ARYA TEB FIROUZ
Knowledge Based Company

THE WORLD BANK
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World Health Organization

Brief Report on State of Health & Medical Services

in

Iraq

December 2022

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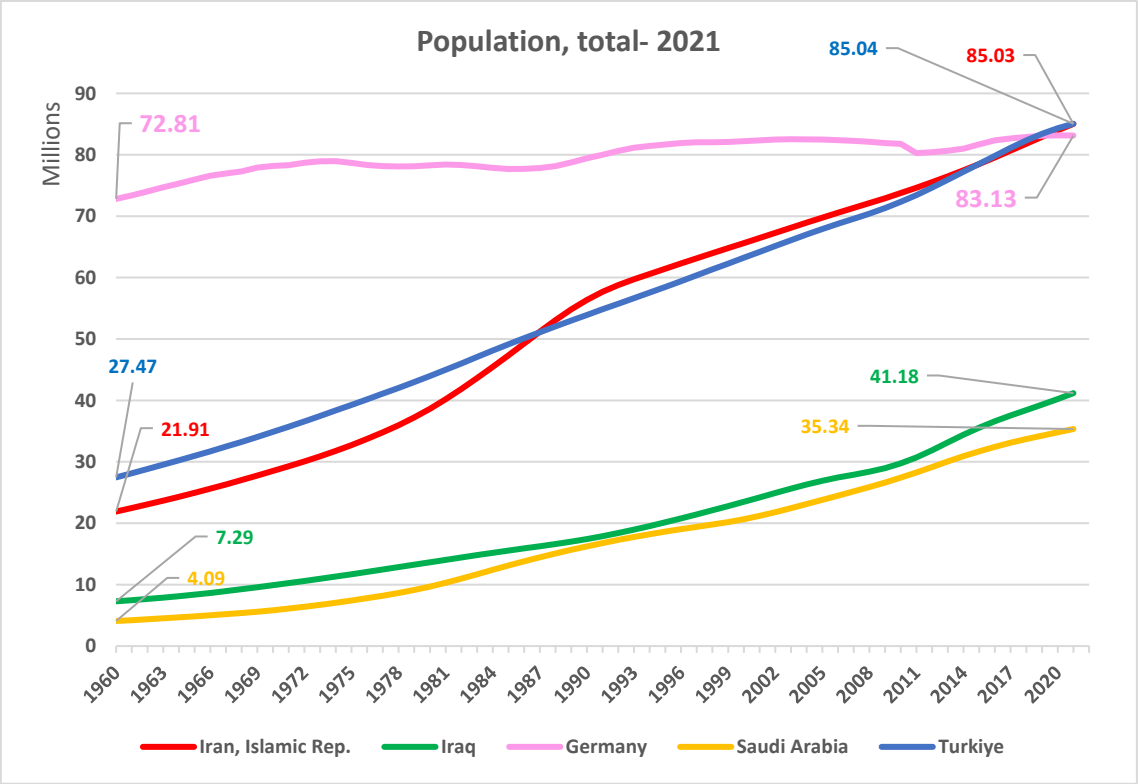

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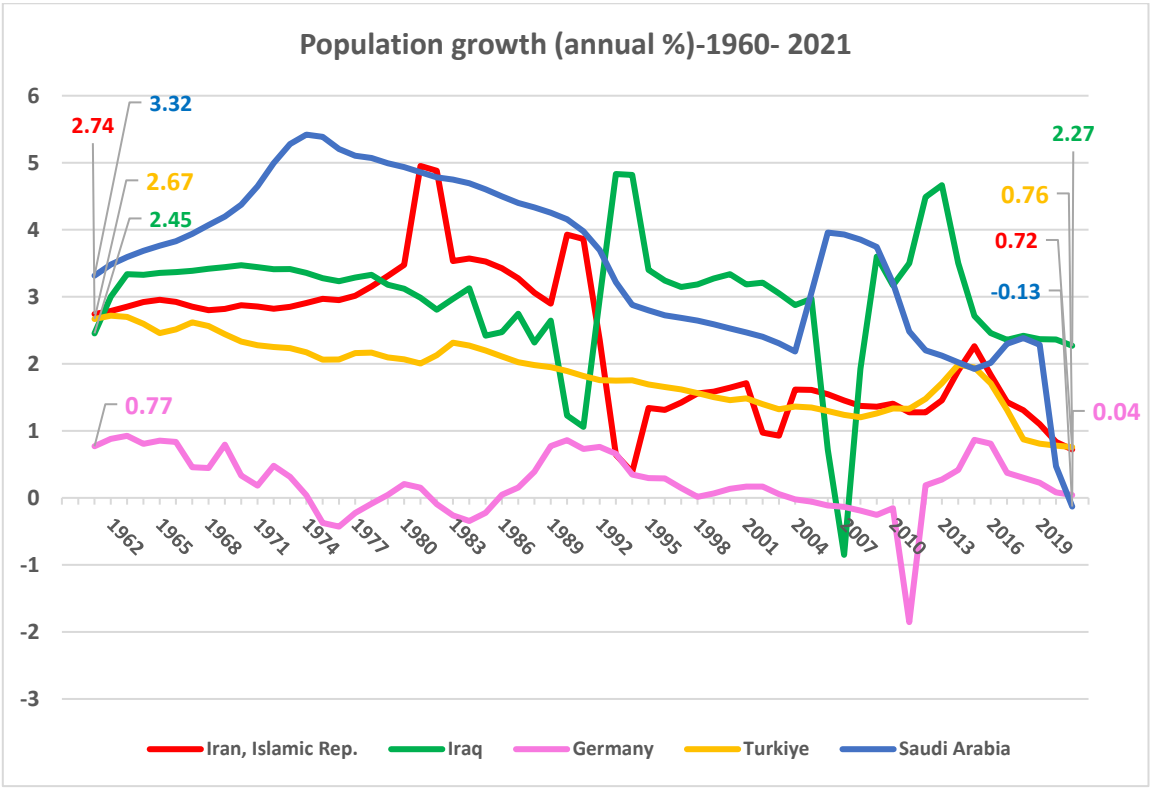

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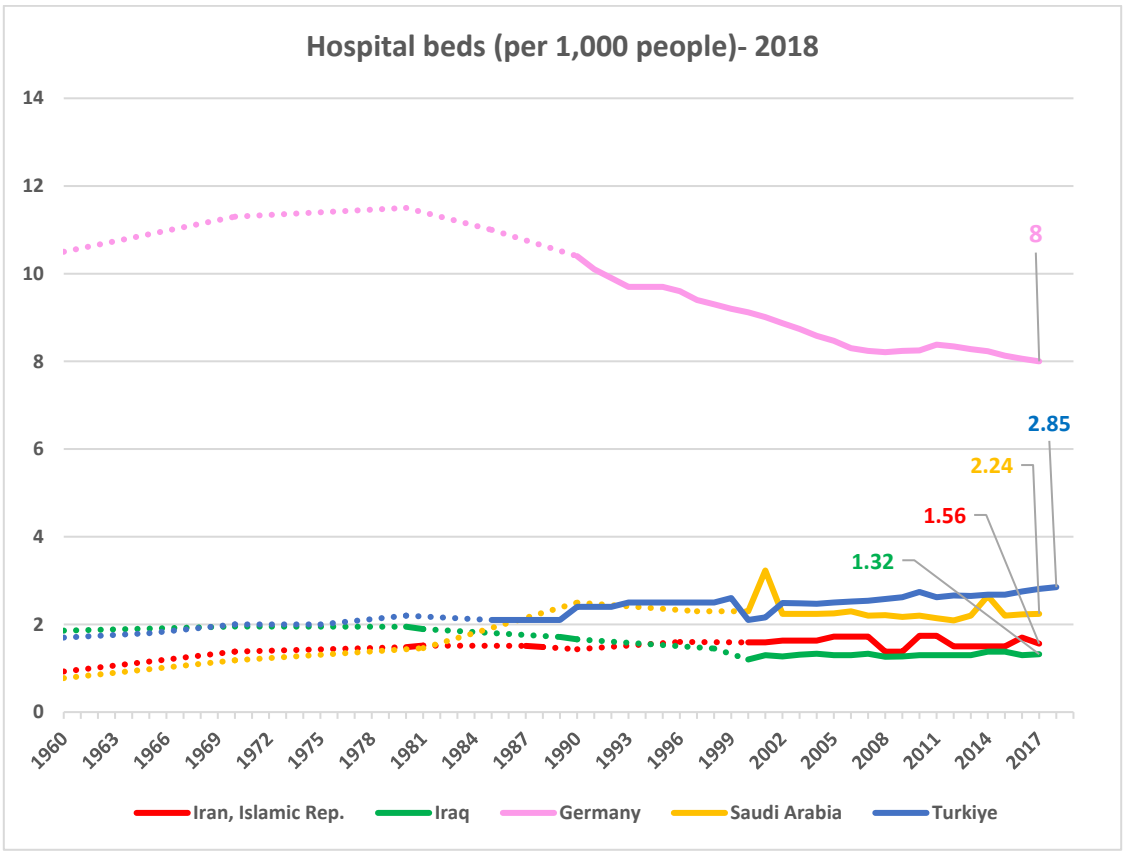

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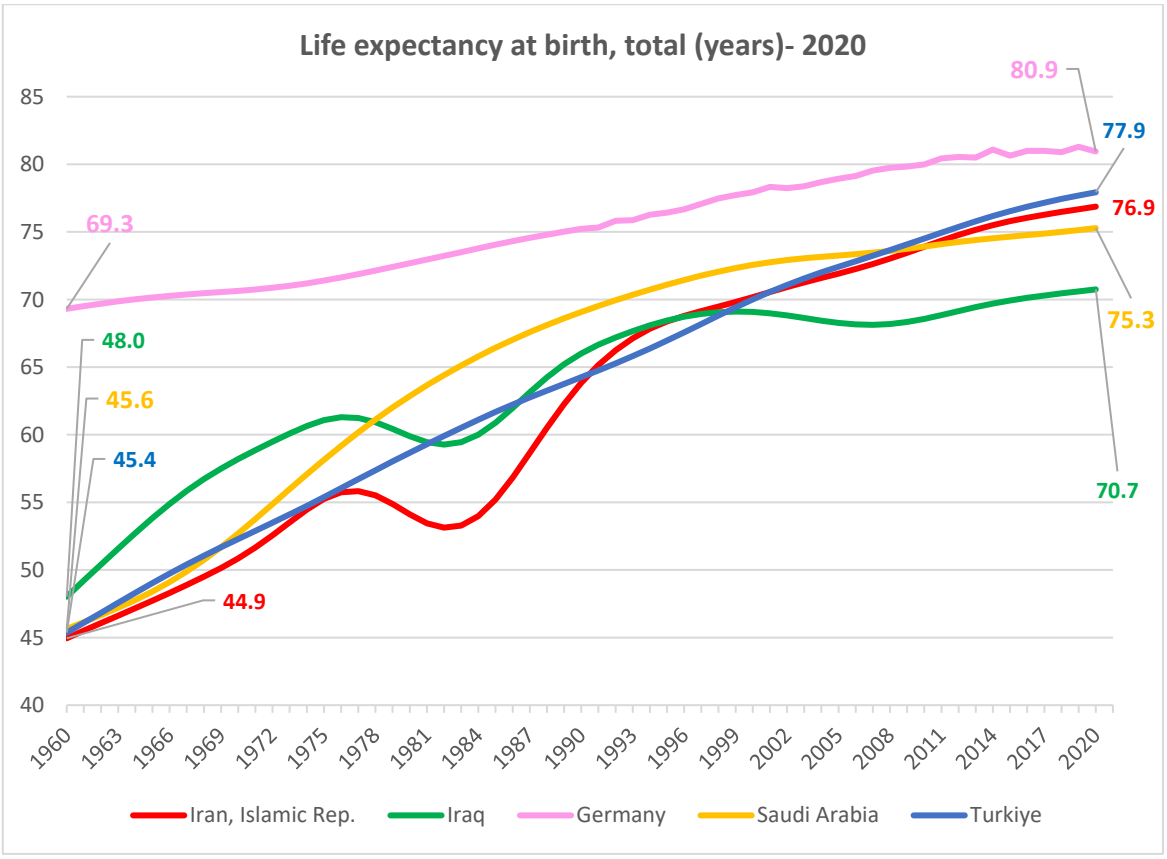

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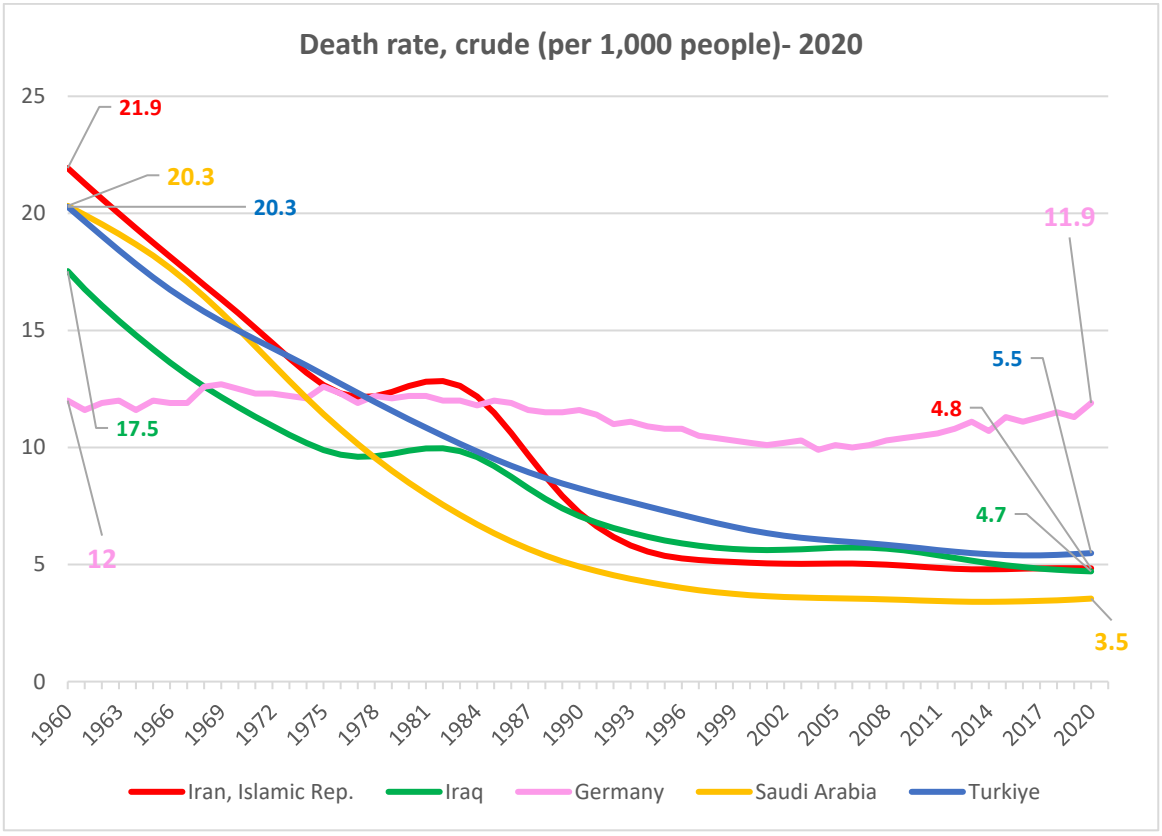

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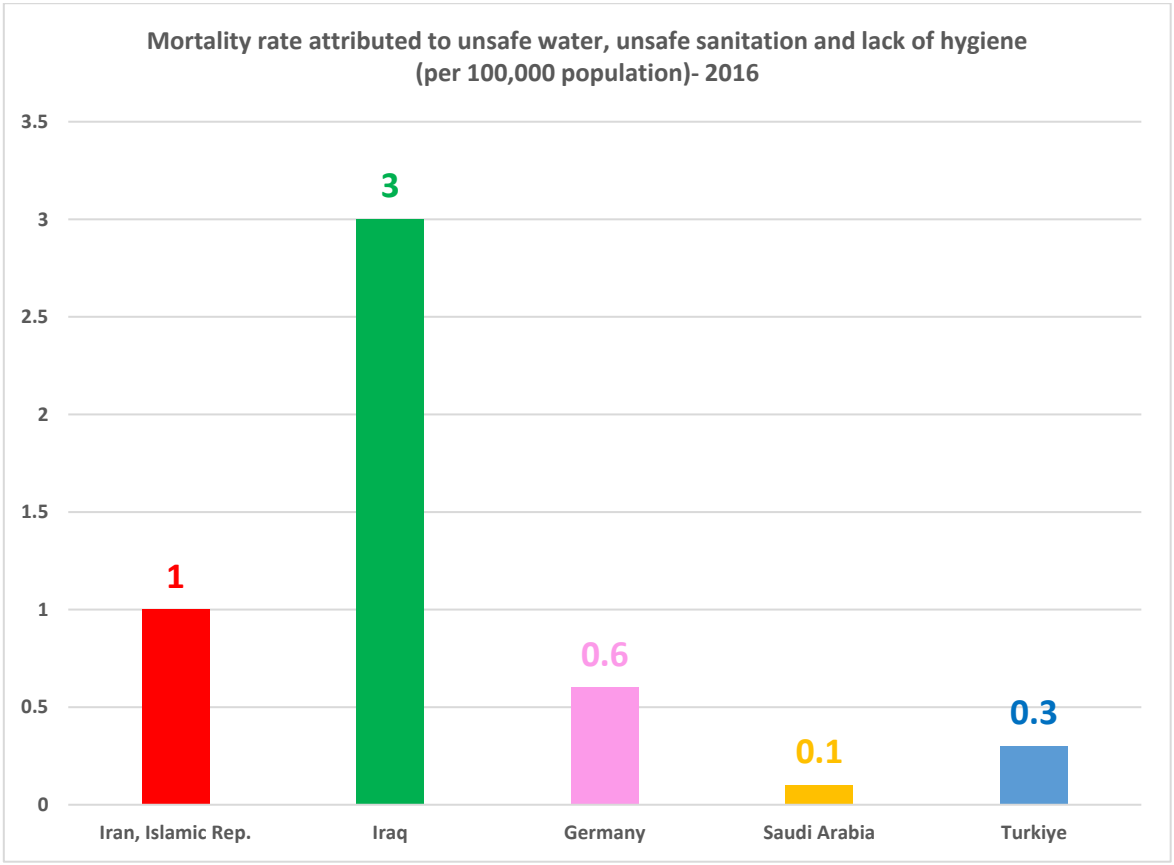

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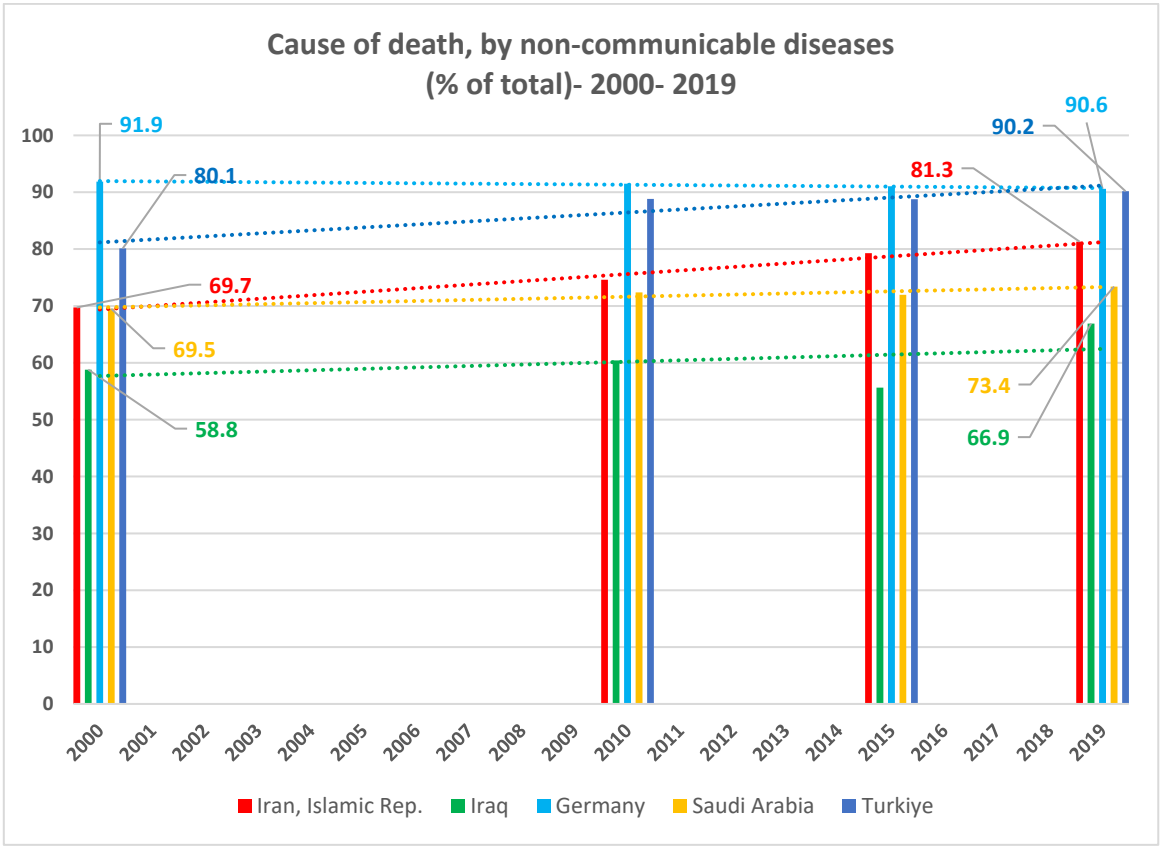

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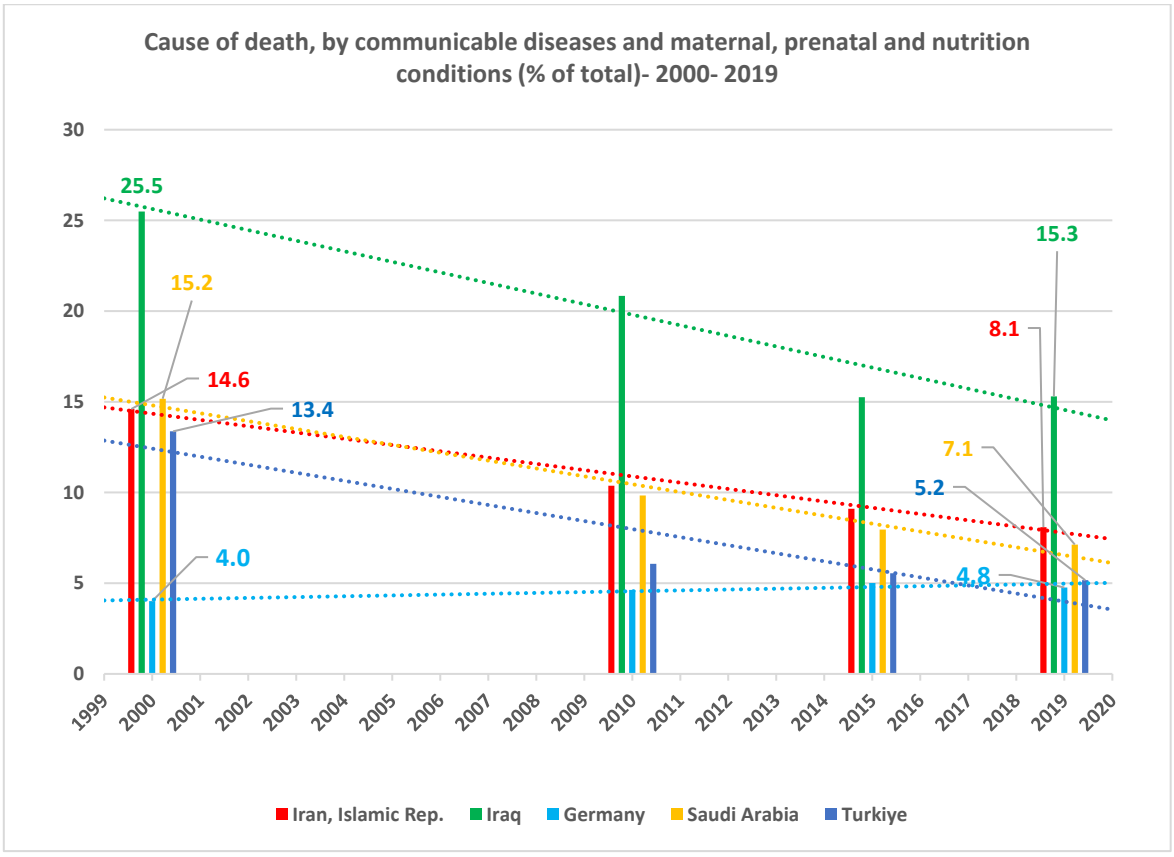

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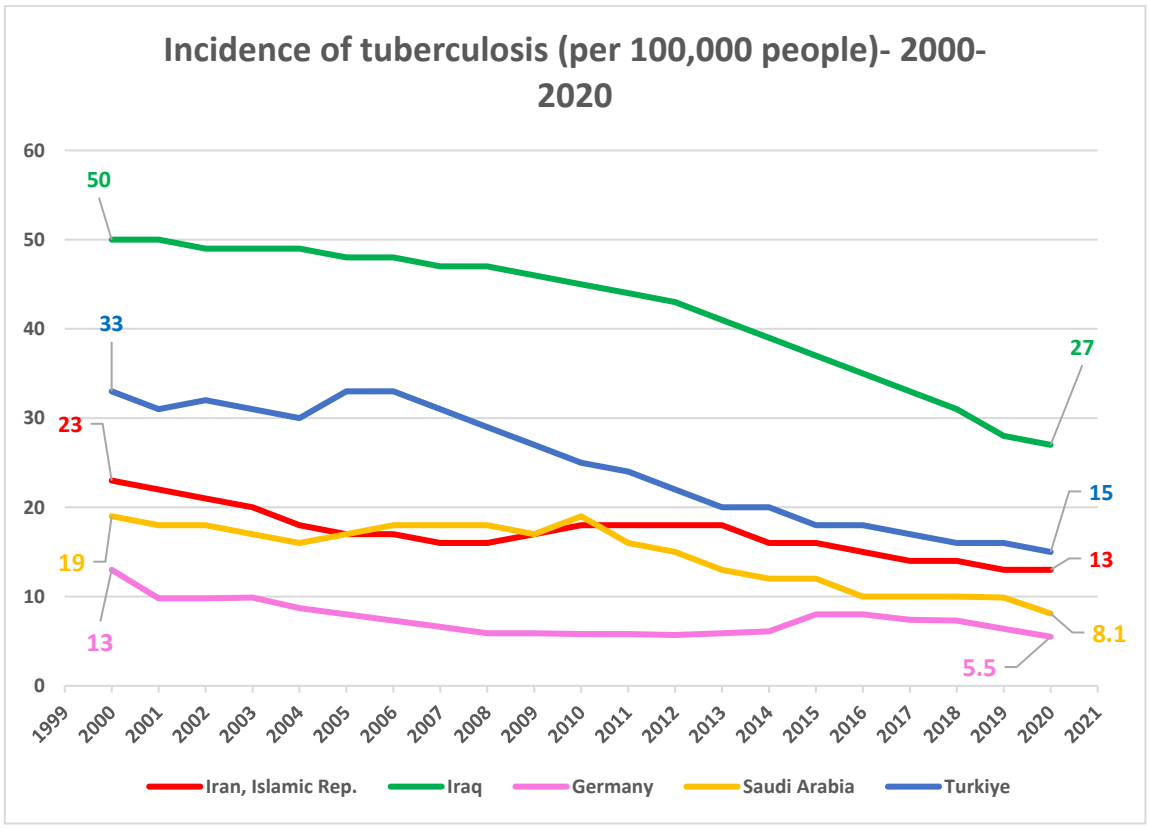

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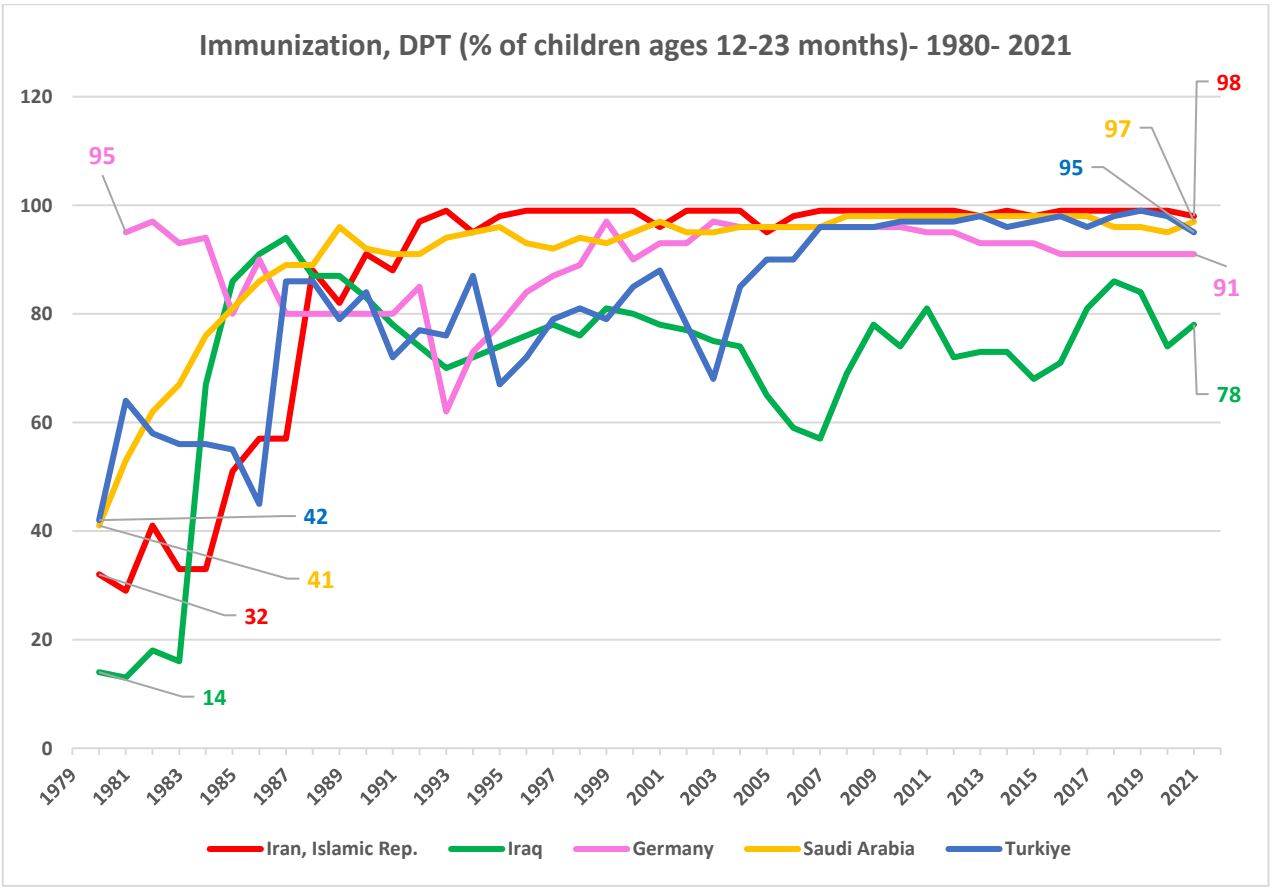

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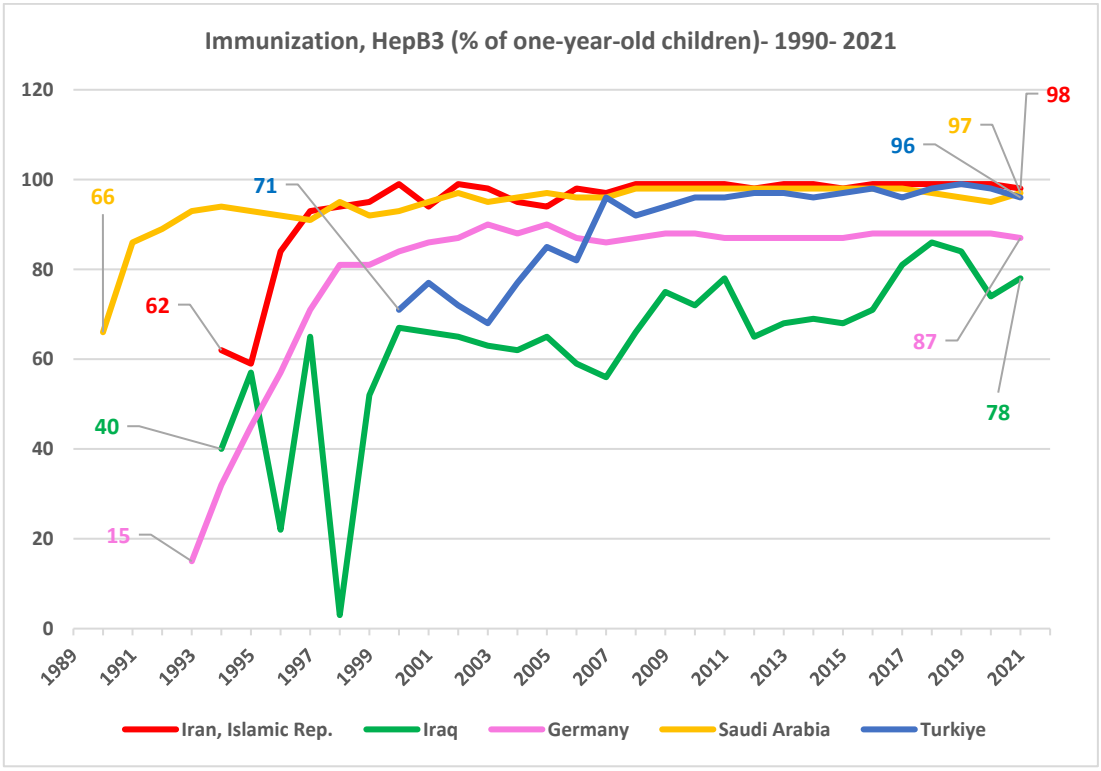

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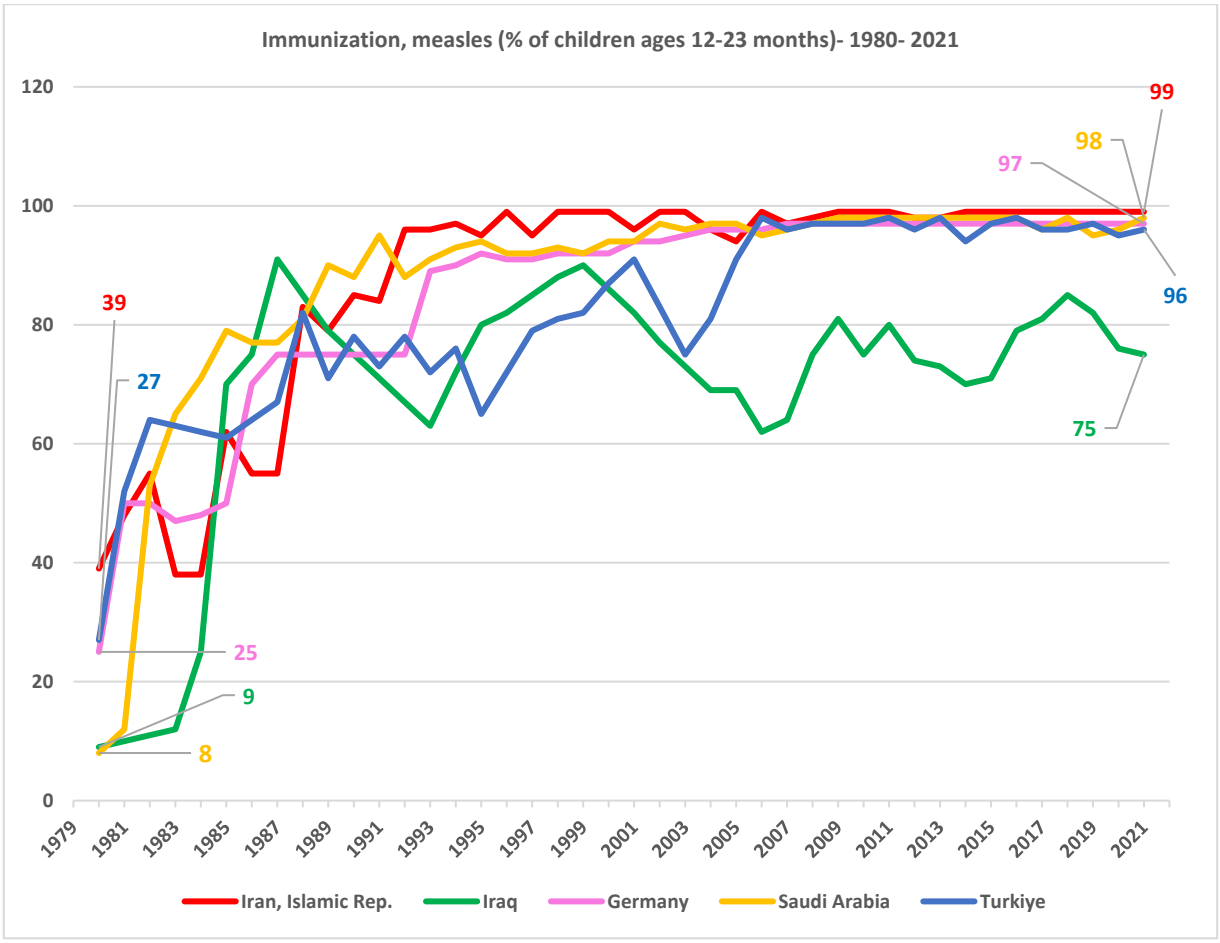

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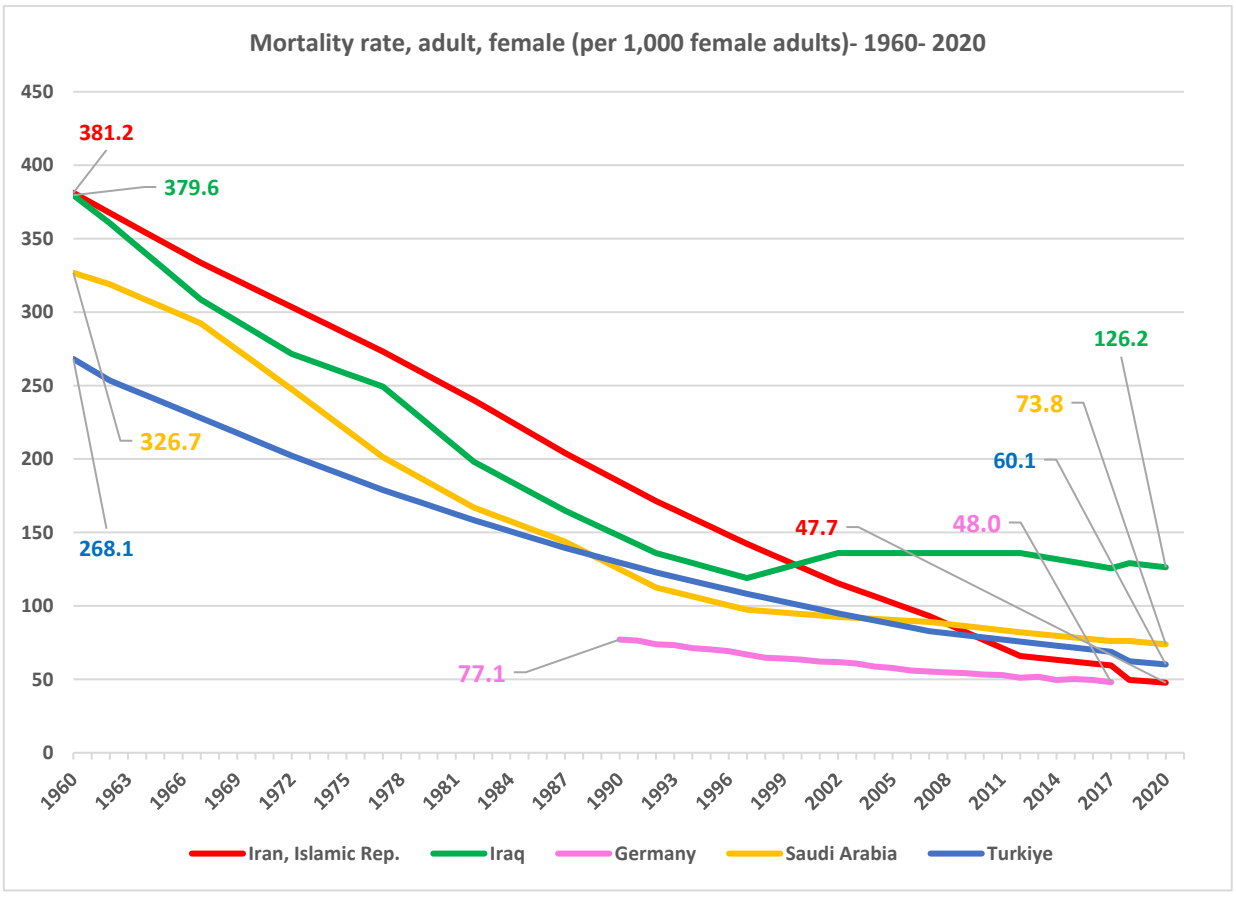

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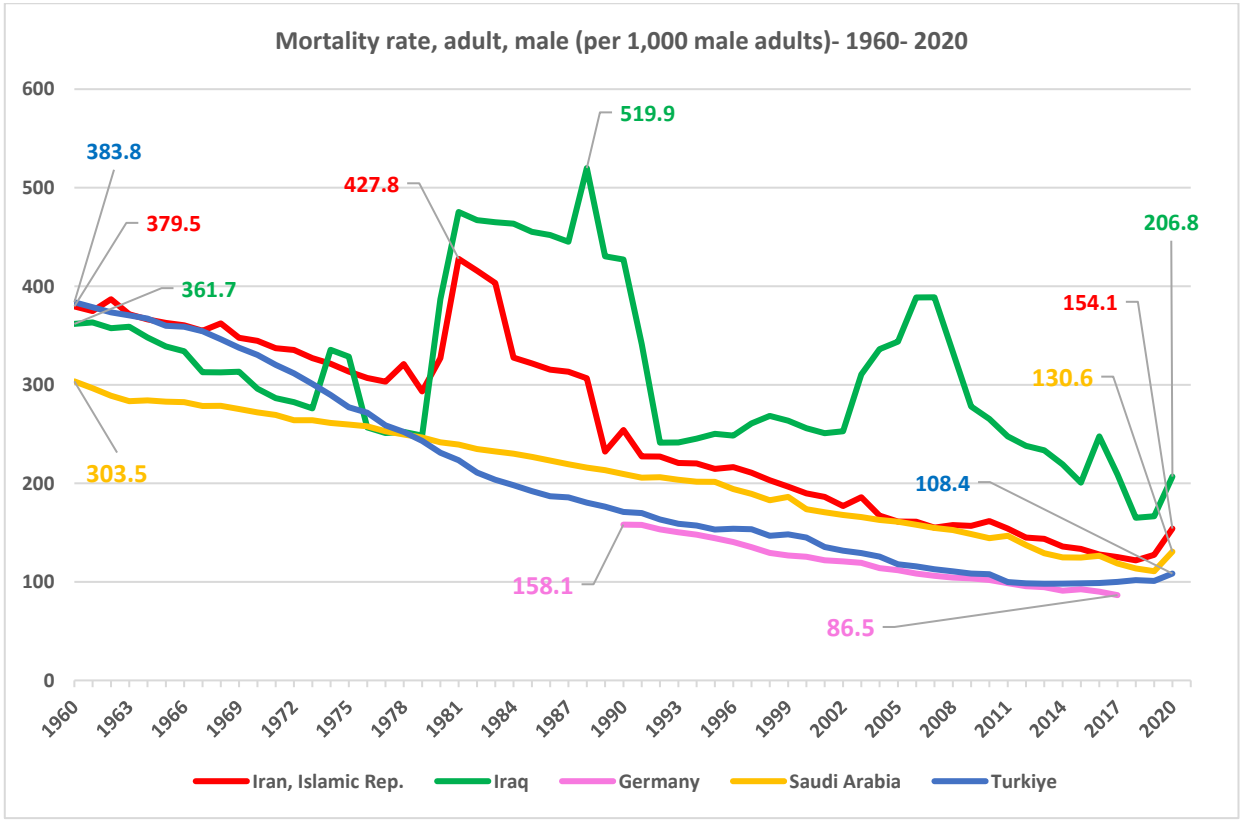

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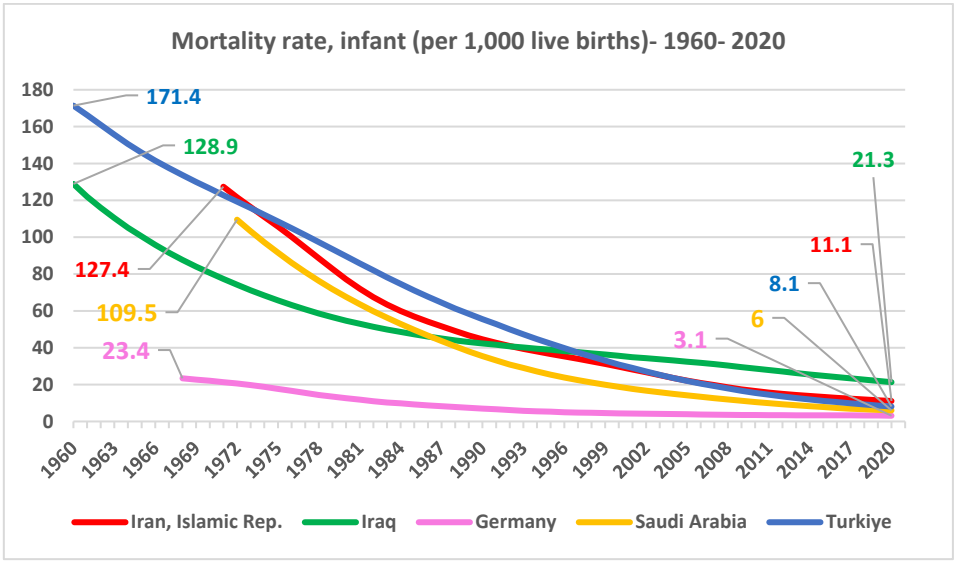

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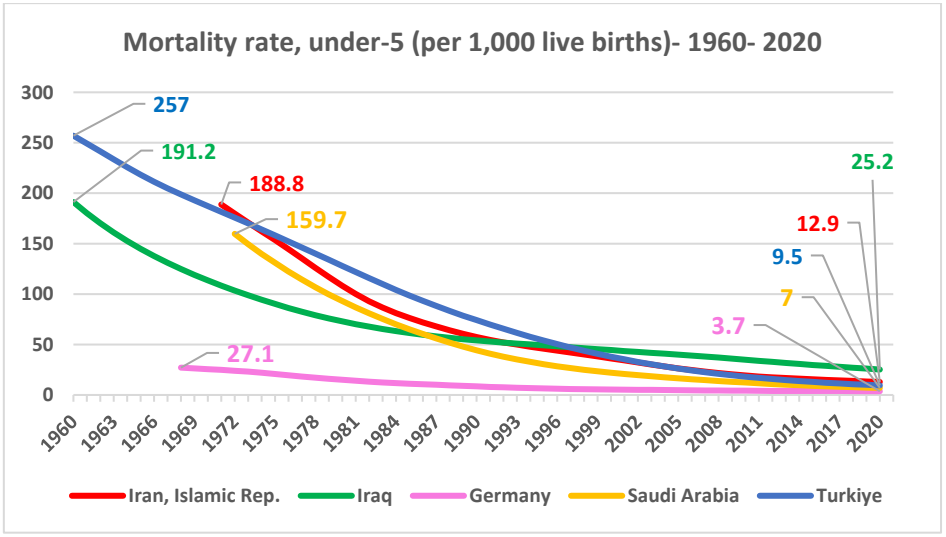

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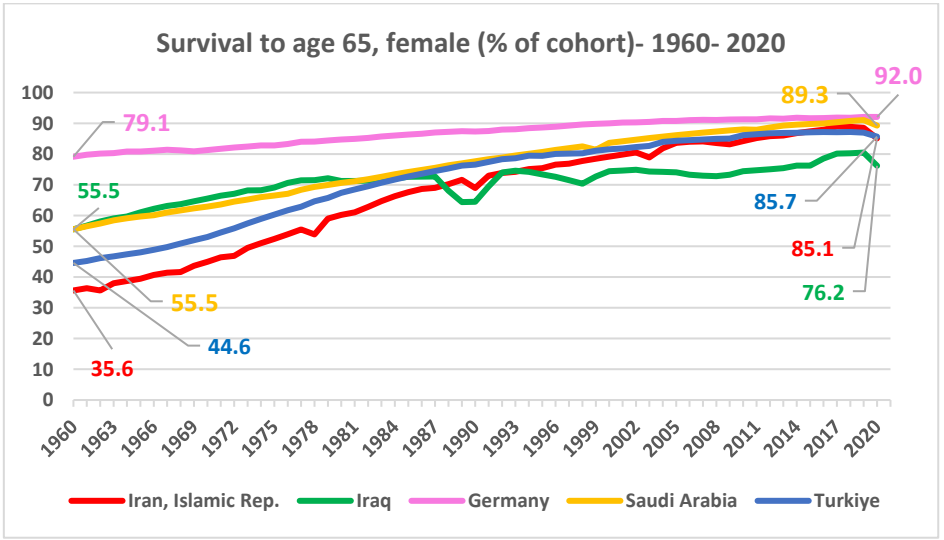

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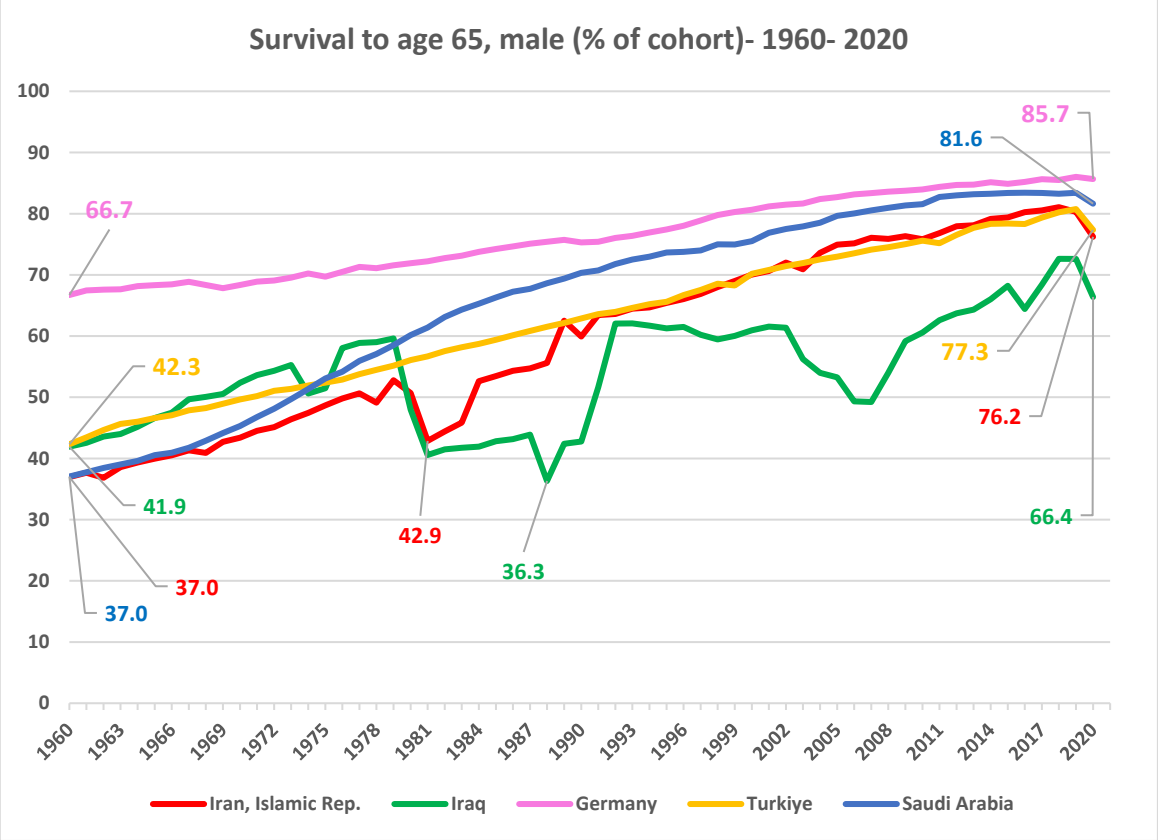

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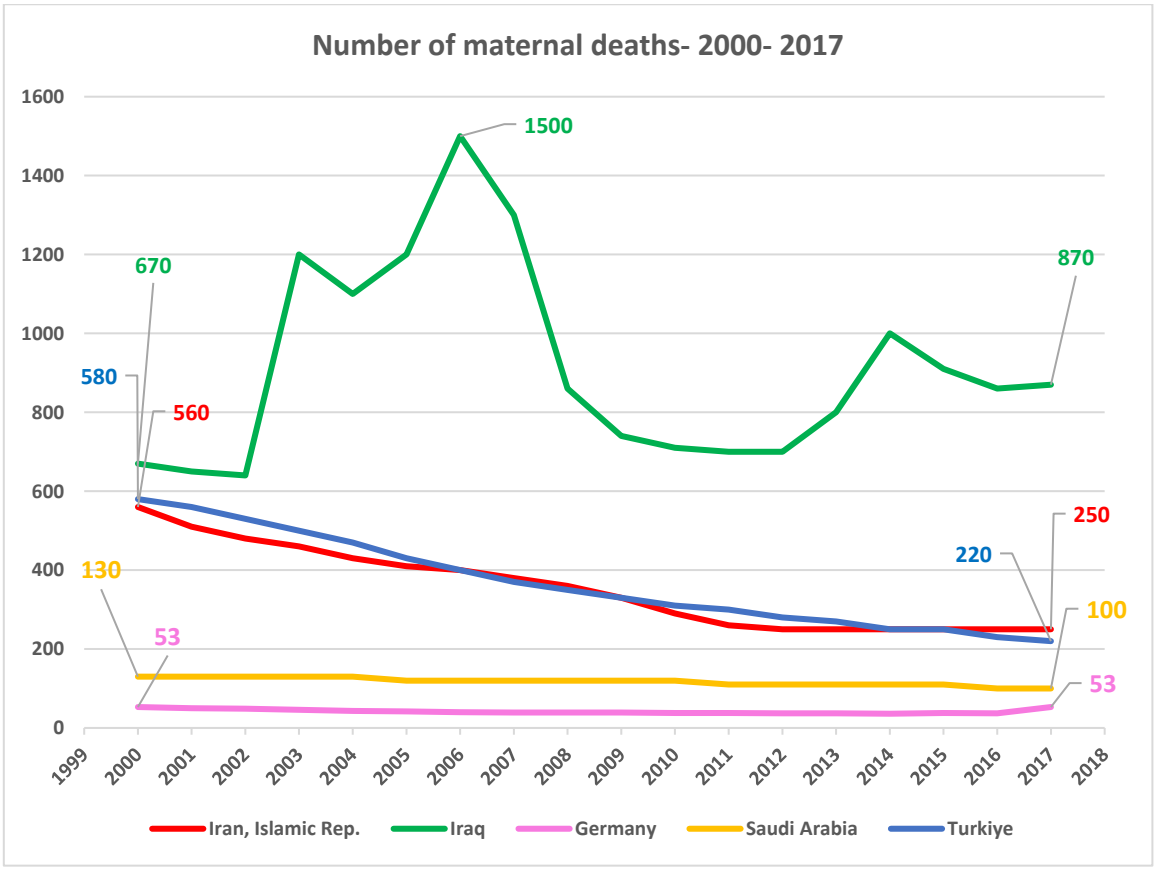

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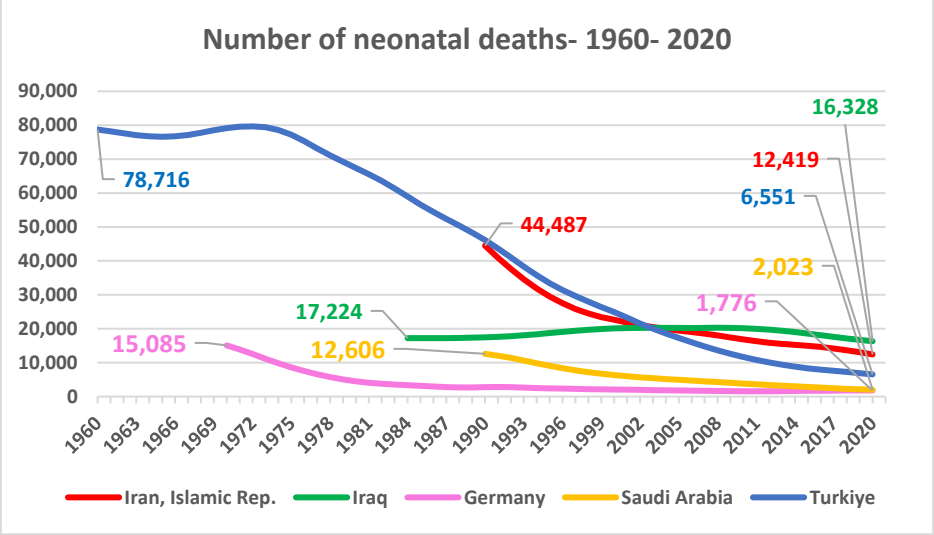

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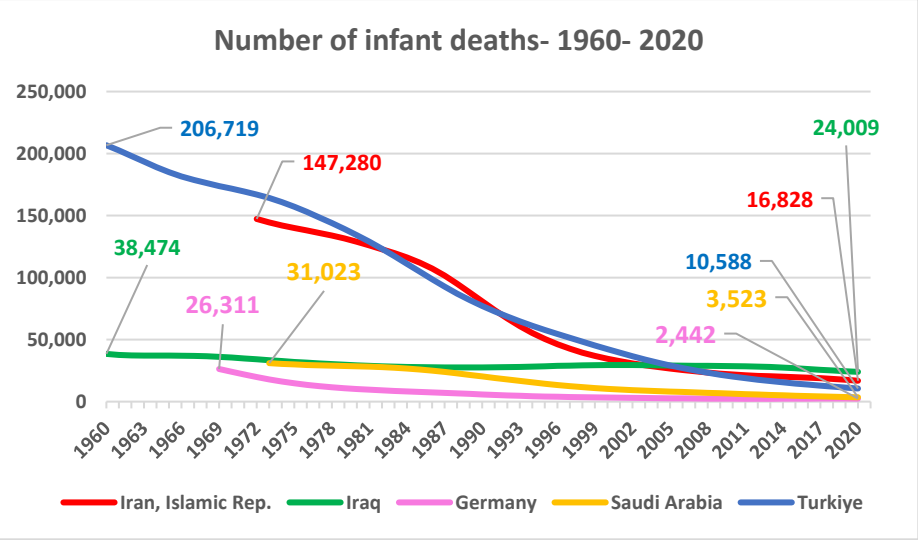

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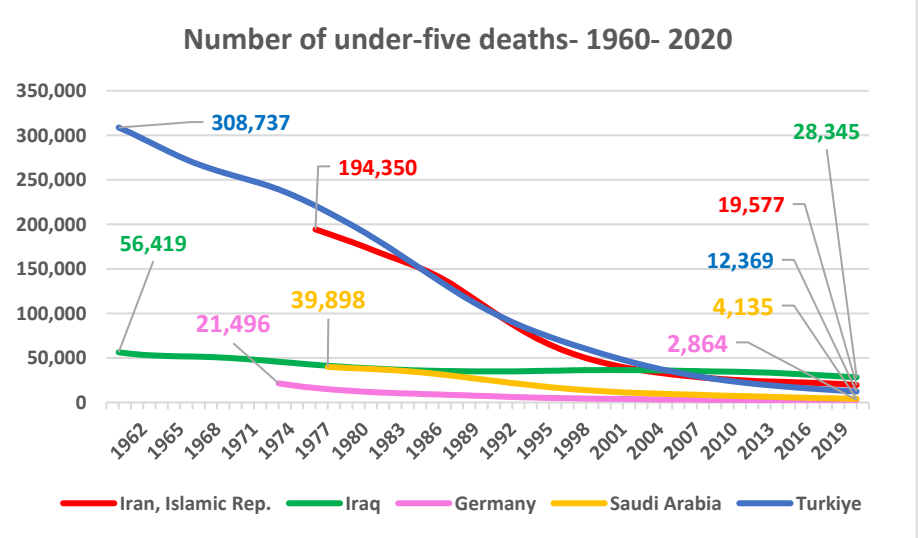

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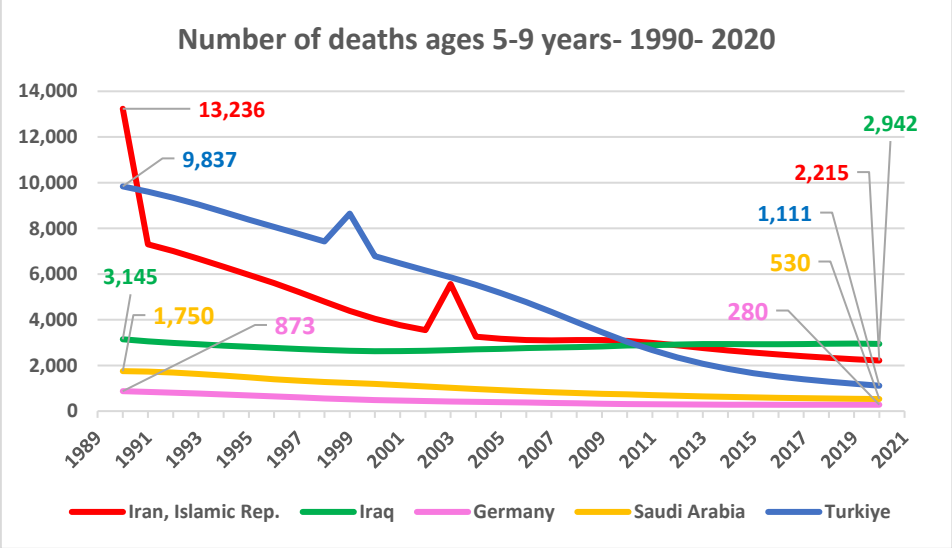

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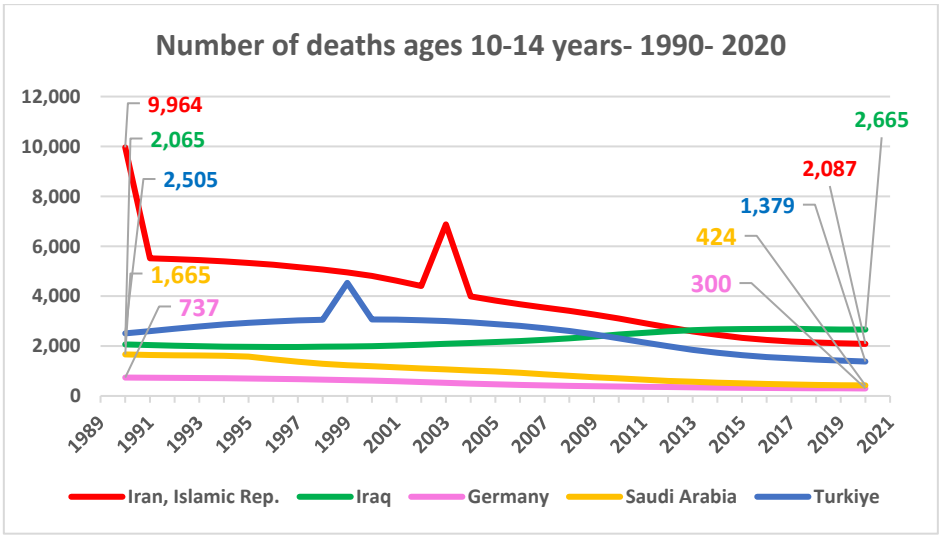

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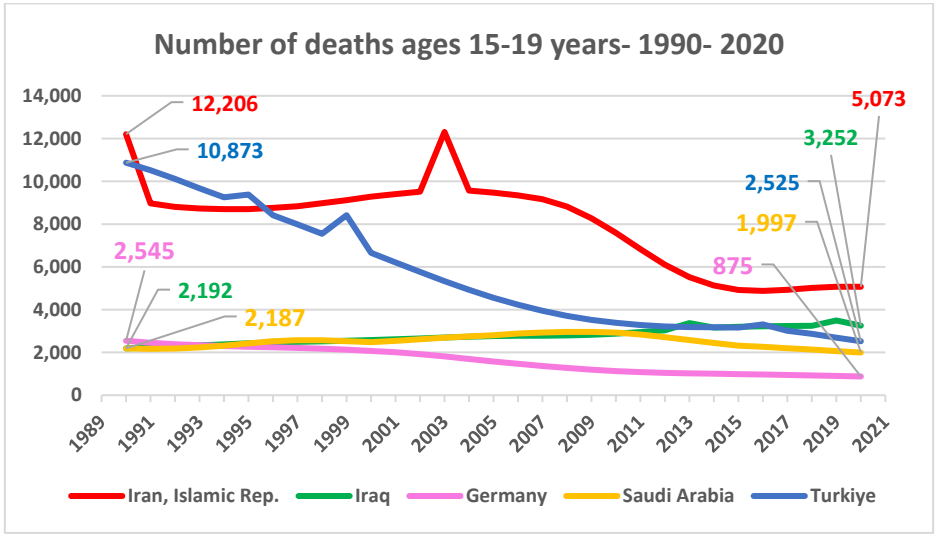

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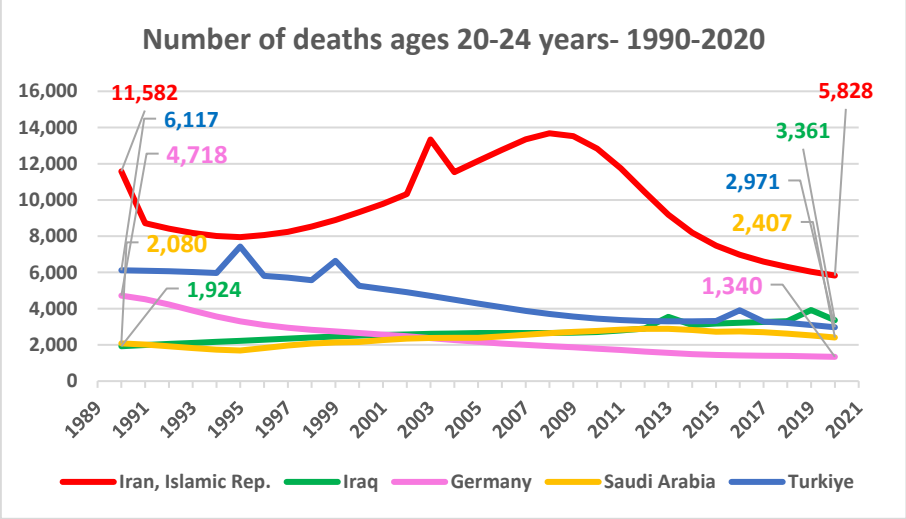

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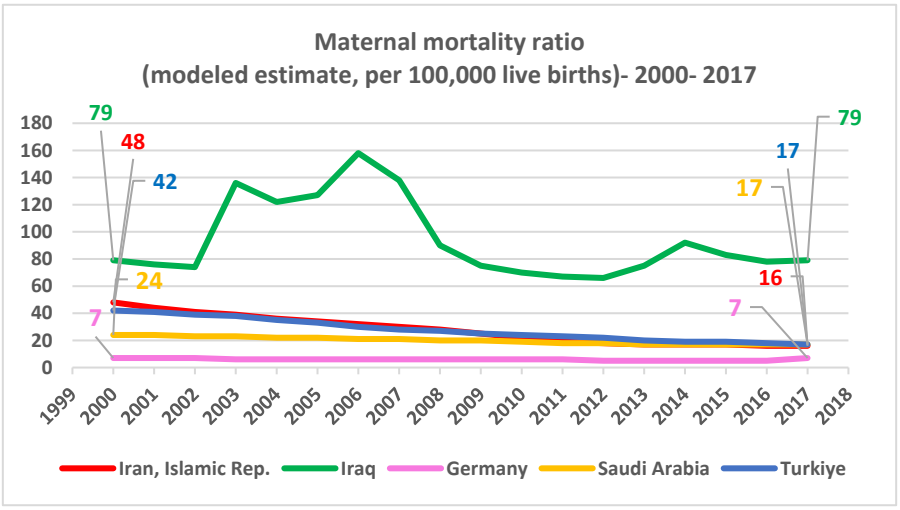

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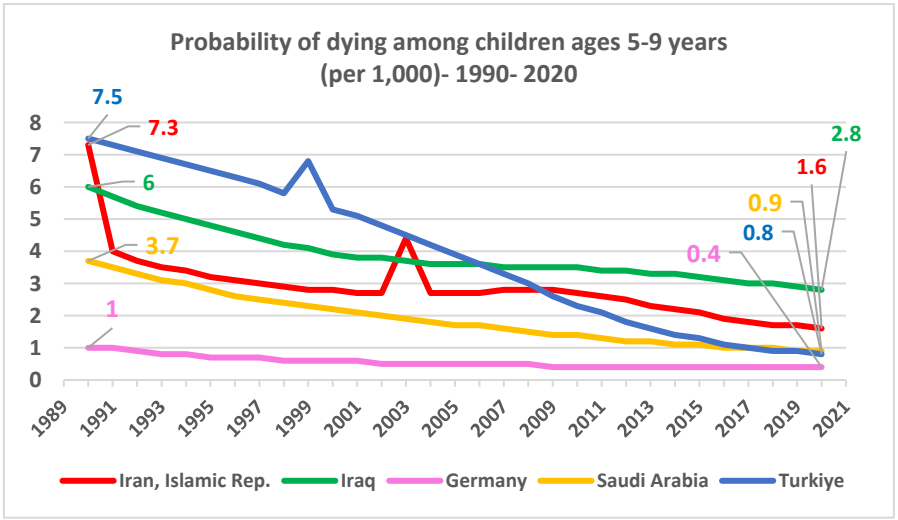

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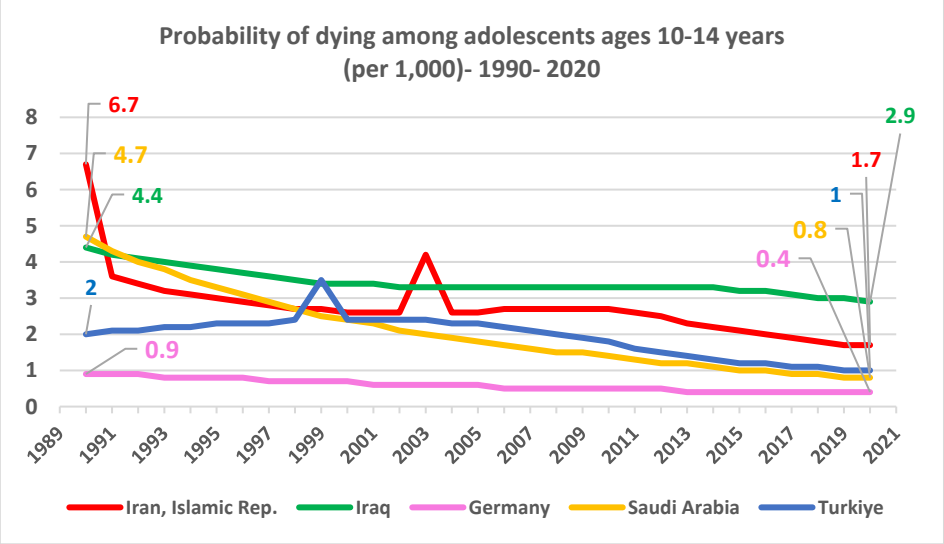

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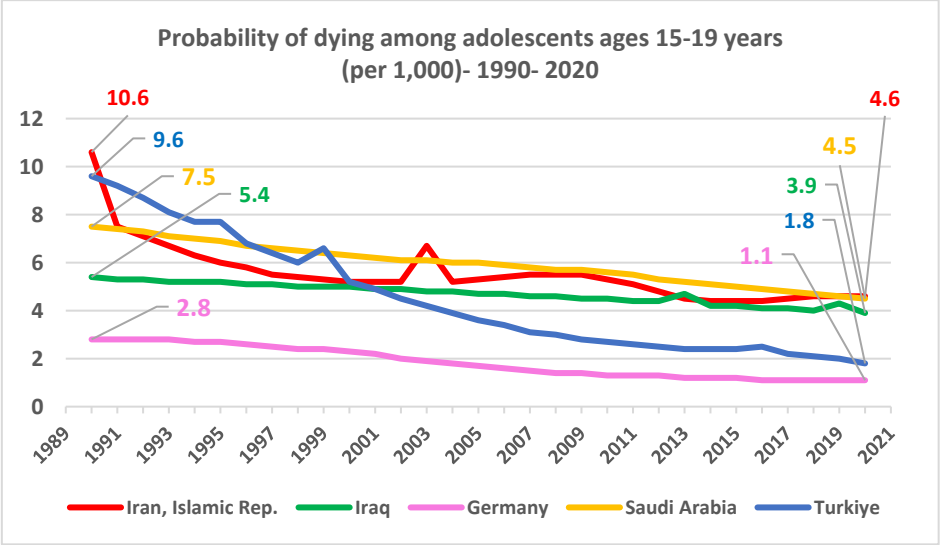

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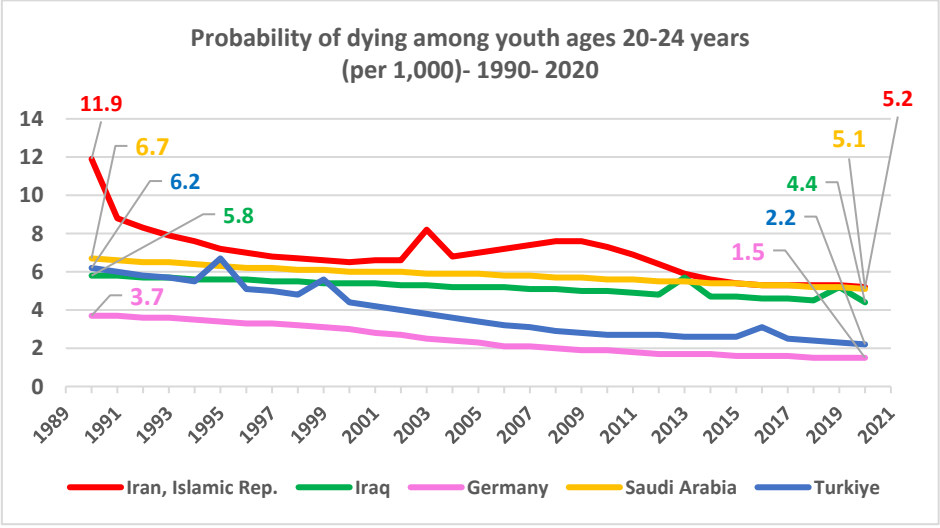

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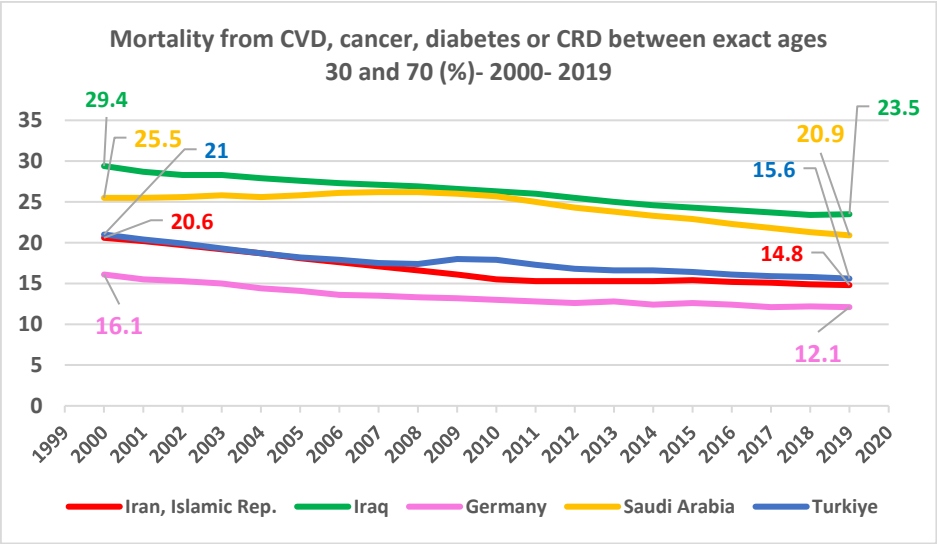

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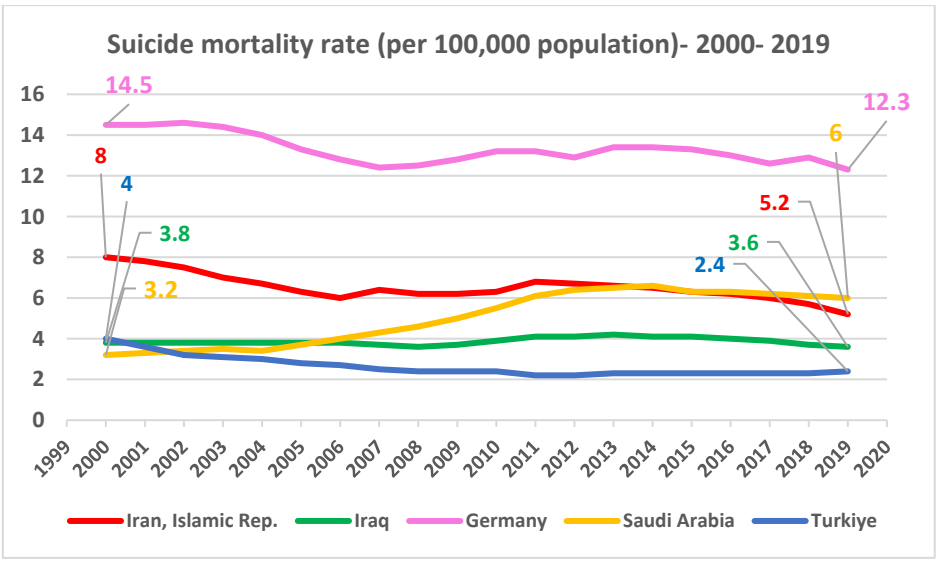

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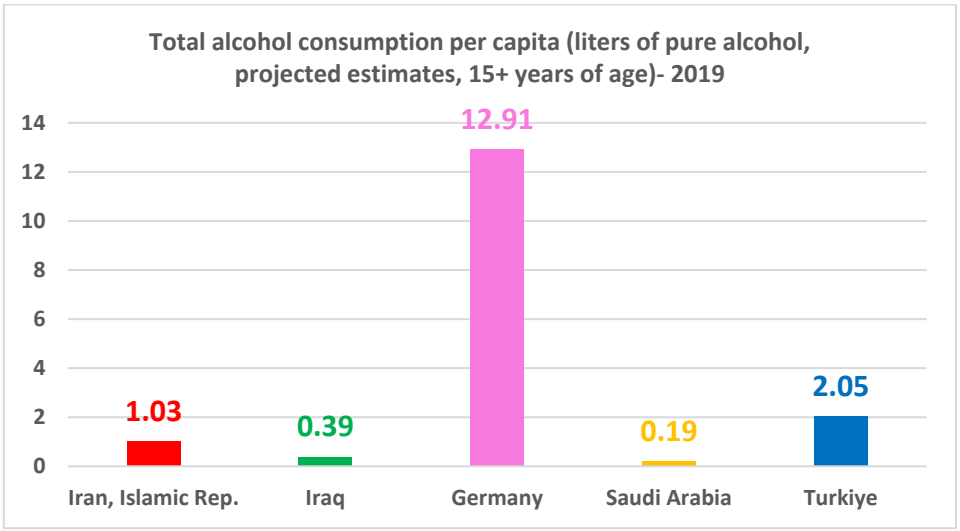

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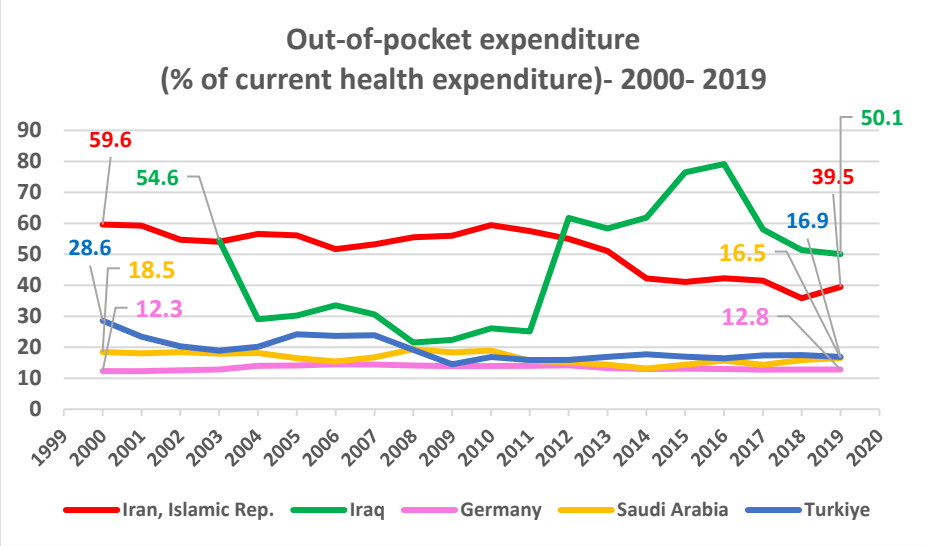

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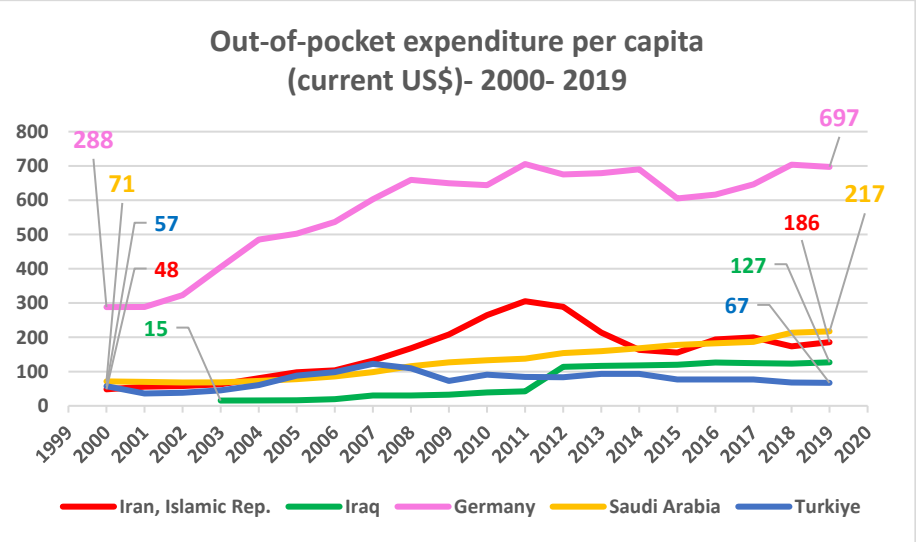

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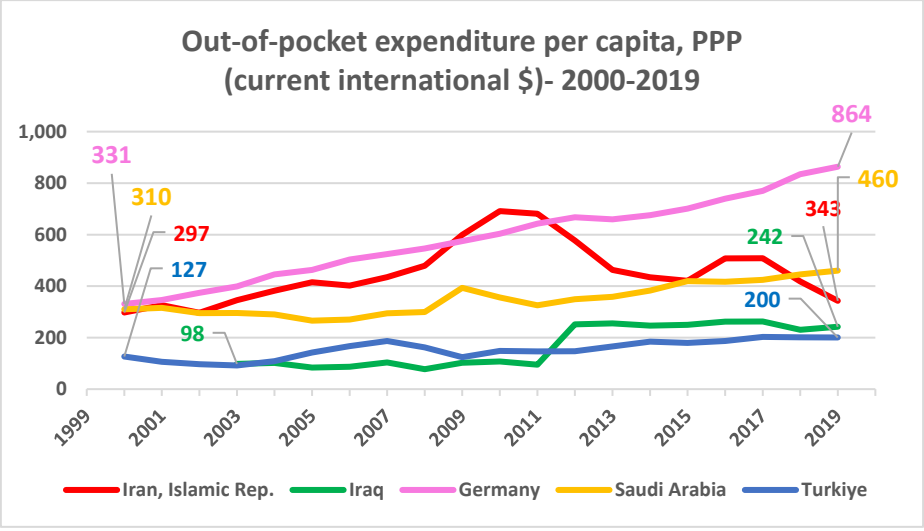

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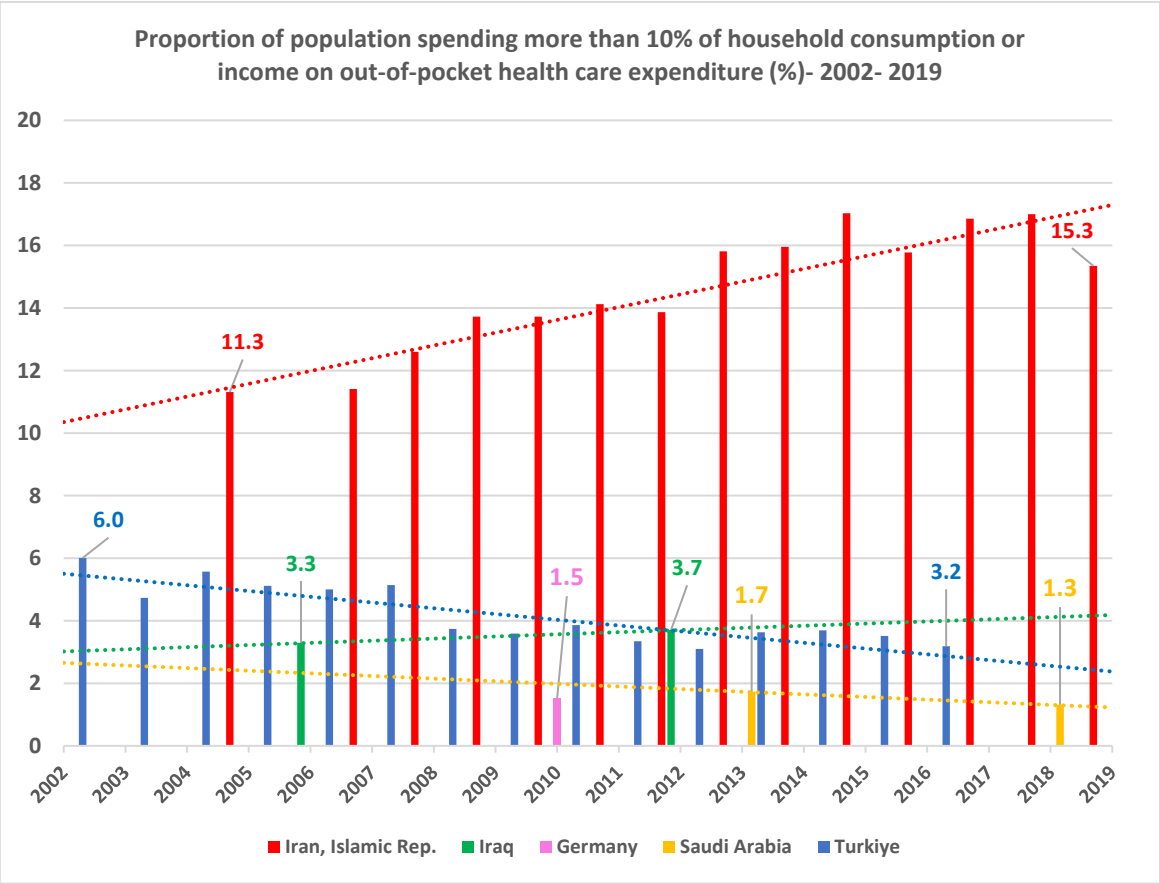

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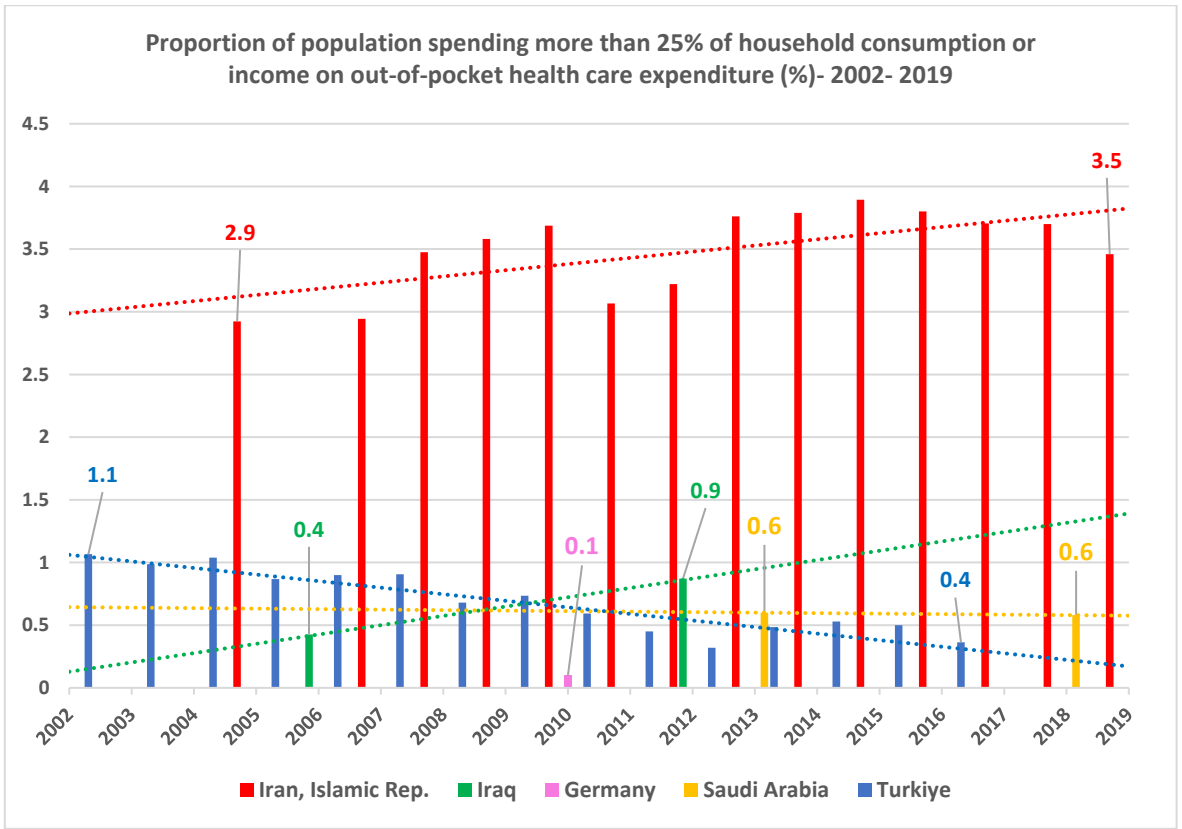

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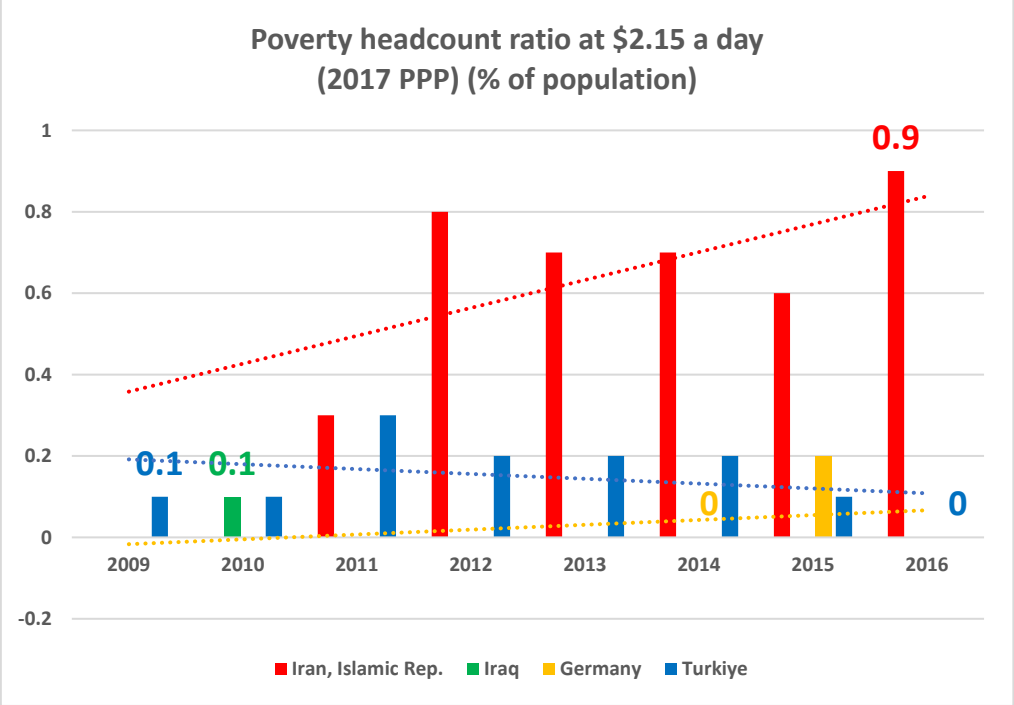
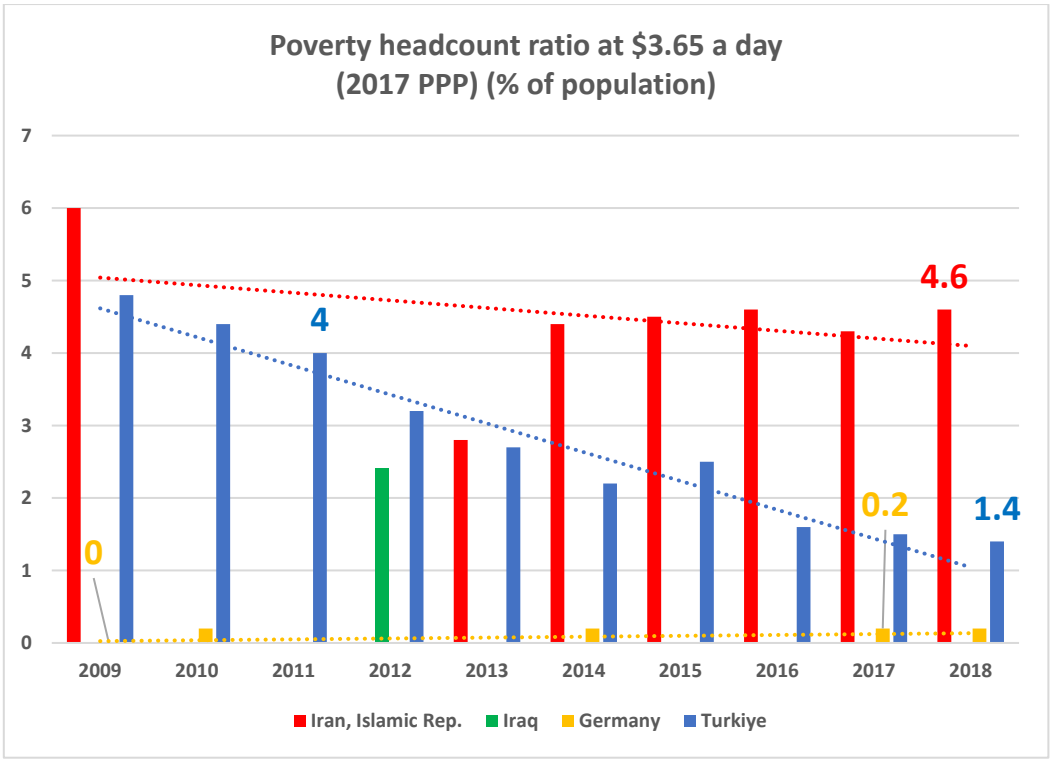


PPP/purchasing power parity conversion factor is the number of units of a country's currency required to buy the same amounts of goods and services in the domestic market as U.S. dollar would buy in the United States. This **conversion factor is** for GDP.

ضریب تبدیل قدرت برابری خرید (PPP/purchasing power parity conversion factor) عبارت است از؛ تعداد واحدهای پول یک کشورمورد نیازبرای خرید میزان مشخصی از کالا و خدمات در بازار داخلی همان کشور در مقایسه با تعداد دلار آمریکا مورد نیاز برای خرید میزان مشابه از کالا و خدمات در کشور آمریکا. از این ضریب تبدیل برای محاسبه "تولید ناخالص داخلی/GDP" هر کشور استفاده می گردد.

https://data.worldbank.org/indicator/SI.POV.DDAY?end=2019&locations=IR-DE-TR-SA-IQ&start=2010&type=shaded&view=chart



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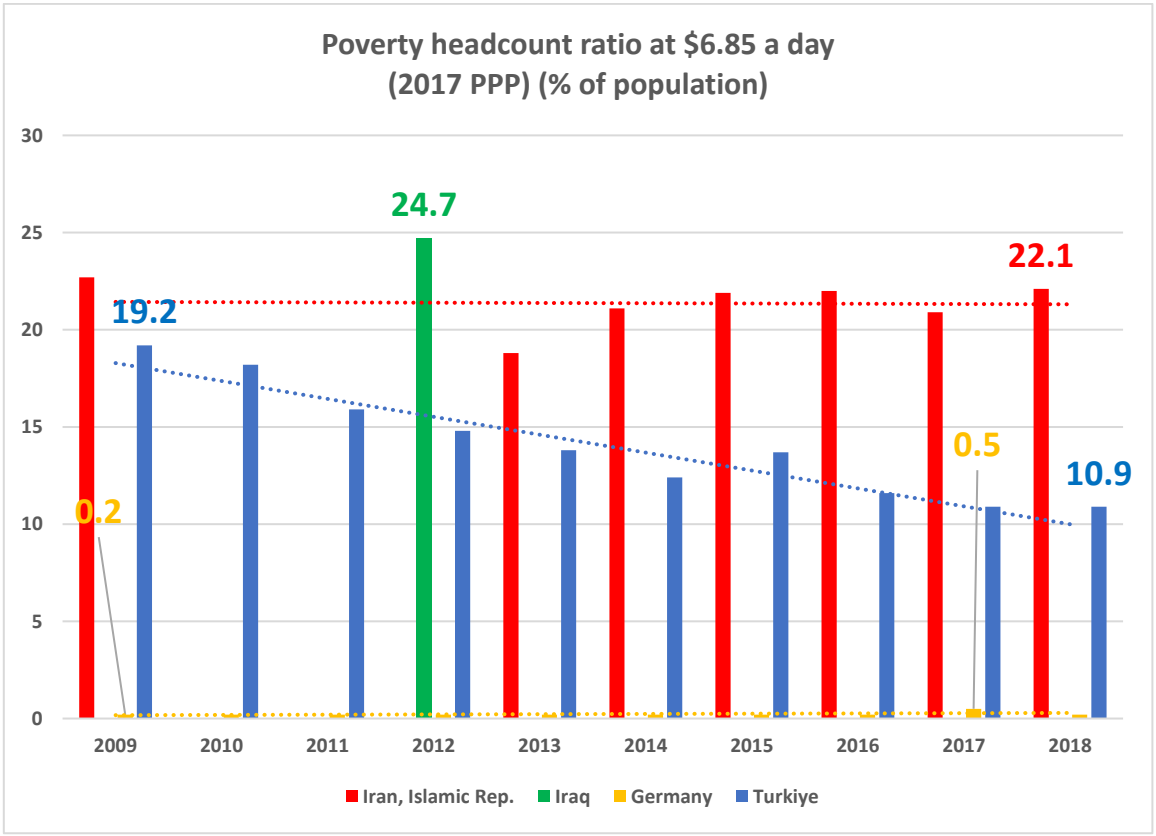
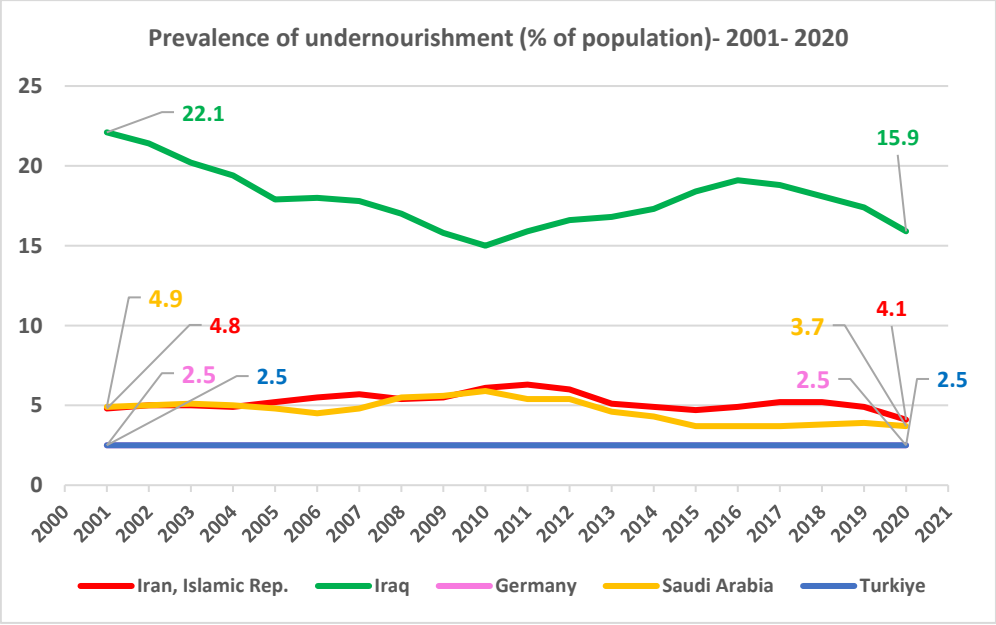


PPP/purchasing power parity conversion factor is the number of units of a country's currency required to buy the same amounts of goods and services in the domestic market as U.S. dollar would buy in the United States. This **conversion factor is** for GDP.

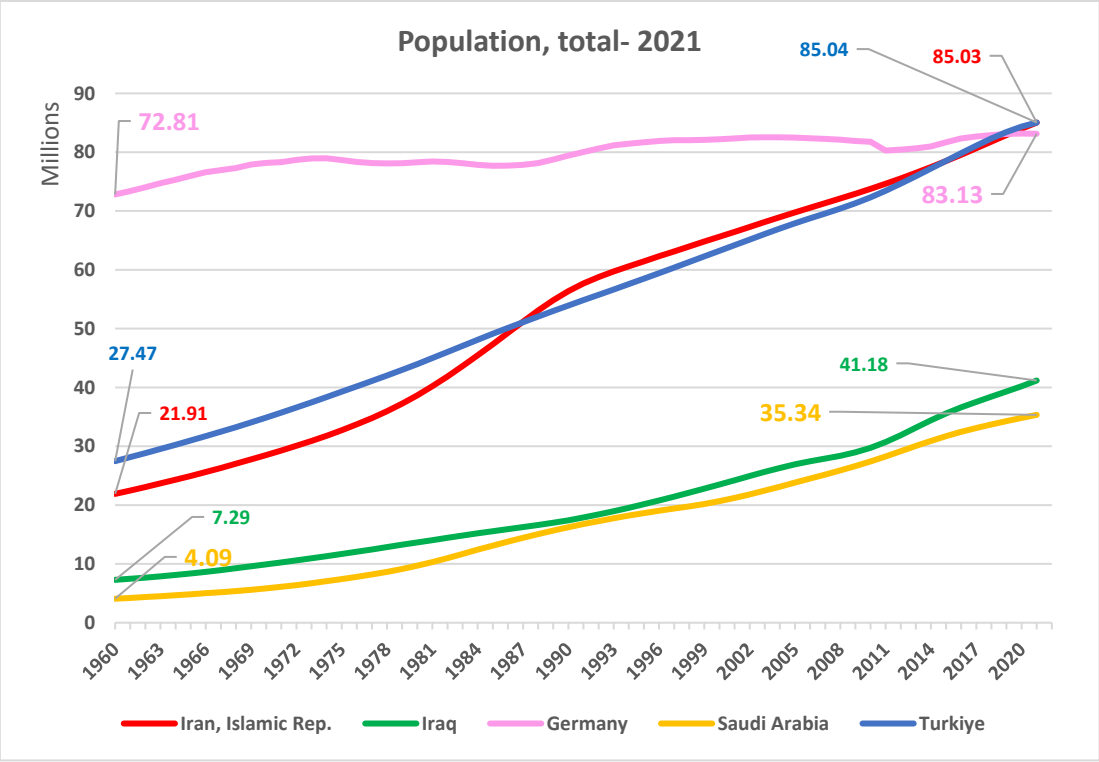
ضریب تبدیل قدرت برابری خرید (**PPP/purchasing power parity conversion factor**) عبارت است از؛ تعداد واحدهای پول یک کشورمورد نیازبرای خرید میزان مشخصی از کالا و خدمات در بازار داخلی همان کشور در مقایسه با تعداد دلار آمریکا مورد نیاز برای خرید میزان مشابه از کالا و خدمات در کشور آمریکا. از این ضریب تبدیل برای محاسبه "تولید ناخالص داخلی/GDP" هر کشور استفاده می گردد.

https://data.worldbank.org/indicator/SI.POV.UMIC?end=2019&locations=IR-DE-TR-SA-IQ&start=2010&type=shaded&view=chart

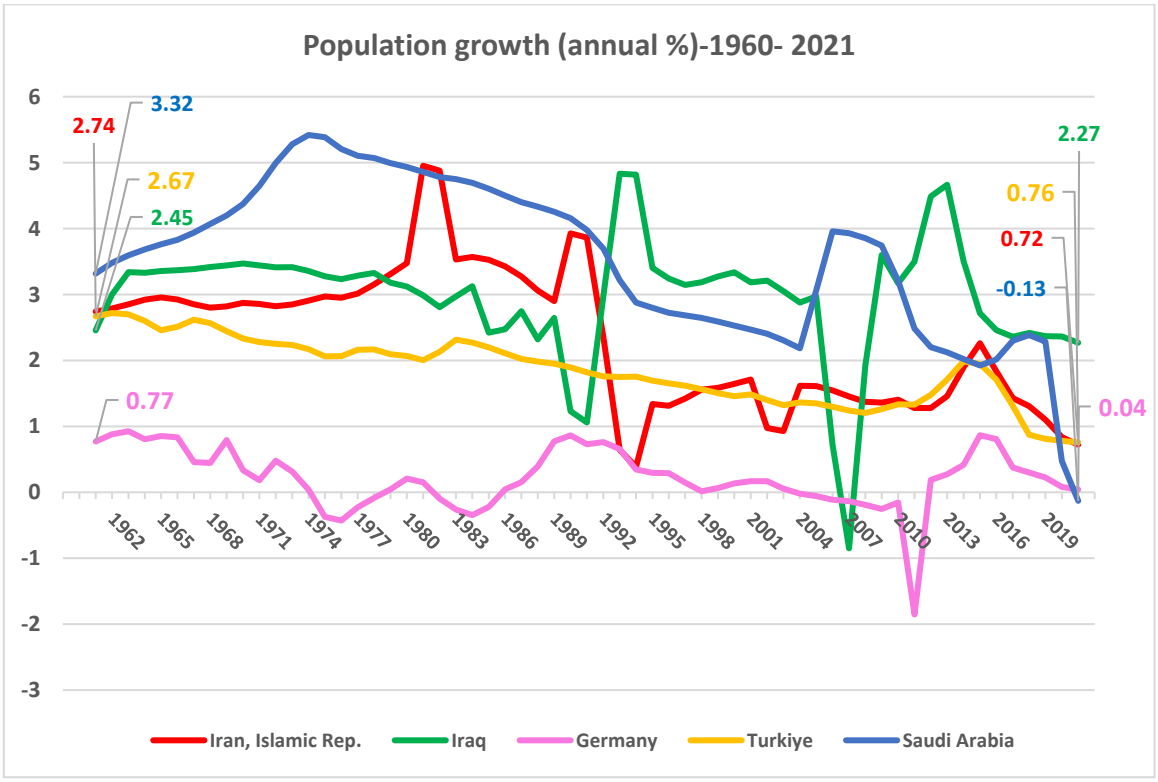


https://data.worldbank.org/indicator/SN.ITK.DEFC.ZS?end=2019&locations=IR-DE-TR-SA-IQ&start=1986&type=shaded&view=chart

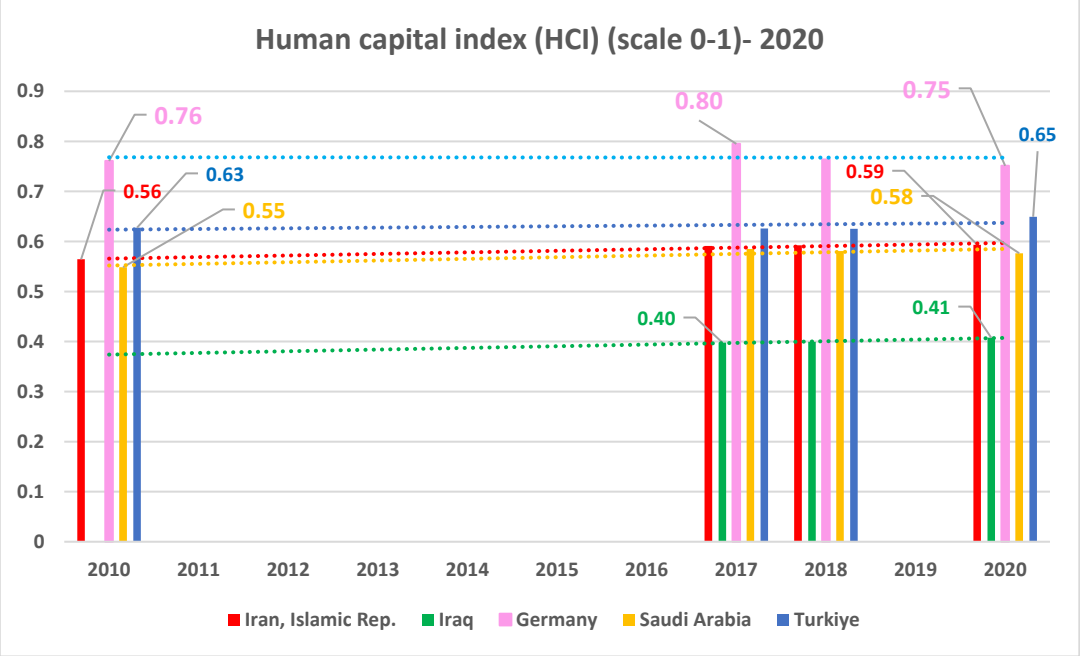
ECONOMY



https://data.worldbank.org/indicator/SP.POP.TOTL?contextual=default&end=2021&locations=IR-IQ-DE-TR-SA&start=1960&type=shaded&view=map



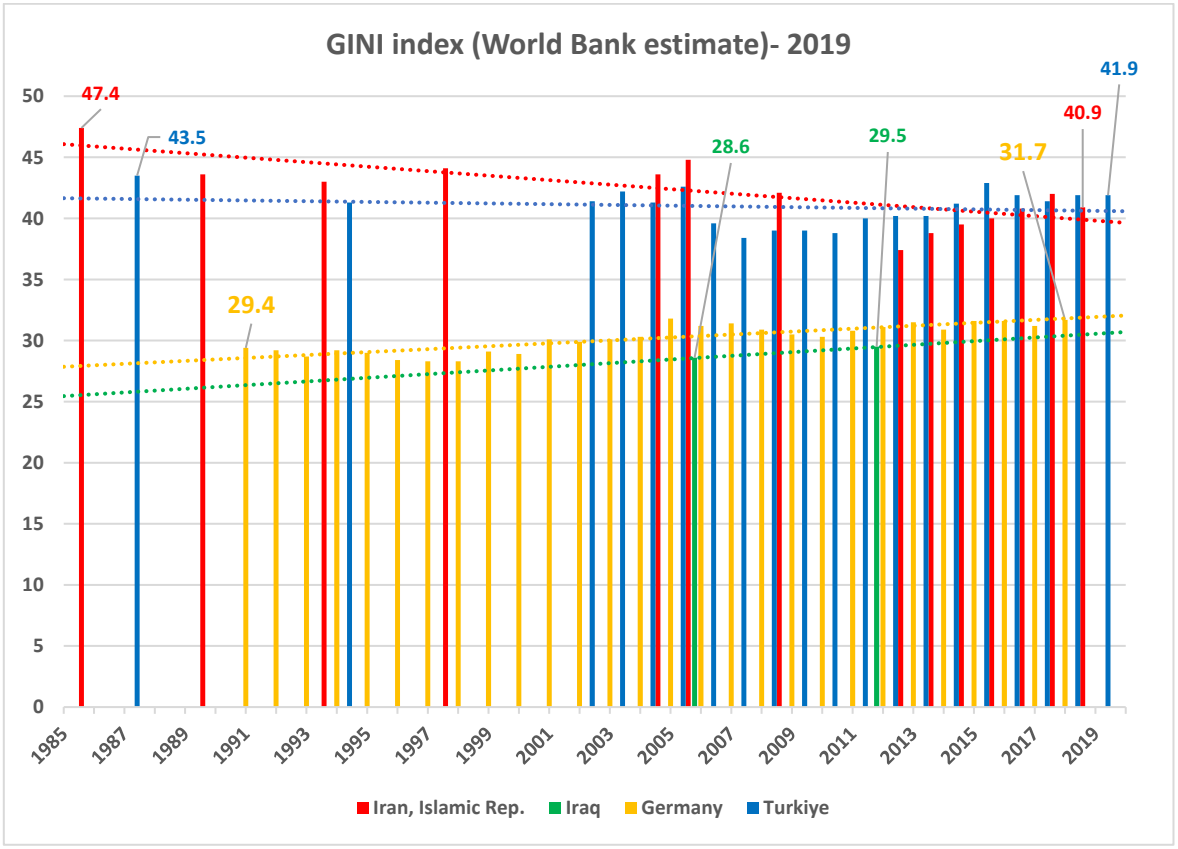
https://data.worldbank.org/indicator/SP.POP.GROW?end=2021&locations=IR-IQ-DE-TR-SA&start=1961&type=shaded&view=chart



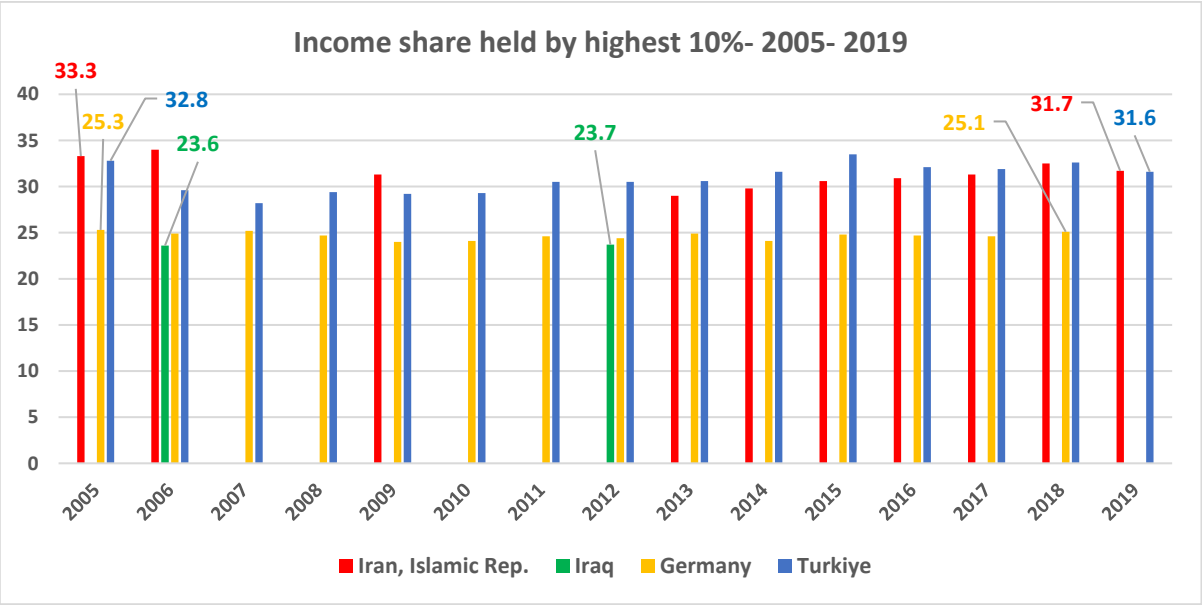
The HCI calculates the contributions of health and education to worker productivity. The final index score ranges from zero to one and measures the productivity as a future worker of child born today relative to the benchmark of full health and complete education.

شاخص HCI سهم بهداشت و درمان و آموزش را در بهره وری کارگران محاسبه می کند. امتیاز شاخص نهایی از صفر تا یک متغیر است و بهره وری را به عنوان کارگر آینده کودکی که امروز متولد می شود نسبت به معیار سلامت کامل و آموزش کامل اندازه گیری می کند.

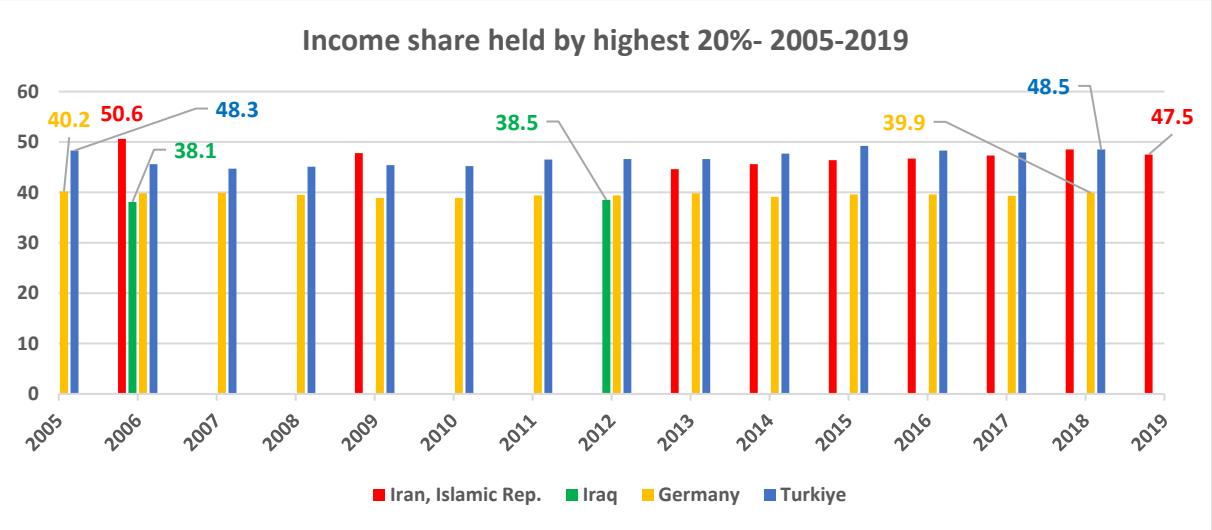
https://data.worldbank.org/indicator/HD.HCI.OVRL?contextual=default&end=2021&locations=IR-IQ-DE-TR-SA&start=1960&type=shaded&view=map&year=1989



https://data.worldbank.org/indicator/SI.POV.GINI?contextual=default&end=2019&locations=IR-IQ-DE-TR-SA&start=1986&type=shaded&view=chart



https://data.worldbank.org/indicator/SI.DST.10TH.10?end=2020&locations=IR-DE-TR-SA-IQ&start=2009&type=shaded&view=chart



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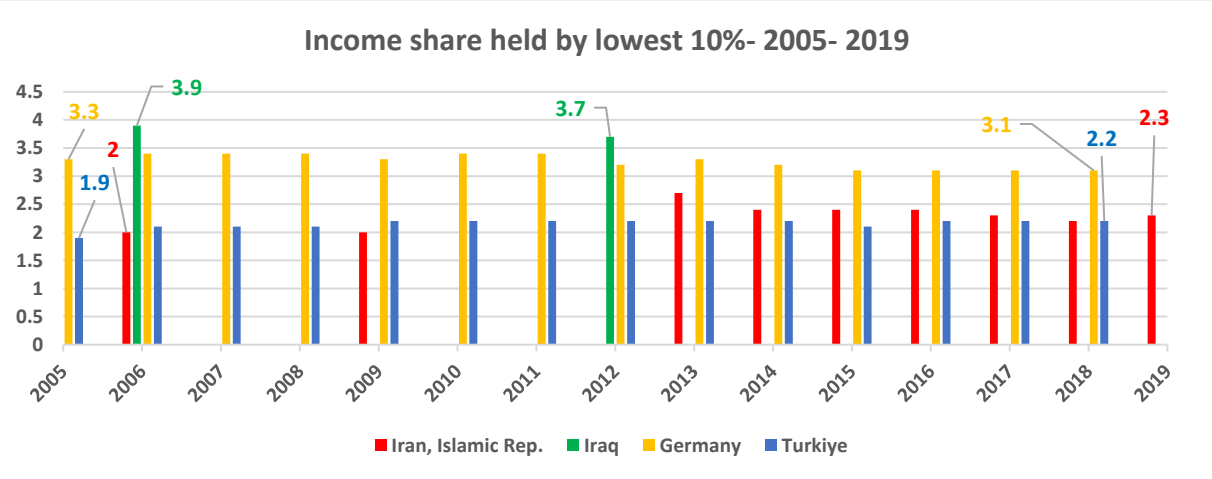

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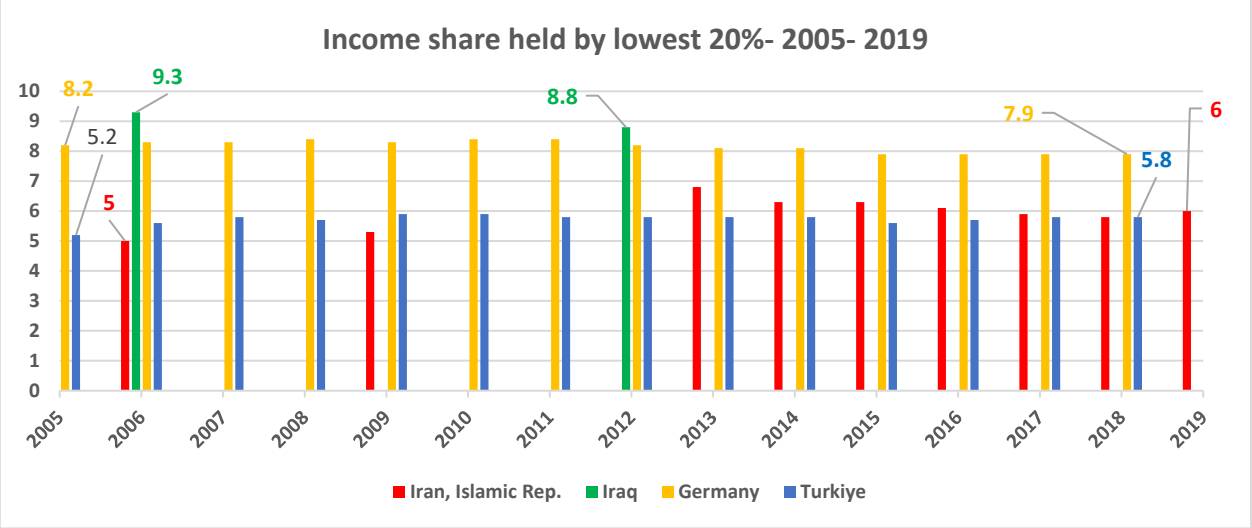
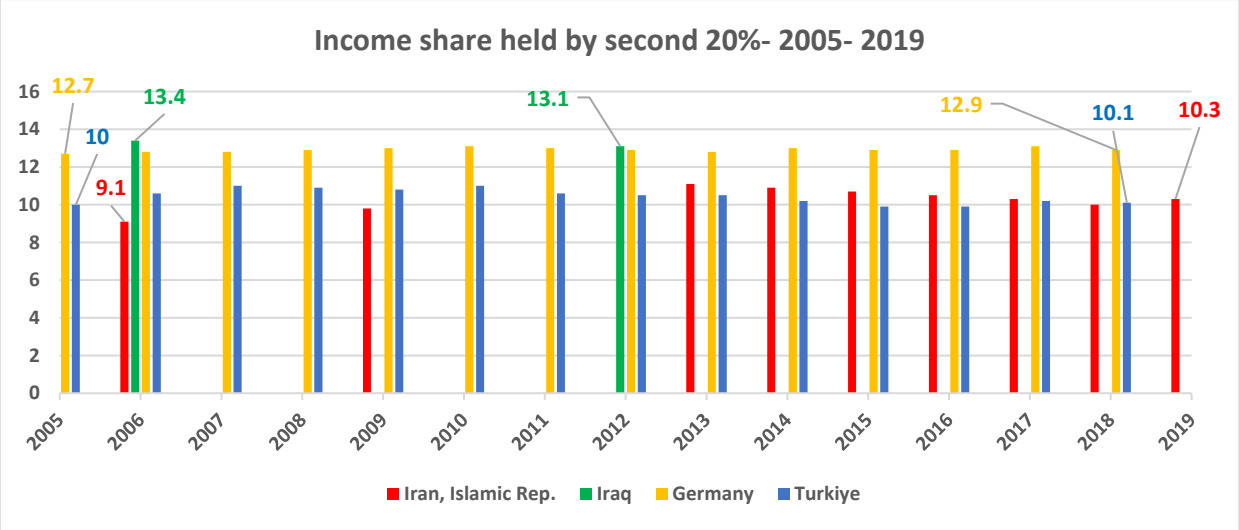
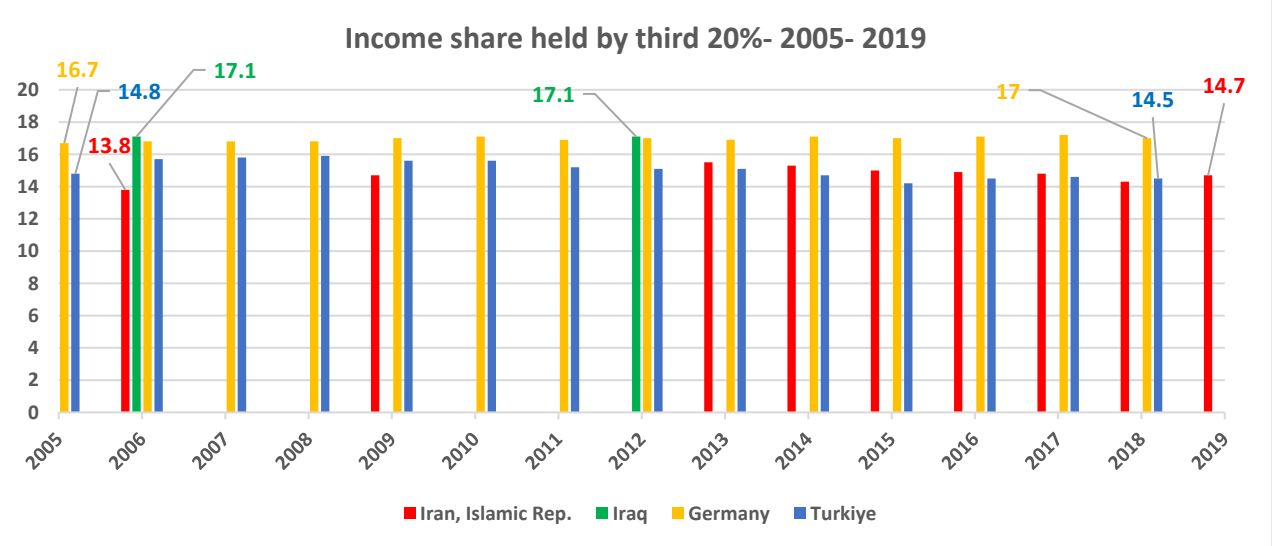


https://data.worldbank.org/indicator/SI.DST.FRST.20?locations=IR-ID-MY



https://data.worldbank.org/indicator/SI.DST.02ND.20?end=2020&locations=IR-DE-TR-SA-IQ&start=2009&type=shaded&view=chart



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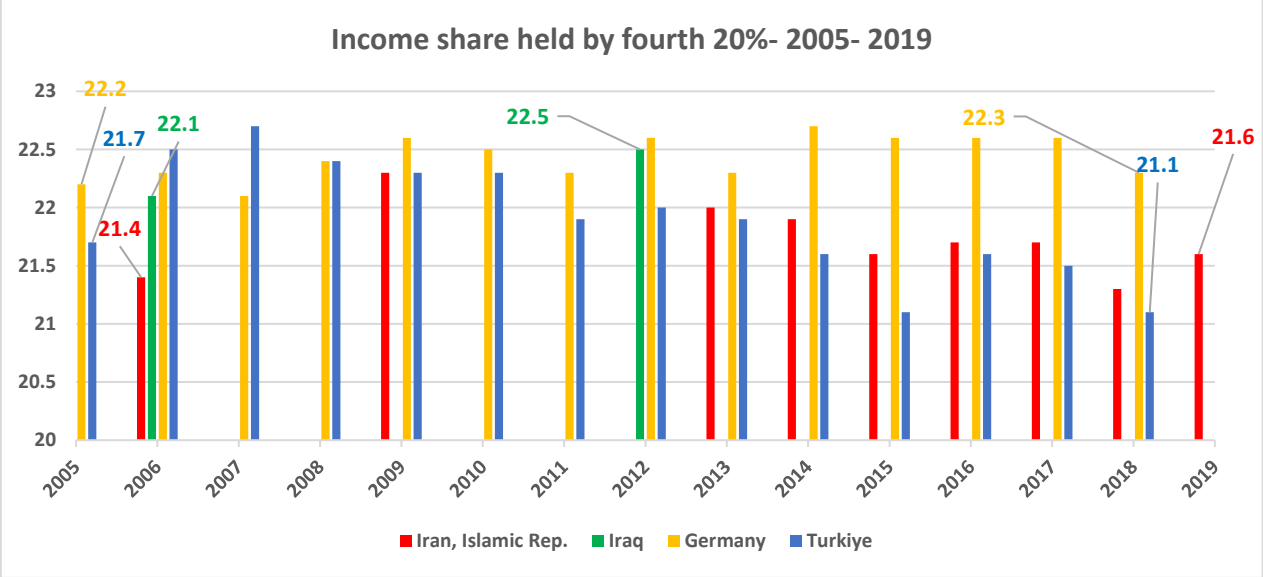

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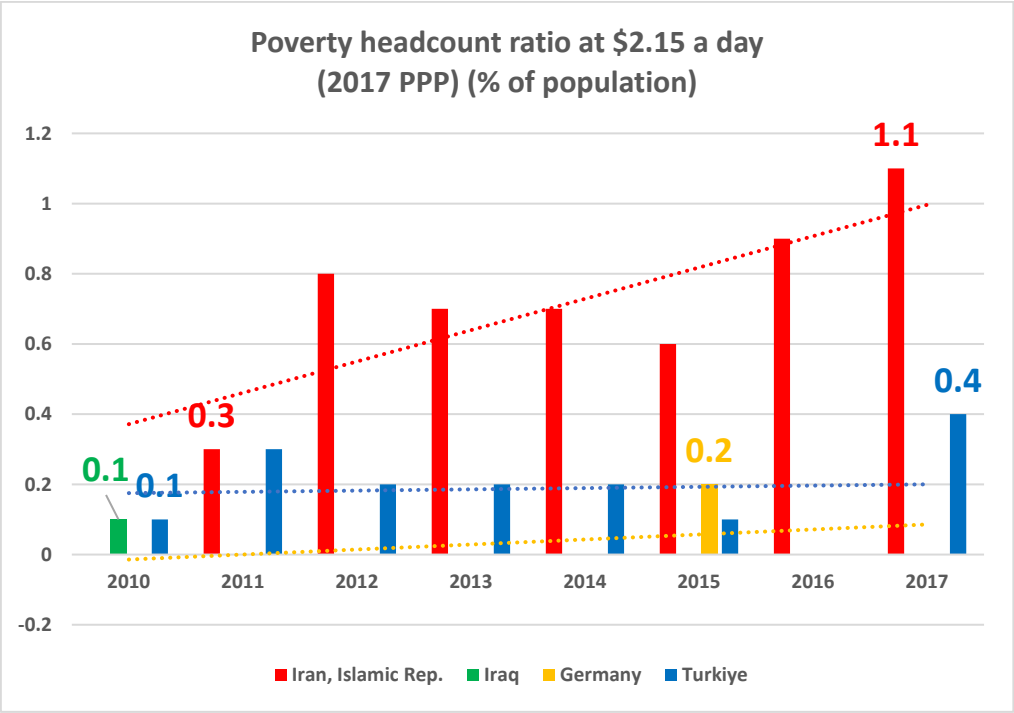
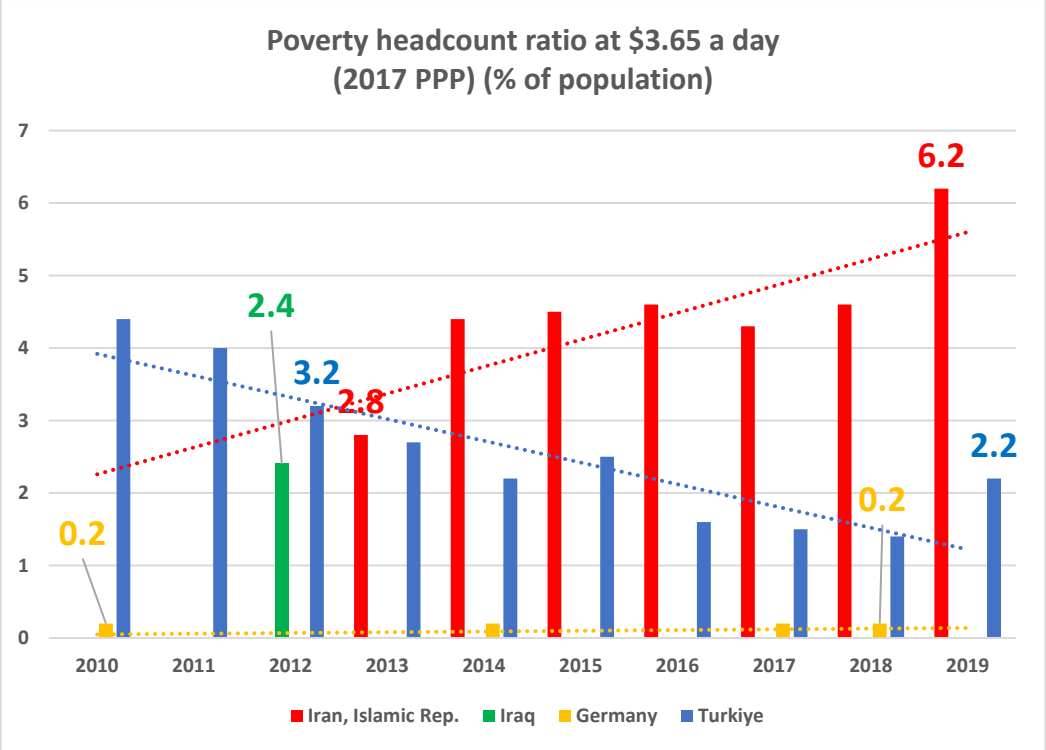


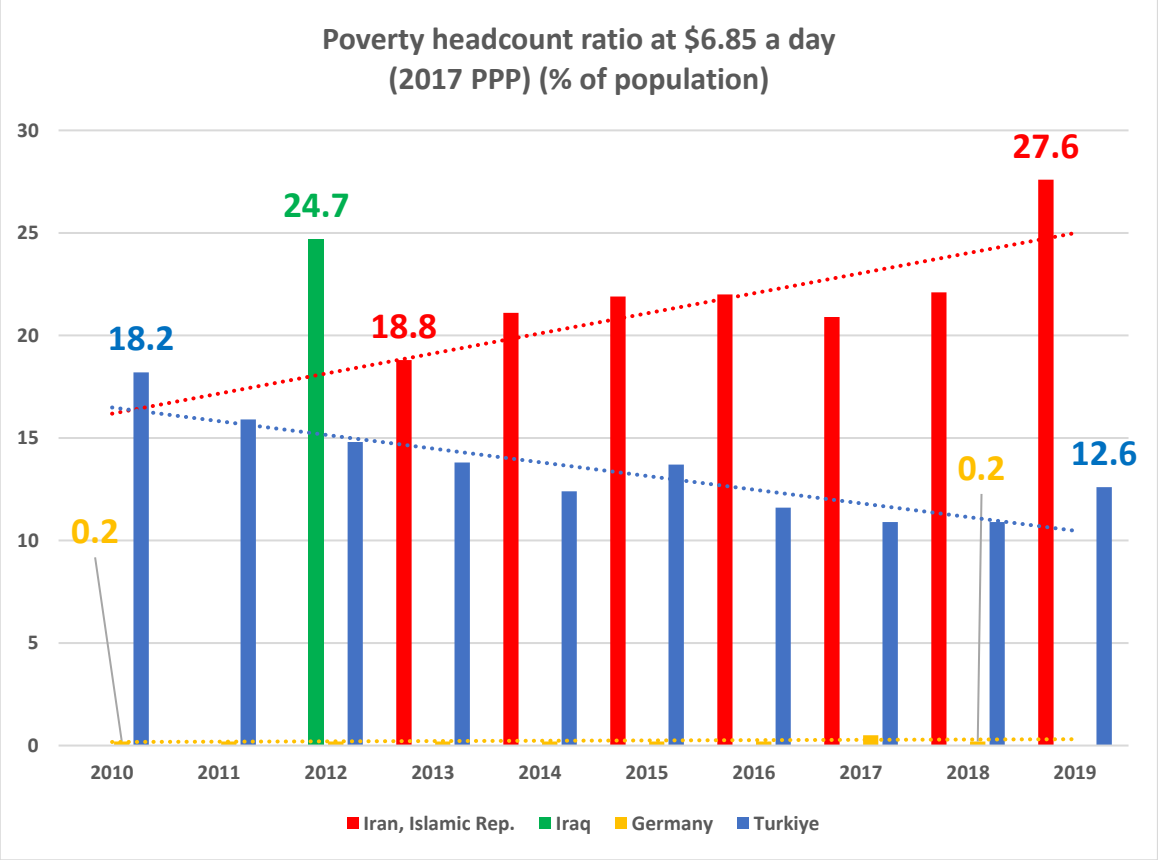
PPP/purchasing power parity conversion factor is the number of units of a country's currency required to buy the same amounts of goods and services in the domestic market as U.S. dollar would buy in the United States. This **conversion factor is** for GDP.

ضریب تبدیل قدرت برابری خرید (PPP/purchasing power parity conversion factor) عبارت است از؛ تعداد واحدهای پول یک کشورمورد نیازبرای خرید میزان مشخصی از کالا و خدمات در بازار داخلی همان کشور در مقایسه با تعداد دلار آمریکا مورد نیاز برای خرید میزان مشابه از کالا و خدمات در کشور آمریکا. از این ضریب تبدیل برای محاسبه "تولید ناخالص داخلی/GDP" هر کشور استفاده می گردد.

https://data.worldbank.org/indicator/SI.POV.DDAY?end=2019&locations=IR-DE-TR-SA-IQ&start=2010&type=shaded&view=chart



https://data.worldbank.org/indicator/SI.POV.LMIC?end=2019&locations=IR-DE-TR-SA-IQ&start=2010&type=shaded&view=chart



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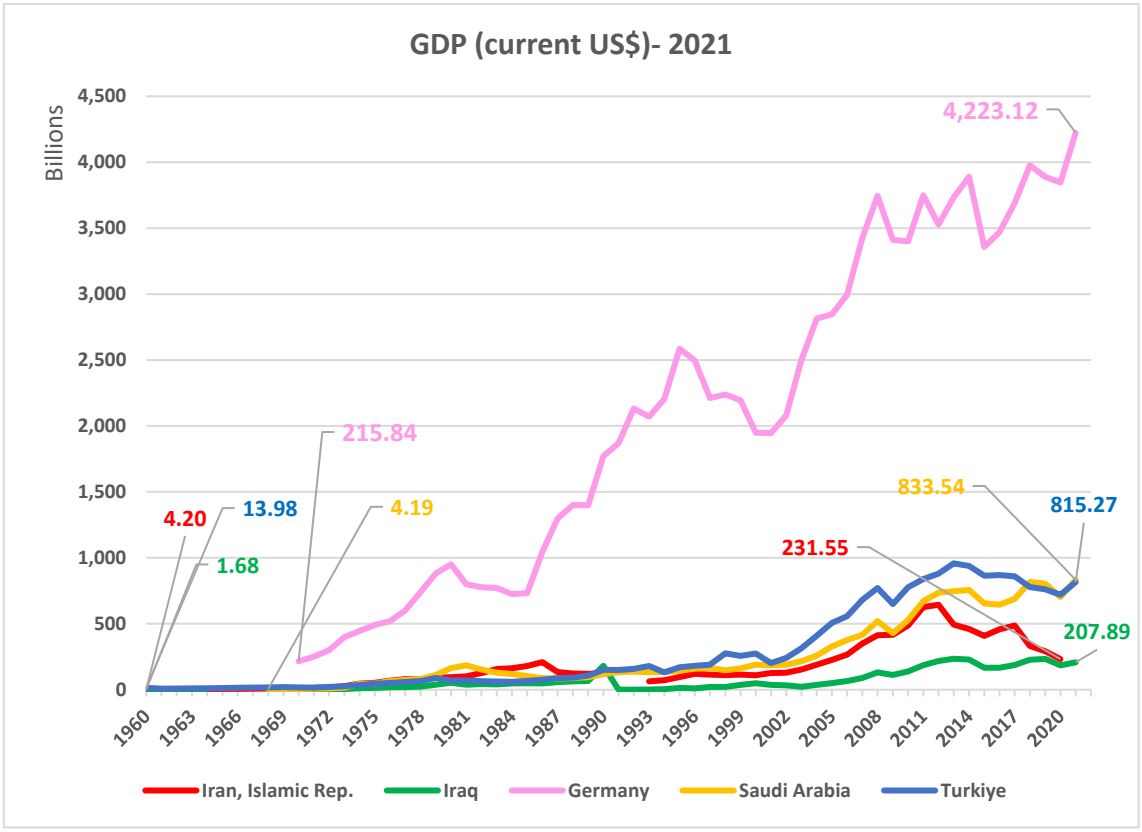
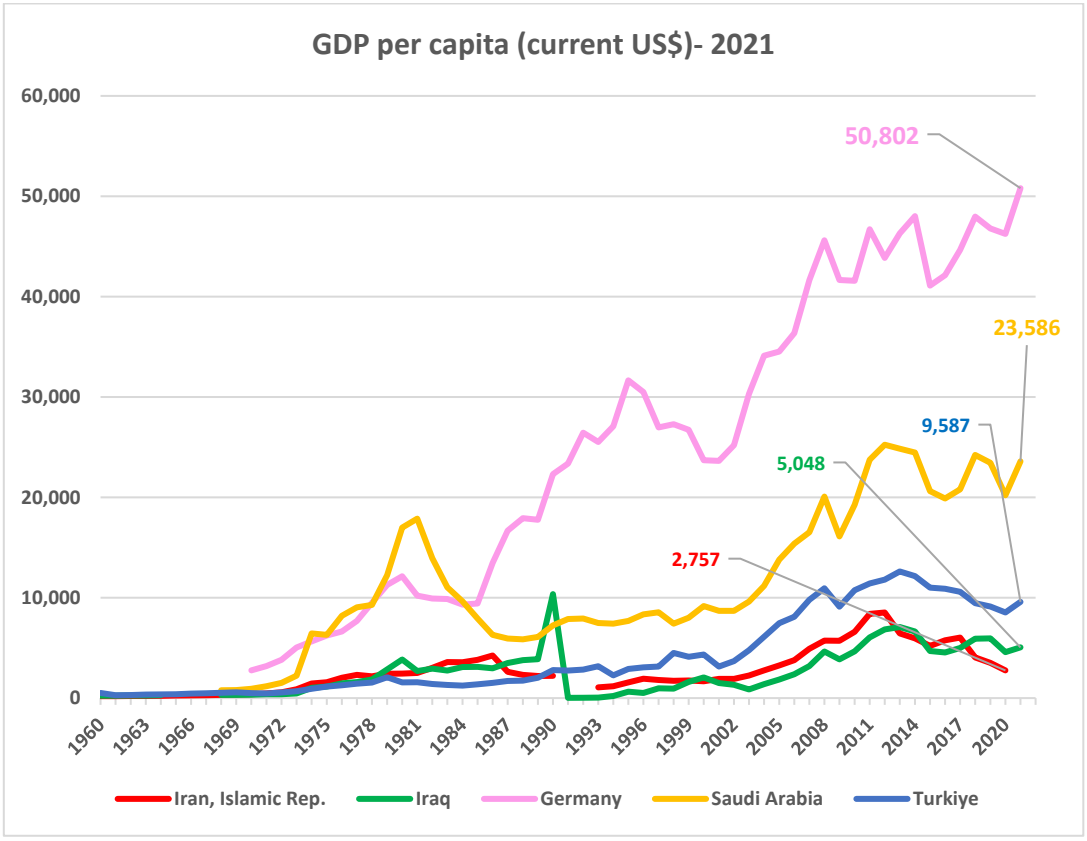
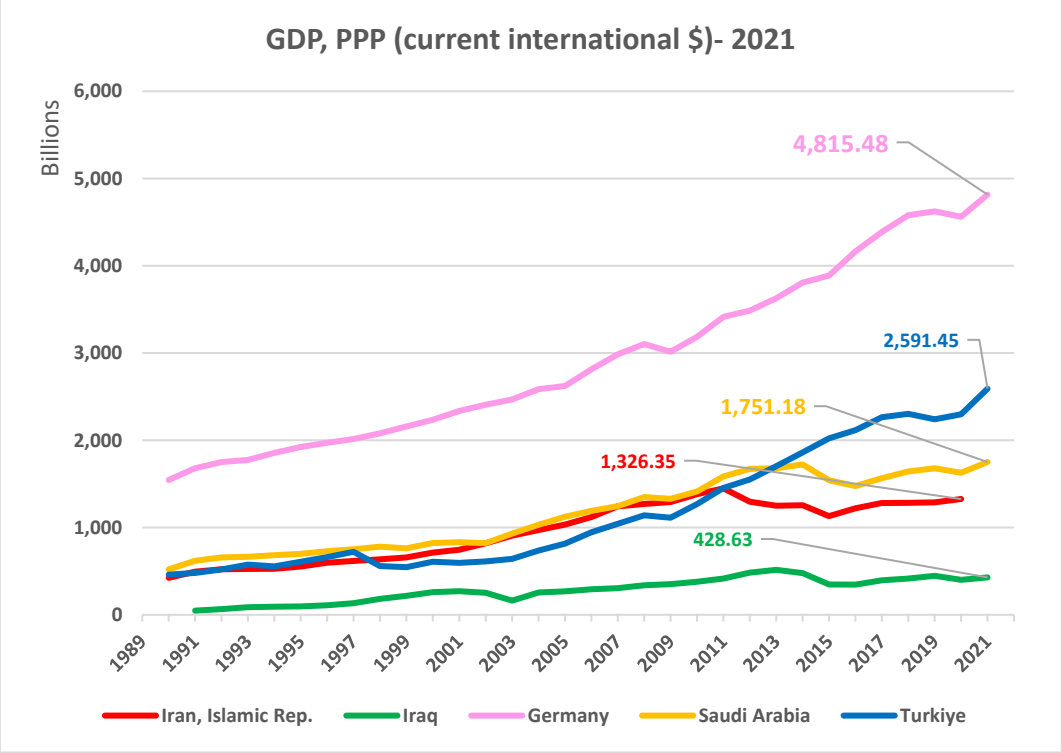
https://data.worldbank.org/indicator/SI.POV.UMIC?end=2019&locations=IR-DE-TR-SA-IQ&start=2010&type=shaded&view=chart



https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2019&locations=IR-IQ-DE-TR-SA&start=1986&type=shaded&view=chart



https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.CD?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart

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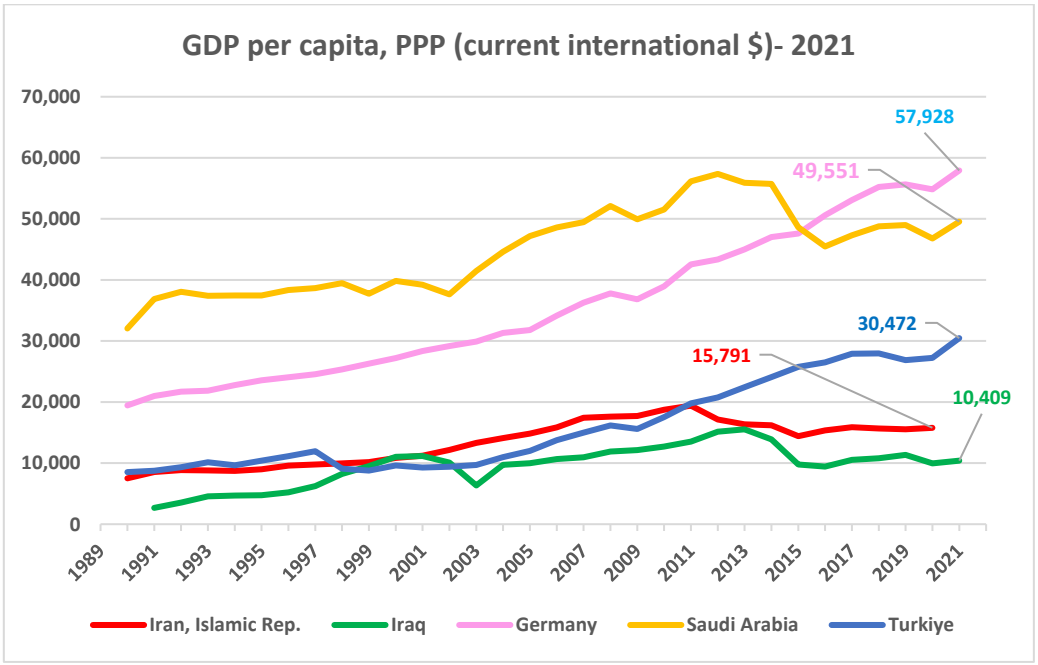
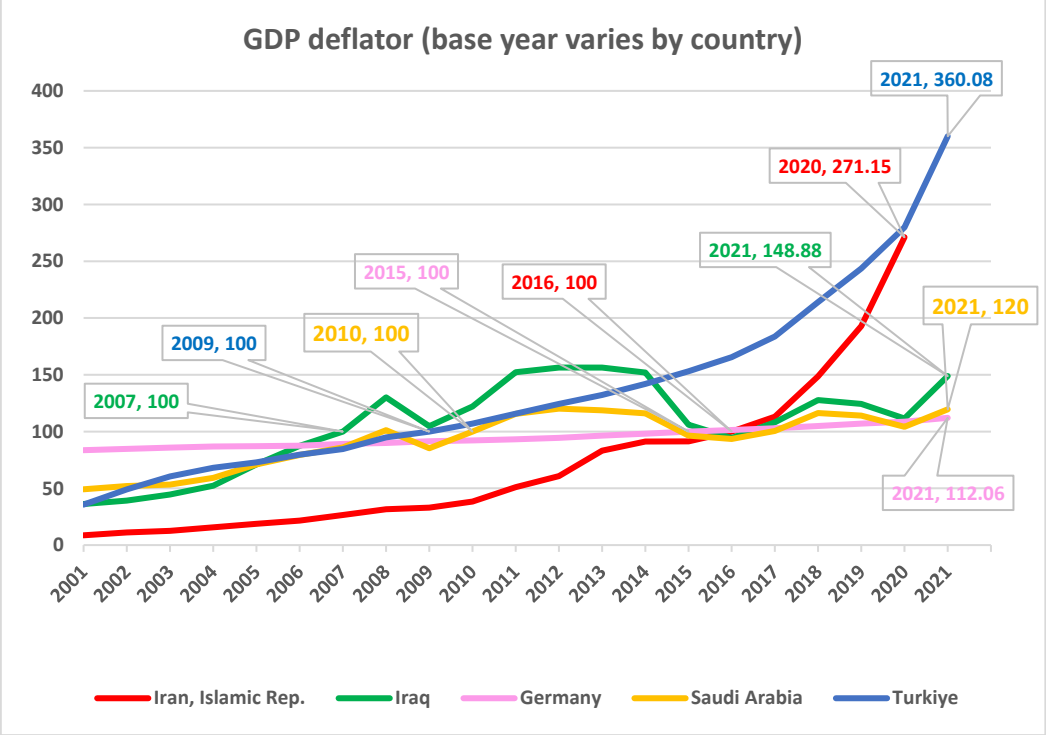


https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



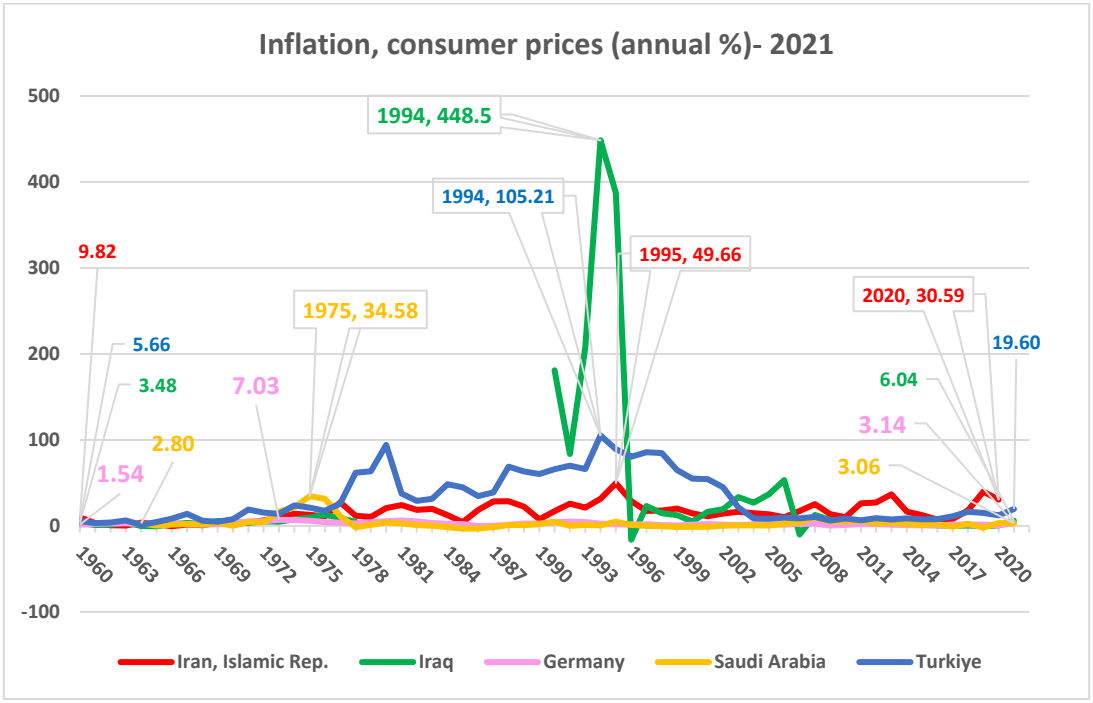
The GDP implicit deflator is the ratio of GDP in current local currency to GDP in constant local currency. The base year varies by country.

شاخص ضمنی تعدیل کننده تولید ناخالص داخلی (GDP deflator/ GDP implicit deflator)؛ عبارت است از **نسبت "تولید ناخالص داخلی"** بر حسب ارزش فعلی پول ملی هر کشور **به "تولید ناخالص داخلی"** بر حسب ارزش ثابت پول ملی همان کشور(سال مبنا در هر کشور متفاوت است).

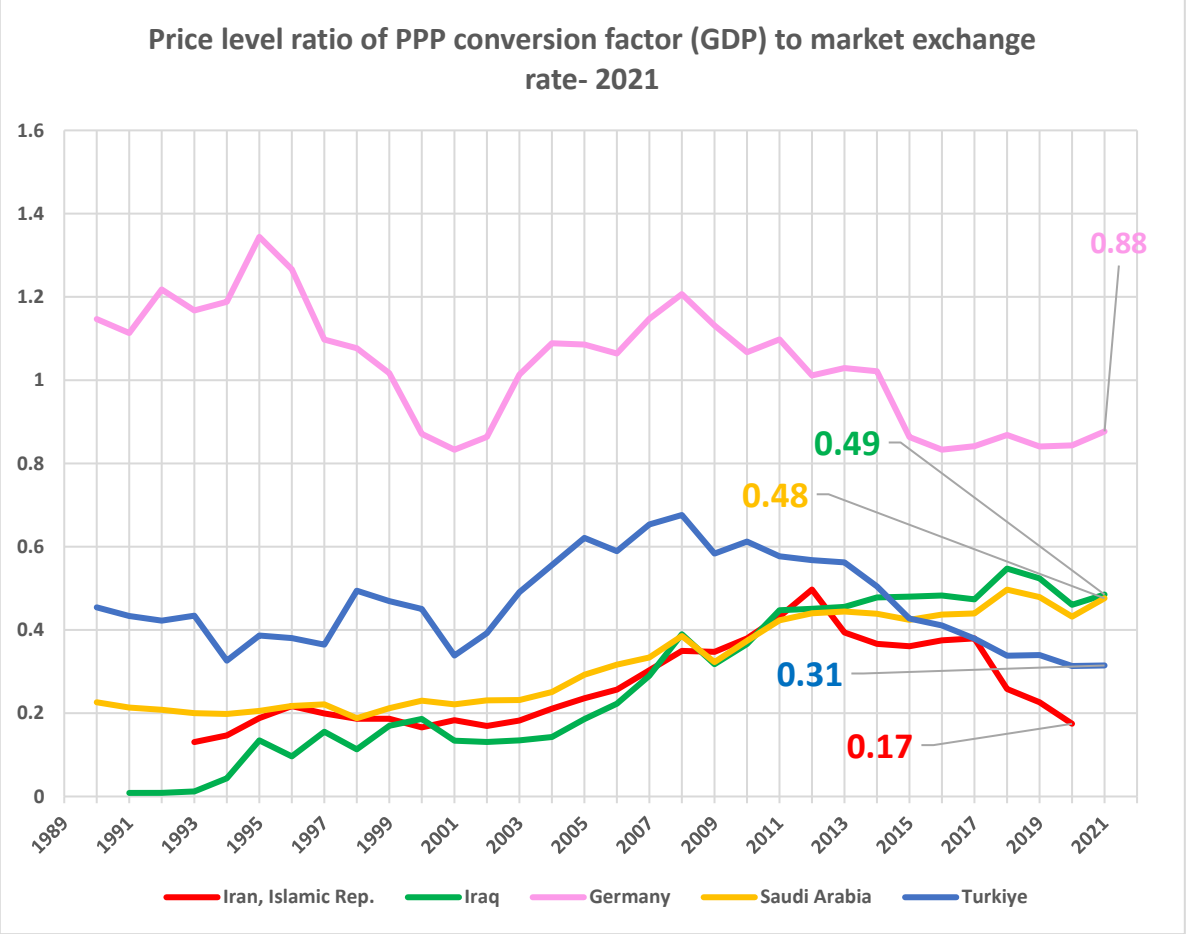
شاخص ضمنی تعدیل کننده تولید ناخالص داخلی، یک شاخص اقتصادی است که اثر تورم در **تولید ناخالص داخلی** هر کشور در هر سال را با مقایسه با سال مبنا همان کشور مشخص می نماید.

این شاخص خاص نشان می دهد که چه میزان از تغییرات در **تولید ناخالص داخلی** بعد ازسال مبنا، در اثر تغییرات در سطح قیمت ها می باشد.

https://data.worldbank.org/indicator/NY.GDP.DEFL.ZS?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



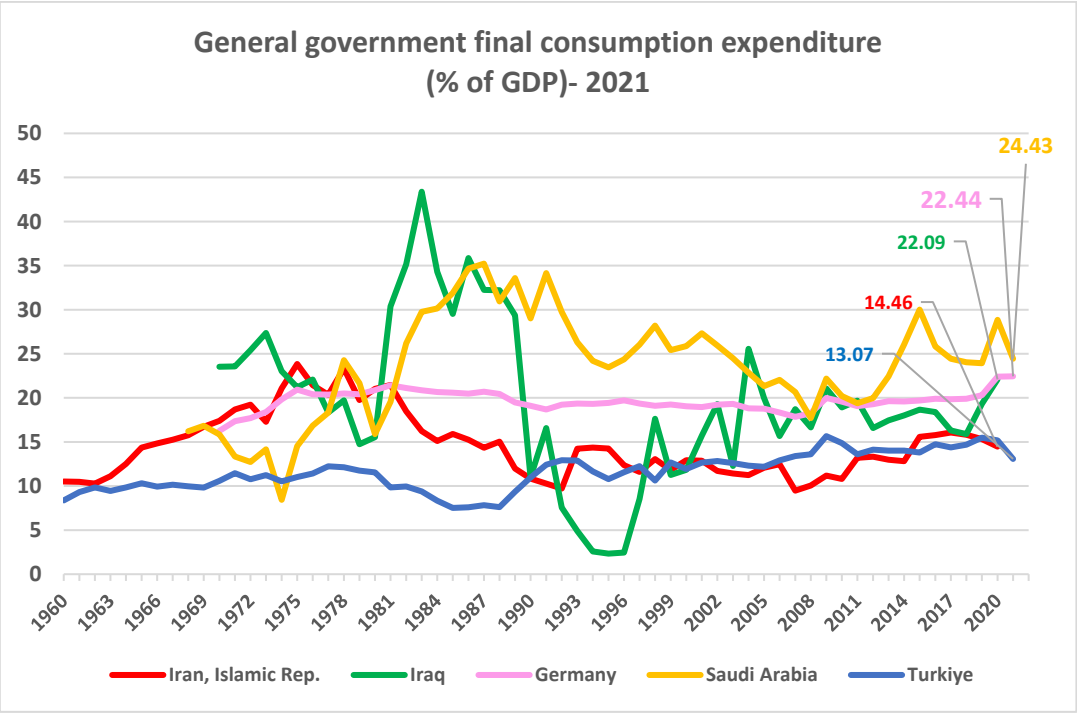
https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



Price level ratio of PPP conversion factor (GDP) to market exchange rate tells "how many dollars are needed to buy a dollar's worth of goods in the country as compared to the United States."

نسبت "سطح قیمت ضریب تبدیل قدرت برابری خرید (تولید ناخالص داخلی)" به "نرخ ارز در بازار یک کشور"؛ مبین تعداد دلارمورد نیاز برای خرید کالا به ارزش یک دلار در آن کشور در مقایسه با آمریکاست.

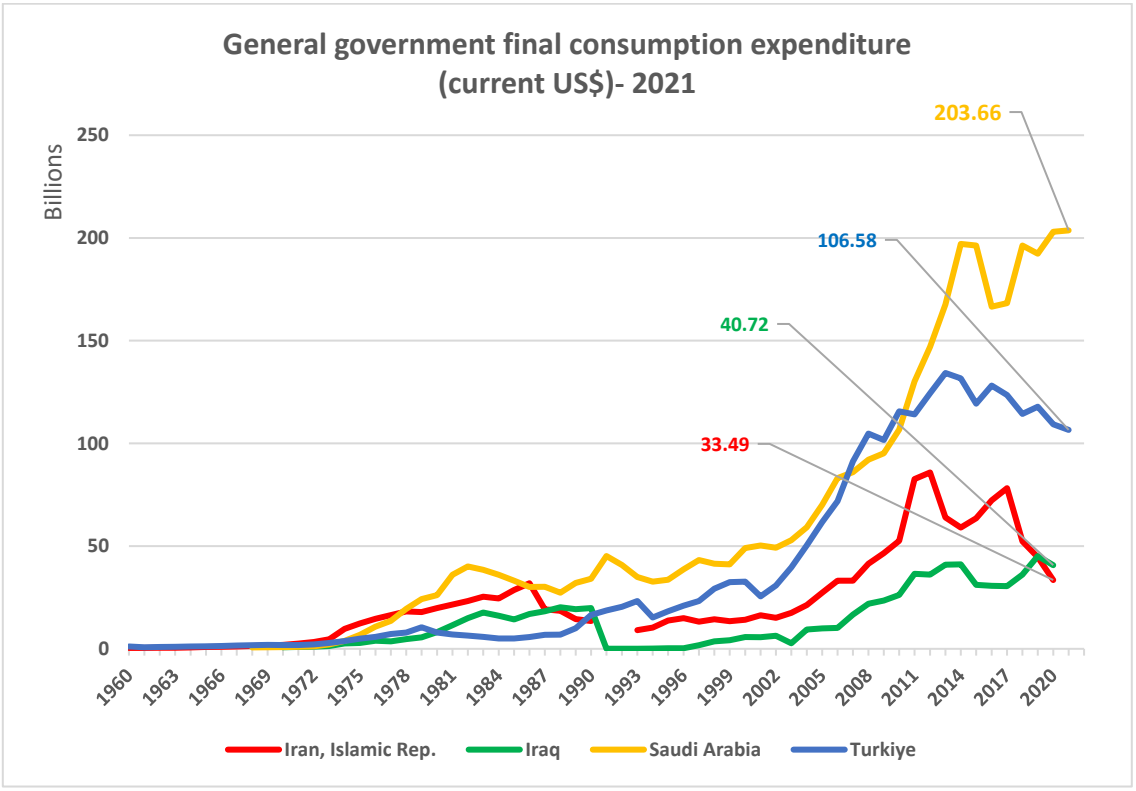
https://data.worldbank.org/indicator/PA.NUS.PPPC.RF?end=2021&locations=IR-DE-TR-SA-IQ&start=1990&type=shaded&view=chart



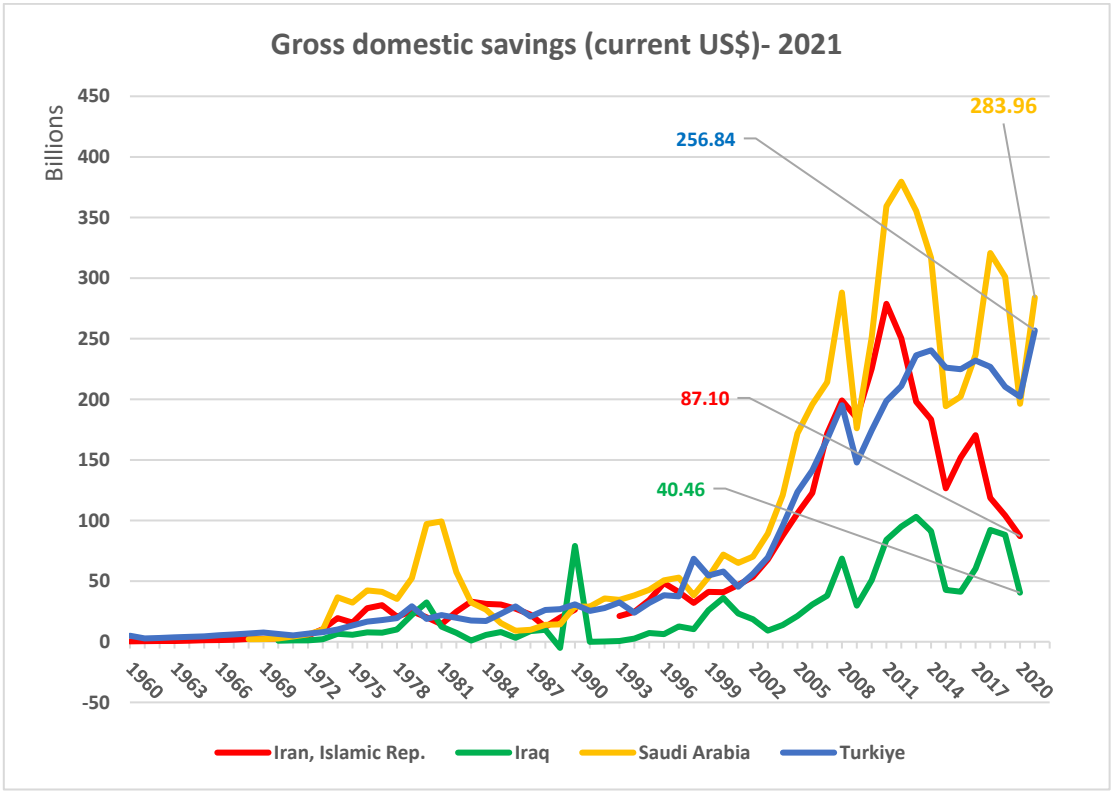
General government final consumption expenditure includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation.

مخارج مصرف نهایی عمومی دولت، شامل تمام مخارج جاری دولت برای خرید کالاها و خدمات (از جمله حقوق و مزایای کارکنان) است. همچنین شامل بیشتر هزینه‌های دفاع و امنیت ملی می‌شود، اما هزینه‌های نظامی دولت که بخشی از تشکیل سرمایه دولت است را در بر نمی‌گیرد.

https://data.worldbank.org/indicator/NE.CON.GOVT.ZS?end=2021&locations=IR-DE-TR-SA-IQ&start=2000&type=shaded&view=chart



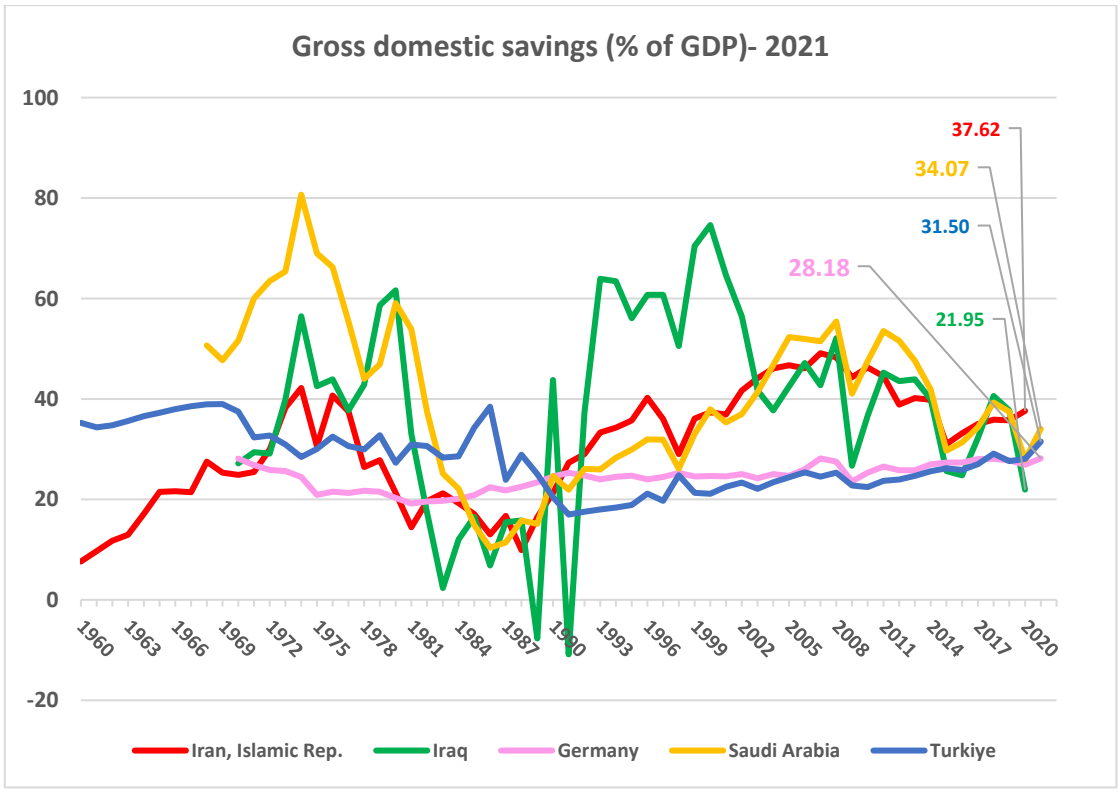
https://data.worldbank.org/indicator/NE.CON.TOTL.CD?end=2021&locations=IR-DE-TR-SA-IQ&start=2000&type=shaded&view=chart



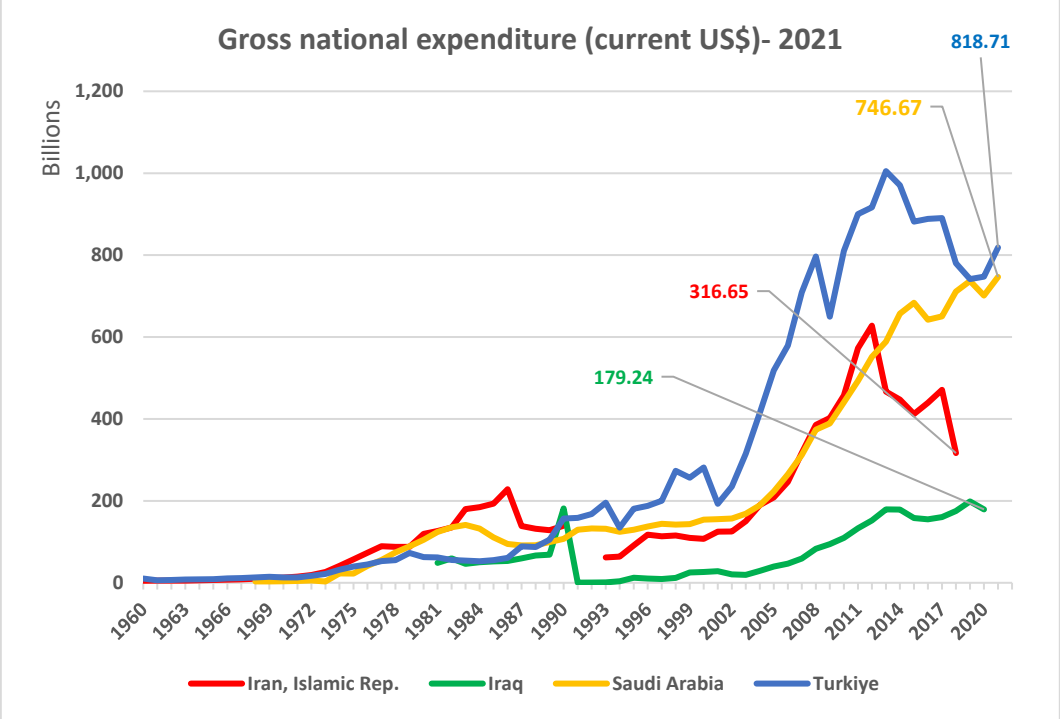
Gross domestic savings are calculated as GDP less final consumption expenditure (total consumption). Data are in current U.S. dollars.

پس انداز ناخالص داخلی، به عنوان "تولید ناخالص داخلی" منهای "مخارج مصرف نهایی (مصرف کل)" محاسبه می شود. داده ها به دلار آمریکا هستند.

https://data.worldbank.org/indicator/NY.GDS.TOTL.CD?end=2021&locations=IR-DE-TR-SA-IQ&start=2000&type=shaded&view=chart



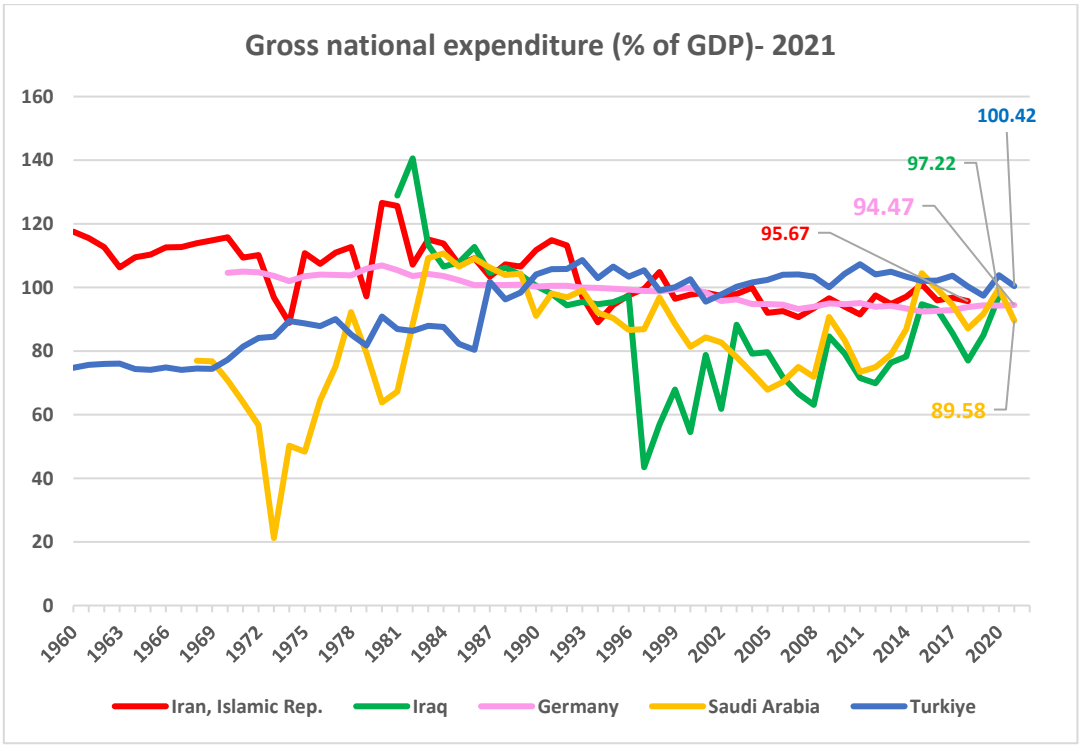
https://data.worldbank.org/indicator/NY.GDS.TOTL.ZS?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



Gross national expenditure is the sum of household final consumption expenditure, general government final consumption expenditure, and gross capital formation. Data are in current U.S. dollars.

مخارج ناخالص ملی، عبارت است از مجموع مخارج مصرف نهایی خانوار، مخارج مصرف نهایی عمومی دولت و تشکیل سرمایه ناخالص دولت.

https://data.worldbank.org/indicator/NE.DAB.TOTL.CD?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



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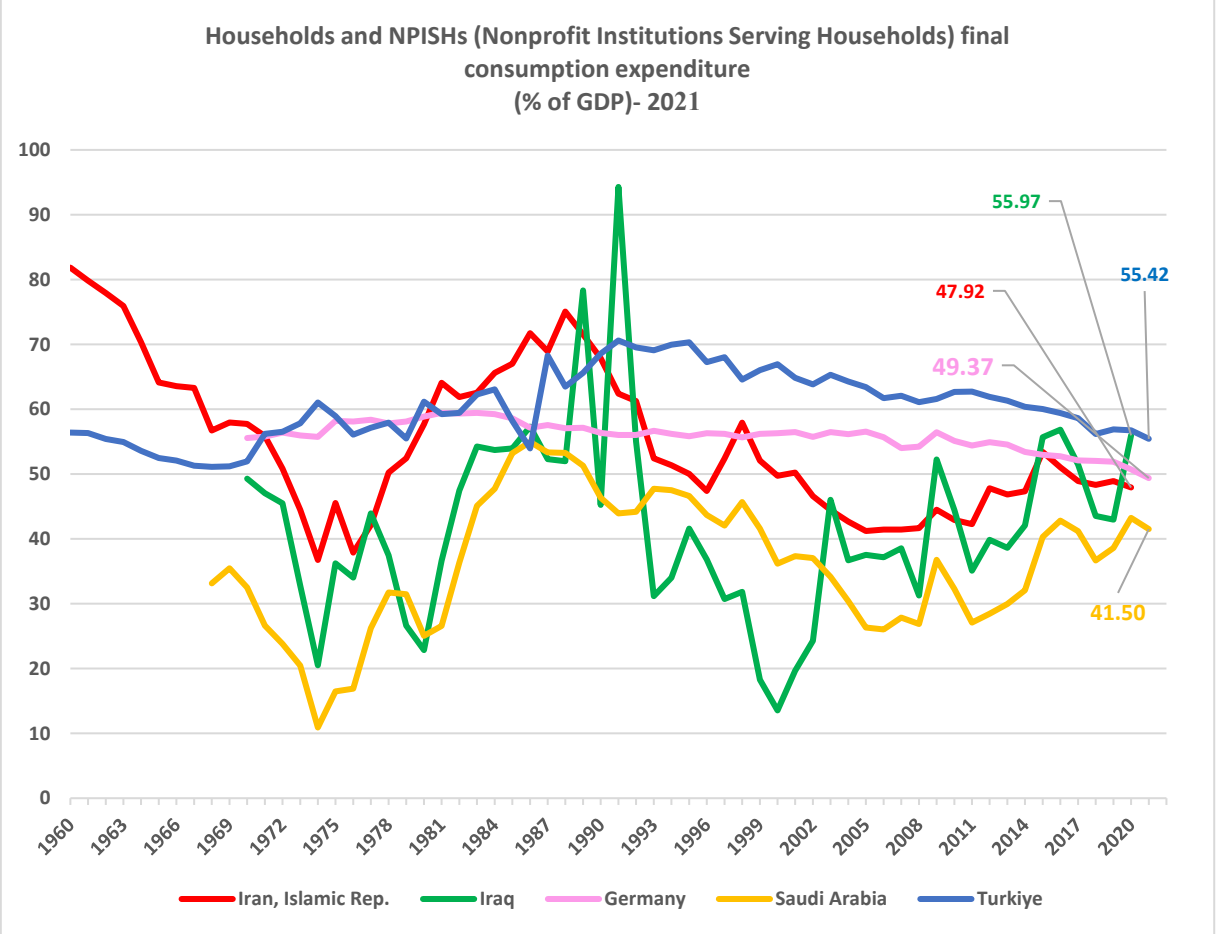
مخارج ناخالص ملی مجموع مخارج مصرف نهایی خانوار، مخارج مصرف نهایی دولت عمومی و تشکیل سرمایه ناخالص است. داده ها به دلار آمریکا هستند.

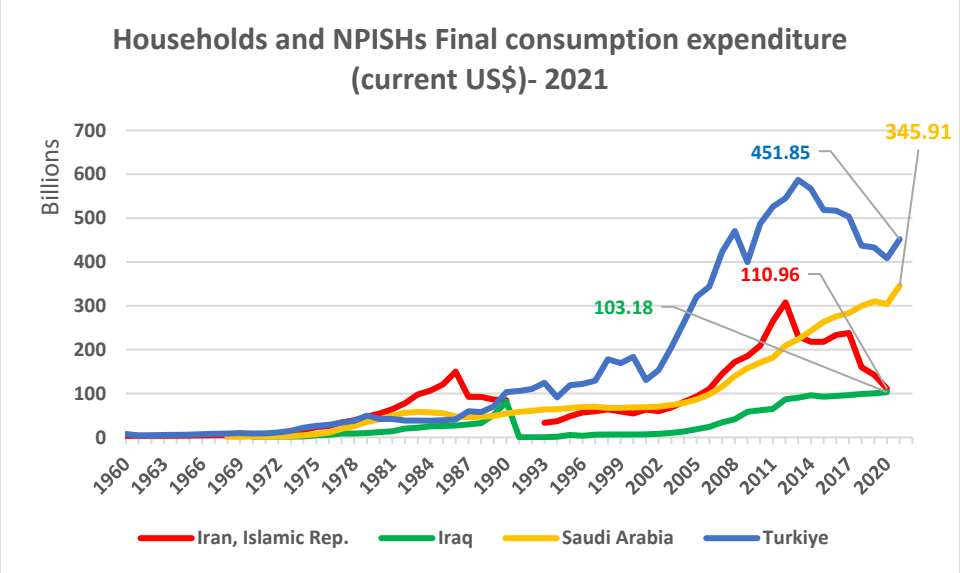
https://data.worldbank.org/indicator/NE.DAB.TOTL.ZS?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



Household final consumption expenditure is the market value of all goods and services, including durable products (such as cars, washing machines, and home computers), purchased by households. It excludes purchases of dwellings but includes imputed rent for owner-occupied dwellings. It also includes payments and fees to governments to obtain permits and licenses. Here, household consumption expenditure includes the expenditures of **Nonprofit Institutions Serving Households (NPISHs)**, even when reported separately by the country. This item also includes any statistical discrepancy in the use of resources relative to the supply of resources.

مخارج مصرف نهایی خانوار، ارزش بازار همه کالاها و خدمات، از جمله محصولات بادوام (مانند ماشین، ماشین لباسشویی و کامپیوترهای خانگی) است که توسط خانوارها خریداری می شود. این شاخص شامل خرید مسکن نمی‌شود، اما شامل اجاره بهای محل اقامت خانوار می‌شود. همچنین شامل پرداخت‌ها و هزینه‌هایی به دولت‌ها برای دریافت انواع مجوزها می‌شود. در این شاخص، مخارج مصرفی خانوارها، شامل "مخارج مؤسسات غیرانتفاعی خدمت به خانوارها" (NPISH) می‌شود، حتی اگر به طور جداگانه توسط کشورها گزارش شود. این آیتم همچنین شامل هرگونه مغایرت آماری در "استفاده از منابع"، نسبت به "تامین منابع" است.

https://data.worldbank.org/indicator/NE.CON.PRVT.ZS?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



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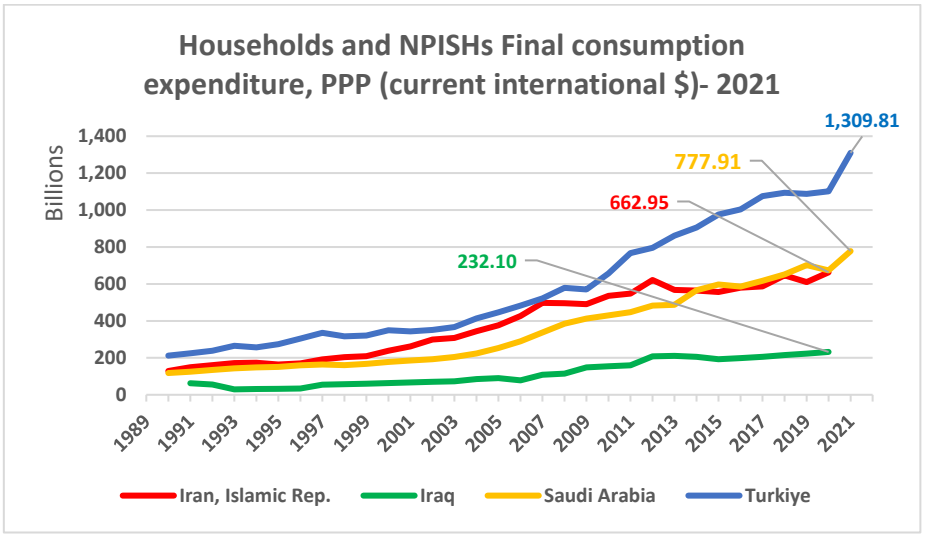
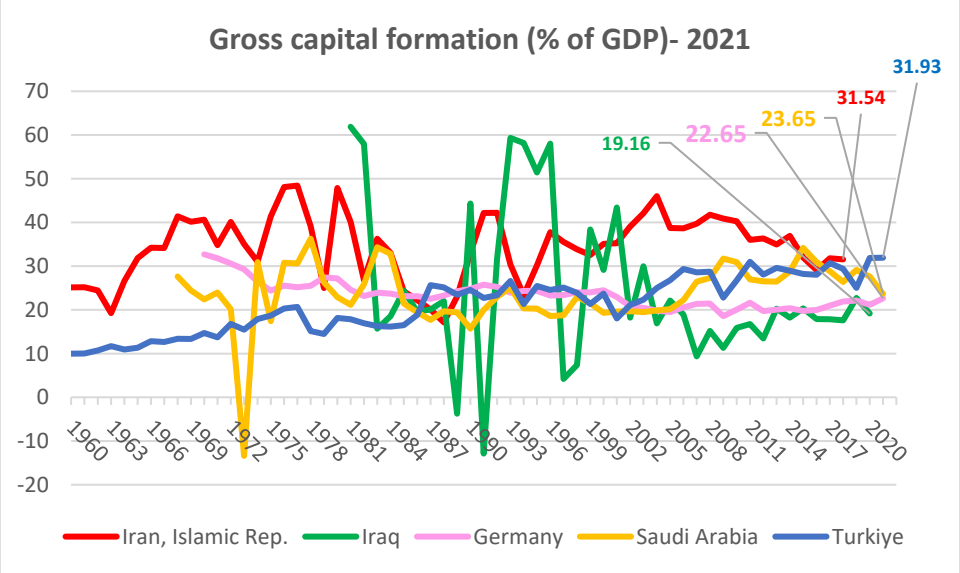
https://data.worldbank.org/indicator/NE.CON.PRVT.CD?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



PPP/purchasing power parity conversion factor is the number of units of a country's currency required to buy the same amounts of goods and services in the domestic market as U.S. dollar would buy in the United States. This **conversion factor is** for GDP.

ضریب تبدیل قدرت برابری خرید (PPP/purchasing power parity conversion factor) عبارت است از؛ تعداد واحدهای پول یک کشورمورد نیازبرای خرید میزان مشخصی از کالا و خدمات در بازار داخلی همان کشور در مقایسه با تعداد دلار آمریکا مورد نیاز برای خرید میزان مشابه از کالا و خدمات در کشور آمریکا. از این ضریب تبدیل برای محاسبه "تولید ناخالص داخلی/GDP" هر کشور استفاده می گردد.

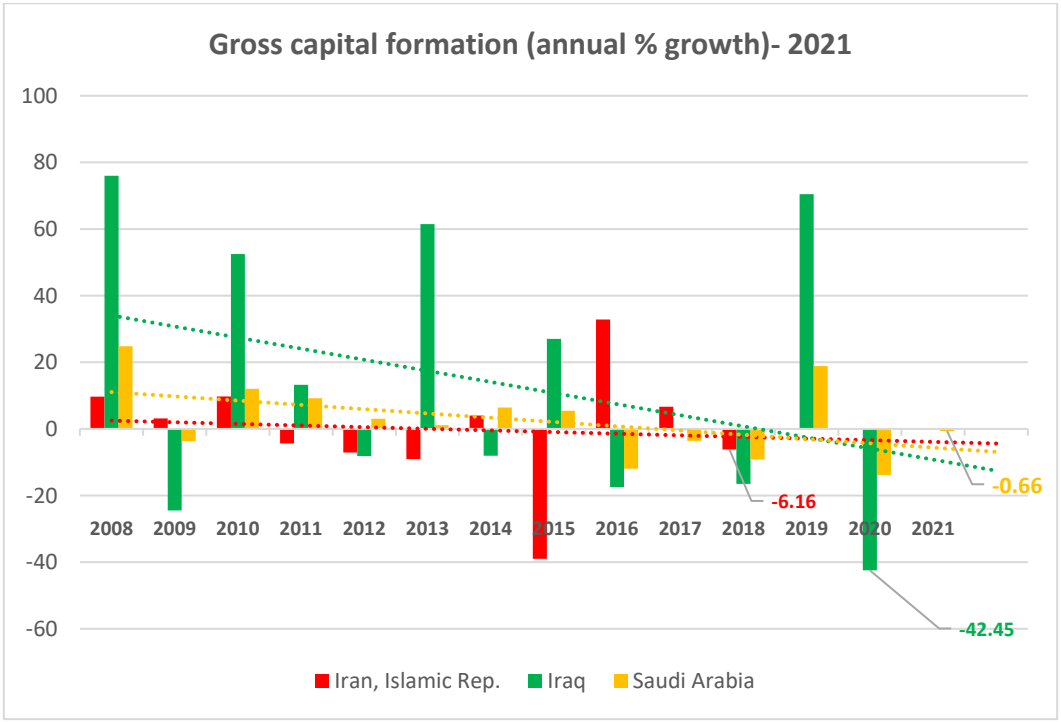
https://data.worldbank.org/indicator/NE.CON.PRVT.PP.CD?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



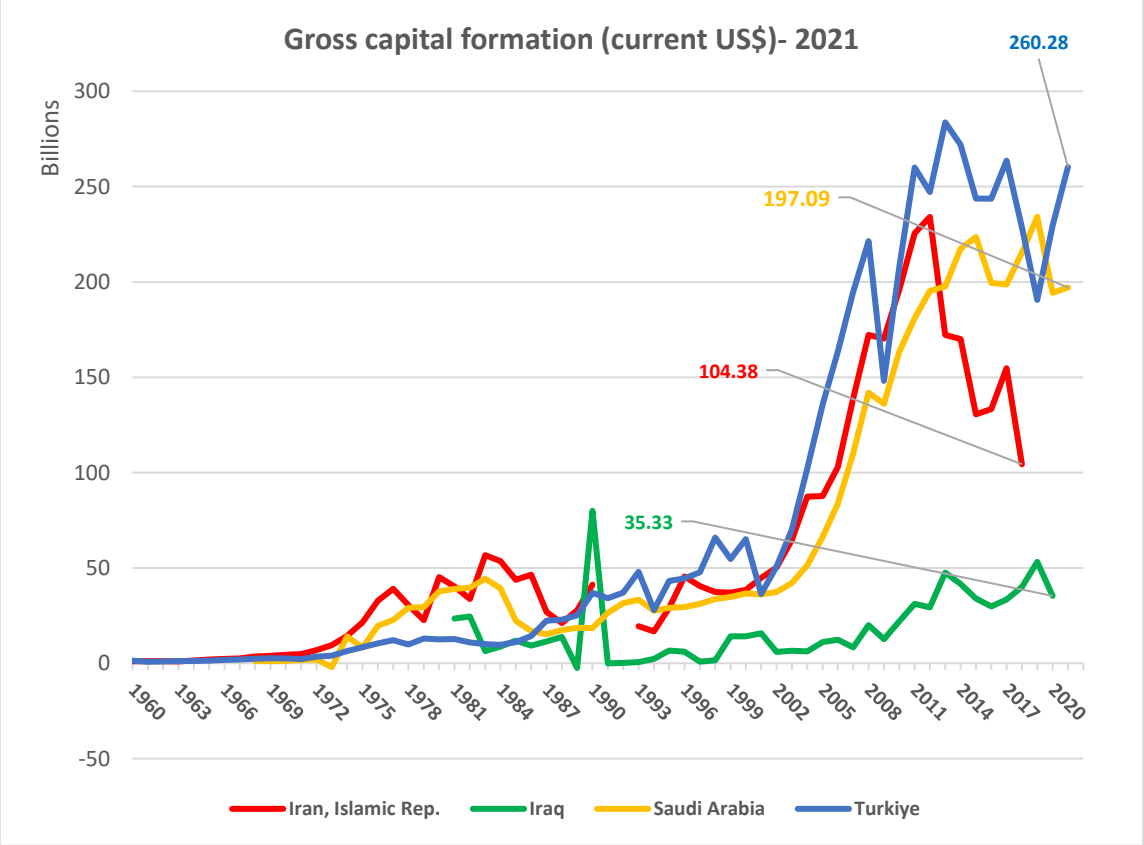
Gross capital formation consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories. Fixed assets include land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. Inventories are stocks of goods held by firms to meet temporary or unexpected fluctuations in production or sales, and "work in progress." According to the 1993 SNA (System of National Accounts), net acquisitions of valuables are also considered capital formation.

تشکیل سرمایه ناخالص شامل، هزینه‌های اضافی به دارایی‌های ثابت هر اقتصاد (کشور) به اضافه تغییرات خالص در سطح موجودی‌ها است. دارایی های ثابت شامل بهسازی زمین (حصارها، خندق ها، زهکش ها و غیره) است. خرید کارخانه، ماشین آلات و تجهیزات؛ و احداث راه و راه آهن و مانند آن اعم از مدارس، ادارات، بیمارستان ها، خانه های مسکونی خصوصی و ساختمان های تجاری و صنعتی. موجودی ها، ذخایر کالاهایی هستند که توسط شرکت ها برای پاسخگویی به نوسانات موقت یا غیرمنتظره در تولید یا فروش، و "کار در حال انجام" نگهداری می شوند. طبق گزارش SNA (سیستم حسابهای ملی) سال 1993، خالص تملک اشیاء با ارزش نیز تشکیل سرمایه محسوب می شود.

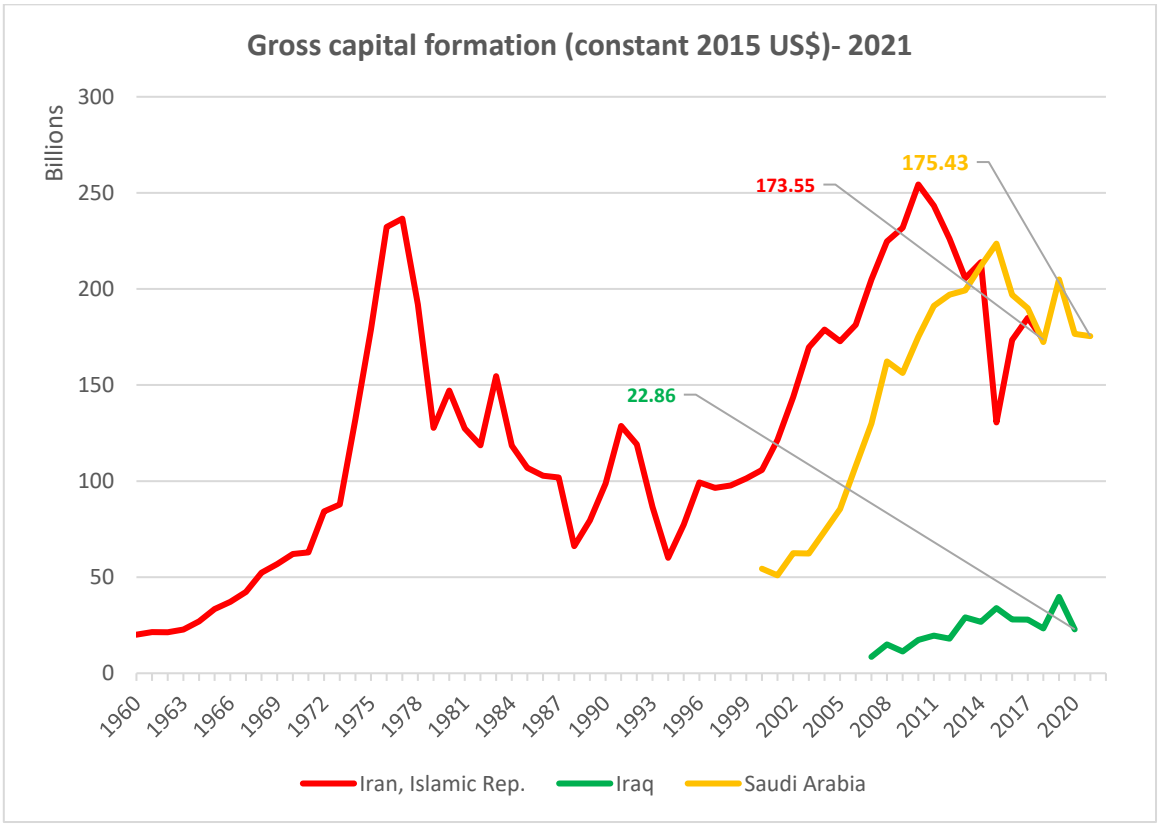
https://data.worldbank.org/indicator/NE.GDI.TOTL.ZS?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



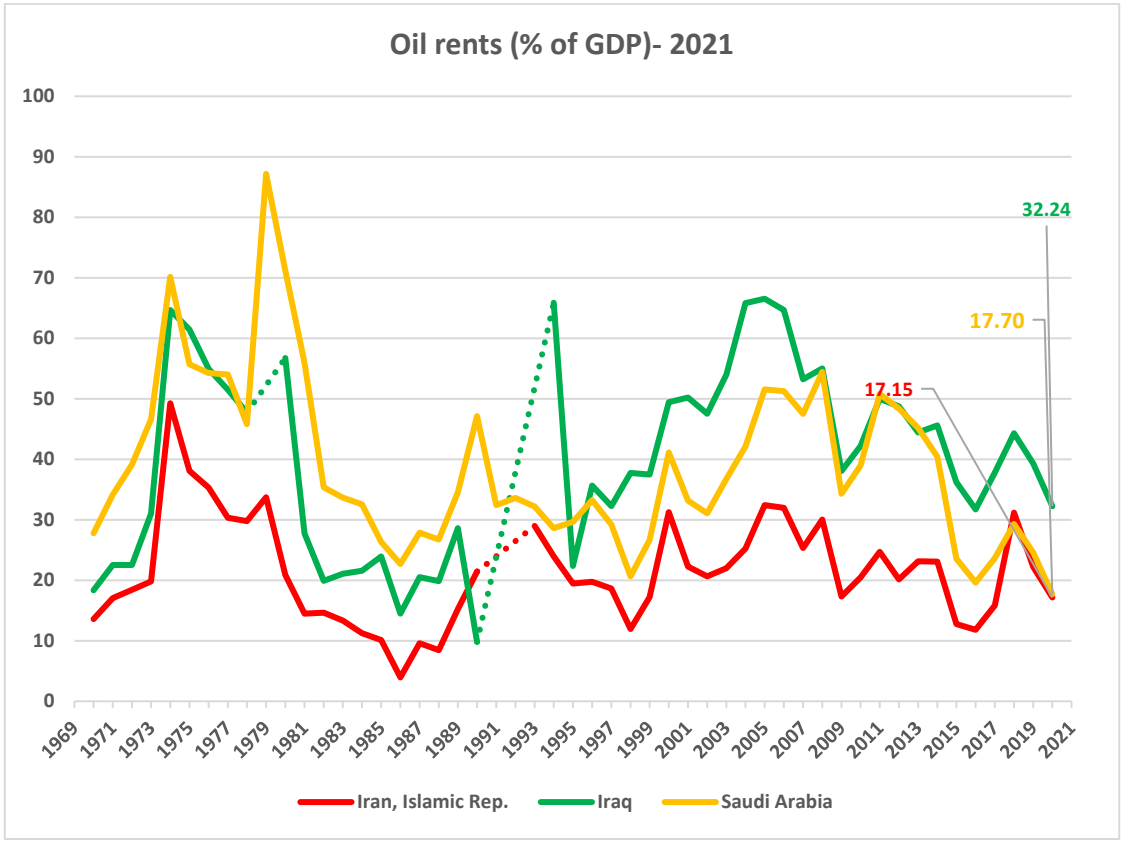
https://data.worldbank.org/indicator/NE.GDI.TOTL.KD.ZG?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



https://data.worldbank.org/indicator/NE.GDI.TOTL.CD?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



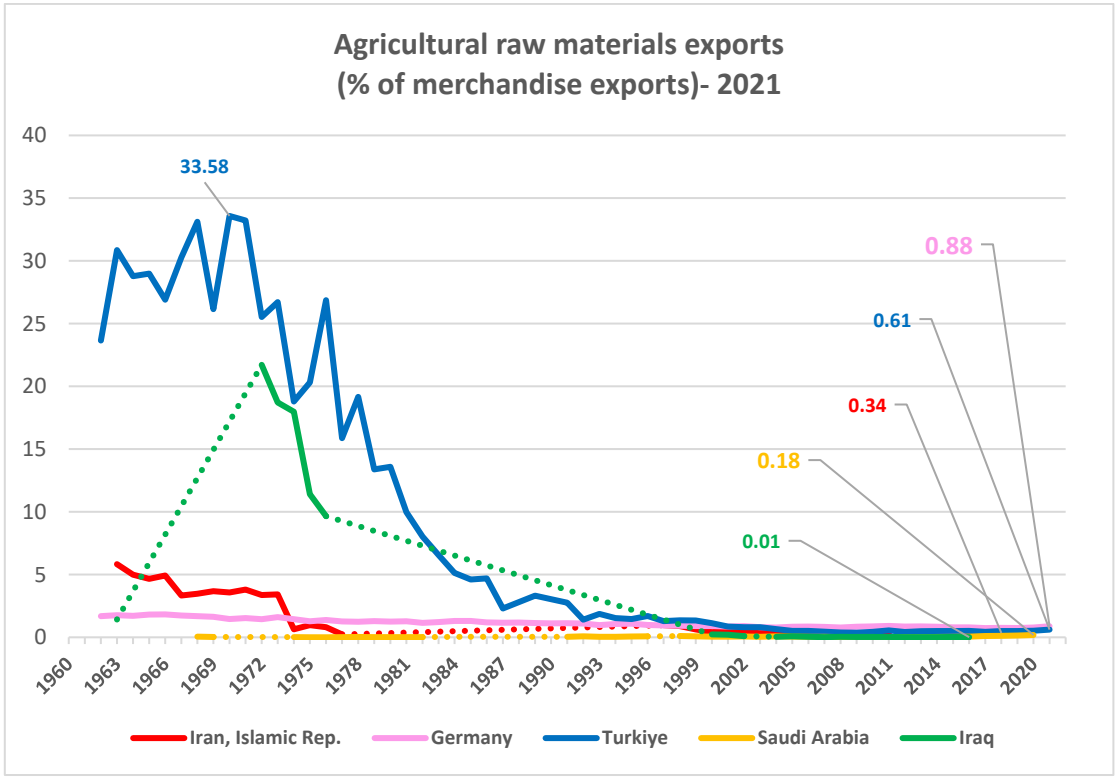
https://data.worldbank.org/indicator/NE.GDI.TOTL.KD?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



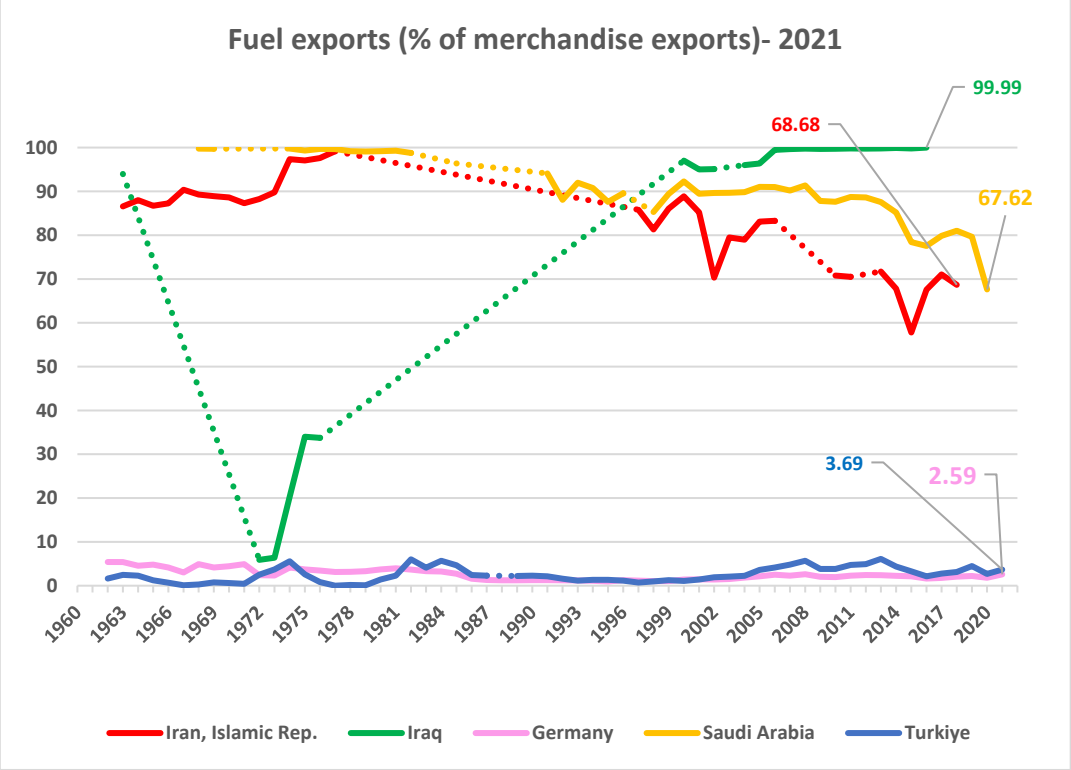
Oil rents are the difference between the value of crude oil production at regional prices and total costs of production.

رانت نفت (درآمد حاصل از فروش نفت خام)، تفاوت بین ارزش تولید نفت خام به قیمت منطقه ای و کل هزینه های تولید است.

https://data.worldbank.org/indicator/NY.GDP.PETR.RT.ZS?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



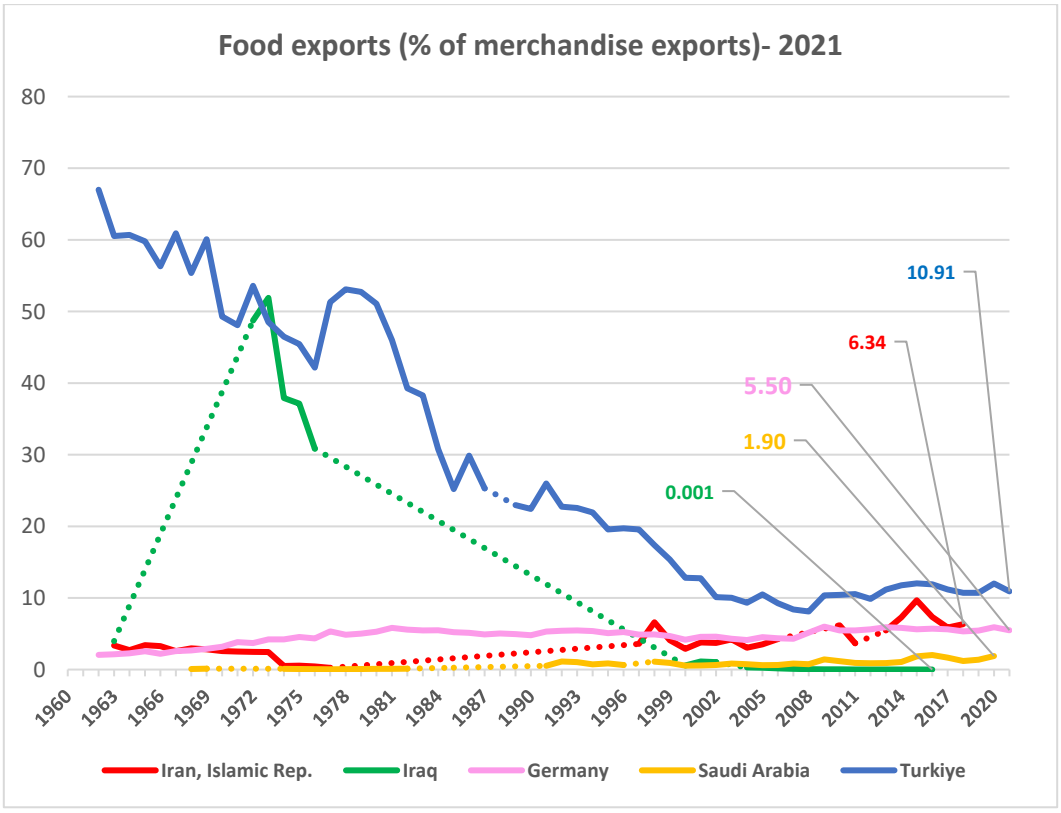
https://data.worldbank.org/indicator/TX.VAL.AGRI.ZS.UN?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



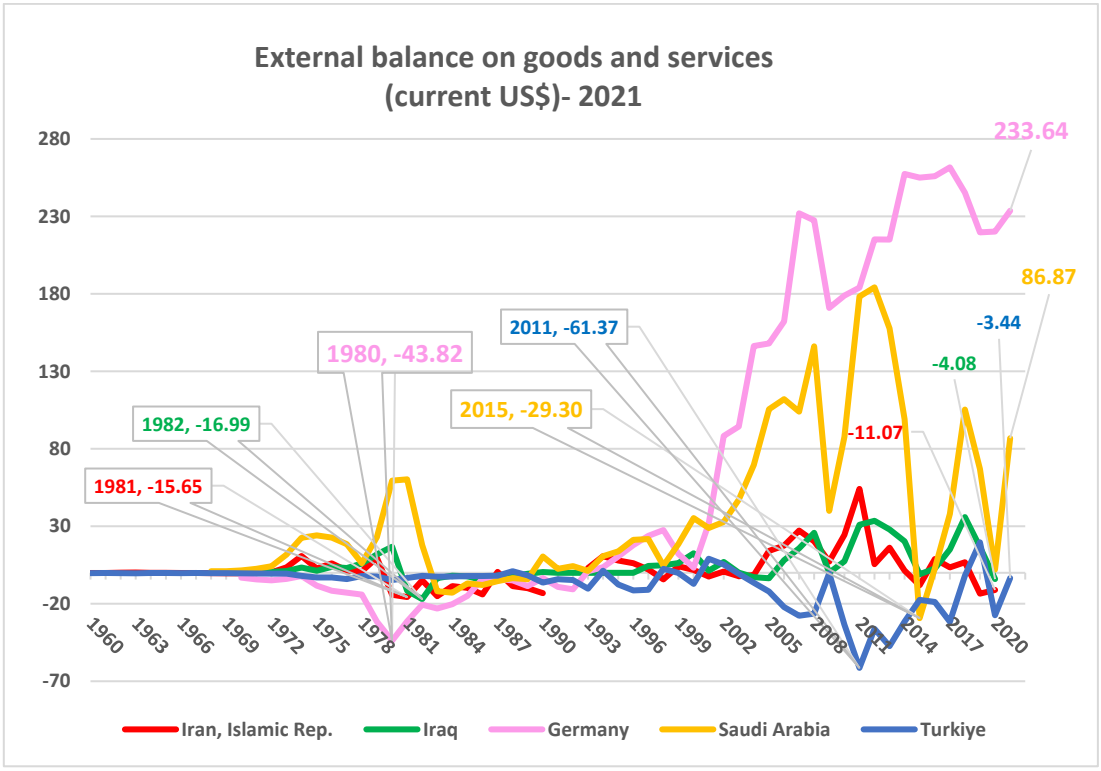
Fuels comprise the commodities in Standard International Trade Classification (SITC) section 3 (mineral fuels, lubricants and related materials).

سوخت ها شامل کالاهای طبقه بندی استاندارد تجارت بین المللی (SITC) بخش 3 (سوخت های معدنی، روان کننده ها و مواد مرتبط) می‌شوند.

https://data.worldbank.org/indicator/TX.VAL.FUEL.ZS.UN?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



https://data.worldbank.org/indicator/TX.VAL.FOOD.ZS.UN?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart

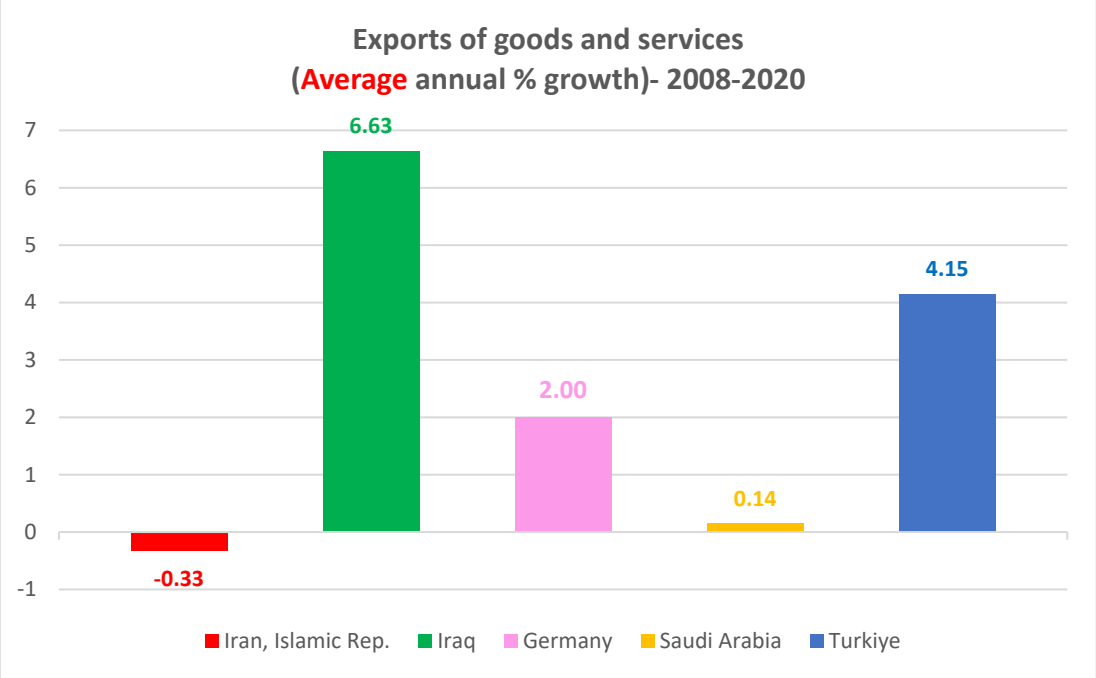


External balance on goods and services equals exports of goods and services minus imports of goods and services. Data are in current U.S. dollars.

تراز خارجی کالاها و خدمات برابر است با صادرات کالا و خدمات منهای واردات کالا و خدمات است. داده ها به دلار آمریکا هستند.

https://data.worldbank.org/indicator/NE.RSB.GNFS.CD?end=2021&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart

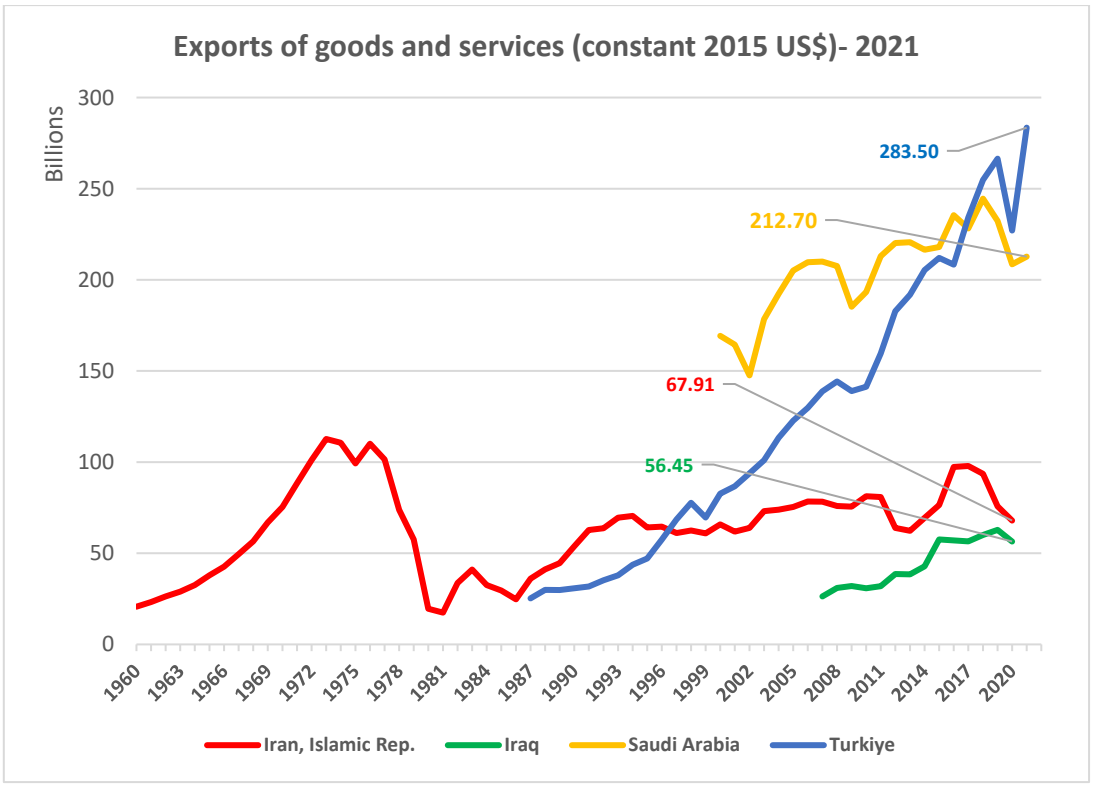
https://data.worldbank.org/indicator/NE.EXP.GNFS.ZS?end=2019&locations=IR-DE-TR-SA-IQ&start=1960&type=shaded&view=chart



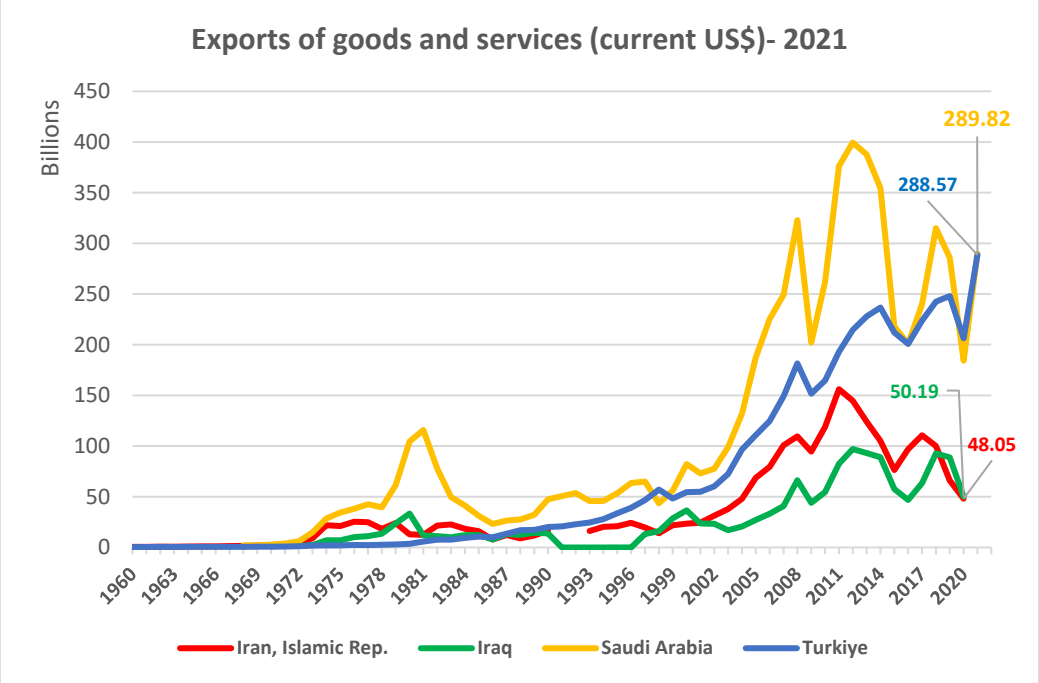
Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income and transfer payments. Data are in current U.S. dollars.

صادرات کالاها و خدمات، ارزش تمام کالاها و سایر خدمات بازار، ارائه شده به سایر نقاط جهان را نشان می دهد. آنها شامل ارزش کالا، حمل و نقل، بیمه، حمل و نقل، مسافرت، حق امتیاز، هزینه مجوز، و سایر خدمات مانند ارتباطات، ساخت و ساز، مالی، اطلاعات، تجاری، شخصی و خدمات دولتی هستند. این شاخص شامل حقوق و مزایای کارکنان و درآمد سرمایه گذاری و پرداخت های انتقالی نمی‌شود. داده ها به دلار آمریکا هستند.

https://data.worldbank.org/indicator/NE.EXP.GNFS.KD.ZG?end=2021&locations=IR-DE-TR-SA-IQ&start=1961&type=shaded&view=chart



https://data.worldbank.org/indicator/NE.EXP.GNFS.KD?end=2021&locations=IR-DE-TR-SA-IQ&start=1961&type=shaded&view=chart



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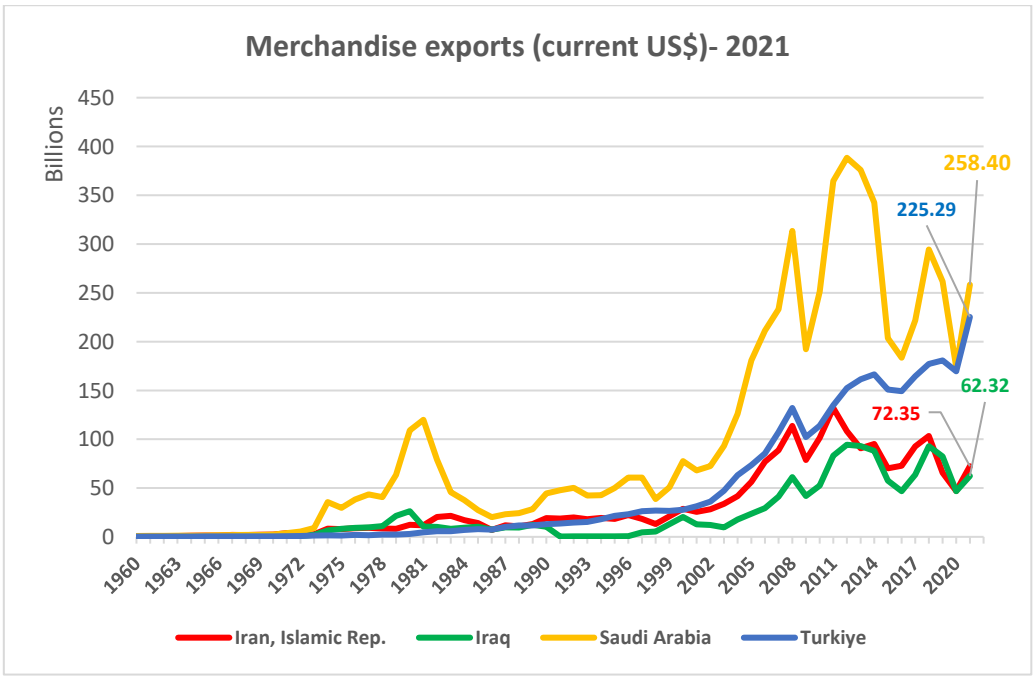
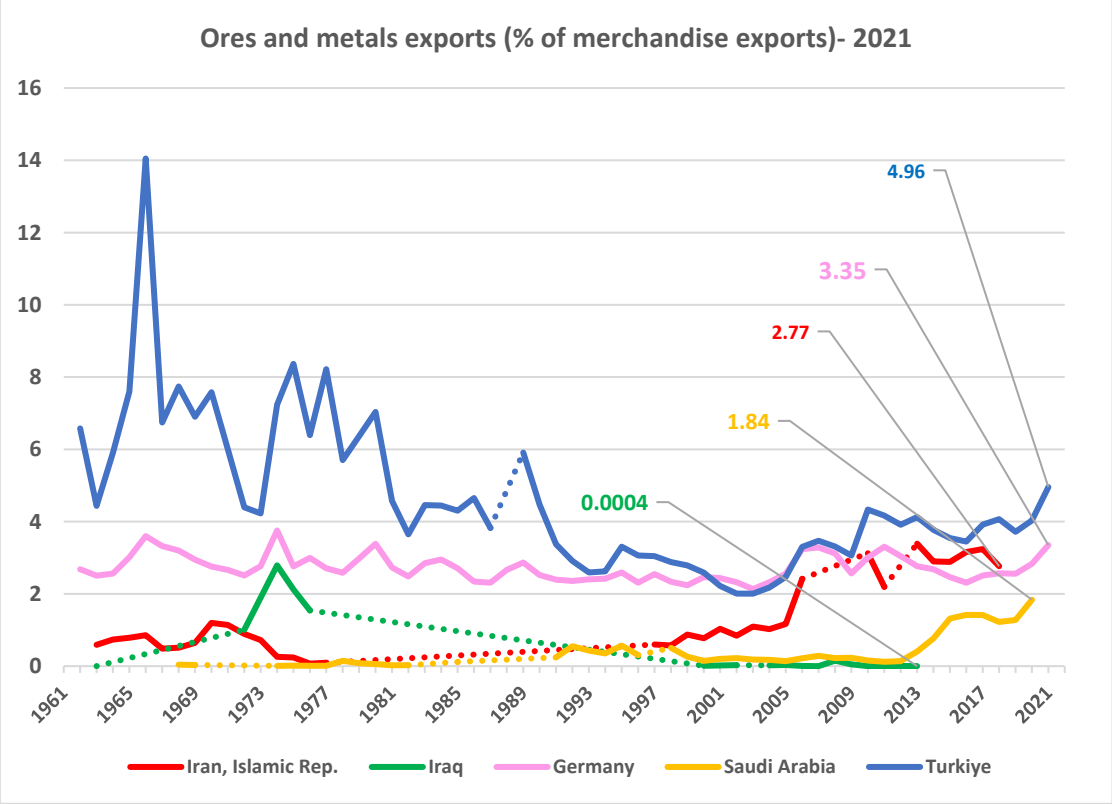
https://data.worldbank.org/indicator/NE.EXP.GNFS.CD?end=2021&locations=IR-DE-TR-SA-IQ&start=1961&type=shaded&view=chart



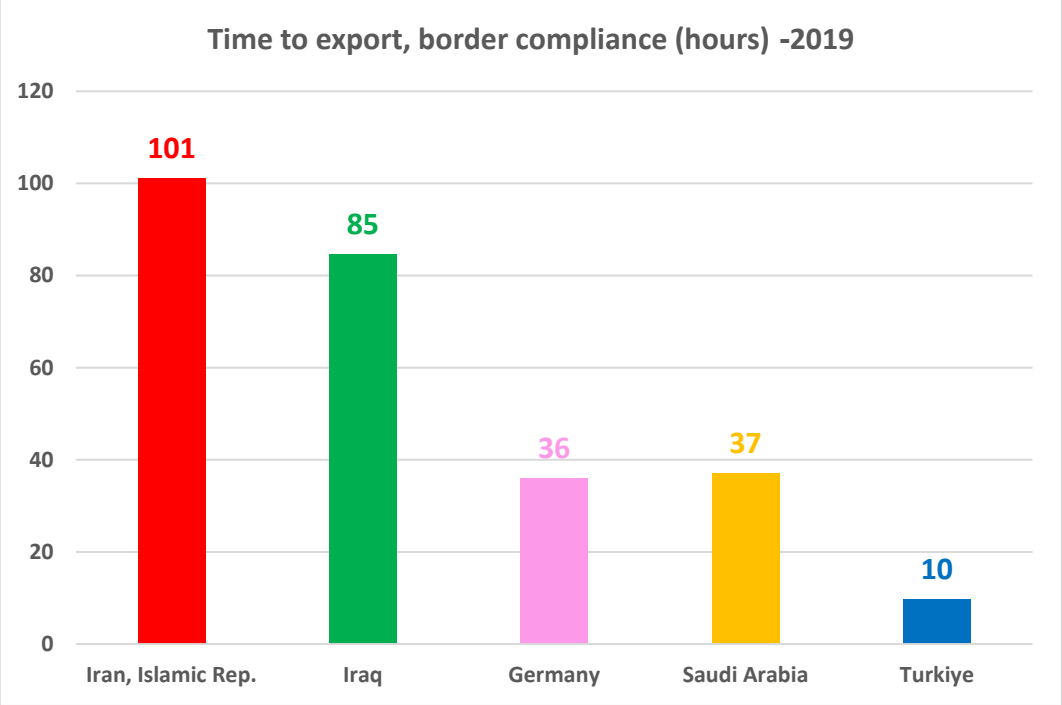
Merchandise exports show the f.o.b. value of goods provided to the rest of the world valued in current U.S. dollars.

ارزش صادرات کالا بصورت f.o.b را نشان می دهد. ارزش کالاهای ارائه شده به سایر نقاط جهان به ارزش دلار آمریکا.

https://data.worldbank.org/indicator/TX.VAL.MRCH.CD.WT?end=2021&locations=IR-DE-TR-SA-IQ&start=1961&type=shaded&view=chart



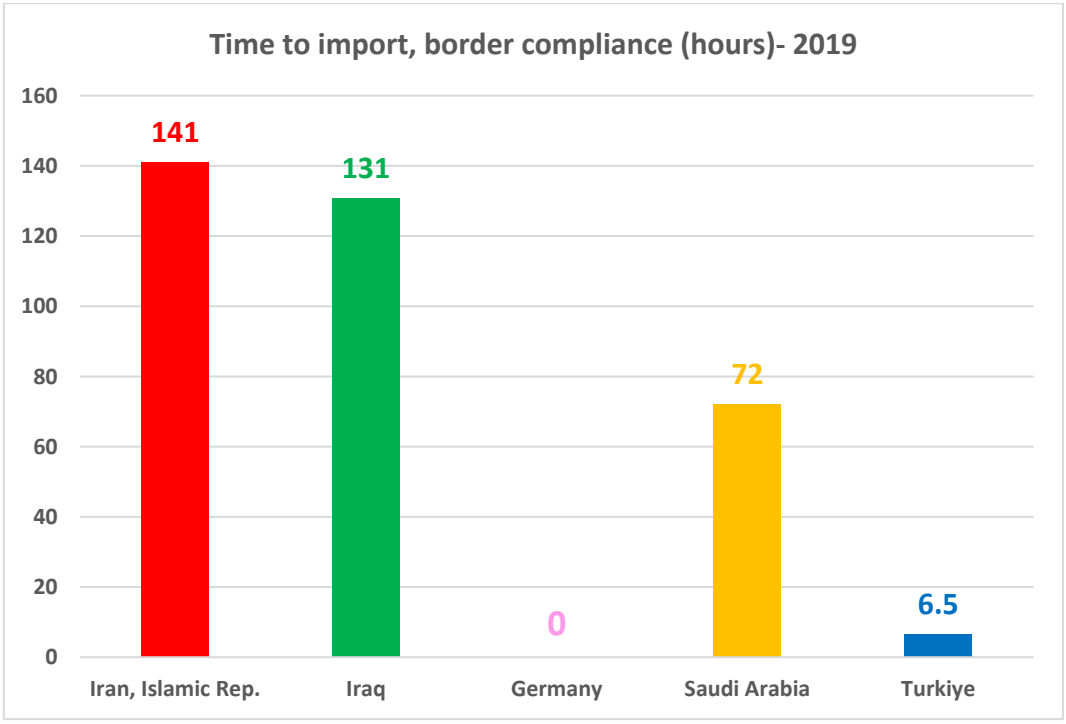
https://data.worldbank.org/indicator/TX.VAL.MMTL.ZS.UN?end=2021&locations=IR-DE-TR-SA-IQ&start=1961&type=shaded&view=chart



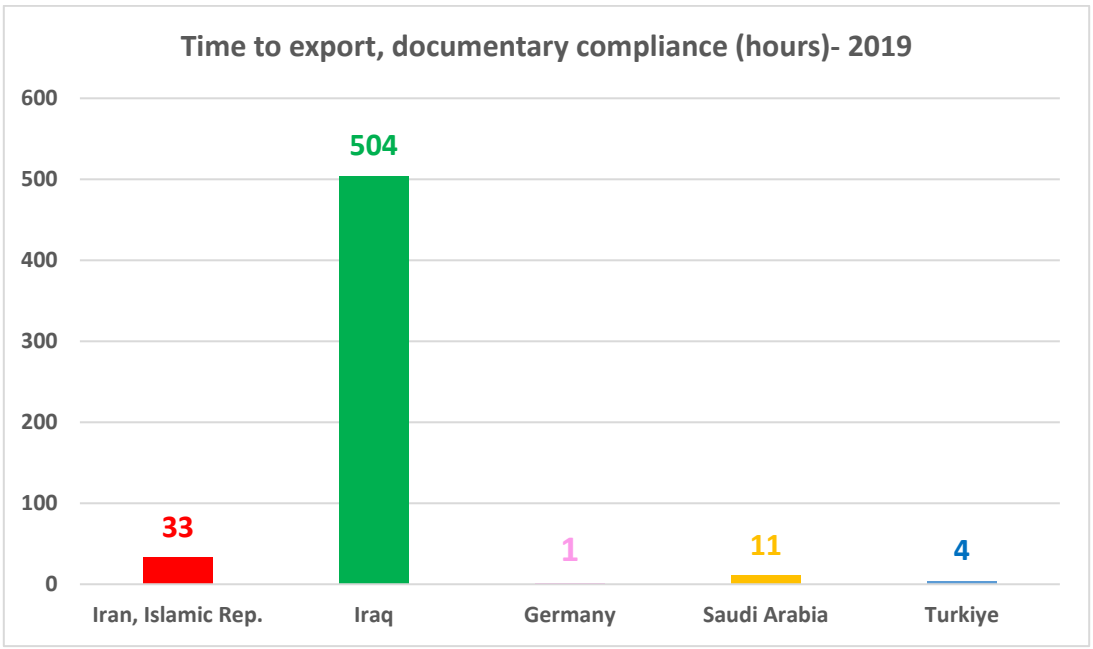
Border compliance captures the time and cost associated with compliance with the economy's customs regulations and with regulations relating to other inspections that are mandatory in order for the shipment to cross the economy's border, as well as the time and cost for handling that takes place at its port or border. The time and cost for this segment include time and cost for customs clearance and inspection procedures conducted by other government agencies.

انطباق با قوانین مرزی شامل؛ زمان و هزینه مربوط به رعایت مقررات گمرکی هر اقتصاد (کشور) و مقررات مربوط به سایر بازرسی‌هایی که برای عبور محموله از مرزهای هر اقتصاد (کشور) اجباری است، و همچنین زمان و هزینه جابجایی که در بندر یا مرز هر اقتصاد (کشور) انجام می شود است. هزینه برای این بخش شامل زمان و هزینه برای ترخیص کالا از گمرک و مراحل بازرسی انجام شده توسط سایر سازمان های دولتی است.

https://data.worldbank.org/indicator/IC.EXP.TMBC?end=2019&locations=IR-DE-TR-SA-IQ&start=2019&type=shaded&view=bar



https://data.worldbank.org/indicator/IC.IMP.TMBC?end=2019&locations=IR-DE-TR-SA-IQ&start=2019&type=shaded&view=bar



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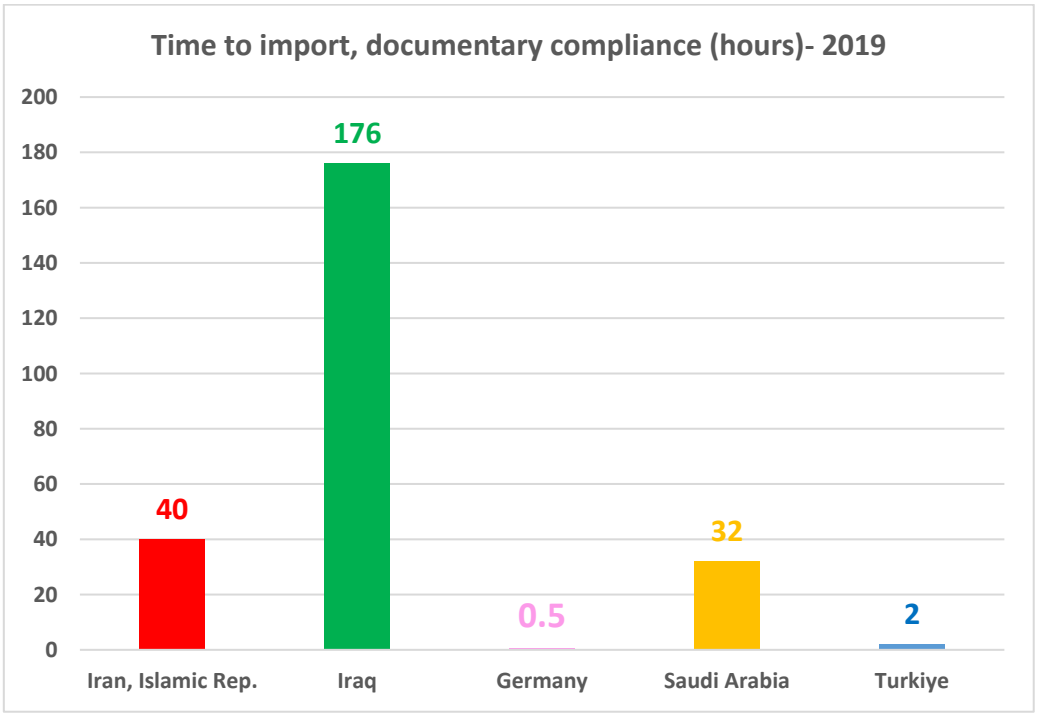
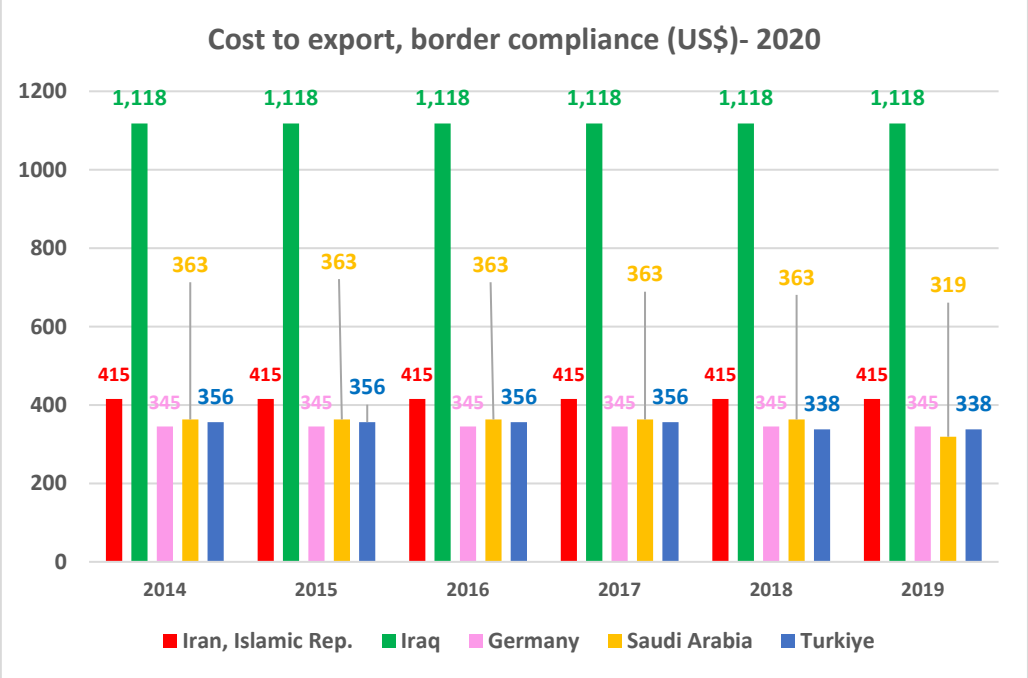
https://data.worldbank.org/indicator/IC.EXP.TMDC?end=2019&locations=IR-DE-TR-SA-IQ&start=2019&type=shaded&view=bar



https://data.worldbank.org/indicator/IC.IMP.TMDC?end=2019&locations=IR-DE-TR-SA-IQ&start=2019&type=shaded&view=bar



Border compliance captures the time and cost associated with compliance with the economy's customs regulations and with regulations relating to other inspections that are mandatory in order for the shipment to cross the economy's border, as well as the time and cost for handling that takes place at its port or border. The time and cost for this segment include time and cost for customs clearance and inspection procedures conducted by other government agencies.

انطباق با قوانین مرزی شامل؛ زمان و هزینه مربوط به رعایت مقررات گمرکی هر اقتصاد (کشور) و مقررات مربوط به سایر بازرسی‌هایی که برای عبور محموله از مرزهای هر اقتصاد (کشور) اجباری است، و همچنین زمان و هزینه جابجایی که در بندر یا مرز هر اقتصاد (کشور) انجام می شود است. هزینه برای این بخش شامل زمان و هزینه برای ترخیص کالا از گمرک و مراحل بازرسی انجام شده توسط سایر سازمان های دولتی است.

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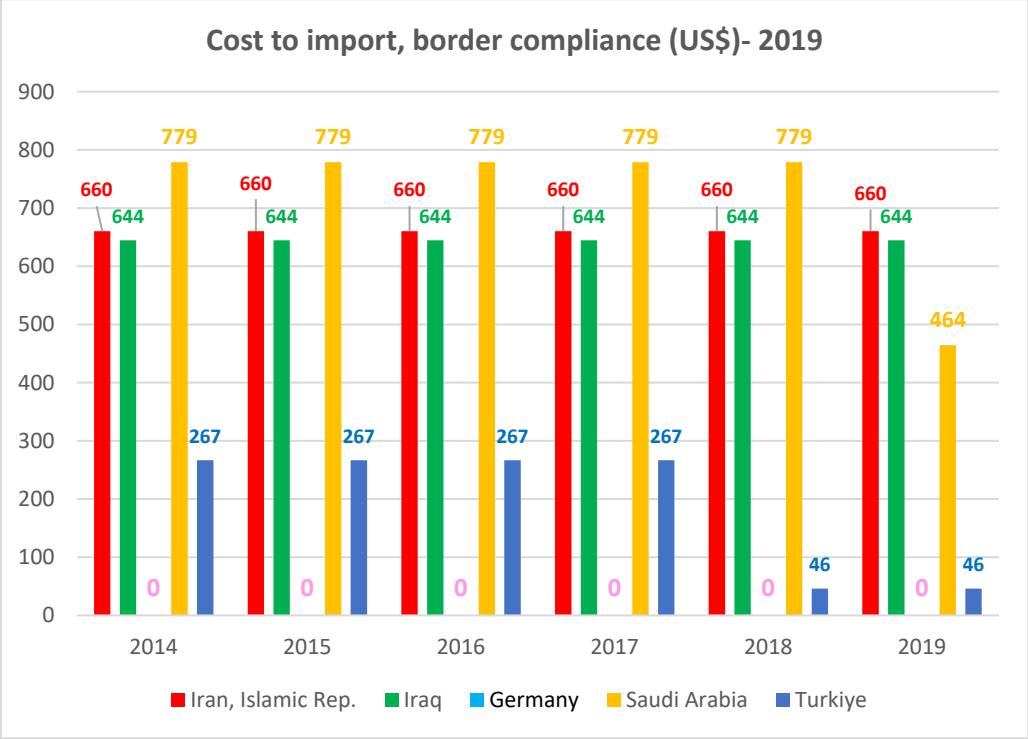

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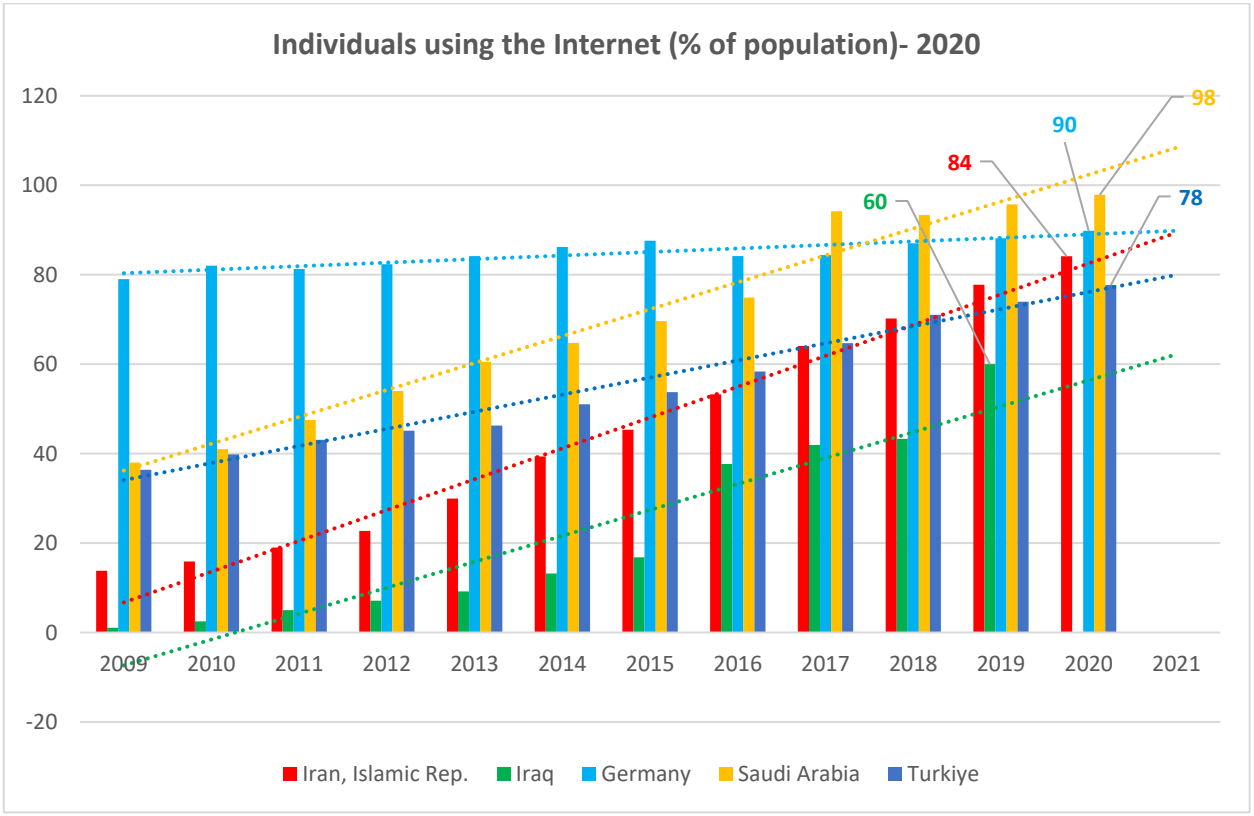

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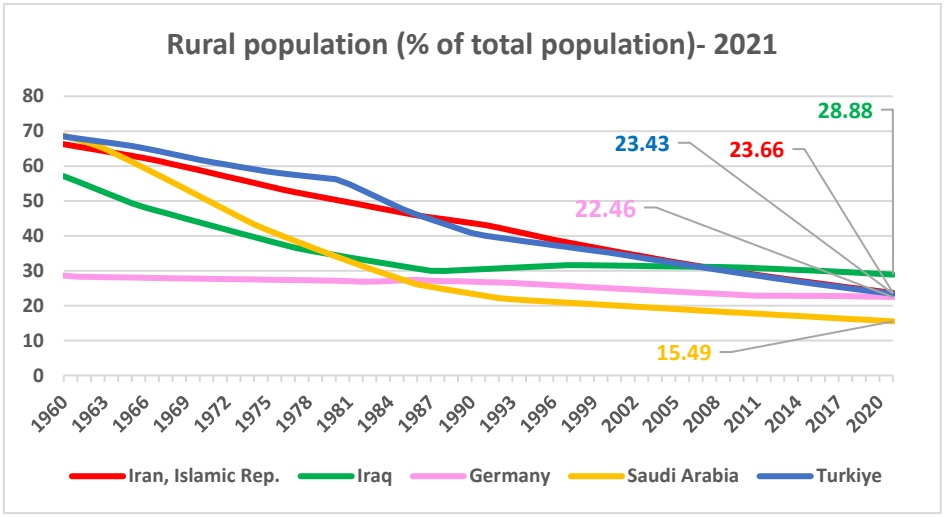

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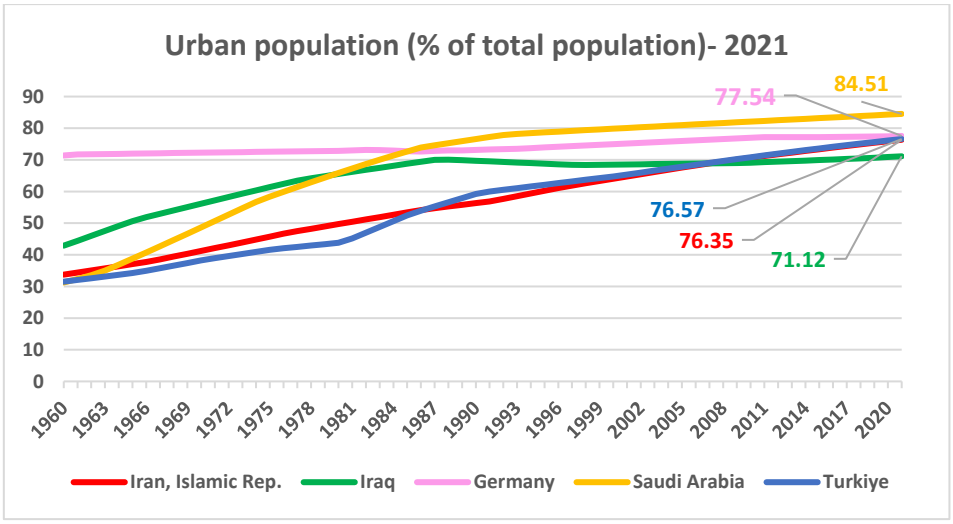

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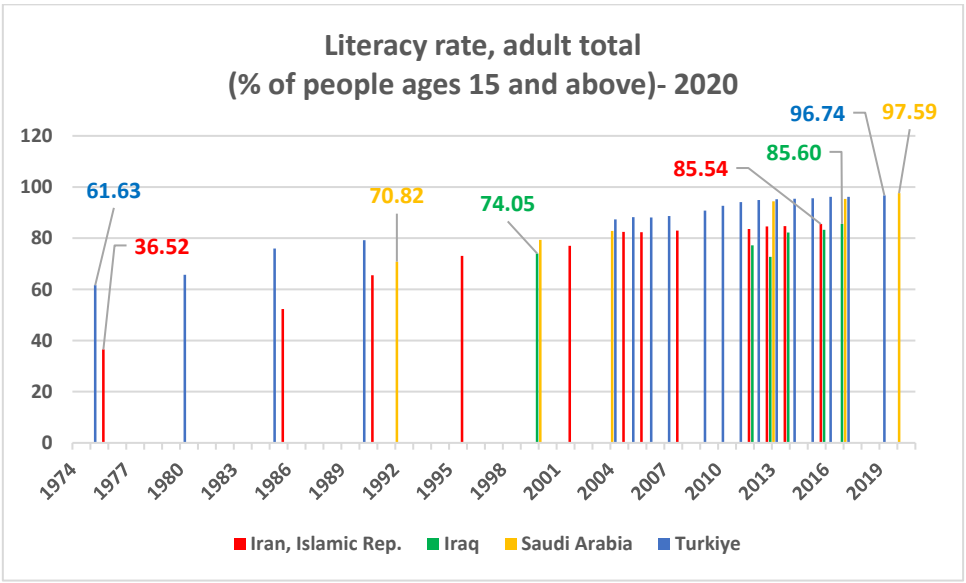

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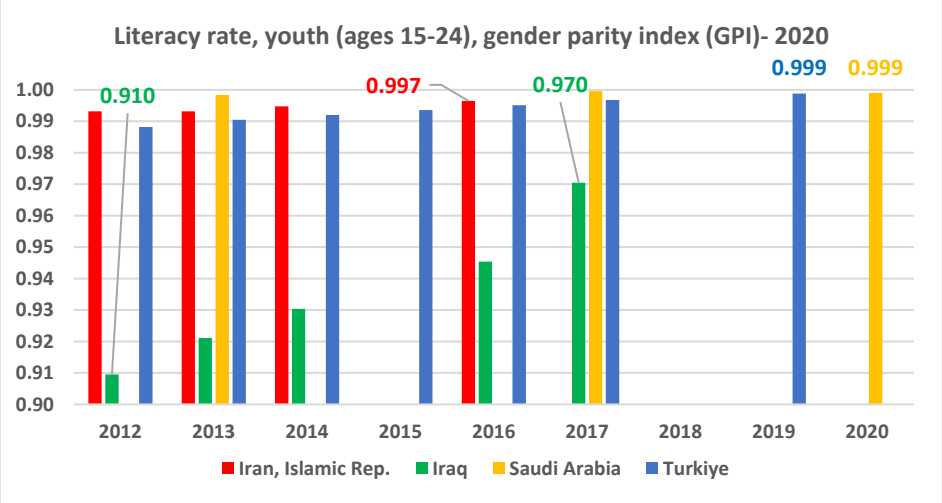

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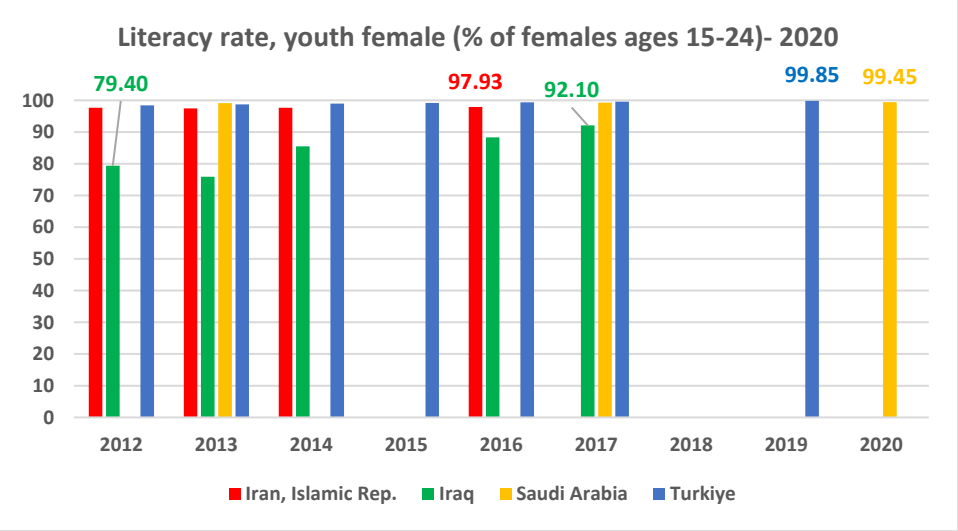

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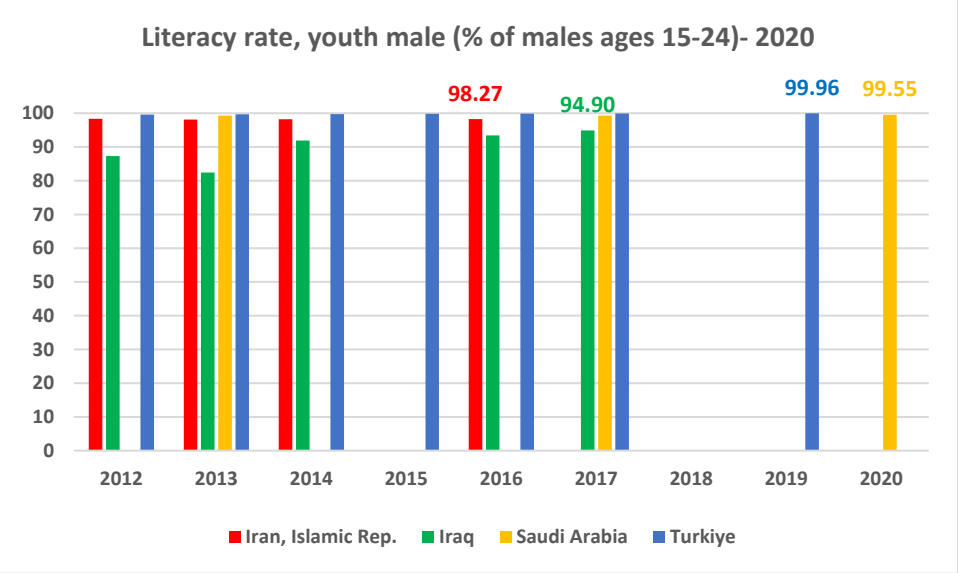

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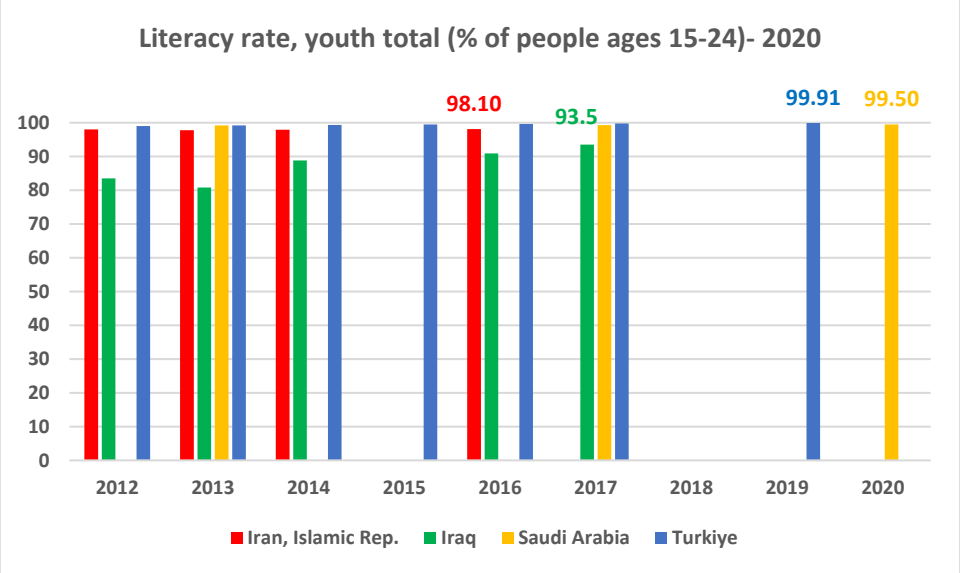

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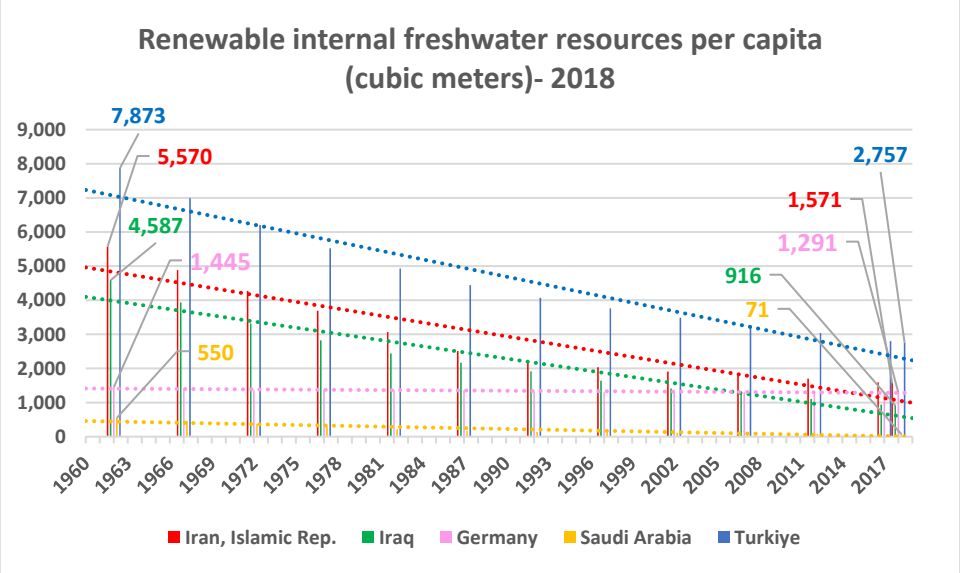

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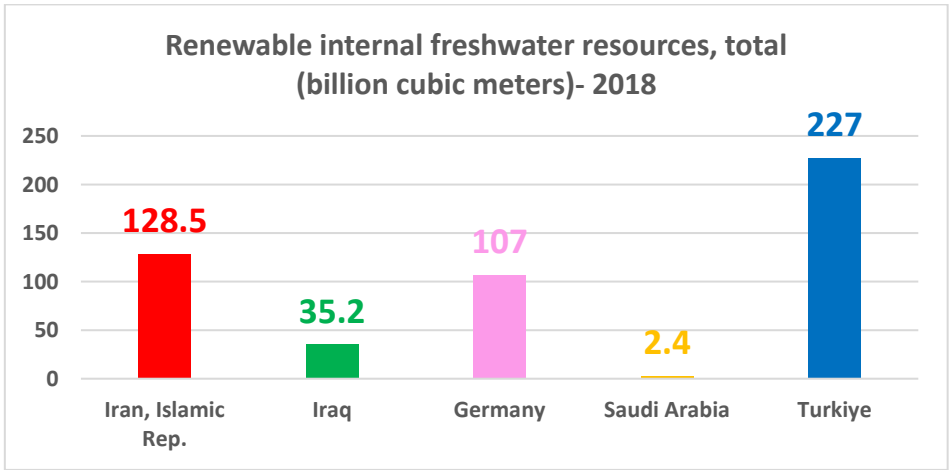

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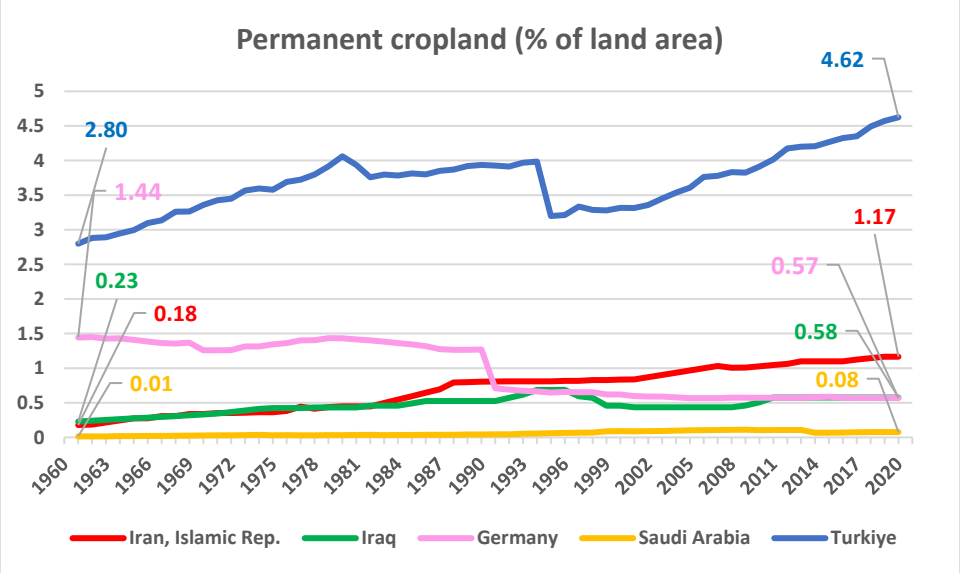

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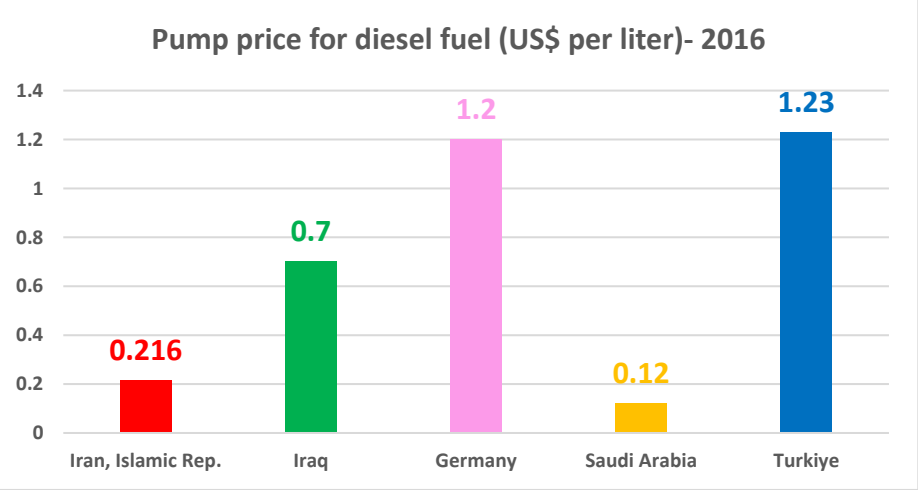

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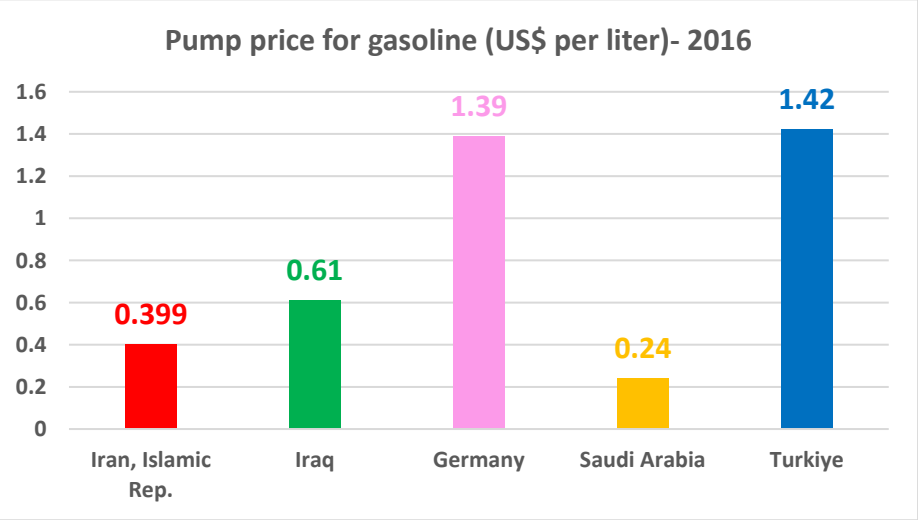

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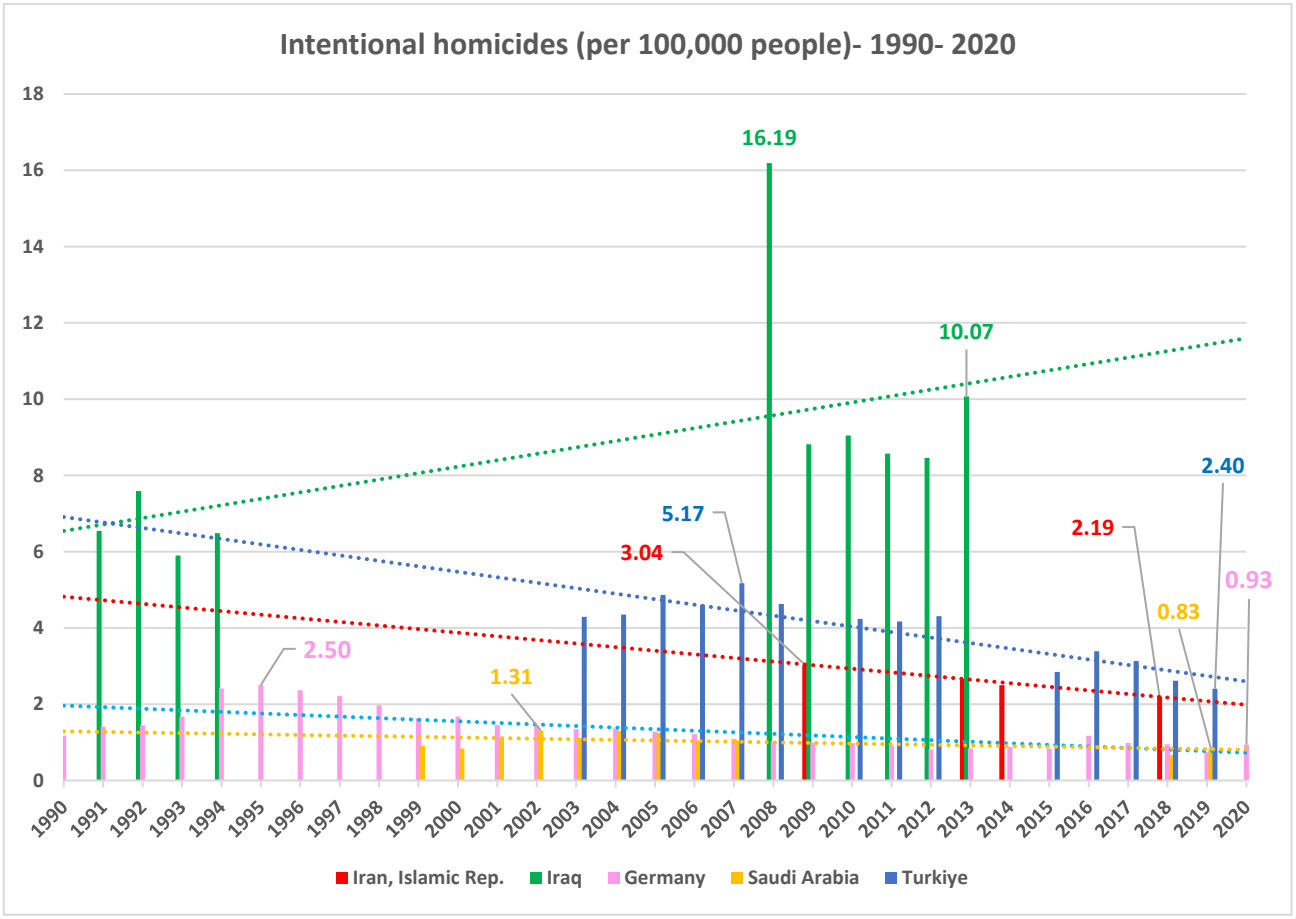
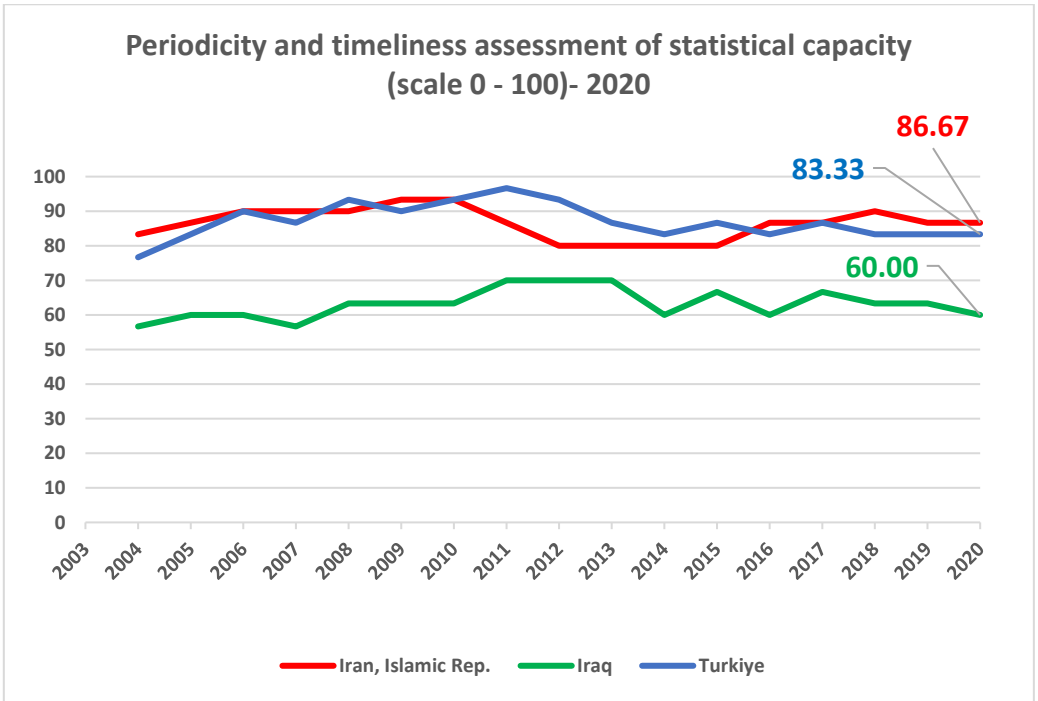


https://data.worldbank.org/indicator/VC.IHR.PSRC.P5?end=2020&locations=IR-DE-TR-SA-IQ&start=1990&type=shaded&view=chart



https://data.worldbank.org/indicator/IQ.SCI.PRDC?end=2020&locations=IR-DE-TR-SA-IQ&start=2004&type=shaded&view=chart

Chapter 2

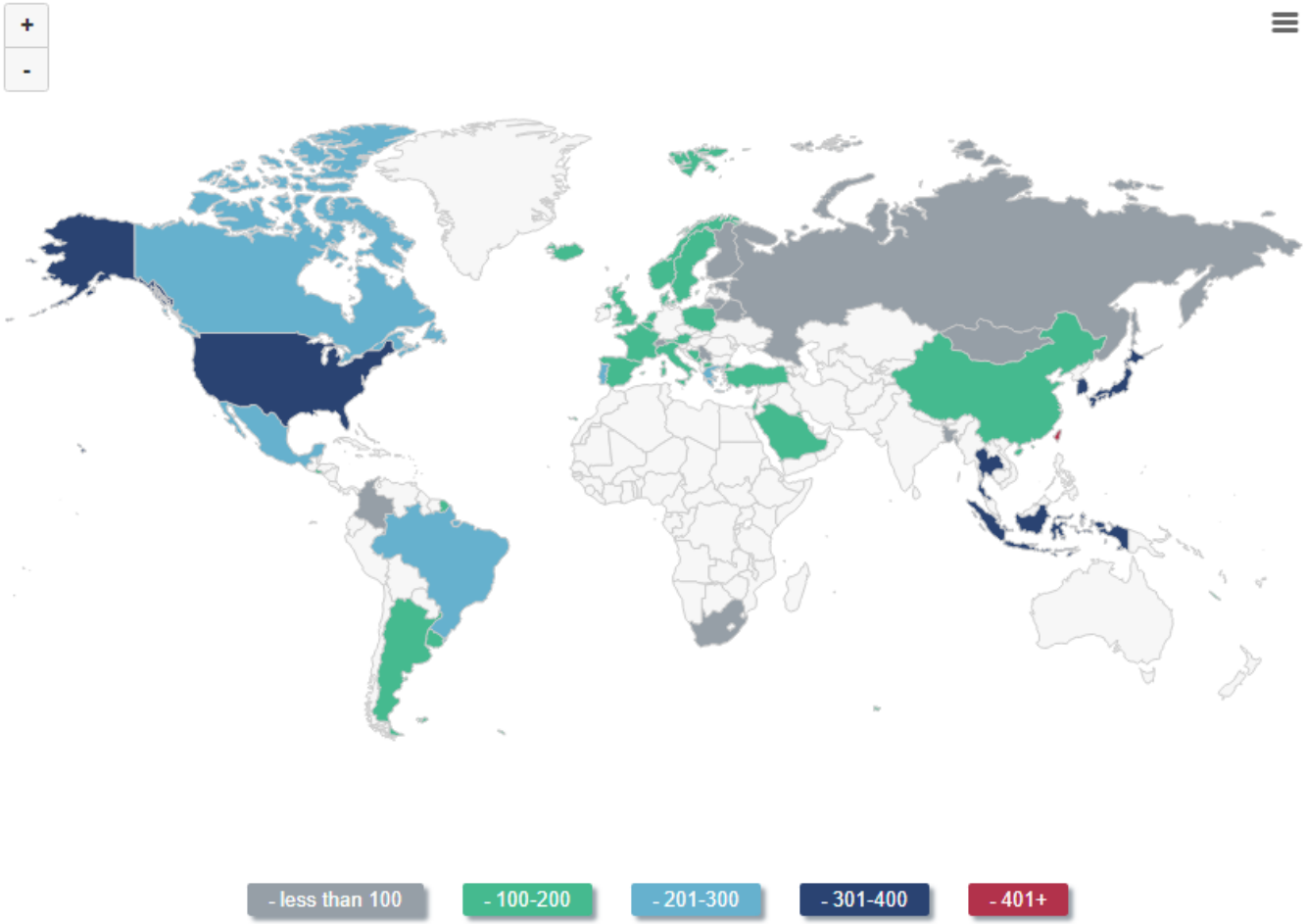
USRDS

UNITED STATES RENAL DATA SYSTEM

2022 Annual Data Report
Volume 2: End-Stage Renal Disease

Chapter 11: International Comparison

Figure 11.1 Geographic variation in incidence of treated ESRD per million population, by country or region, 2020



Data source: Special analysis, USRDS ESRD Database. Data presented only for countries from which relevant information was available. The incidence is unadjusted. Data for Mexico includes Aguascalientes only. Data for Belgium includes both Dutch speaking and French speaking. NOTE: Data collection methods vary across countries, requiring caution in making direct comparisons.

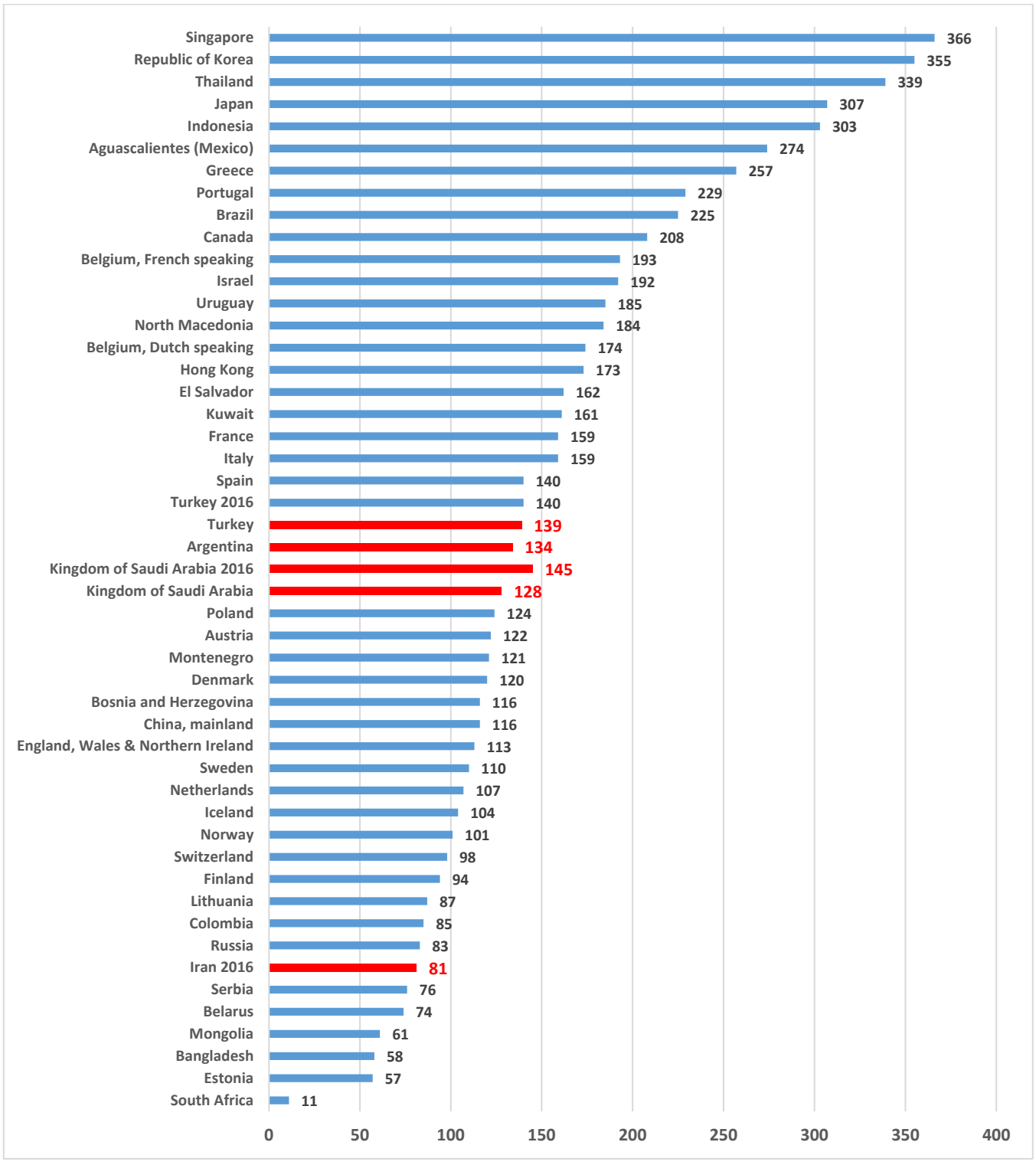
Data source: 2022 United States Renal Data System Annual Data Report

Iran 2016: 81.2 per million population (Table N.1.b)

No data available on Iraq

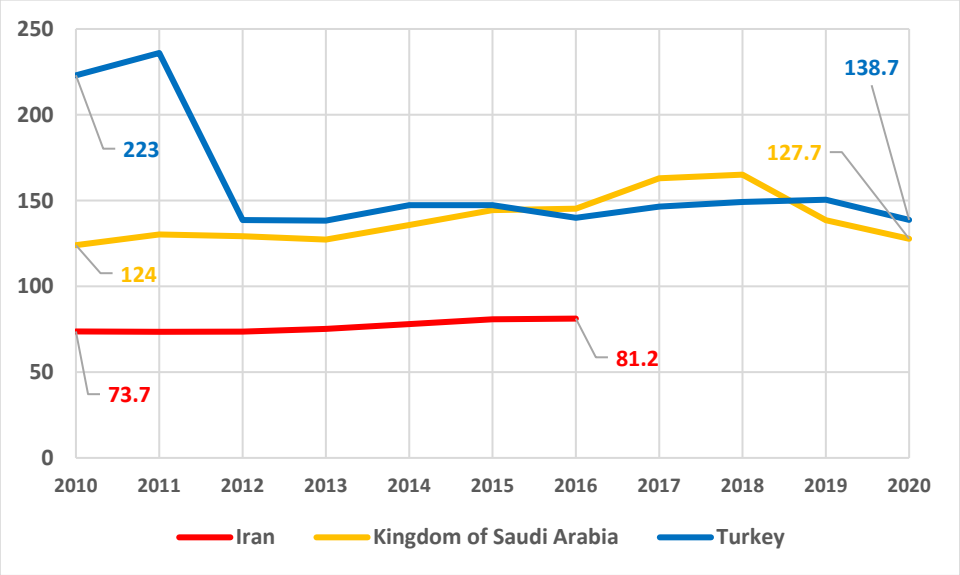
Figure 11.2, Incidence of treated ESRD, by country or region, 2020

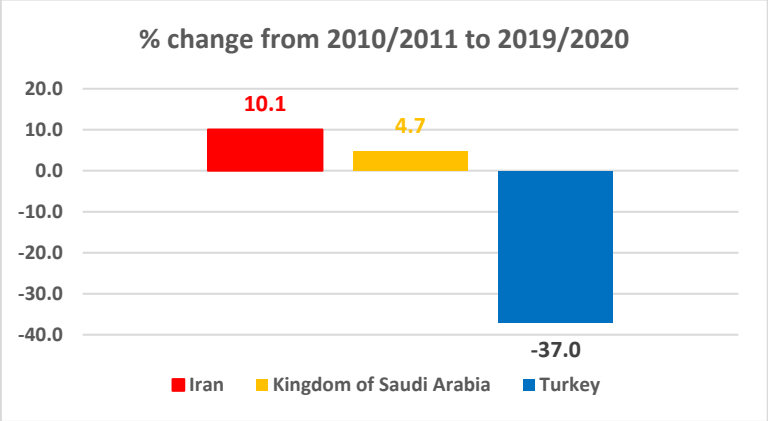
Data for Türkiye, Kingdom of Saudi Arabia & Iran extracted from Table N.1.b- Trends in the incidence rate (per million population/year) of treated ESRD, unadjusted, by country/region, 2010-2020

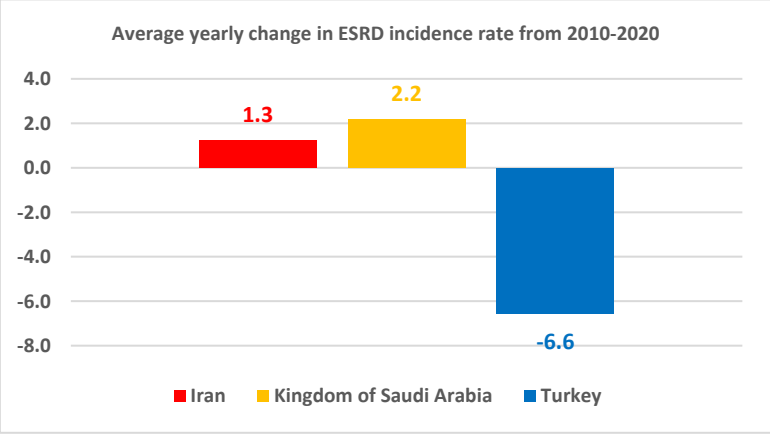


No data available on Iraq

Table N.1.b- Trends in the incidence rate (per million population/year) of treated ESRD, unadjusted, by country/region, 2010-2020

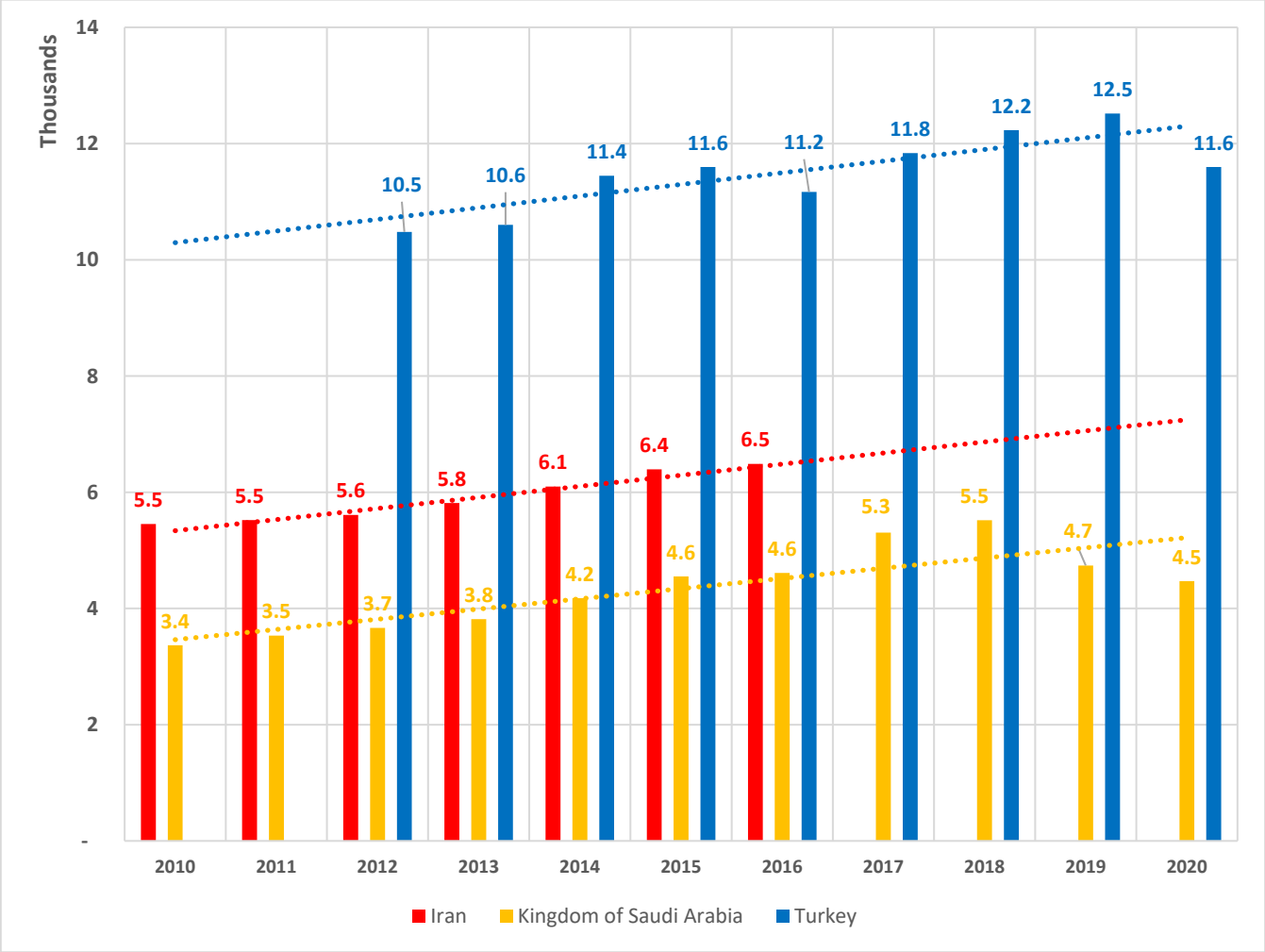






No data available on Iraq

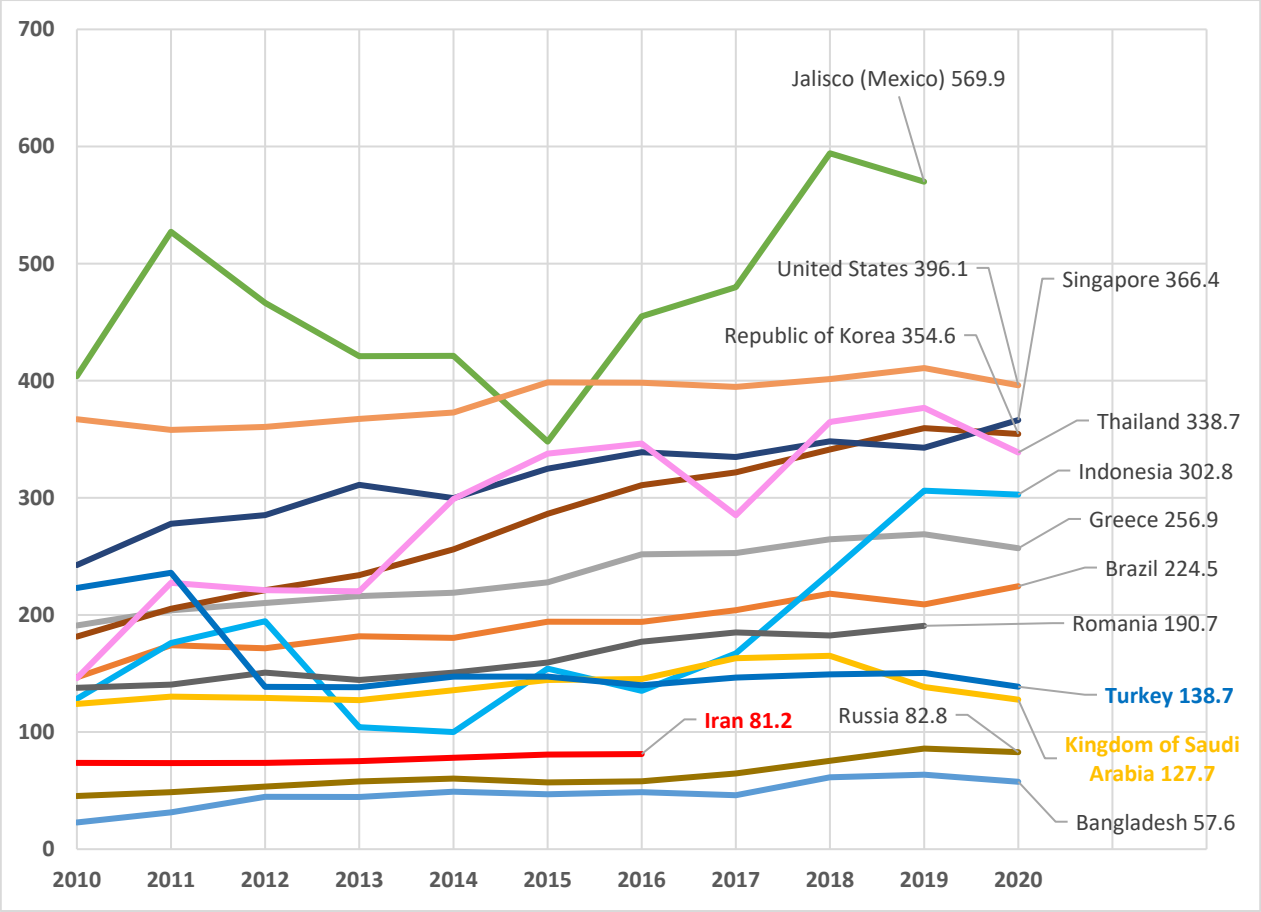
Table N.1.a- Yearly counts of incident patients treated for ESRD, by country/region, 2010-2020



No data available on Iraq

Figure 11.3a Incidence of treated ESRD in countries or regions with the largest percentage increase in incidence, 2010 versus 2020

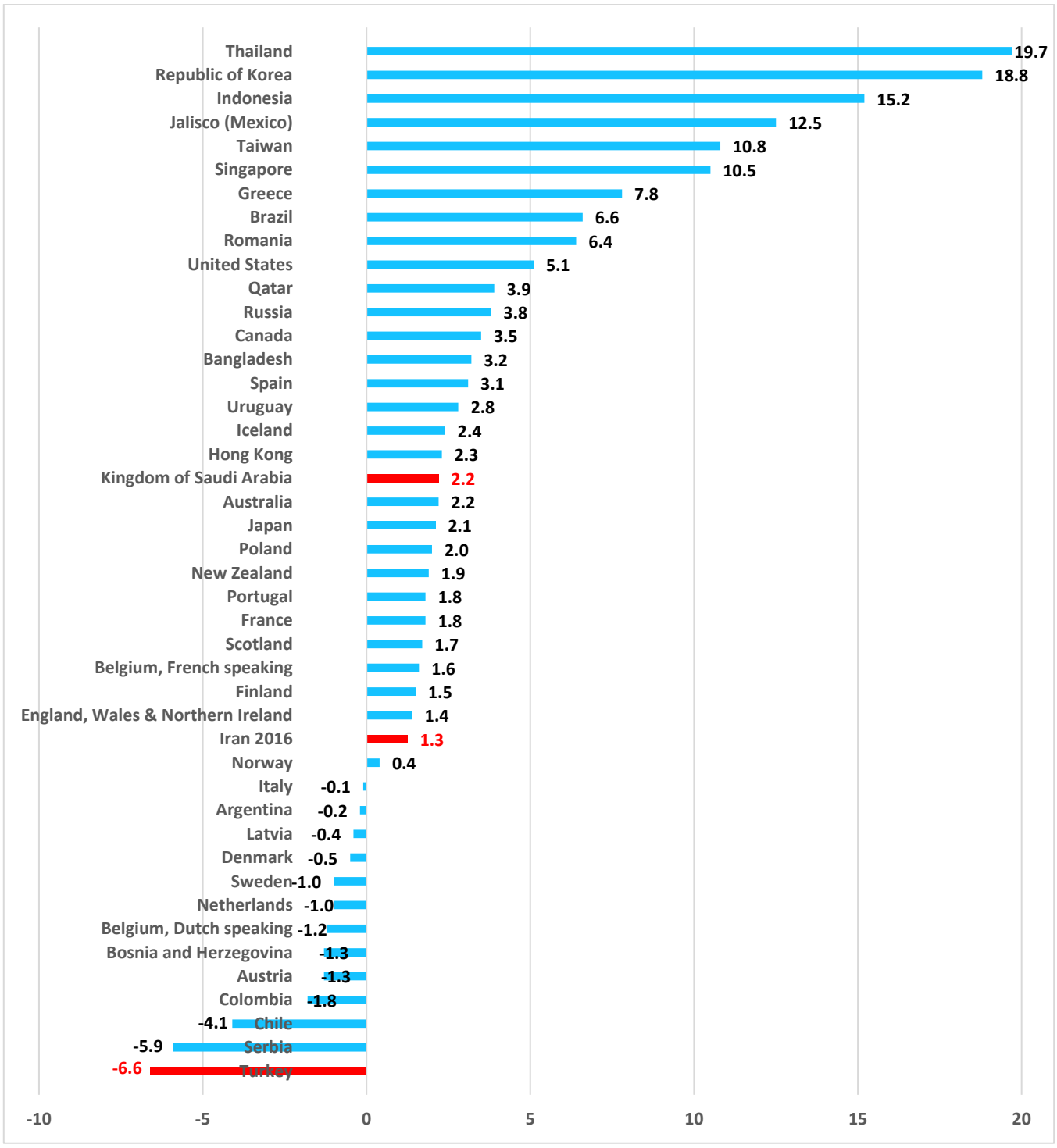
Data for Türkiye, Kingdom of Saudi Arabia & Iran extracted from Table N.1.b- Trends in the incidence rate (per million population/year) of treated ESRD, unadjusted, by country/region, 2010-2020



No data available on Iraq

Figure 11.3b Average yearly change in incidence of treated ESRD by country or region, 2010 versus 2020

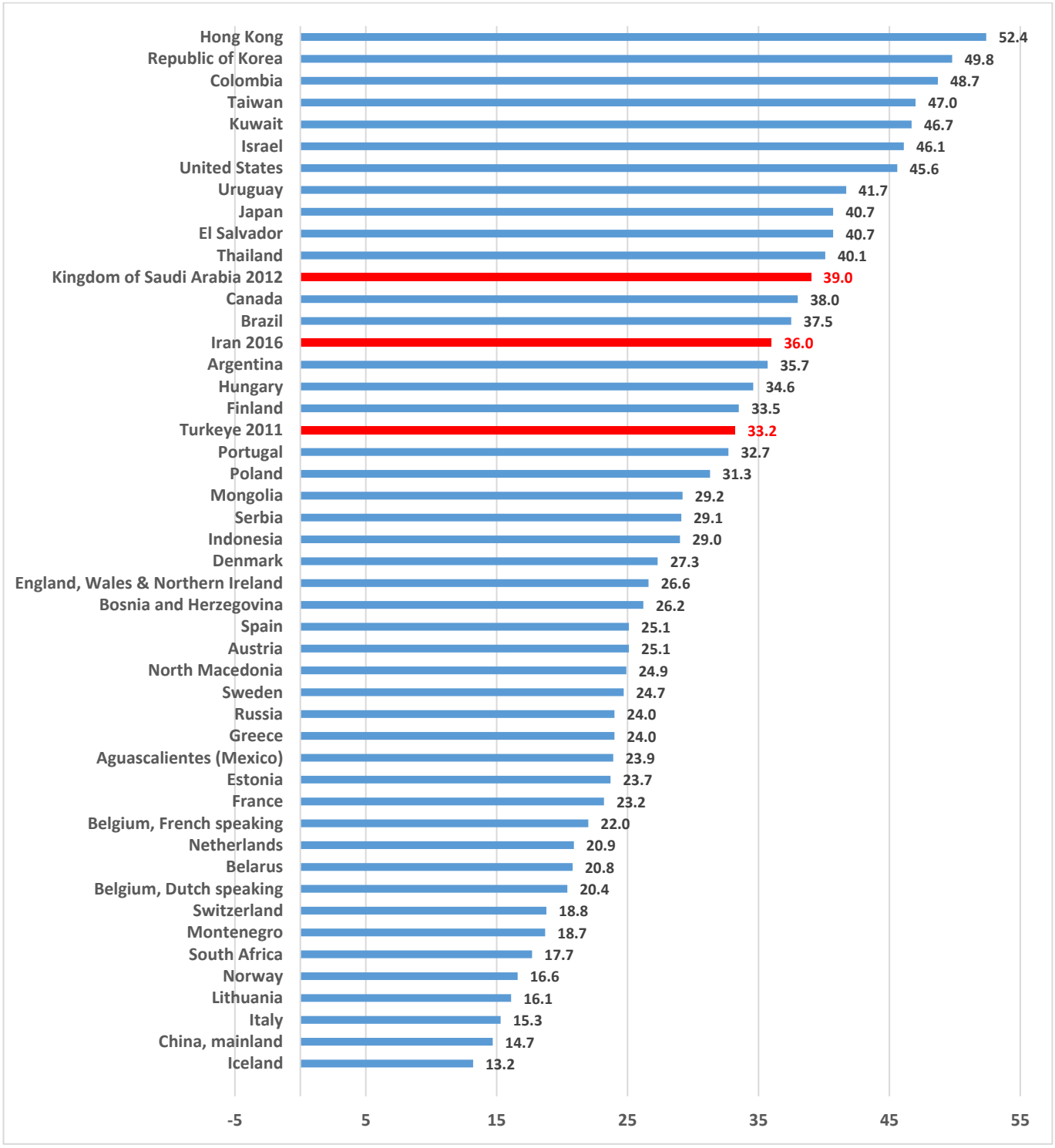
Data for Türkiye, Kingdom of Saudi Arabia & Iran extracted from Table N.1.b- Trends in the incidence rate (per million population/year) of treated ESRD, unadjusted, by country/region, 2010-2020



No data available on Iraq

Figure 11.4a Percentage of incident cases of treated ESRD attributed to diabetes, by country or region, 2020

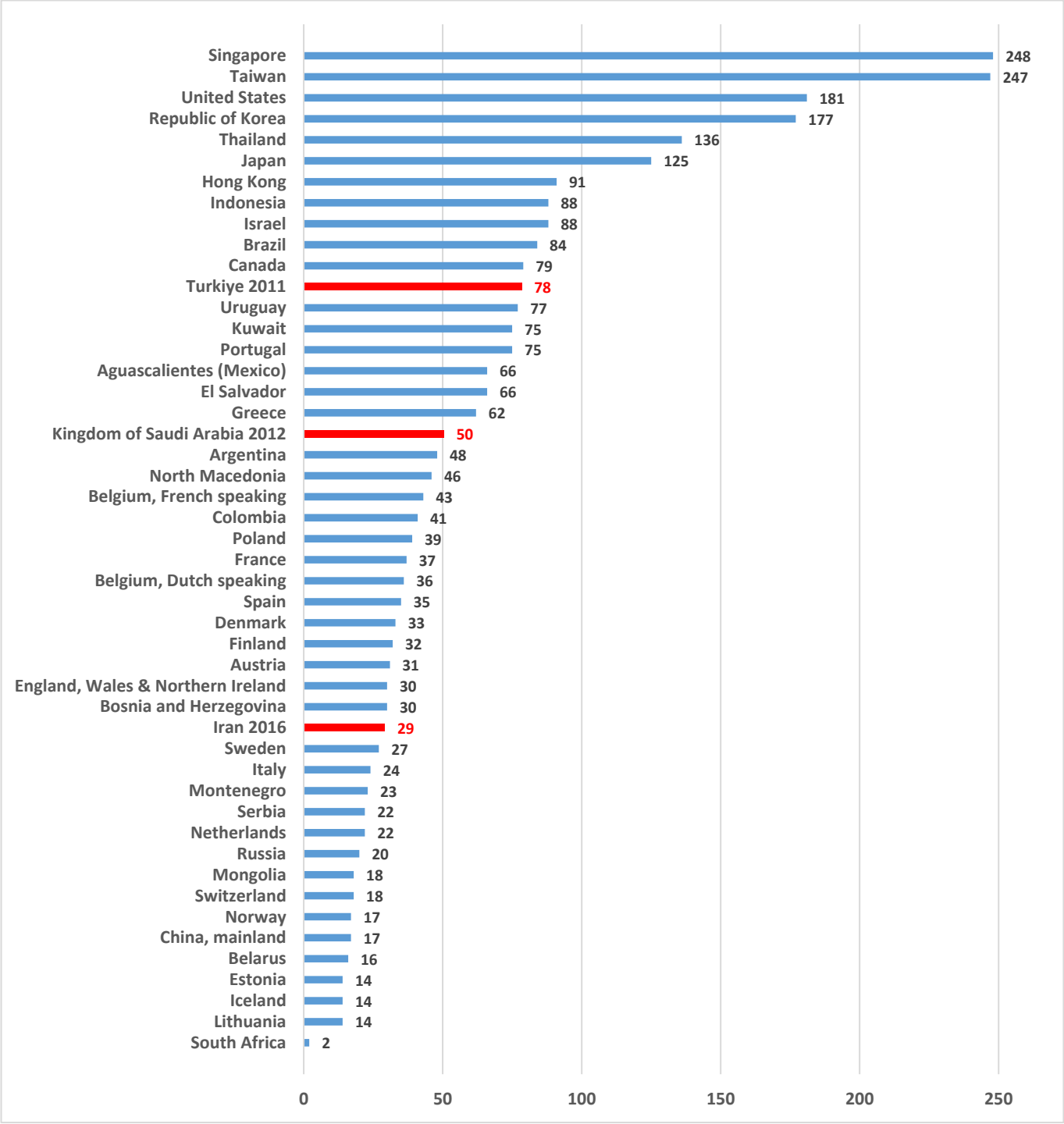
Data for Türkiye, Kingdom of Saudi Arabia & Iran extracted from "Table N.2/Table N.1.b"



No data available on Iraq

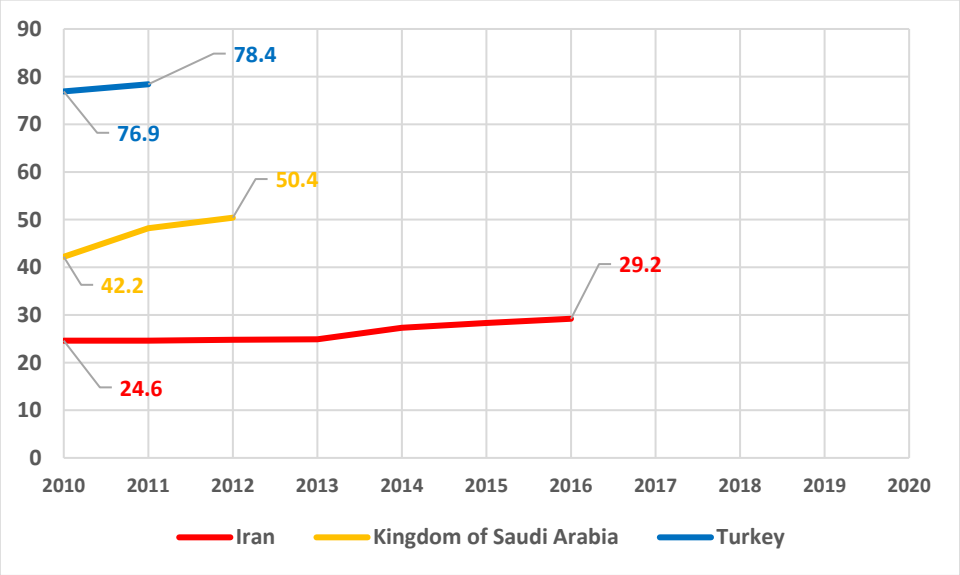
Figure 11.4b Incidence of treated ESRD attributed to diabetes, by country or region, 2020

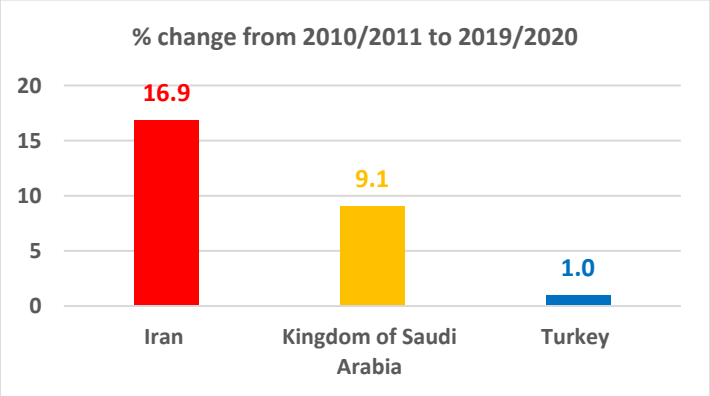
Data for Türkiye, Kingdom of Saudi Arabia & Iran extracted from Table N.2- Trends in the incidence rate (per million population/year) of treated ESRD, unadjusted, by country/region, 2010-2020

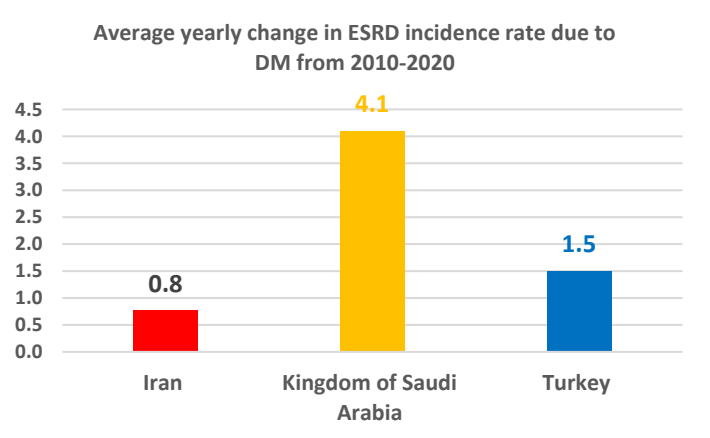


No data available on Iraq

Table N.2, Trends in the incidence rate (per million population/year) of treated ESRD due to diabetes, unadjusted, by country/region, 2010-2020



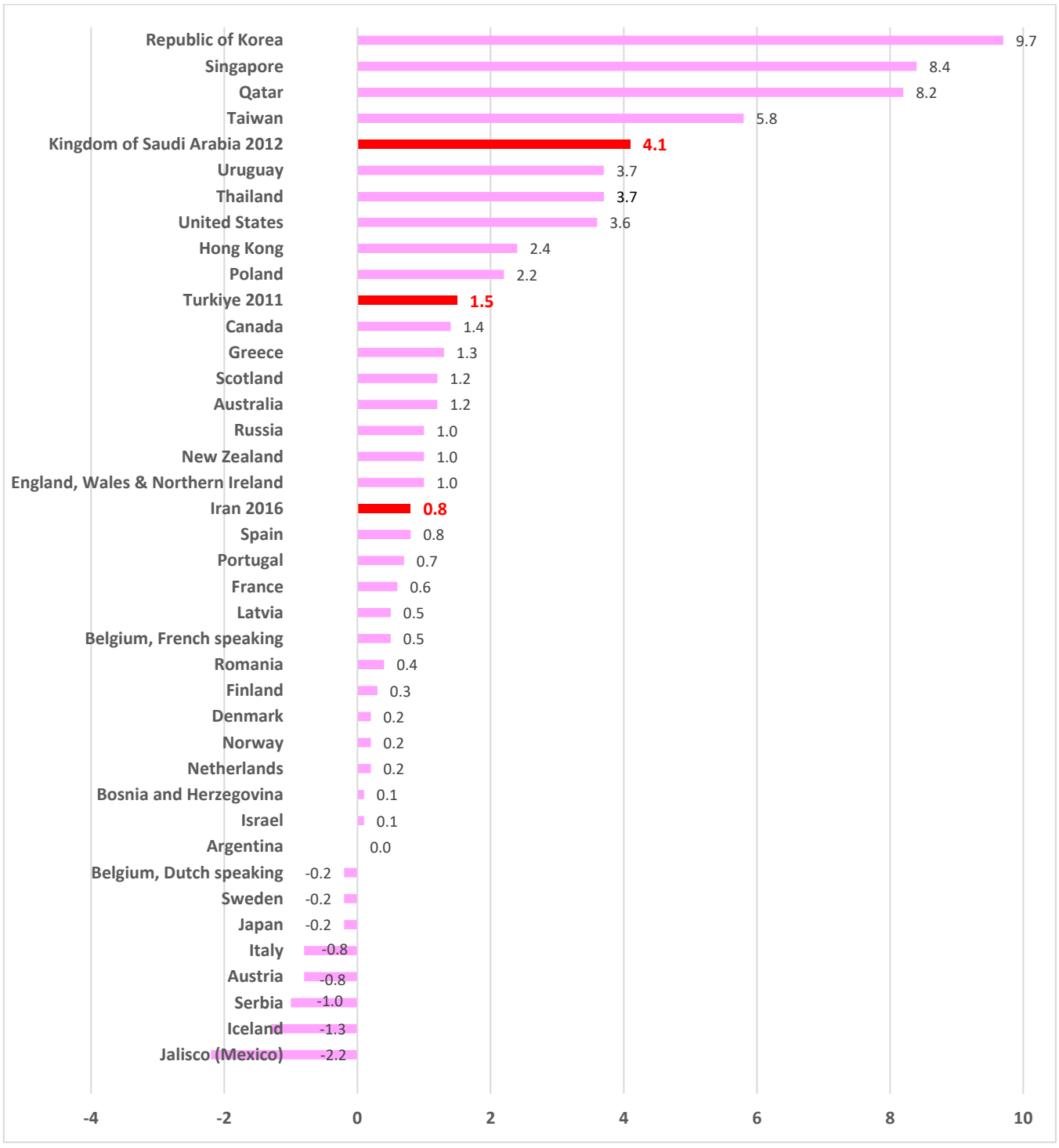




No data available on Iraq

Figure 11.5 Average yearly change in incidence of treated ESRD attributed to diabetes, by country or region, 2010-2020

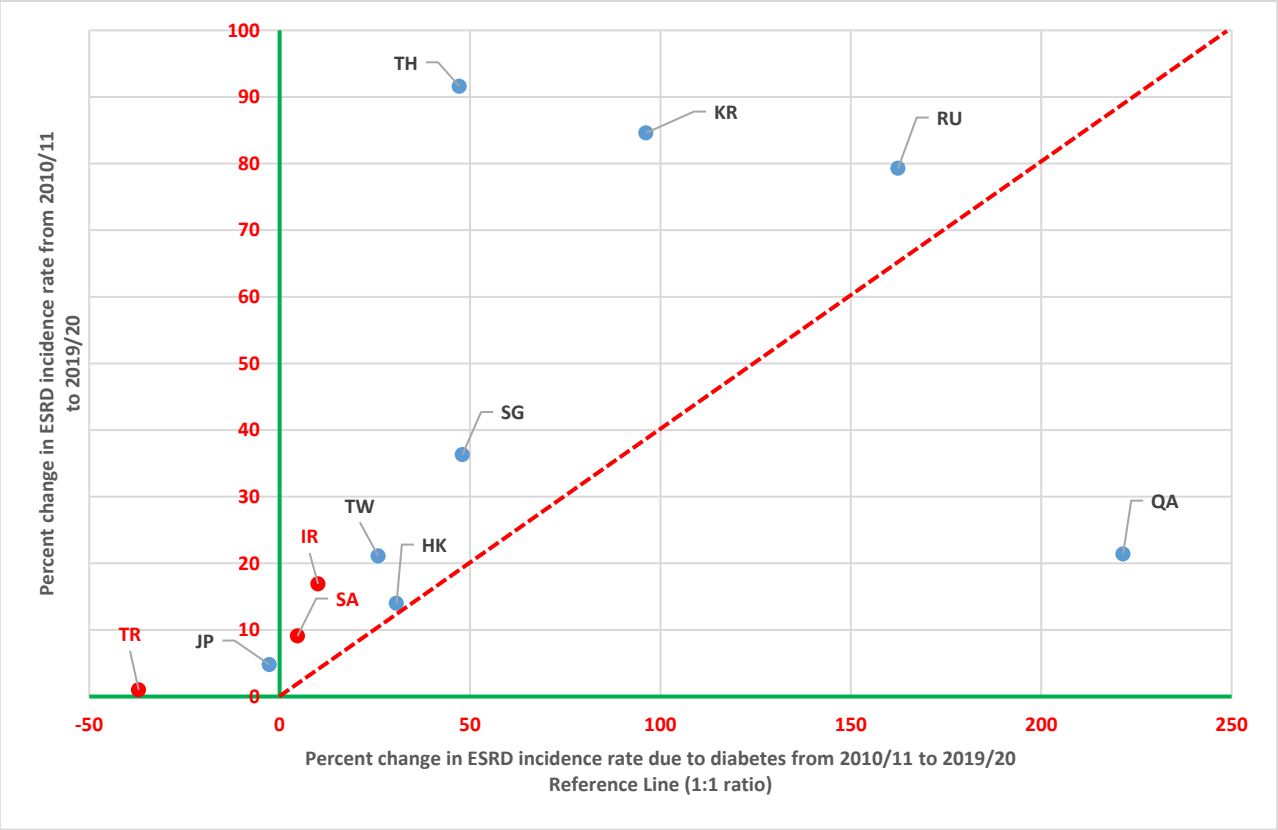
Data for Türkiye, Kingdom of Saudi Arabia & Iran extracted from Table N.2- Trends in the incidence rate (per million population/year) of treated ESRD, unadjusted, by country/region, 2010-2020



No data available on Iraq

Figure 11.6 Country or region-level correlation between percentage change in incidence of treated ESRD and percentage change in incidence of treated ESRD attributed to diabetes, by region of the world, 2010-2020, Asia & Russia

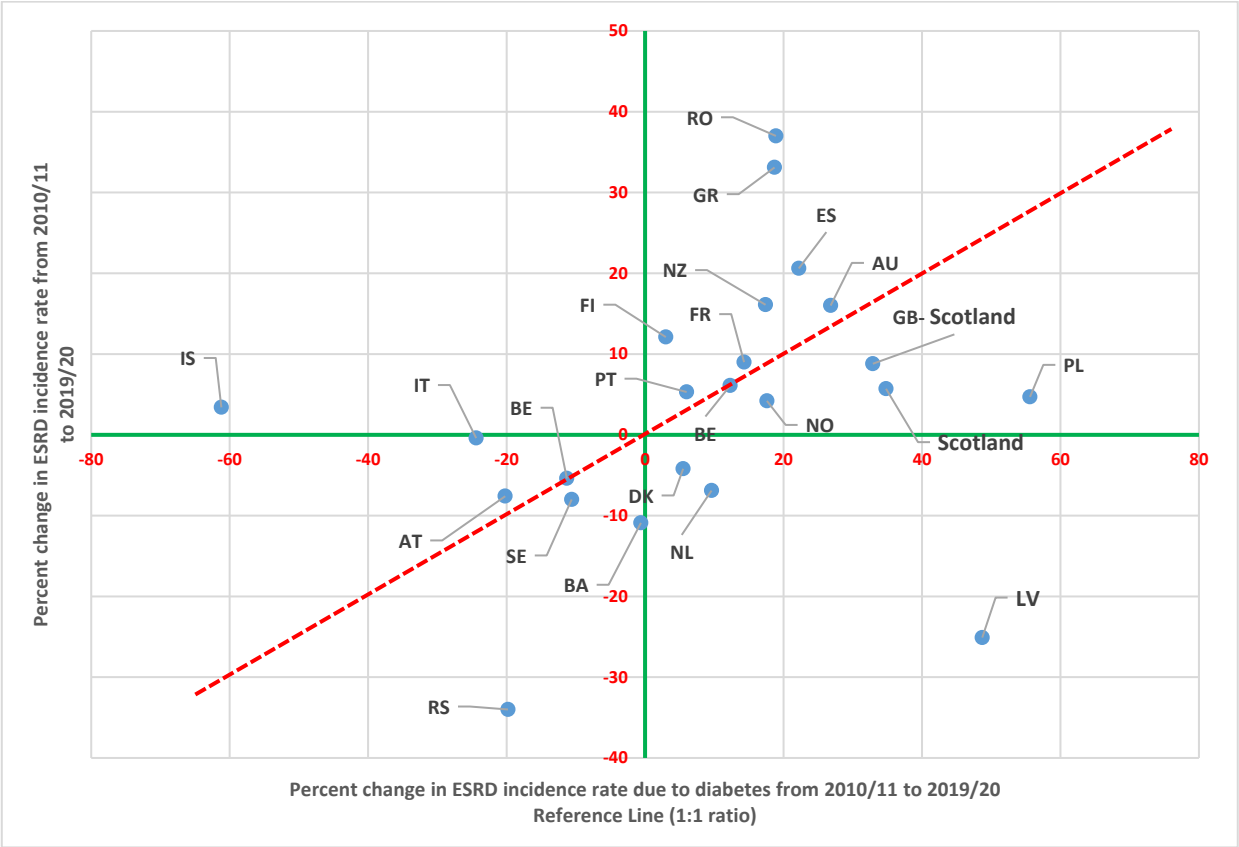
Data for Türkiye, Kingdom of Saudi Arabia & Iran extracted from "Table N.2 & Table N.1.b"



Country	Region	X Percent change in ESRD incidence rate due to diabetes from 2010/11 to 2019/20	Y Percent change in ESRD incidence rate from 2010/11 to 2019/20
Turkey, TR *2010/11*	Asia & Russia	-37	1.00
Japan, JP	Asia & Russia	-2.70	4.80
Kingdom of Saudi Arabia, SA *2010/11 to 2011/12*	Asia & Russia	4.7	9.1
Iran, IR *2010/11 to 2015/16*	Asia & Russia	10.1	16.9
Taiwan, TW	Asia & Russia	25.90	21.10
Hong Kong, HK	Asia & Russia	30.70	14.00
Thailand, TH	Asia & Russia	47.20	91.60
Singapore, SG	Asia & Russia	48.00	36.30
Republic of Korea, KR	Asia & Russia	96.20	84.60
Russia, RU	Asia & Russia	162.40	79.30
Qatar, QA	Asia & Russia	221.50	21.40

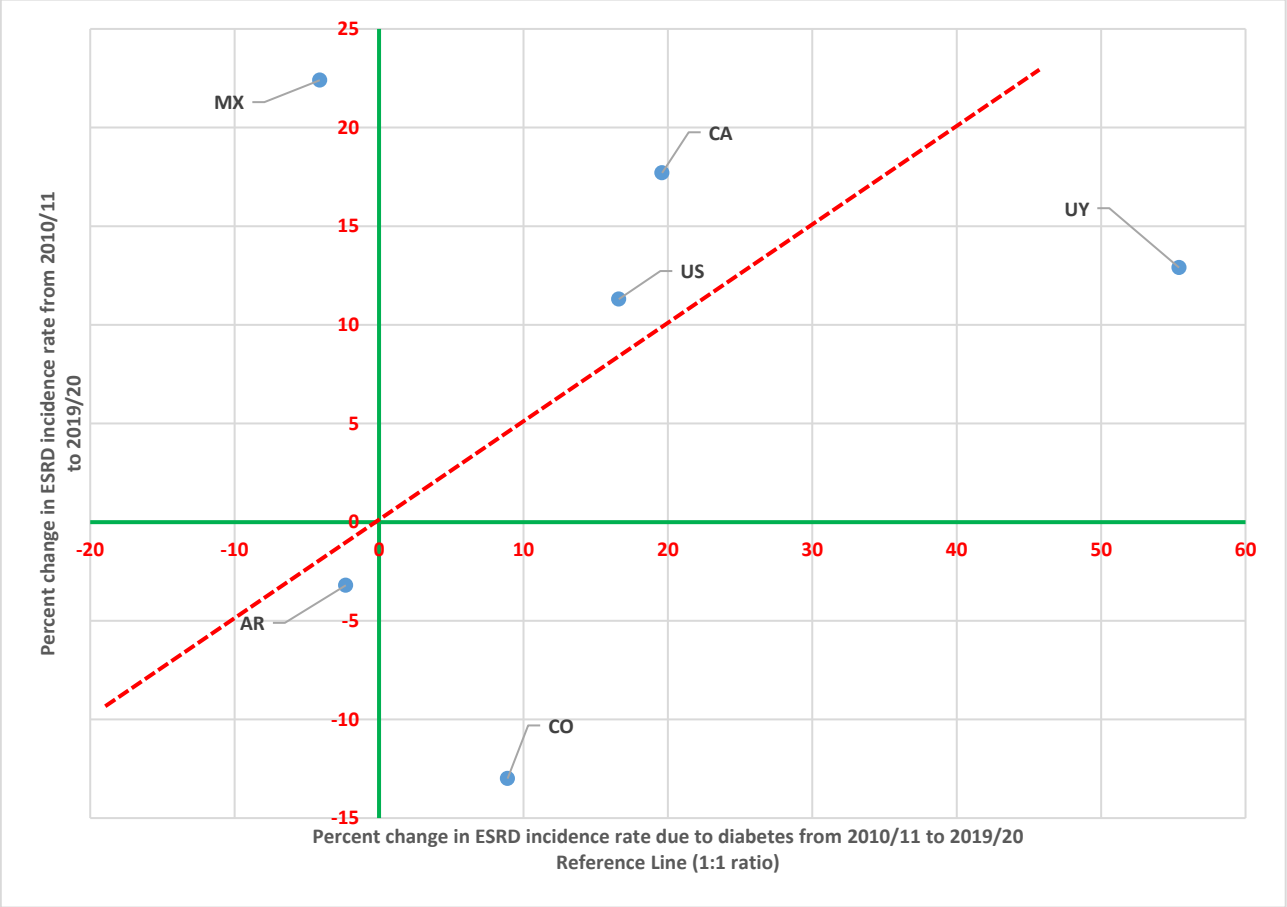
No data available on Iraq

Figure 11.6 Country or region-level correlation between percentage change in incidence of treated ESRD and percentage change in incidence of treated ESRD attributed to diabetes, by region of the world, 2010-2020, Europe



Country	Region	X Percent change in ESRD incidence rate due to diabetes from 2010/11 to 2019/20	Y Percent change in ESRD incidence rate from 2010/11 to 2019/20
Iceland, IS	Europe	-61.20	3.40
Italy, IT	Europe	-24.40	-0.40
Austria, AT	Europe	-20.20	-7.60
Serbia, RS	Europe	-19.80	-34.00
Belgium, Dutch speaking, BE	Europe	-11.30	-5.40
Sweden, SE	Europe	-10.60	-8.00
Bosnia and Herzegovina, BA	Europe	-0.60	-10.90
Finland, FI	Europe	3.00	12.10
Denmark, DK	Europe	5.50	-4.20
Portugal, PT	Europe	6.00	5.30
Netherlands, NL	Europe	9.60	-6.90
Belgium, French speaking, BE	Europe	12.30	6.10
France, FR	Europe	14.30	9.00
New Zealand, NZ	Europe	17.40	16.10
Norway, NO	Europe	17.60	4.20
Greece, GR	Europe	18.70	33.10
Romania, RO	Europe	18.90	37.00
Spain, ES	Europe	22.20	20.60
Australia, AU	Europe	26.80	16.00
England, Wales & Northern Ireland, GB	Europe	32.90	8.80
Scotland	Europe	34.80	5.70
Latvia, LV	Europe	48.70	-25.10
Poland, PL	Europe	55.60	4.70

Figure 11.6 Country or region-level correlation between percentage change in incidence of treated ESRD and percentage change in incidence of treated ESRD attributed to diabetes, by region of the world, 2010-2020, North & Latin America



Country	Region	X Percent change in ESRD incidence rate due to diabetes from 2010/11 to 2019/20	Y Percent change in ESRD incidence rate from 2010/11 to 2019/20
Jalisco (Mexico), MX	North & Latin America	-4.10	22.40
Argentina, AR	North & Latin America	-2.30	-3.20
Colombia, CO	North & Latin America	8.90	-13.00
United States, US	North & Latin America	16.60	11.30
Canada, CA	North & Latin America	19.60	17.70
Uruguay, UY	North & Latin America	55.40	12.90

Figure 11.9 Prevalence of treated ESRD, by country or region, 2020

Data for Türkiye, Kingdom of Saudi Arabia, Iran & Iraq extracted from Table N.4.b Trends in the prevalence (per million population/year) of treated ESRD, unadjusted, by country/region, 2010-2020

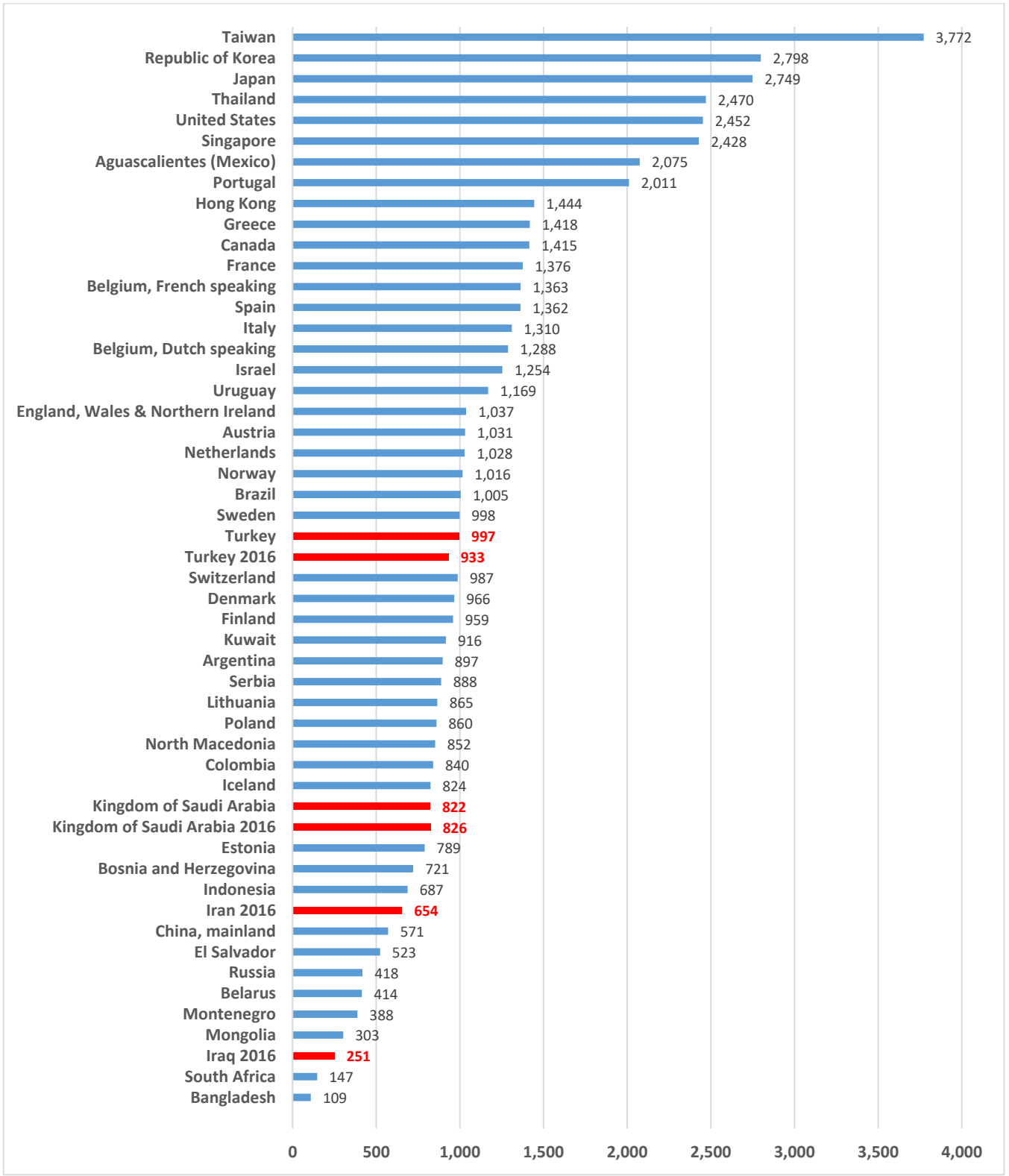


Figure 11.9 Prevalence of treated ESRD, by country or region, 2020

Data for Türkiye, Kingdom of Saudi Arabia, Iran & Iraq extracted from Table N.4.a Yearly point prevalent counts of patients treated for ESRD at the end of the calendar year, by country/region, 2010-2020

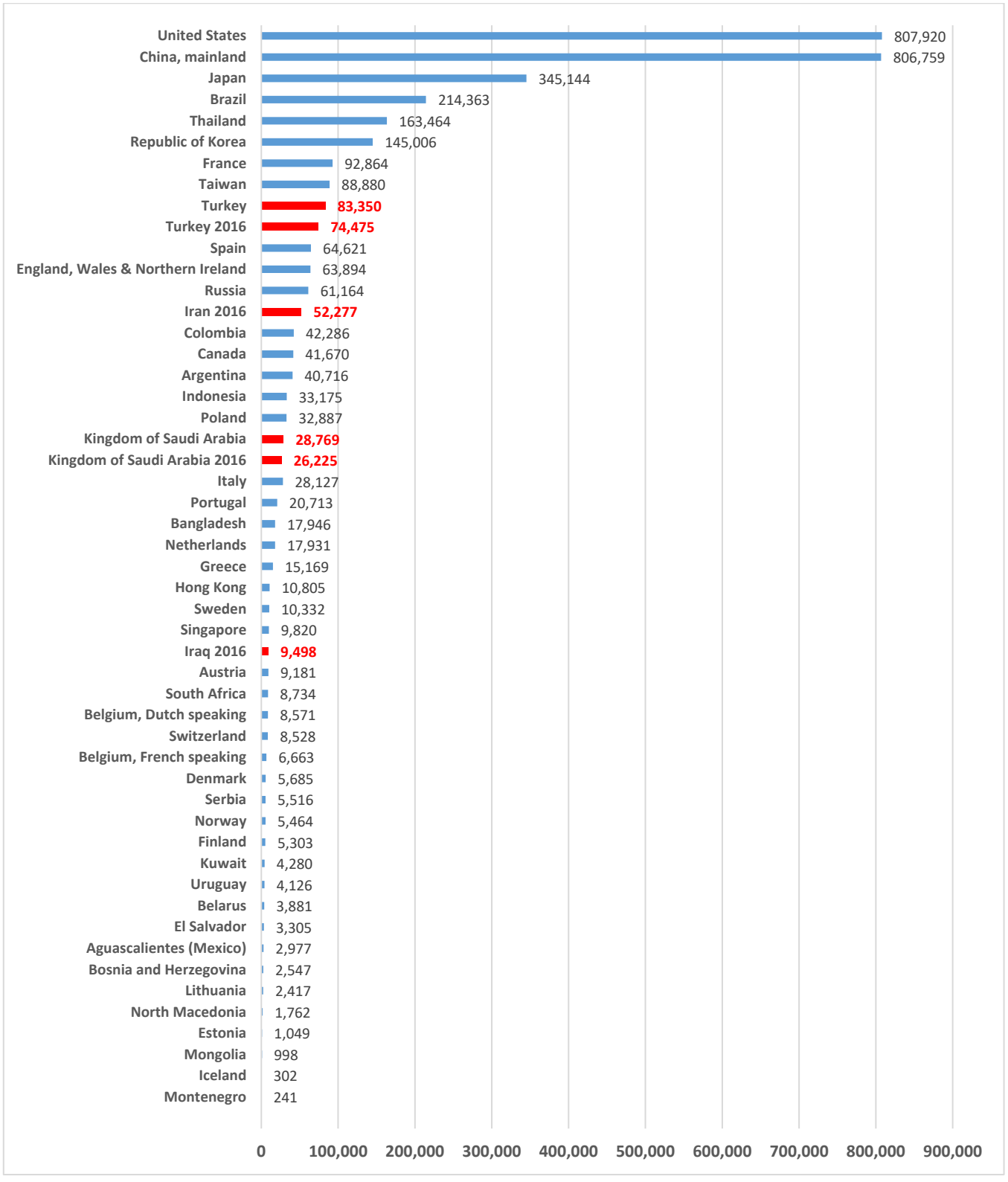


Figure 11.12a Prevalence of treated ESRD in countries or regions with the largest percentage increase in prevalence, 2010 versus 2020

Data for Türkiye, Kingdom of Saudi Arabia, Iran & Iraq extracted from Table N.4.b Trends in the prevalence (per million population/year) of treated ESRD, unadjusted, by country/region, 2010-2020

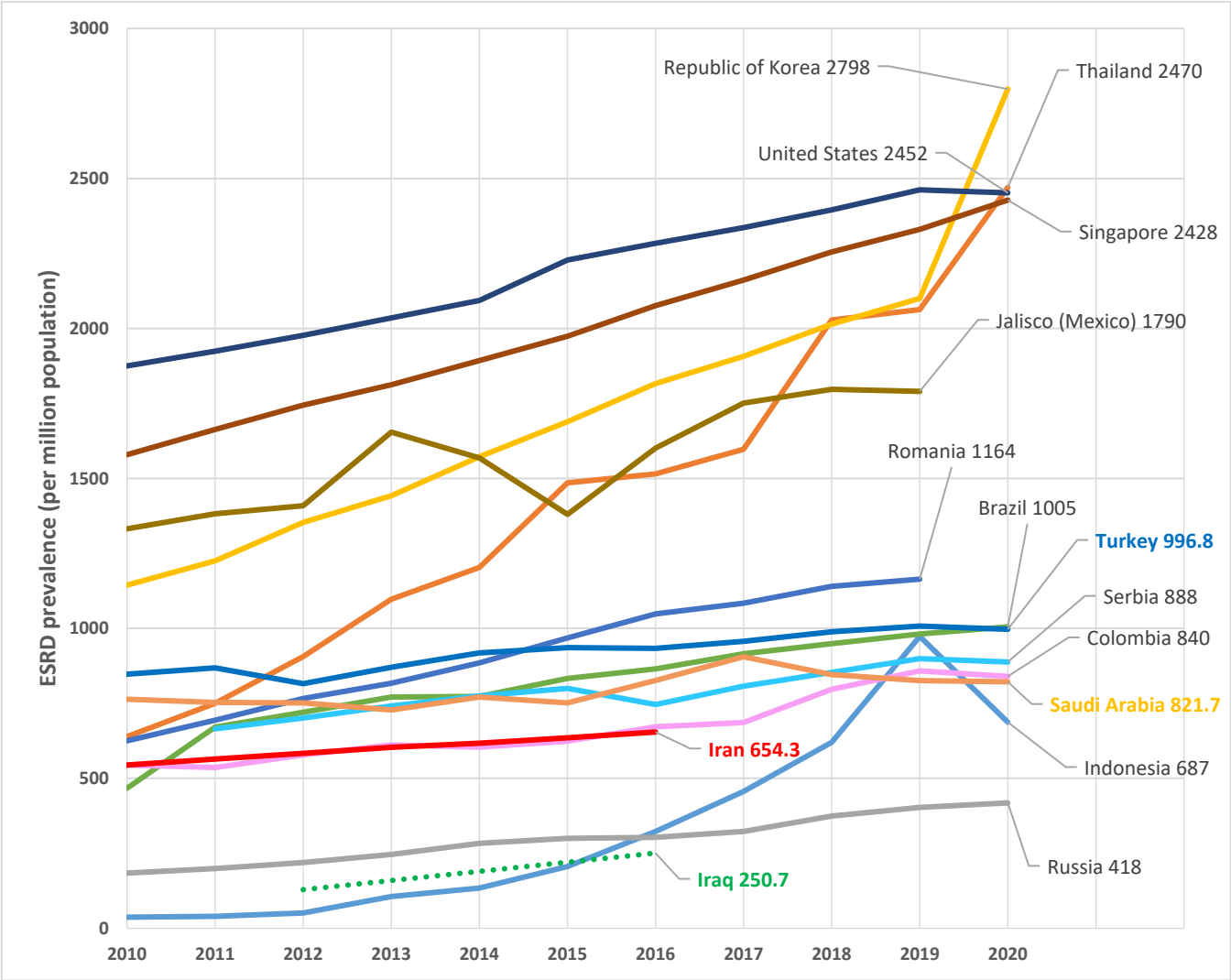


Figure 11.12b Average yearly change in prevalence of treated ESRD by country or region, 2010-2020

Data for Türkiye, Kingdom of Saudi Arabia, Iran & Iraq extracted from Table N.4.b Trends in the prevalence (per million population/year) of treated ESRD, unadjusted, by country/region, 2010-2020

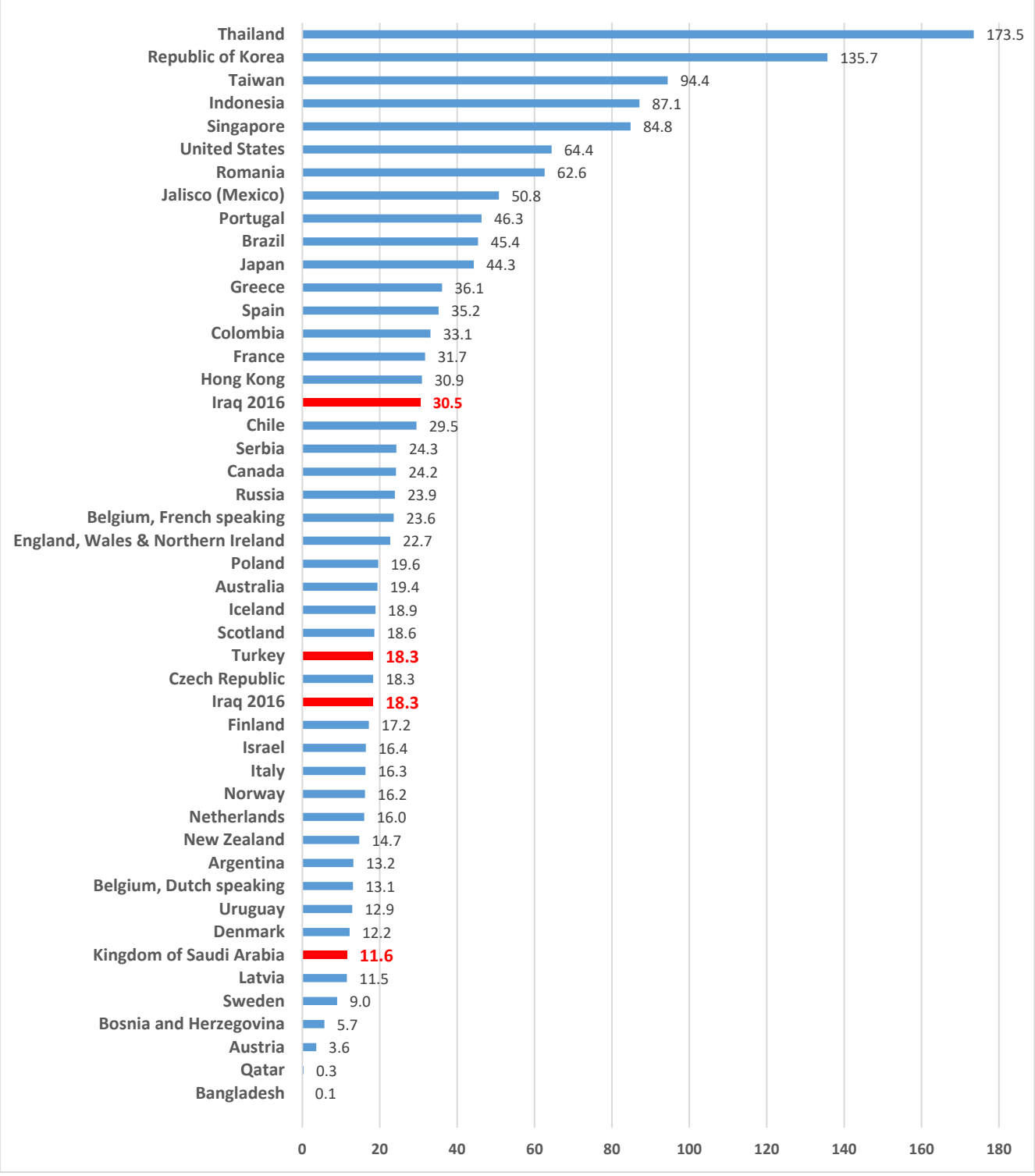
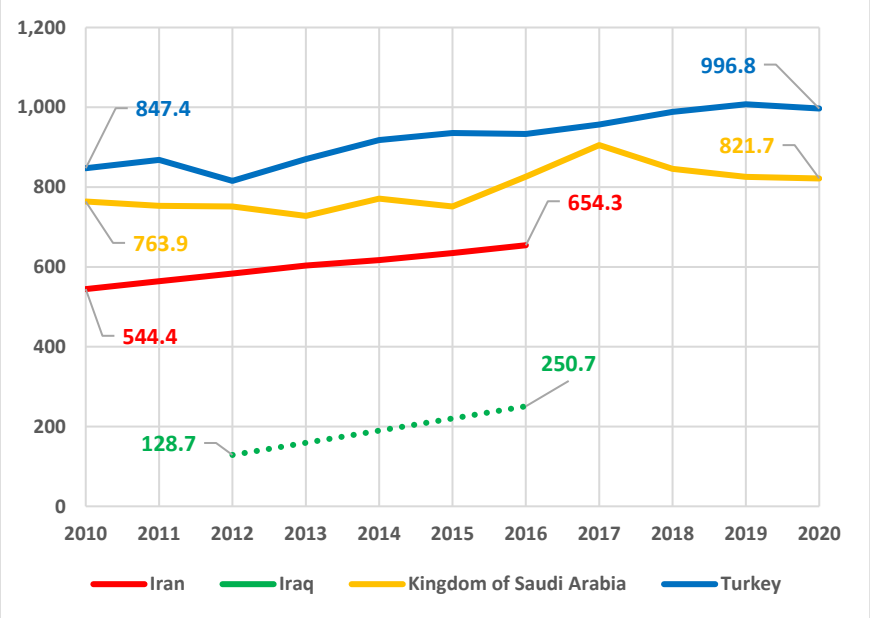
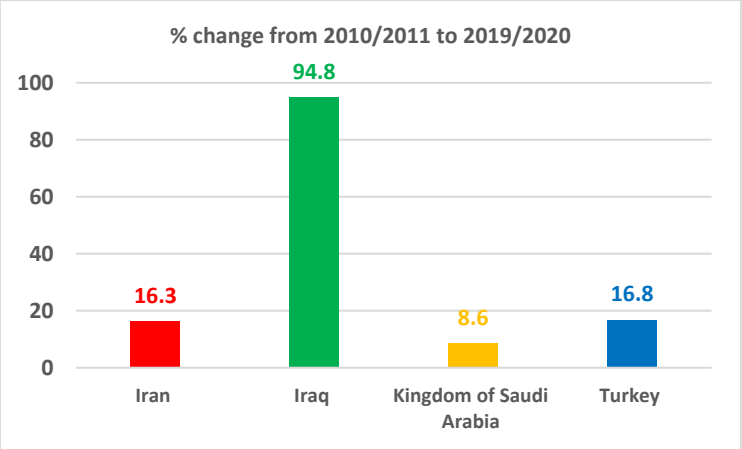


Table N.4.b Trends in the prevalence (per million population/year) of treated ESRD, unadjusted, by country/region, 2010-2020





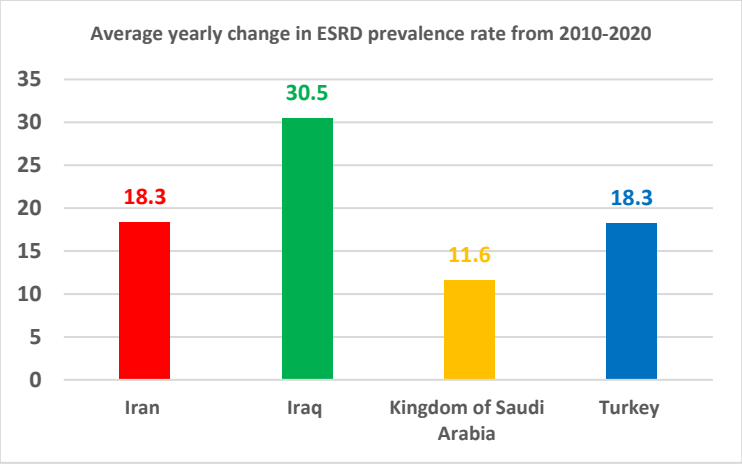


Table N.4.a Yearly point prevalent counts of patients treated for ESRD at the end of the calendar year, by country/region, 2010-2020

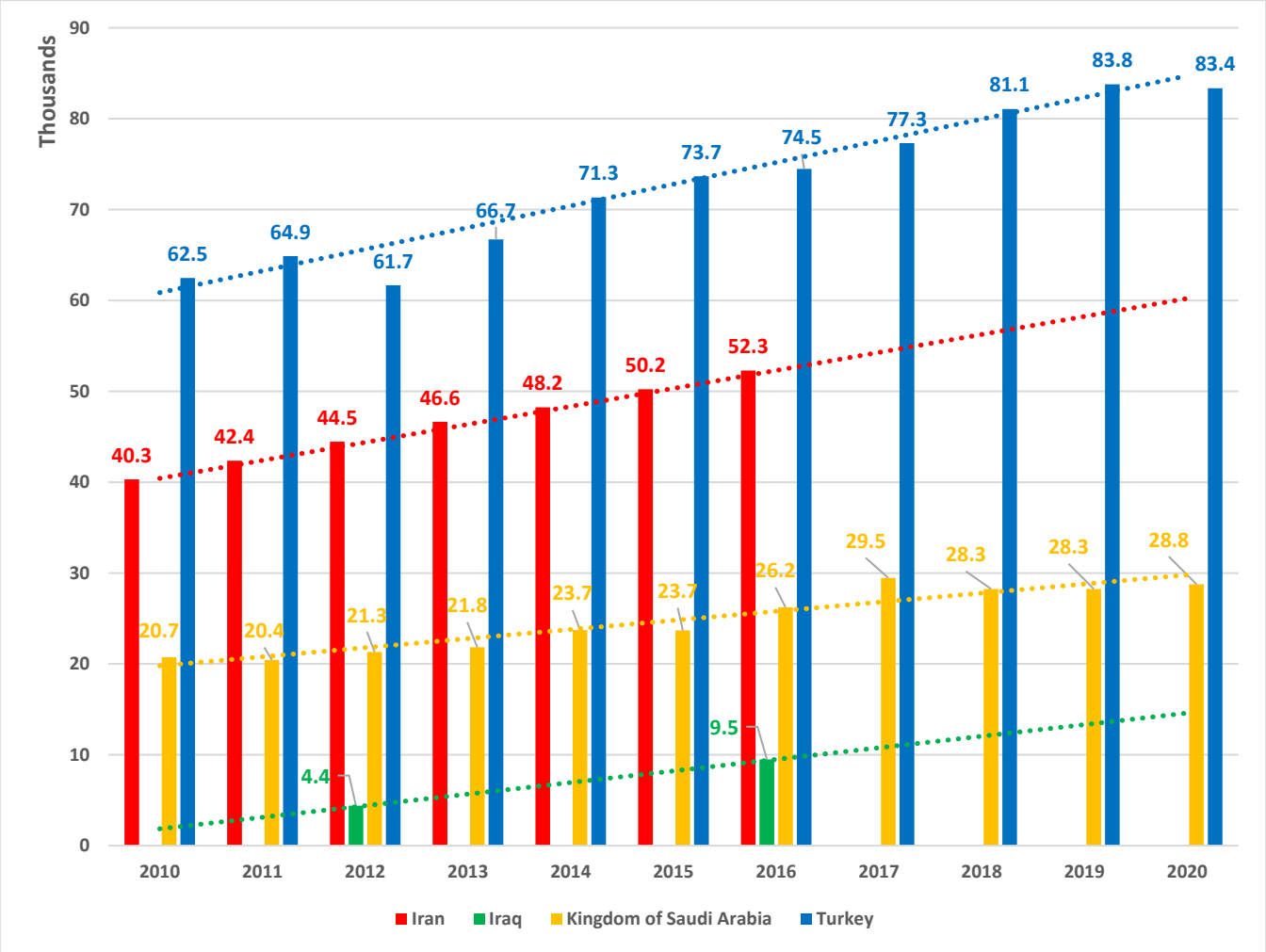
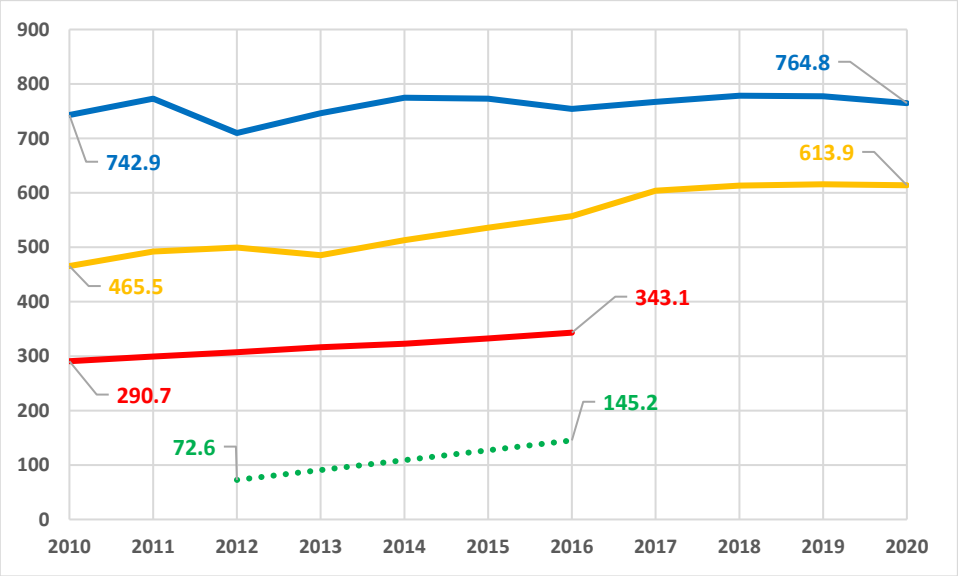
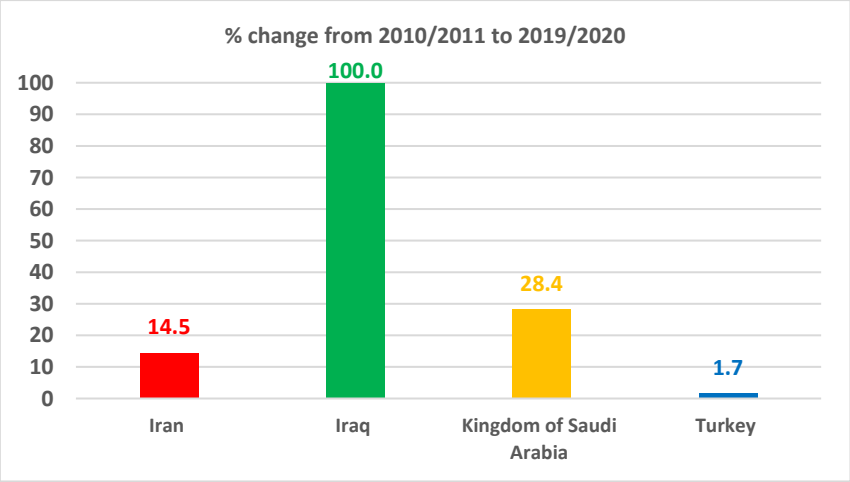


Table N.6.b Trends in the prevalence of dialysis (per million population/year), unadjusted, by country/region, 2010-2020





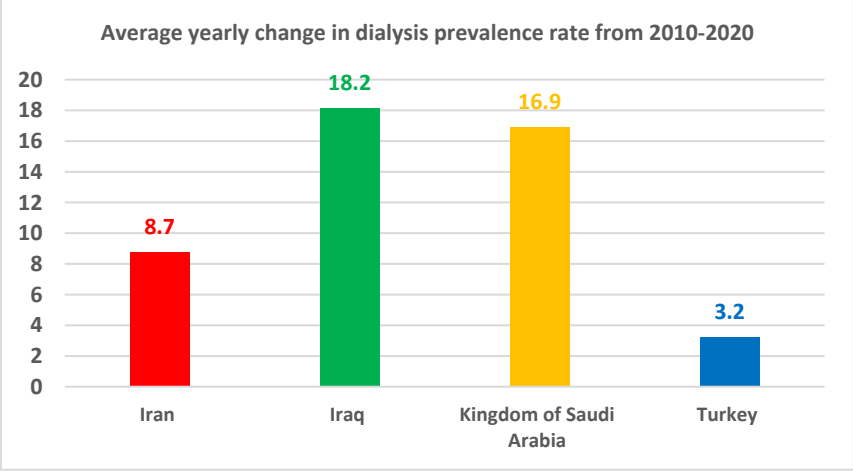


Table N.6.a Yearly point prevalent counts of patients treated with dialysis at the end of the calendar year, by country/region, 2010-2020

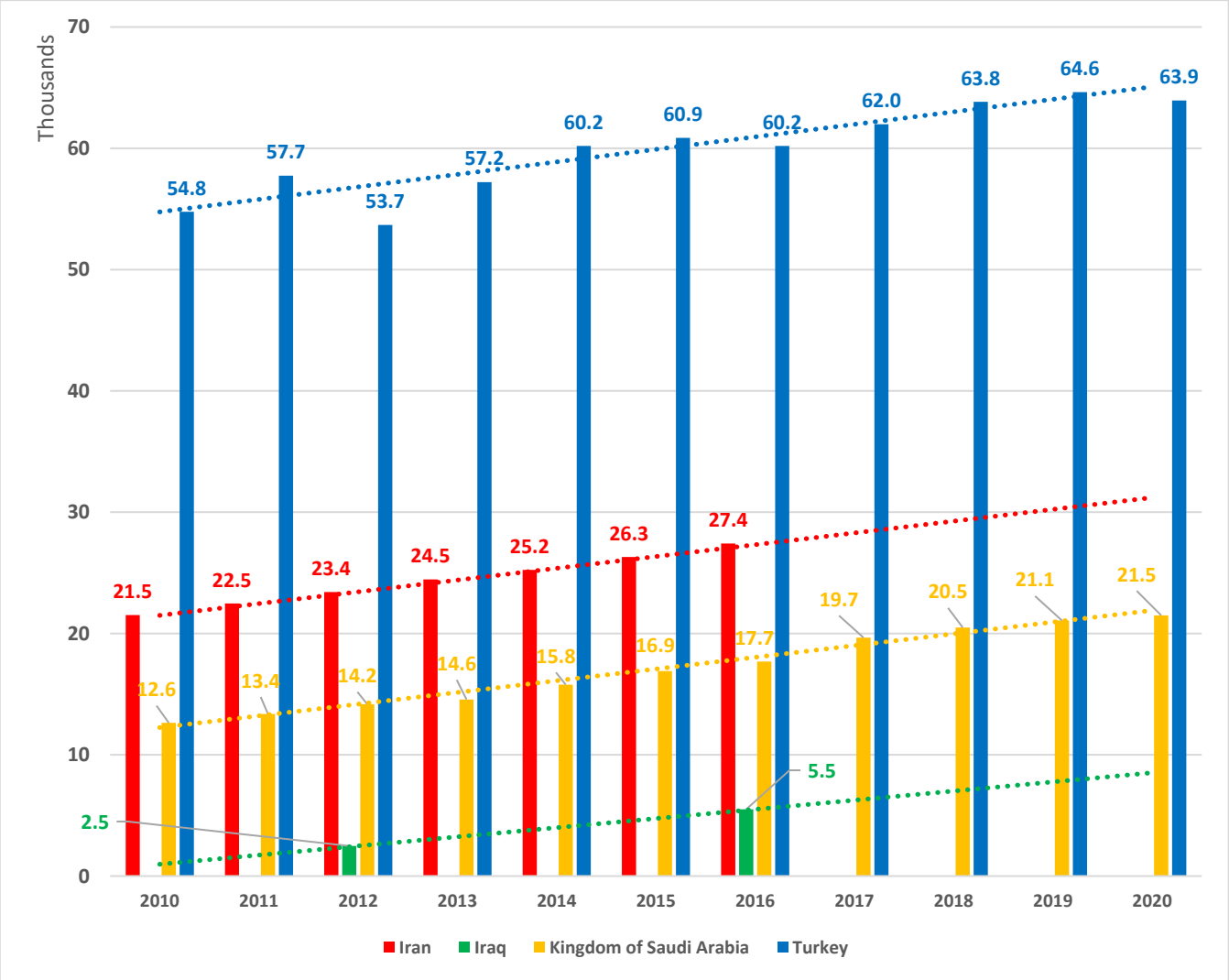


Figure 11.13 Percentage distribution of ESRD treatment modality, by country or region, 2020

Data for Iran & Iraq extracted from Tables N.7.d, N.7.e, N.7.f & N.9.c

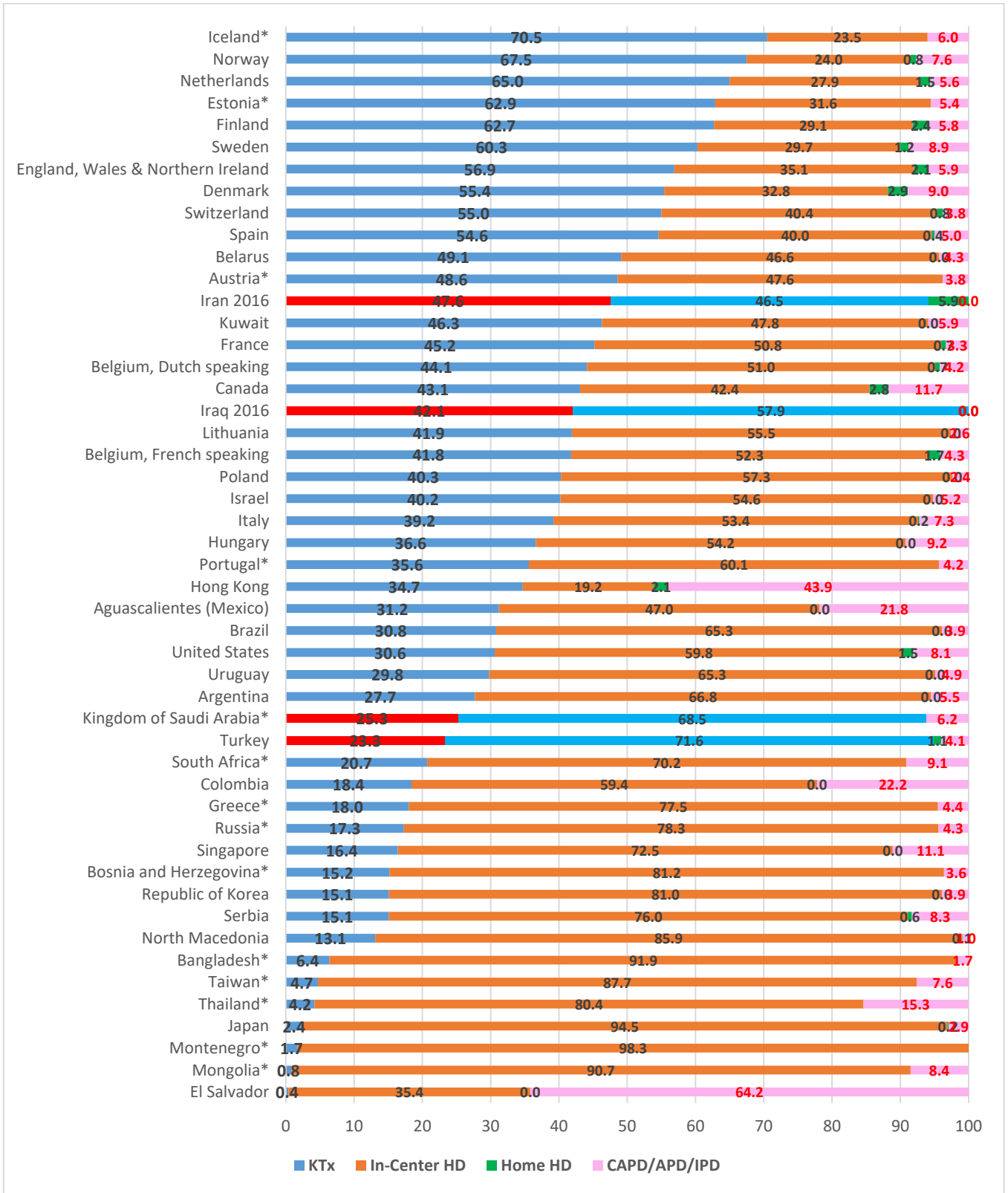


Figure 11.14 Prevalence of dialysis by country or region, 2020

2016 Data for Türkiye, Kingdom of Saudi Arabia & Iran extracted from Table N.6.b Trends in the prevalence of dialysis (per million population/year), unadjusted, by country/region, 2010-2020

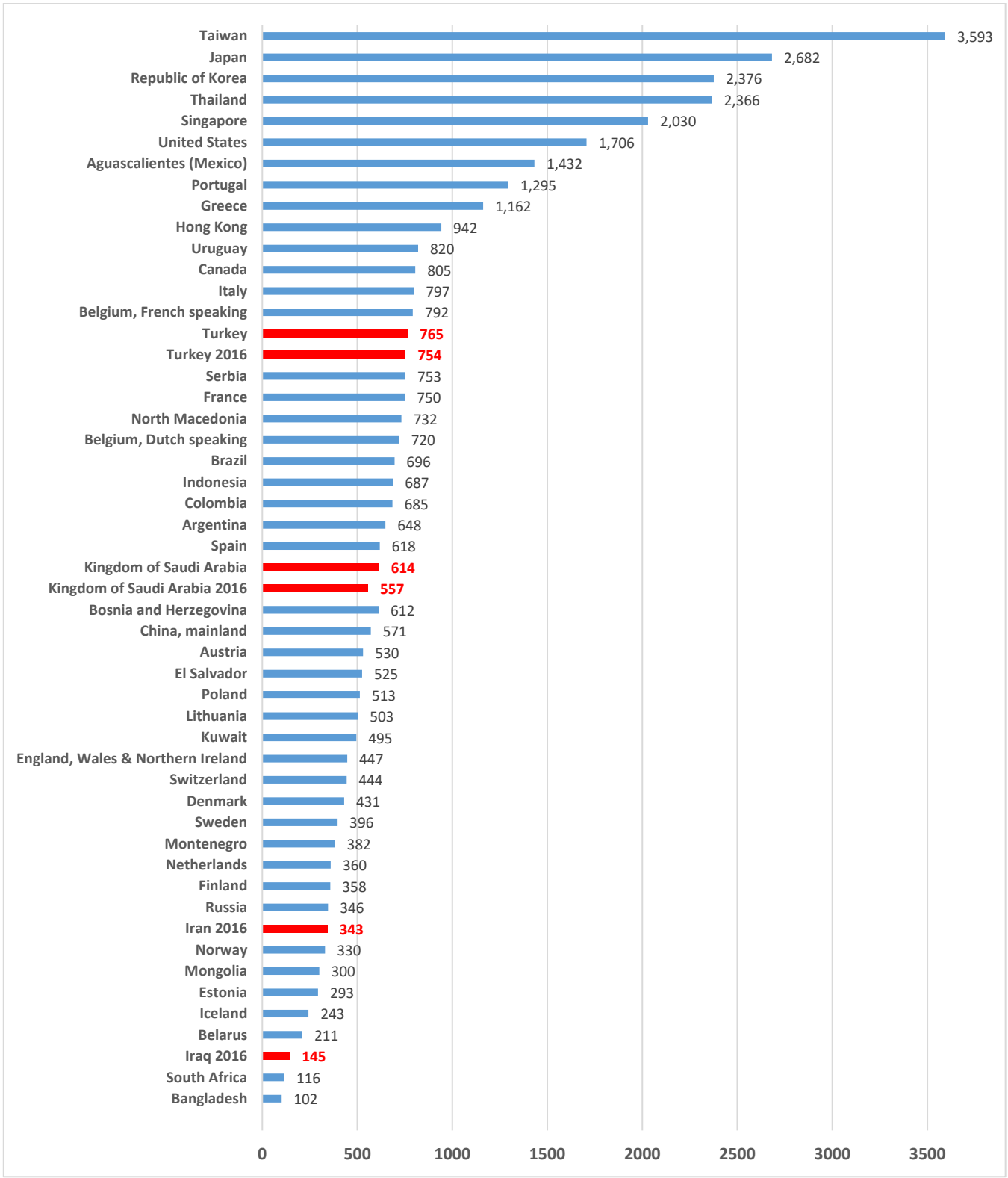


Figure 11.15a Prevalence of dialysis in countries or regions with the largest percentage increase in dialysis, 2010 versus 2020

Data for Türkiye, Kingdom of Saudi Arabia, Iraq & Iran extracted from Table N.6.b Trends in the prevalence of dialysis (per million population/year), unadjusted, by country/region, 2010-2020

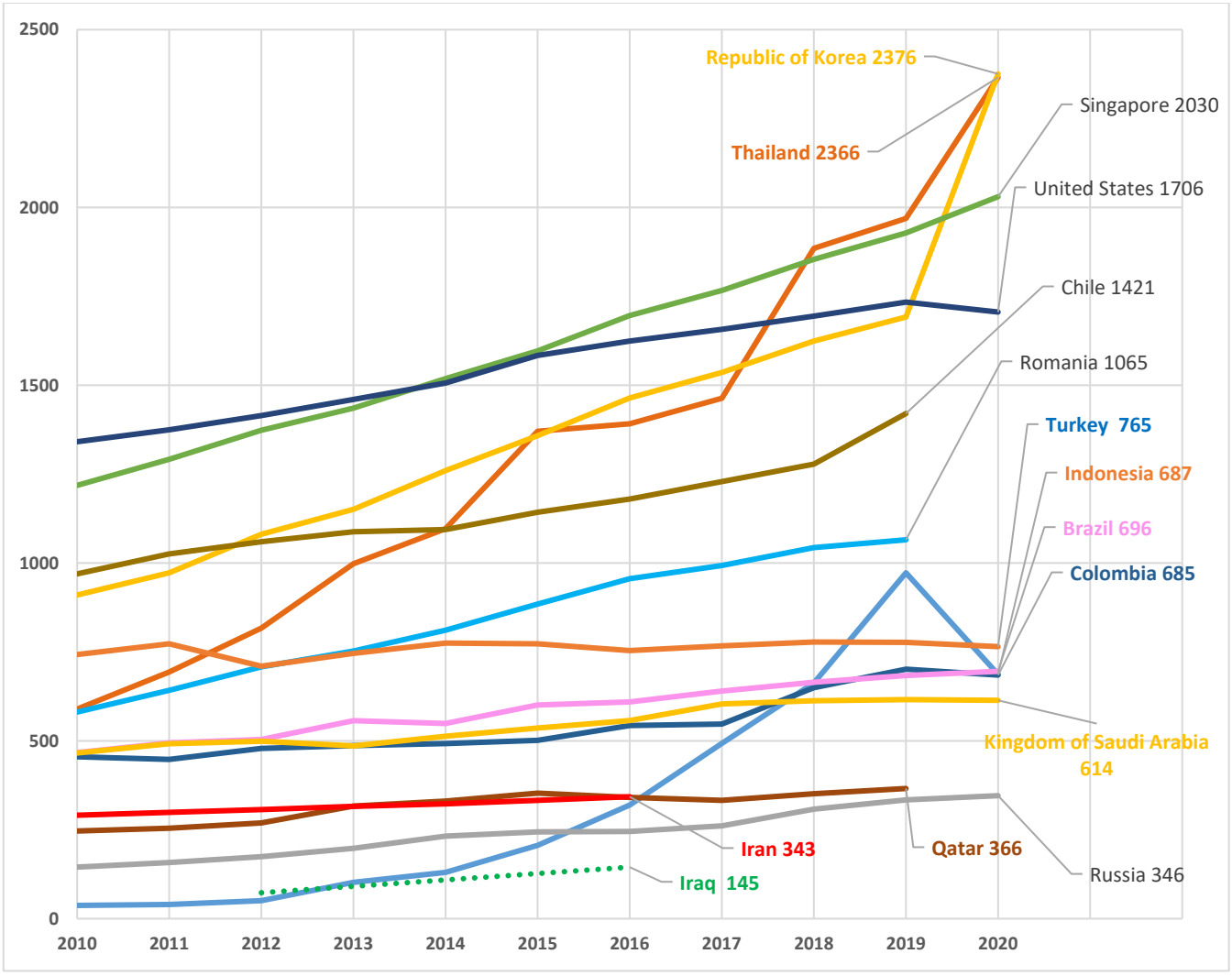


Figure 11.15b Average yearly change in prevalence of dialysis, by country or region, 2010-2020

Data for Iraq & Iran extracted from Table N.6.b Trends in the prevalence of dialysis (per million population/year), unadjusted, by country/region, 2010-2020

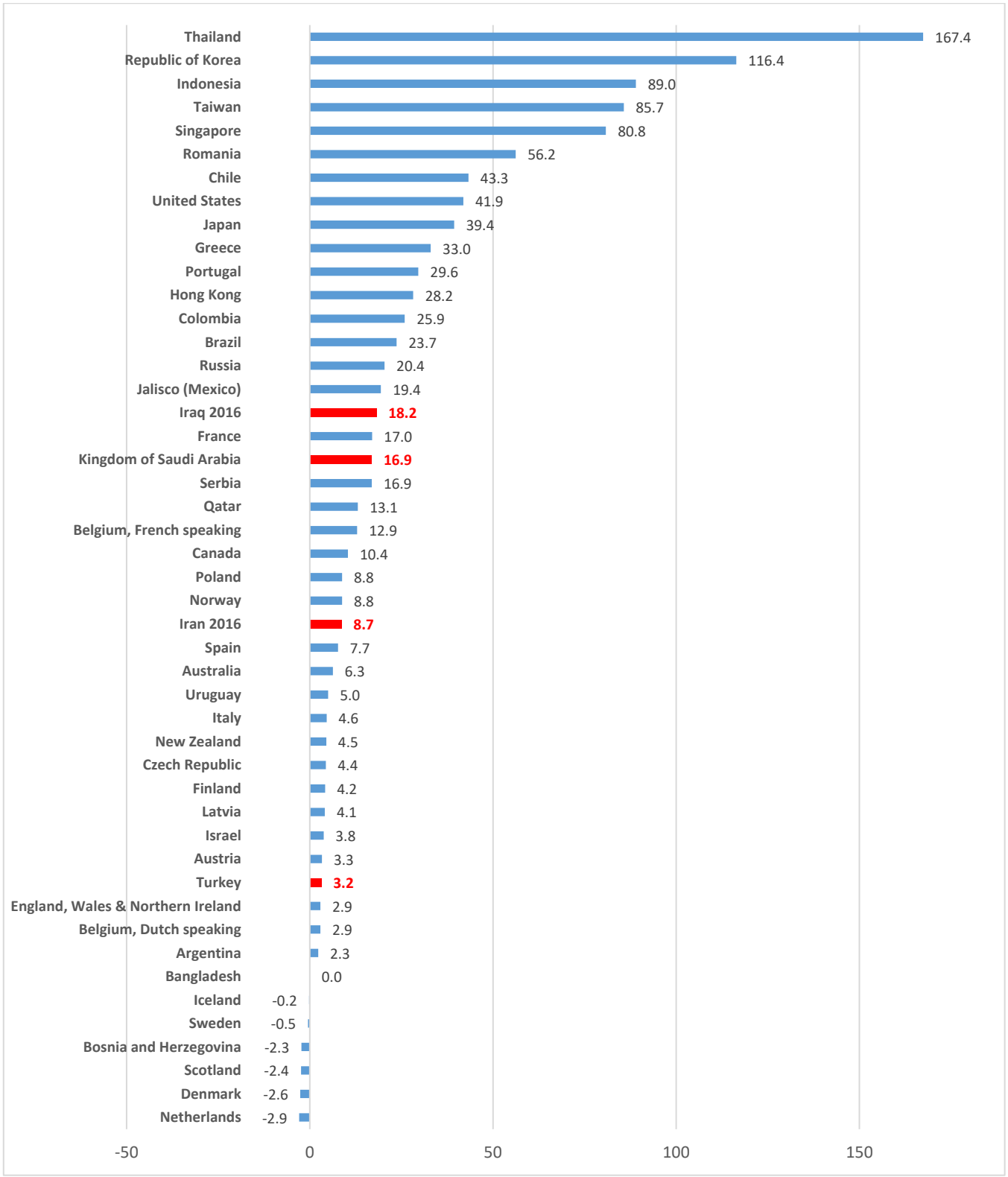


Figure 11.16 Distribution (Yearly Percentage) of dialysis modality in prevalent patients with ESRD, by country or region, 2020

Data for Iran & Iraq extracted from Tables N.7.d, N.7.e, & N.7.f Yearly percentage Distribution of prevalent dialysis patients using in-center, CAPD/APD/IPD & home hemodialysis, 2010-2020

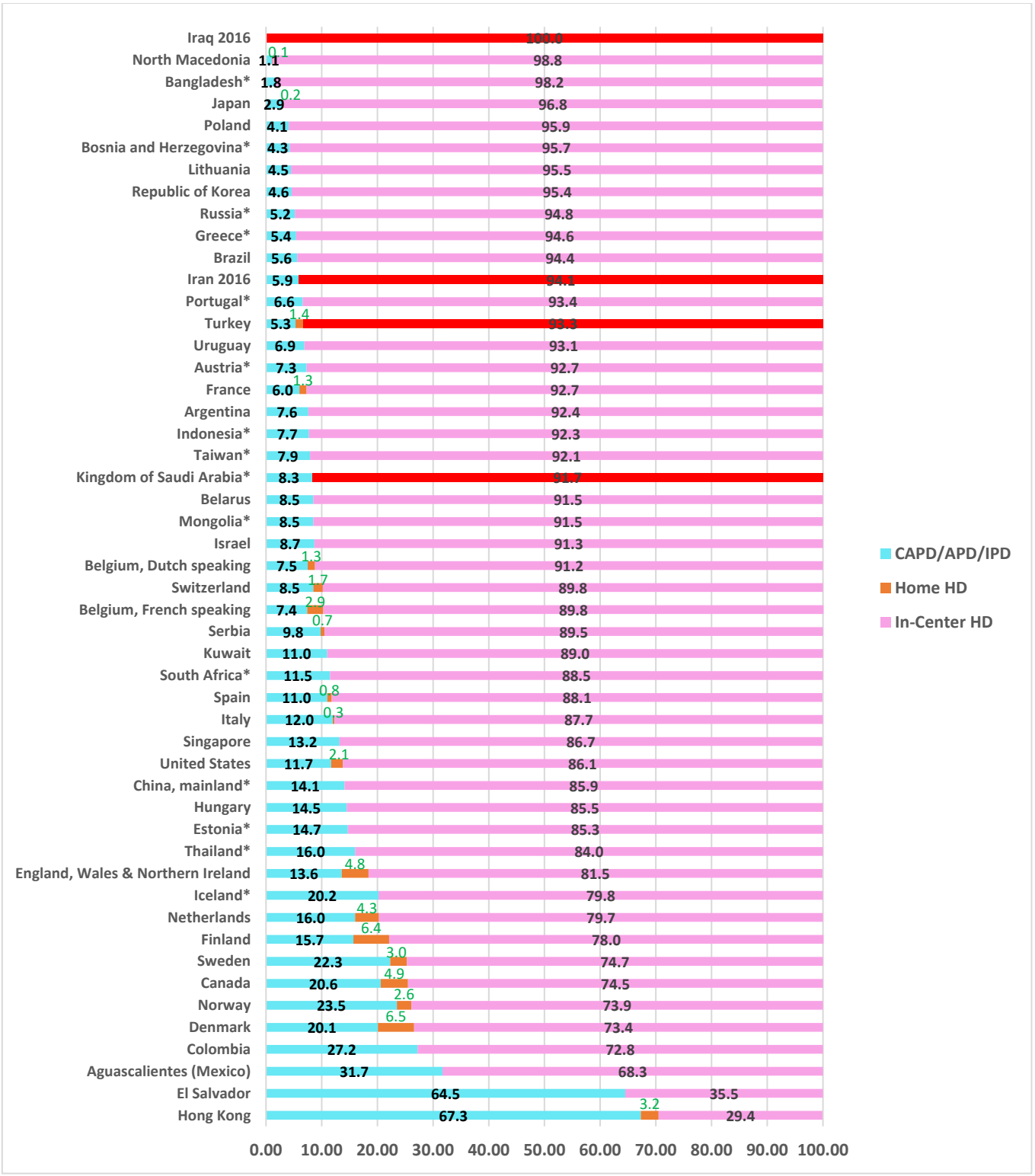


Table N.7.a Yearly counts of all patients treated with in-center hemodialysis as of the end of the calendar year, 2010-2020

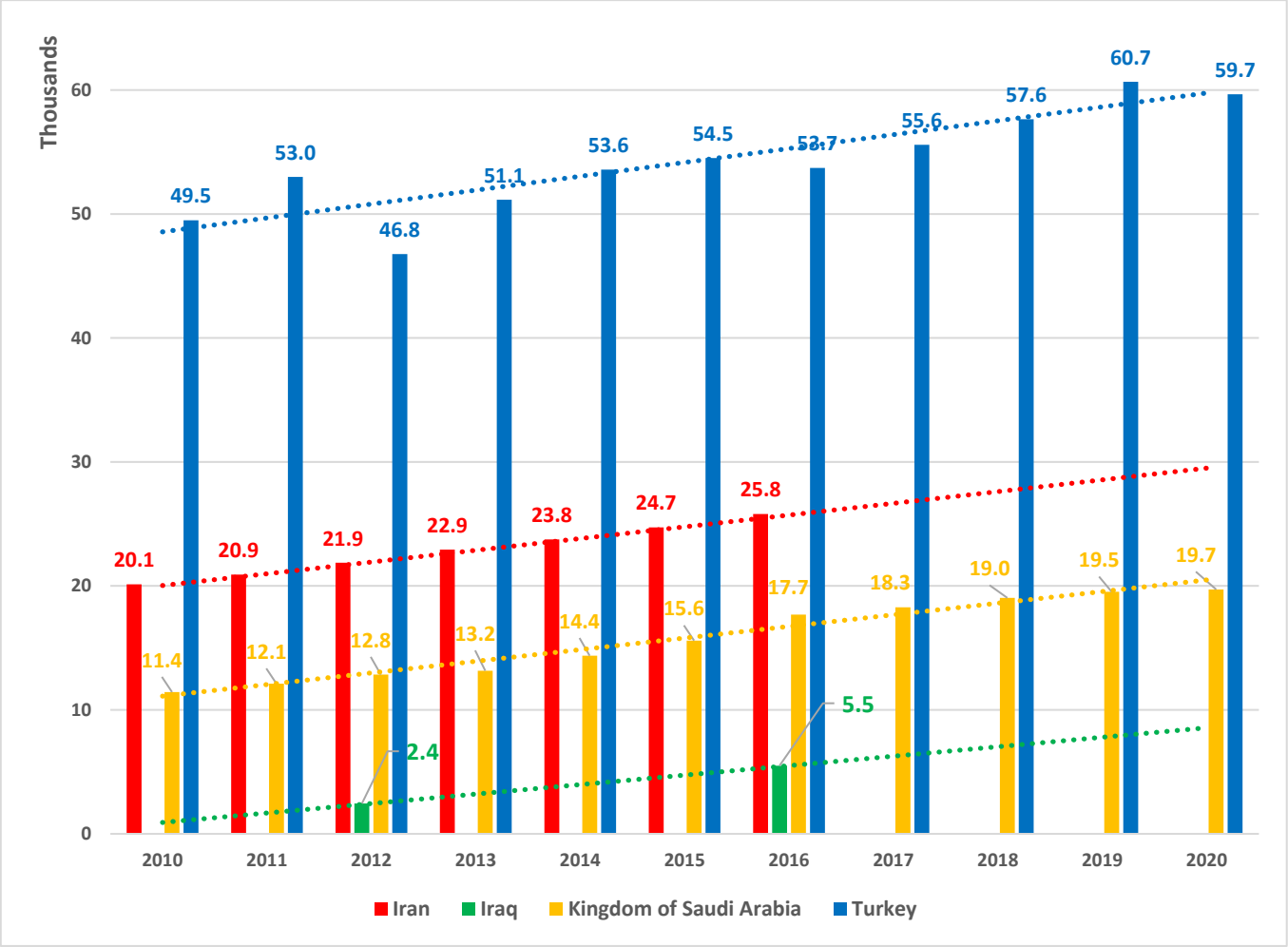


Table N.7.b Yearly counts of all patients treated with CAPD/APD/IPD as of the end of the calendar year, 2010-2020

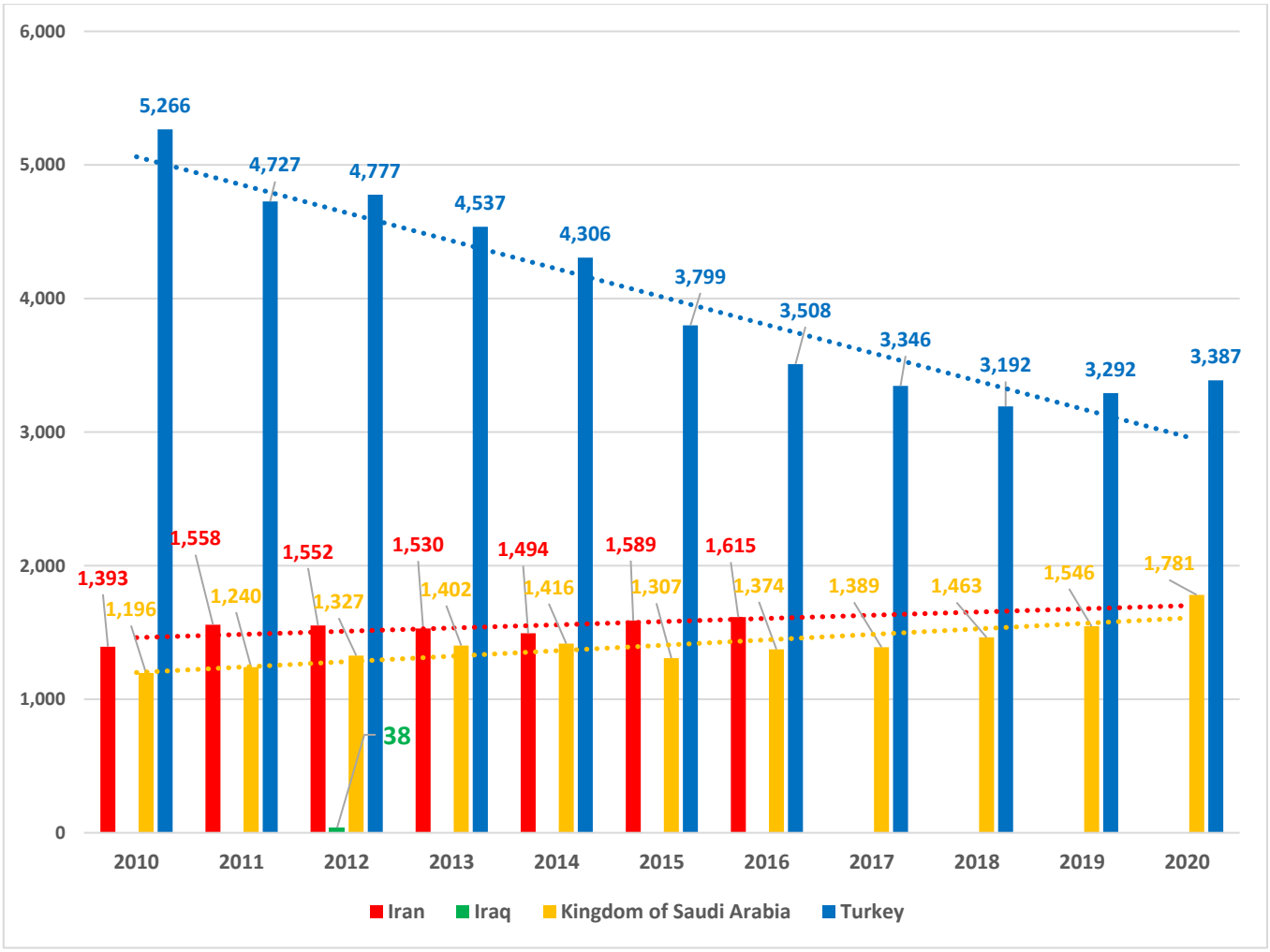


Table N.7.c Yearly counts of all patients treated with home hemodialysis as of the end of the calendar year, 2010-2020

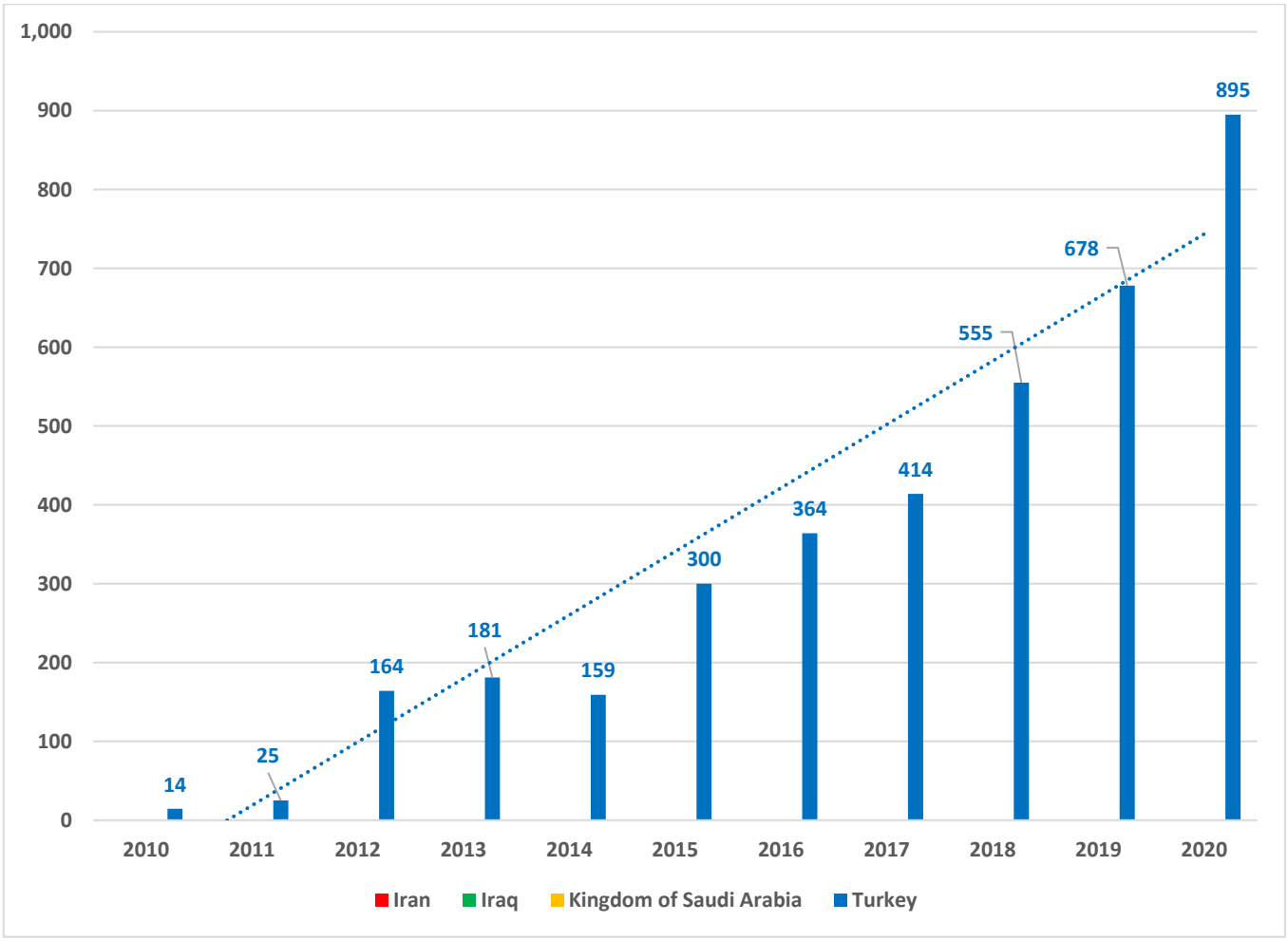


Table N.7.d Yearly percentage of prevalent dialysis patients using in-center hemodialysis, 2010-2020

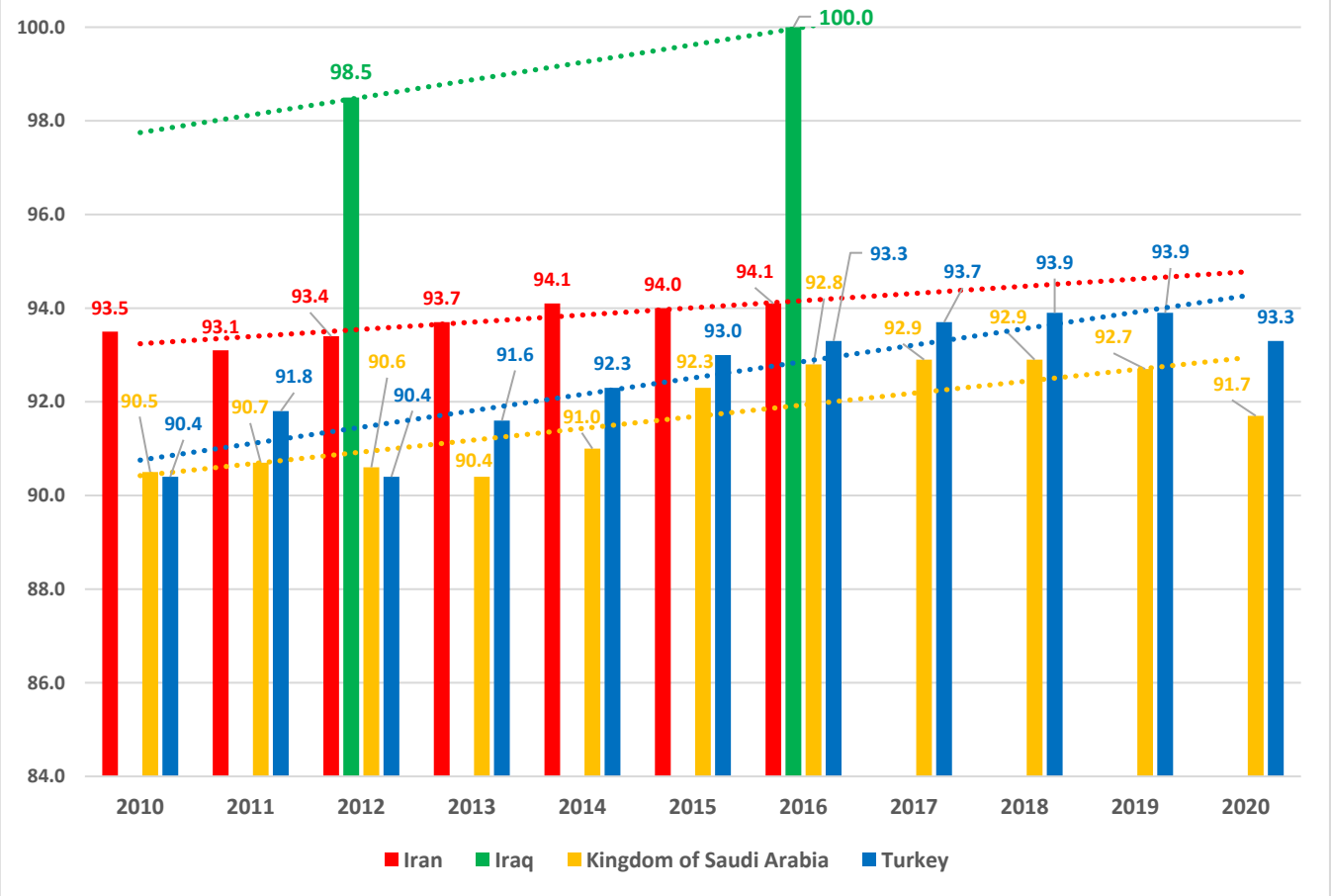


Table N.7.e Yearly percentage of prevalent dialysis patients using CAPD/APD/IPD, 2010-2020

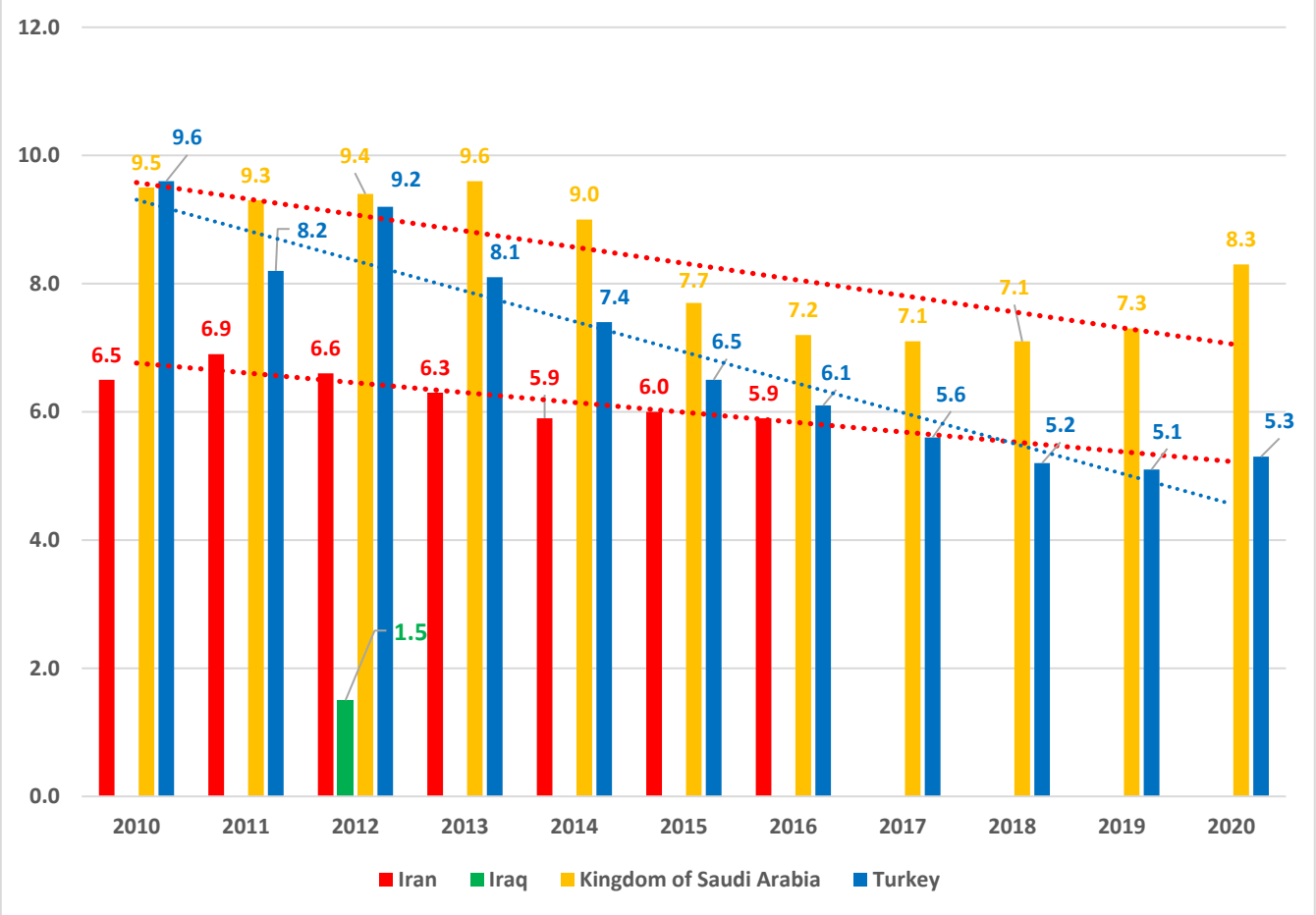


Table N.7.f Yearly percentage of prevalent dialysis patients using home hemodialysis, 2010-2020

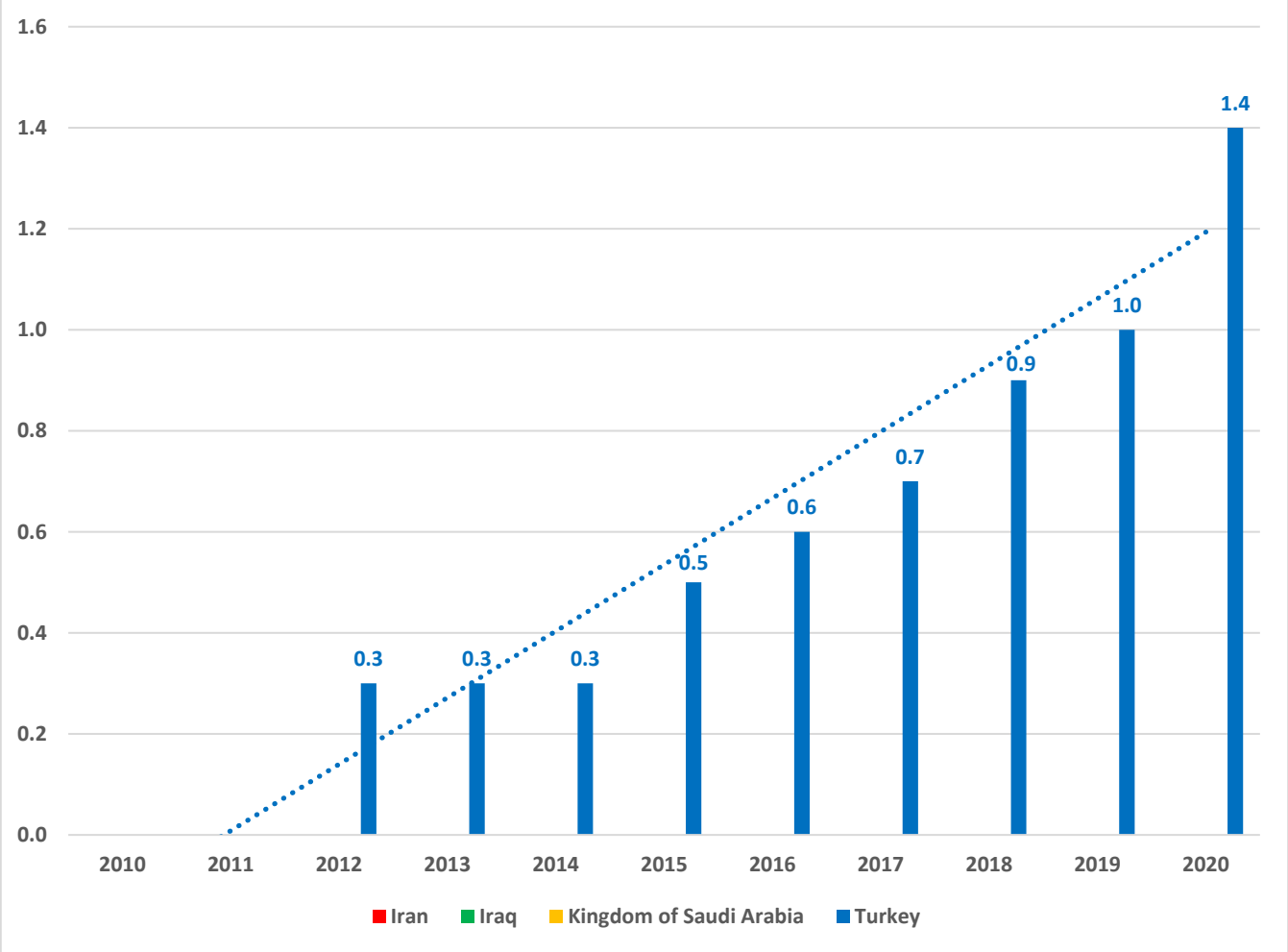


Figure 11.17a Kidney transplantation by country or region, 2020

2016 Data for Türkiye, Kingdom of Saudi Arabia, Iraq & Iran extracted from Table N.8.b Trends in the kidney transplantation rate (per million population/year), unadjusted, by country/region, 2010-2020

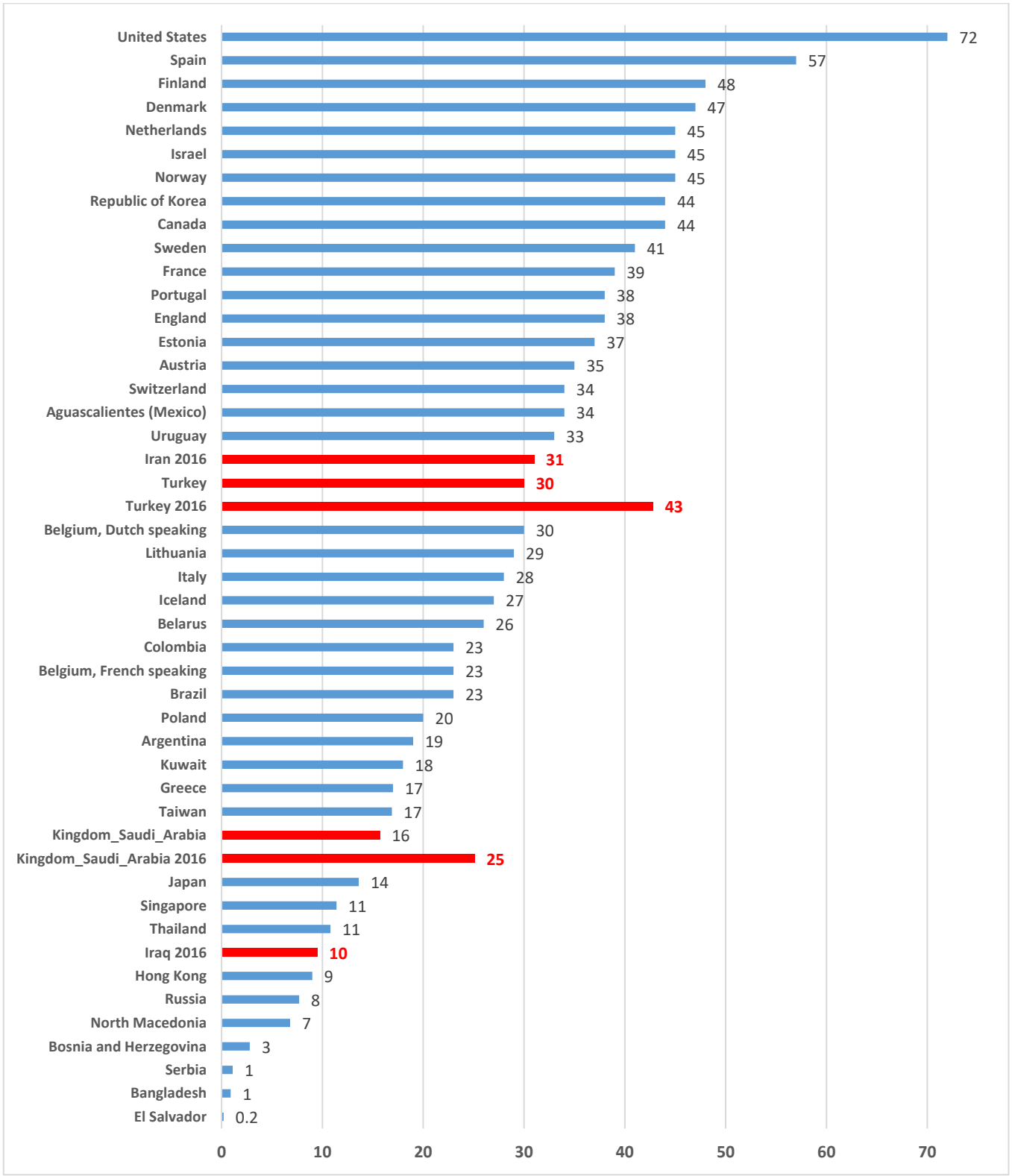


Figure 11.18a Incidence of kidney transplantation in countries or regions with the largest percentage increase in transplantation, 2010 versus 2020

Data for Türkiye, Kingdom of Saudi Arabia, Iraq & Iran extracted from Table N.8.b Trends in the kidney transplantation rate (per million population/year), unadjusted, by country/region, 2010-2020

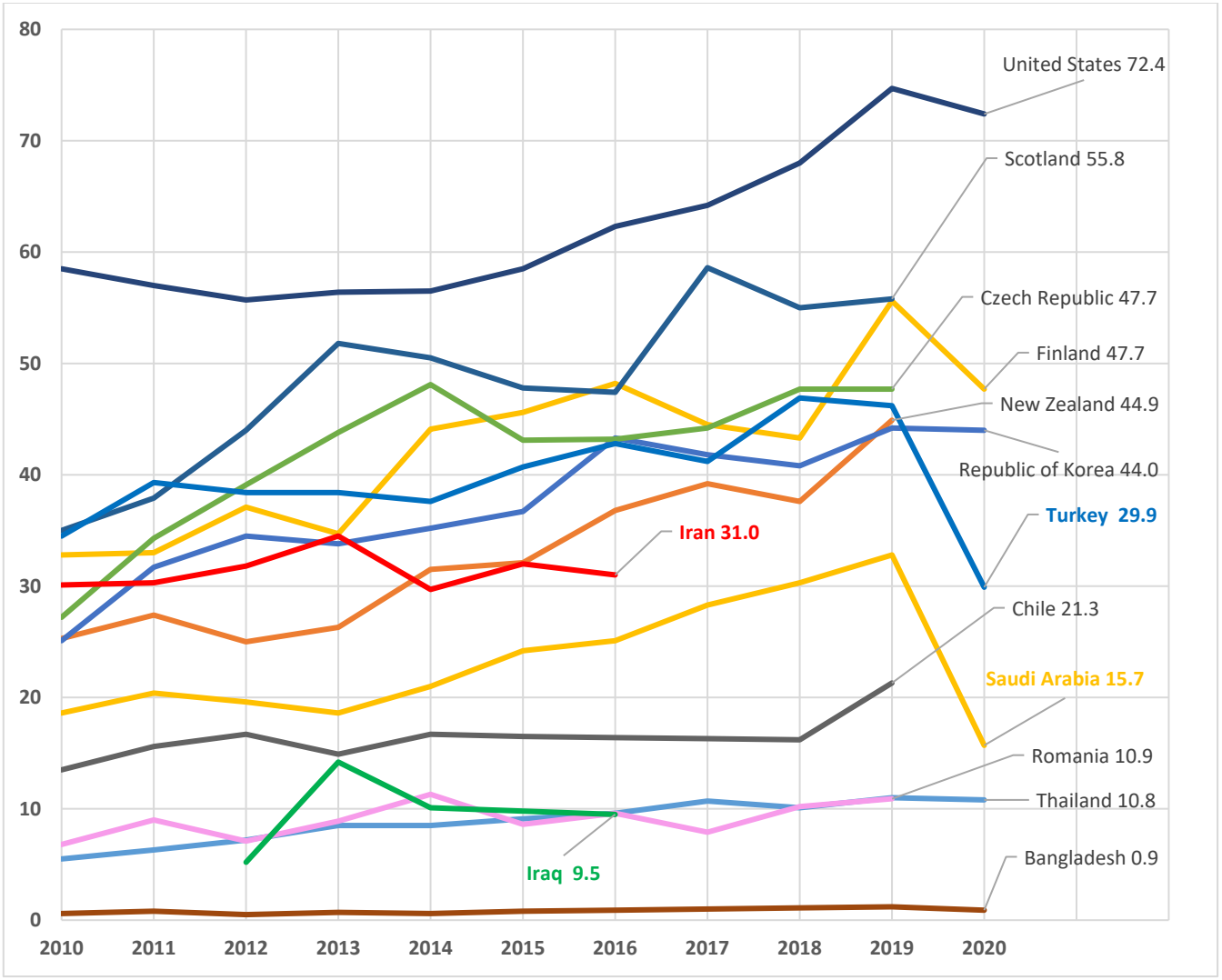


Figure 11.18b Average yearly change in incidence of kidney transplantation by country or region, 2010-2020

Data for Türkiye, Kingdom of Saudi Arabia, Iraq & Iran extracted from Table N.8.b Trends in the kidney transplantation rate (per million population/year), unadjusted, by country/region, 2010-2020

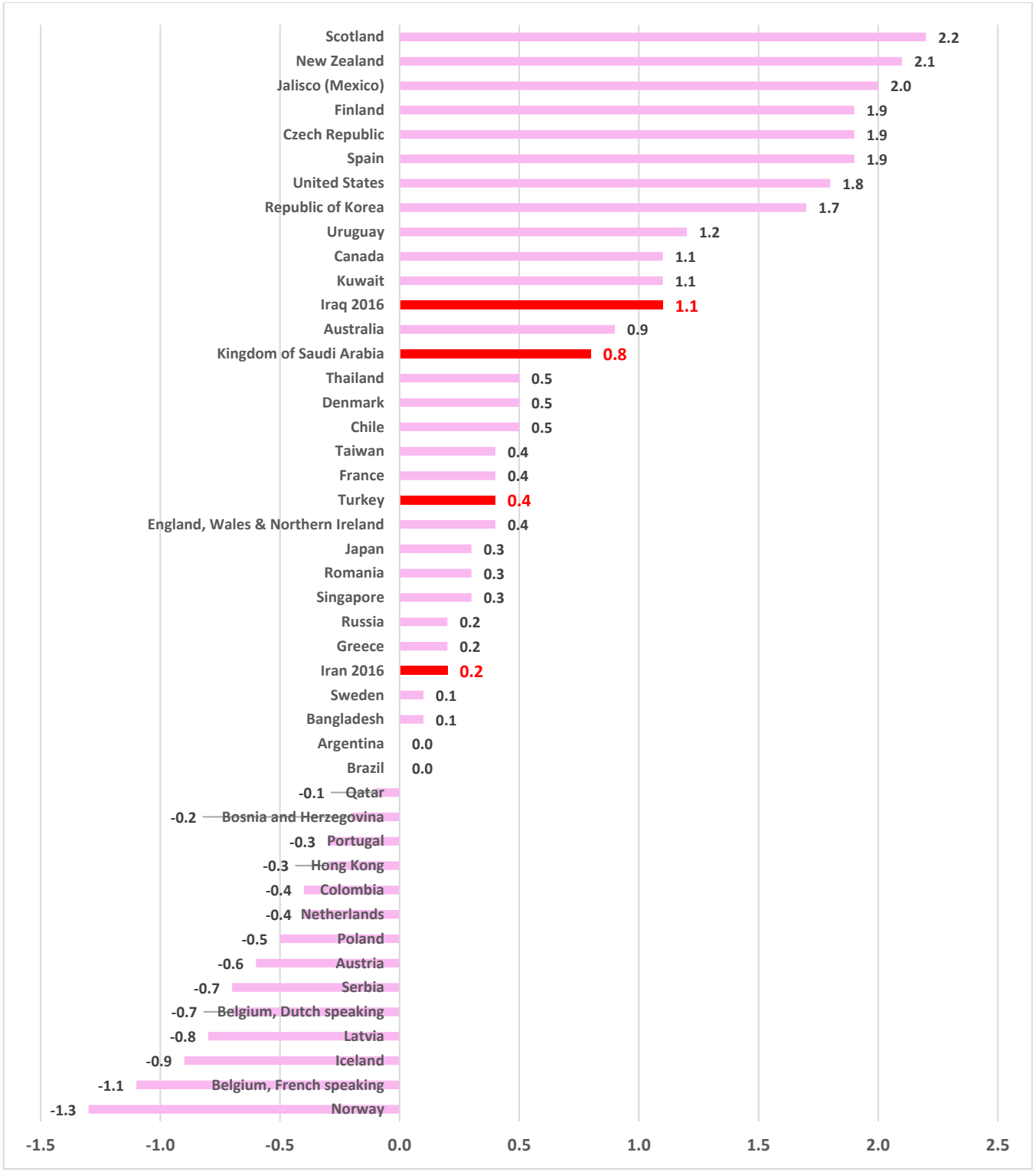


Table N.8.a Yearly counts of kidney transplants performed, by country/region, 2010-2020

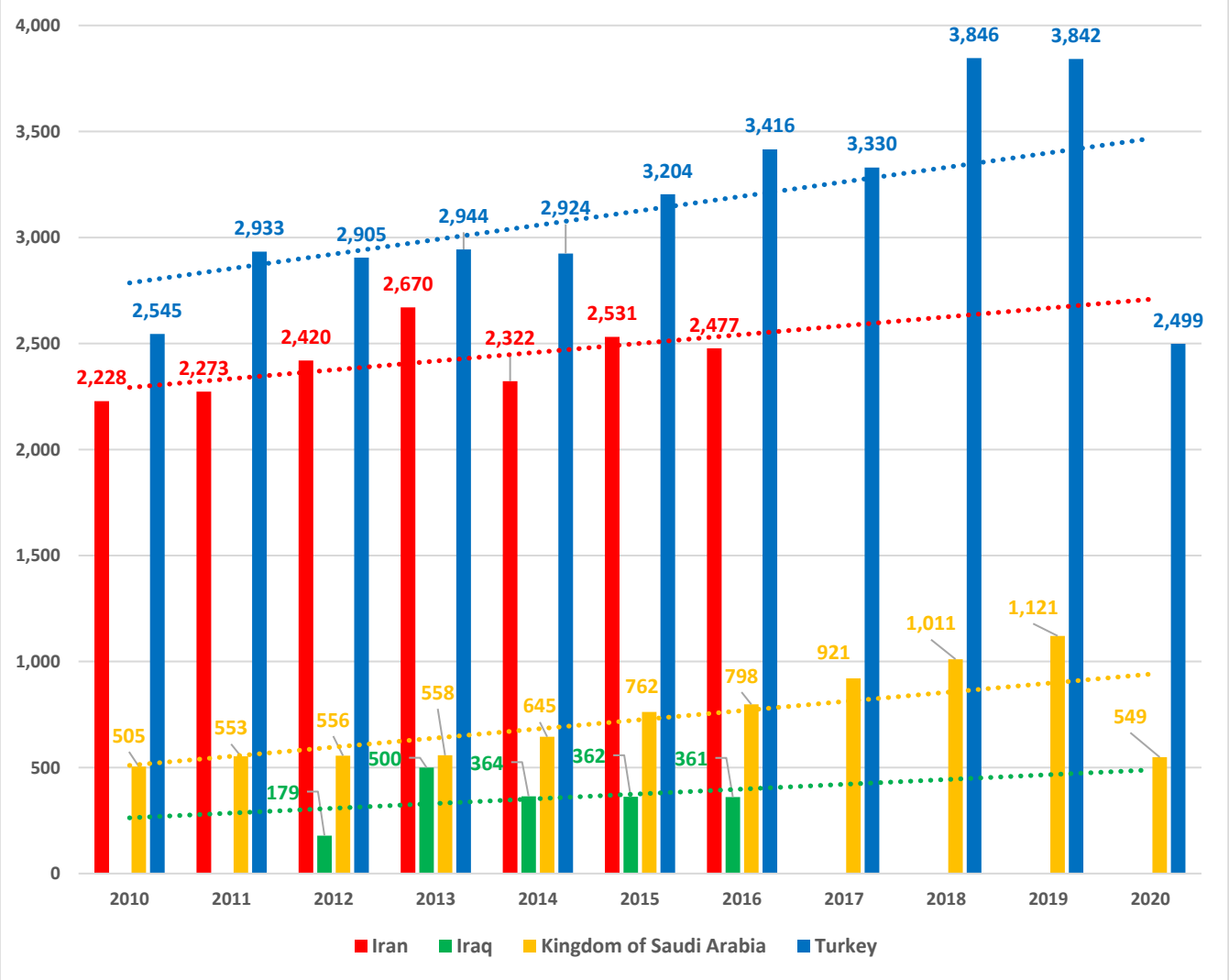
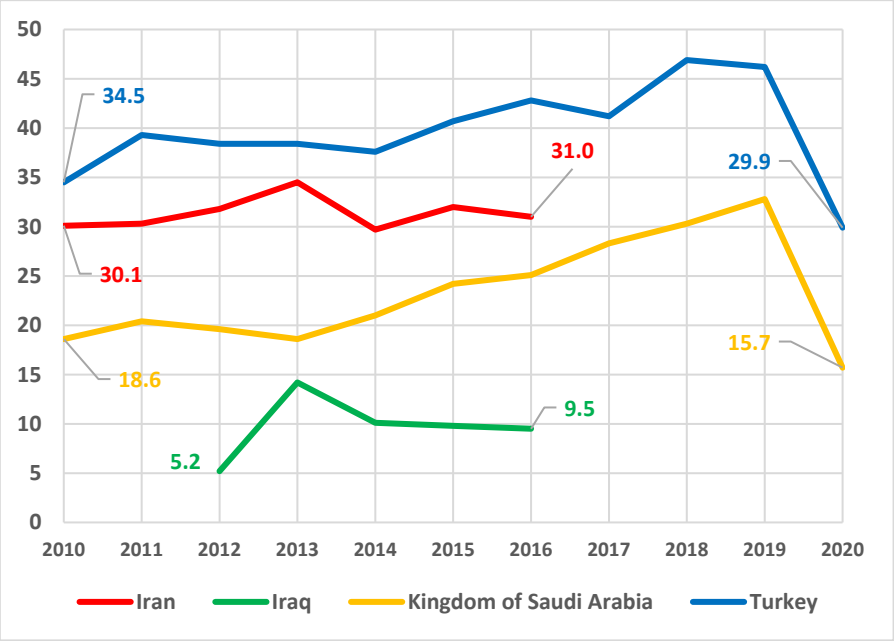
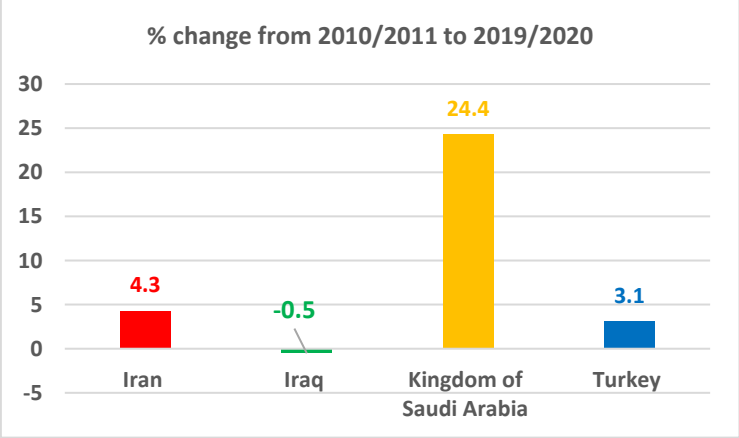


Table N.8.b Trends in the kidney transplantation rate (per million population/year), unadjusted, by country/region, 2010-2020





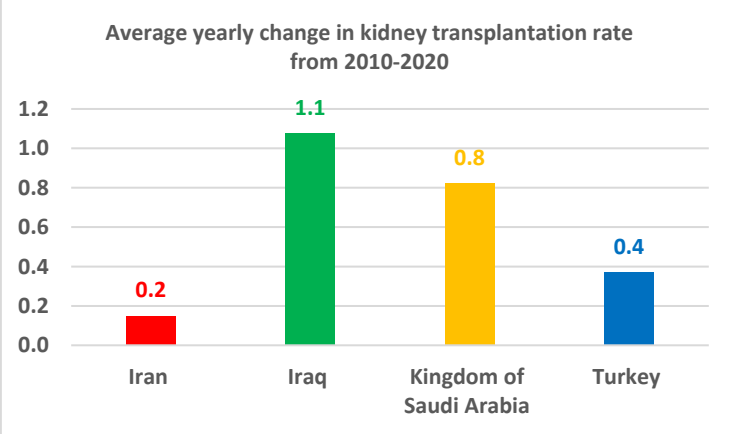


Figure 11.20 Prevalence of patients with a functioning kidney transplant, by country or region, 2020

2016 Data for Türkiye, Kingdom of Saudi Arabia, Iraq & Iran extracted from Table N.9.b Trends in the prevalence (per million population/year) of treated ESRD patients living with a functioning kidney transplant, unadjusted, by country/region, 2010-2020

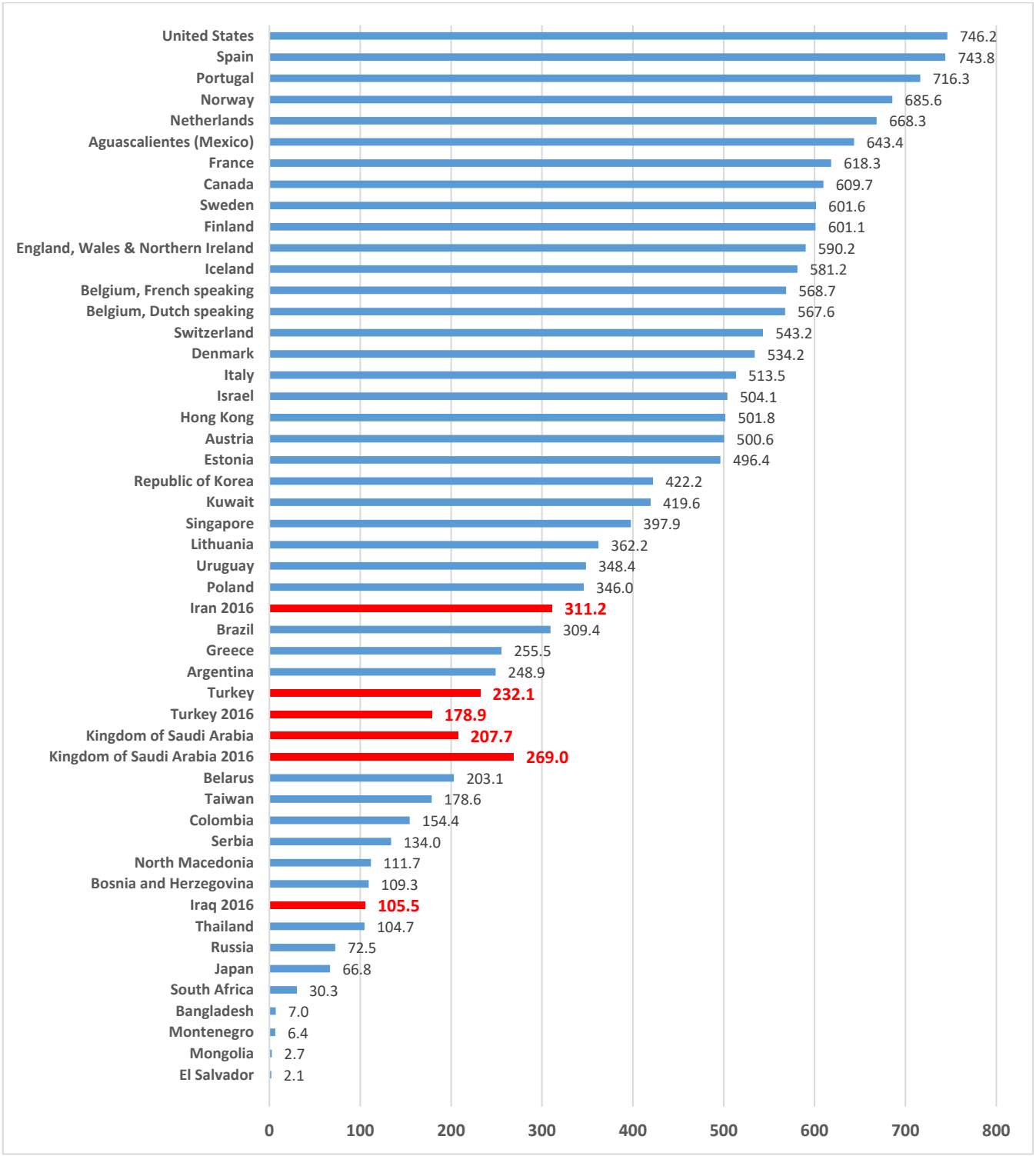


Figure 11.21 Average yearly change in the prevalence of patients with a functioning kidney transplant, by country or region, 2010 to 2020

Data for Iraq & Iran extracted from Table N.9.b Trends in the prevalence (per million population/year) of treated ESRD patients living with a functioning kidney transplant, unadjusted, by country/region, 2010-2020

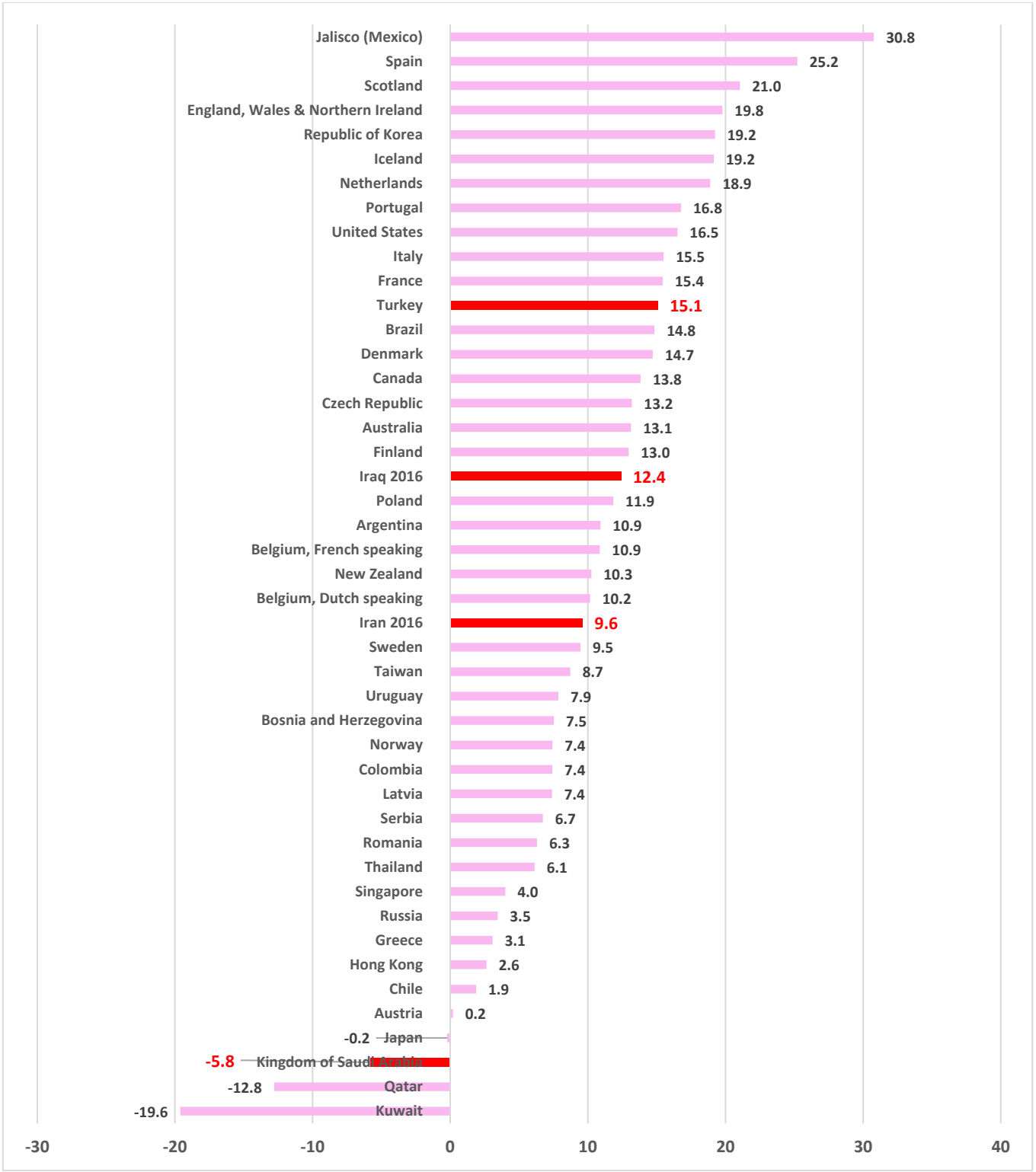


Table N.9.a Yearly point prevalent counts of treated ESRD patients living with a functioning kidney transplant at the end of the calendar year, by country/region, 2010-2020

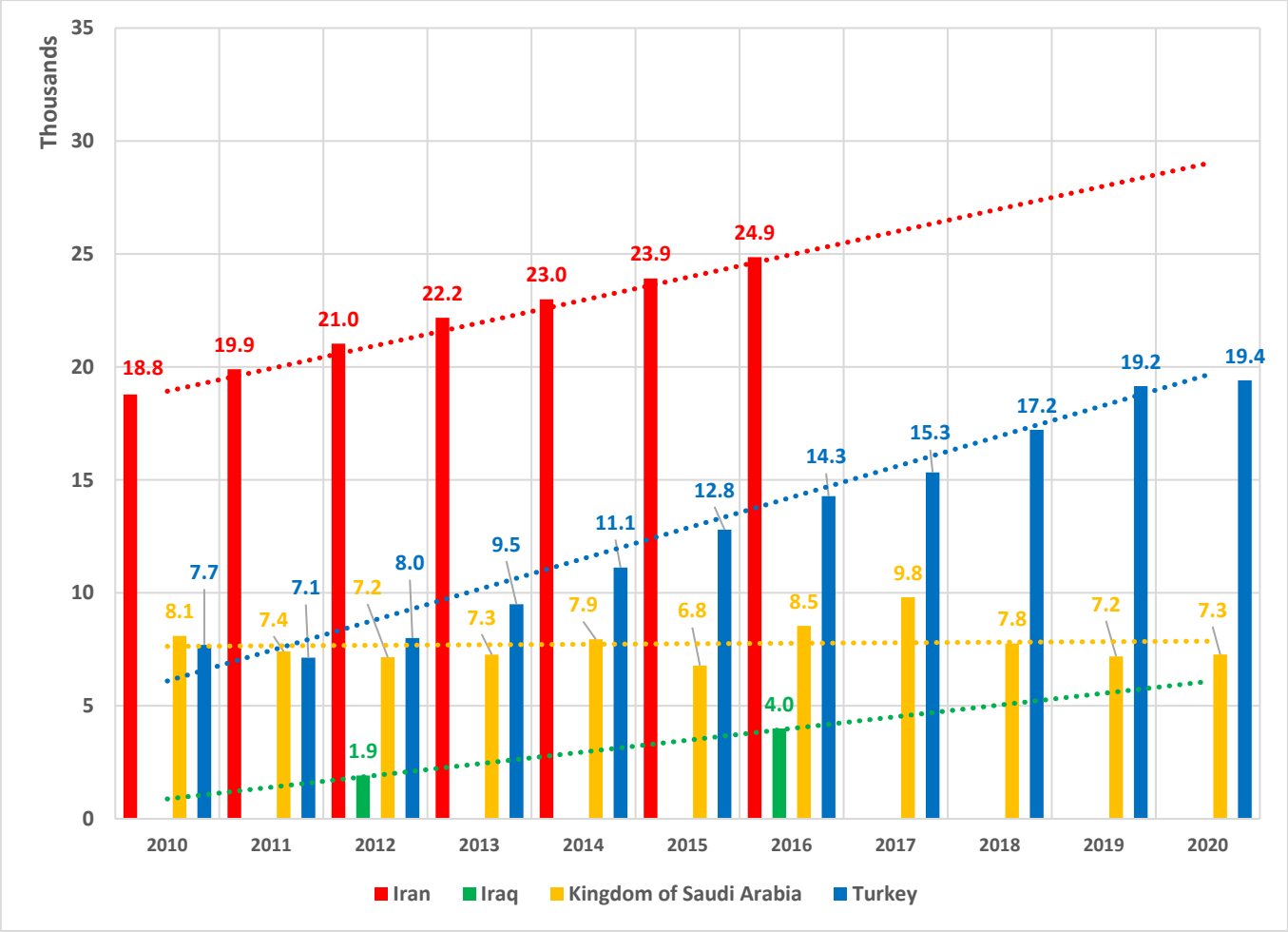
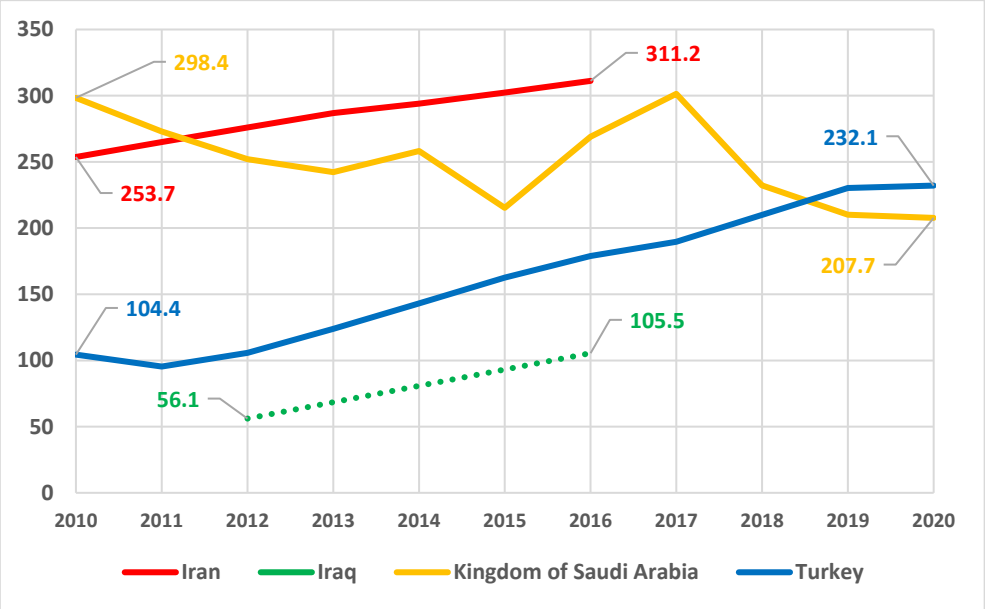
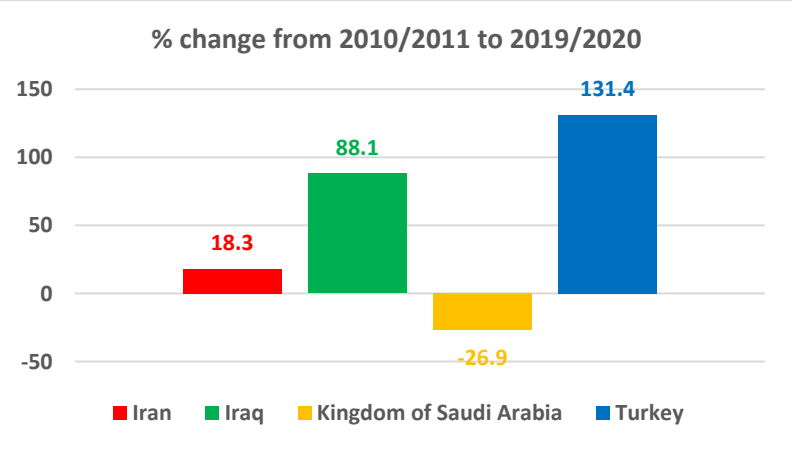


Table N.9.b Trends in the prevalence (per million population/year) of treated ESRD patients living with a functioning kidney transplant, unadjusted, by country/region, 2010-2020





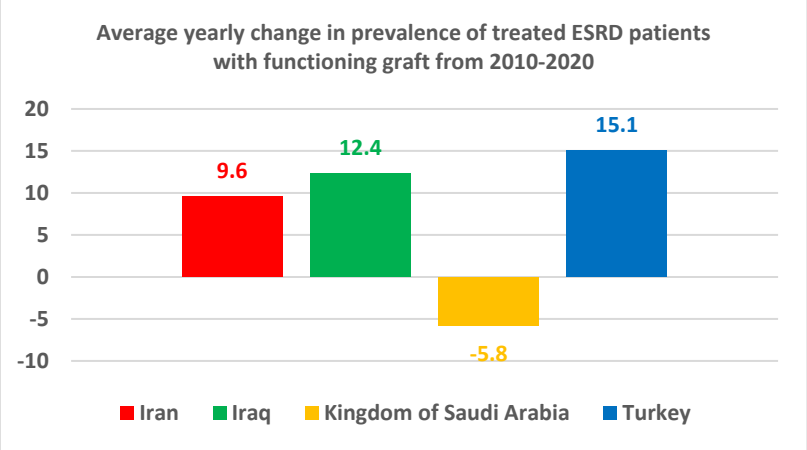
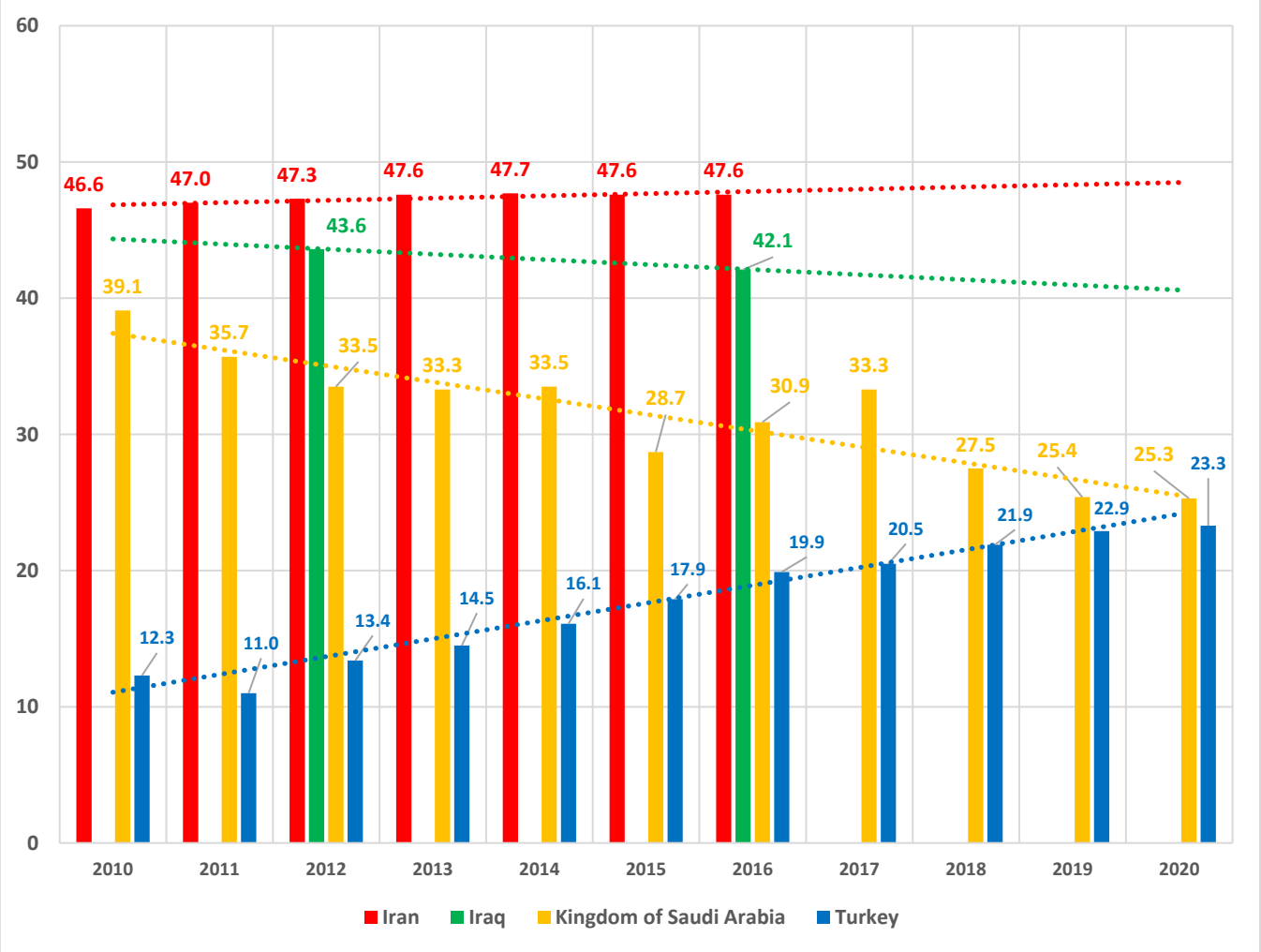


Table N.9.c Yearly percentage of treated ESRD patients living with a functioning kidney transplant, by country/region, 2010-2020



ARYA TEB FIROUZ

Chapter 3
Environmental statistics for Iraq, health indicators for the year 2019

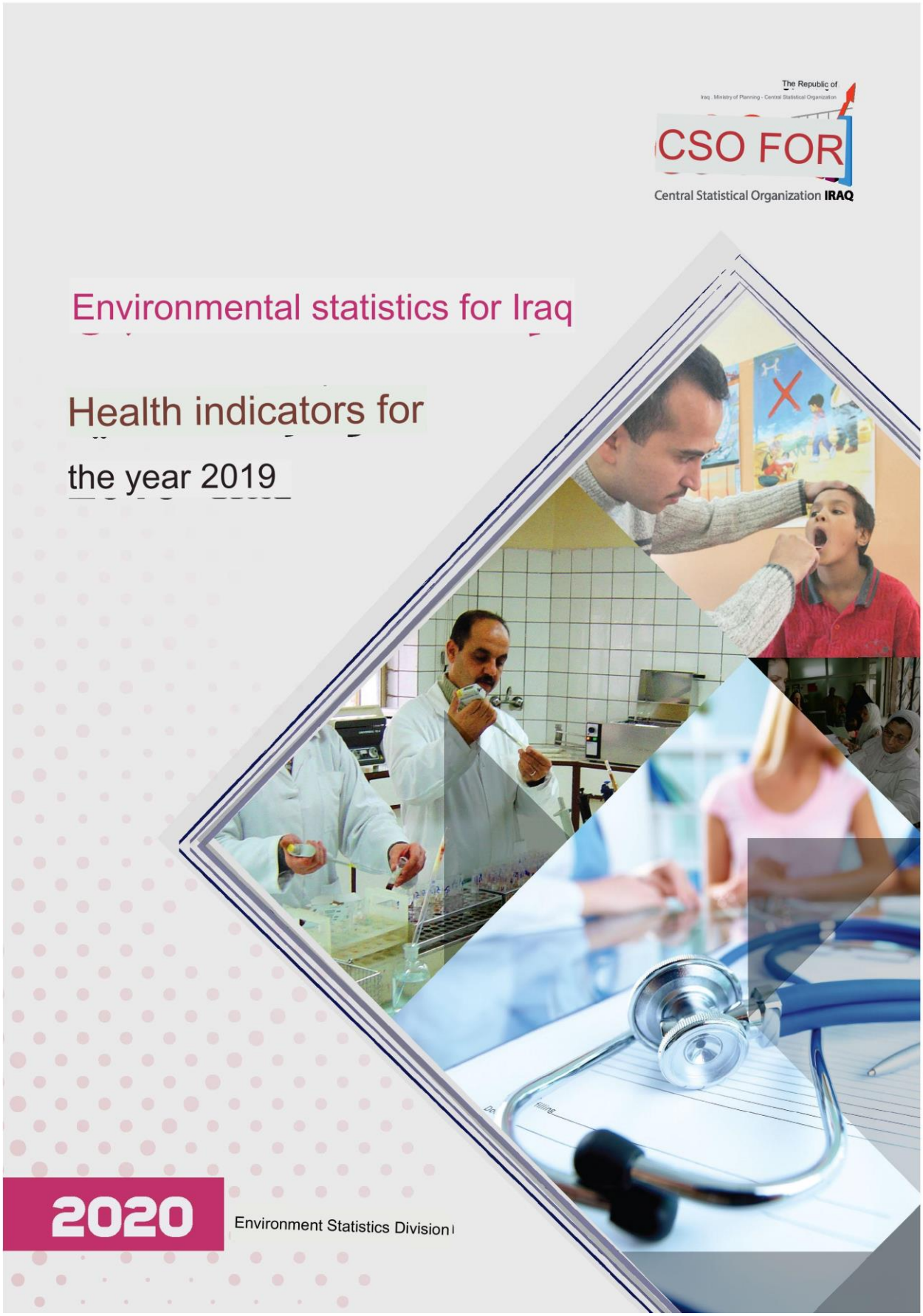
جمهورية العراق
وزارة التخطيط - الجهاز المركزي للإحصاء
CSO
Central Statistical Organization IRAQ

الإحصاءات البيئية للعراق

المؤشرات الصحية
لسنة 2019

2020

قسم احصاءات البيئة


The Republic of
CSO FOR
Central Statistical Organization IRAQ
Environmental statistics for Iraq
Health indicators for
the year 2019
2020
Environment Statistics Division

The number of total crude deaths and the death rate per (1,000) people by gender and governorate for the year 2019

Table (6)

	Male	Female	Total	Male	Female	Total
Total Iraq	76,961	63,660	140,621	4.6	3.9	4.3

Source: Ministry of Health and Environment /Health Sector /Department of Planning and Resources Development /Department of Health and life Statistics

عدد الوفيات الخام الكلّية ومعدل الوفيات لكل (1000) نسمة حسب الجنس والمحافظة لسنة 2019

جدول (6)

المحافظة	عـدد الوفيات الخام الكلّية			معدل الوفيات الخام لكل (1000) نسمة		
	ذكور	إناث	المجموع	الذكور	الإناث	المجموع
نينوى	5,326	4,413	9,739	2.8	2.3	2.6
كركوك	2,864	2,423	5,287	3.5	3.0	3.3
ديالى	3,253	2,579	5,832	2.8	2.2	2.5
الأنبار	1,967	1,737	3,704	2.1	1.9	2.1
بغداد	21,995	17,162	39,157	5.3	4.1	4.8
بابل	4,078	3,426	7,504	3.9	3.2	3.6
كربلاء	2,911	2,440	5,351	4.7	3.9	4.3
واسط	2,621	2,332	4,953	3.7	3.3	3.5
صلاح الدين	2,236	1,678	3,914	2.7	2.1	2.4
النجف	3,638	3,129	6,767	4.9	4.2	4.5
القادسية	2,627	2,241	4,868	4.0	3.4	3.7
المثنى	1,523	1,449	2,972	3.7	3.5	3.6
ذي قار	4,137	3,683	7,820	3.9	3.5	3.7
ميسان	1,996	1,557	3,553	3.6	2.8	3.2
البصرة	6,755	5,574	12,329	4.6	3.8	4.2
إجمالي	67,927	55,823	123,750	4.0	3.3	3.6
إقليم كردستان						
دهوك	2,838	2,613	5,451	4.3	3.9	4.1
السليمانية	2,416	2,390	4,806	2.2	2.2	2.2
أربيل	3,780	2,834	6,614	3.9	3.0	3.5
إجمالي	9,034	7,837	16,871	3.3	2.9	3.1
إجمالي العراق	76,961	63,660	140,621	4.6	3.9	4.3

المصدر : وزارة الصحة والبيئة / القطاع الصحي / دائرة التخطيط وتنمية الموارد / قسم الإحصاء الصحي والحياتي

The number of total crude deaths and the death rate per (1000) people by gender and governorate for the year 2019

Table (6)

Crude death rate per (1000) population			The number of total crude deaths			Governorate
the total	female	males	the total	females	males	
2.6	2.3	2.8	9,739	4,413	5,326	Nineveh
3.3	3.0	3.5	5,287	2,423	2,864	Kirkuk
2.5	2.2	2.8	5,832	2,579	3,253	Dayali
2.1	1.9	2.1	3,704	1,737	1,967	Anbar
4.8	4.1	5.3	39,157	17,162	21,995	Baghdad
3.6	3.2	3.9	7,504	3,426	4,078	Babylon
4.3	3.9	4.7	5,351	2,440	2,911	Karbala
3.5	3.3	3.7	4,953	2,332	2,621	Intermediary
2.4	2.1	2.7	3,914	1,678	2,236	Salahaddin
4.5	4.2	4.9	6,767	3,129	3,638	Najaf
3.7	3.4	4.0	4,868	2,241	2,627	Qadisiyah
3.6	3.5	3.7	2,972	1,449	1,523	Double
3.7	3.5	3.9	7,820	3,683	4,137	Dhi Qar
3.2	2.8	3.6	3,553	1,557	1,996	Maysan
4.2	3.8	4.6	12,329	5,574	6,755	Basra
3.6	3.3	4.0	123,750	55,823	67,927	Total
						Kurdistan region
4.1	3.9	4.3	5,451	2,613	2,838	Duhok
2.2	2.2	2.2	4,806	2,390	2,416	Sulaymaniyah
3.5	3.0	3.9	6,614	2,834	3,780	Erbil
3.1	2.9	3.3	16,871	7,837	9,034	Total
4.3	3.9	4.6	140,621	63,660	76,961	Total Iraq

Source: Ministry of Health and Environment / Health Sector / Department of Planning and Resources Development / Department of Health and Life Statistics

Table (16)

The top ten causes of death in Iraq for the year 2019

	The top ten causes of death in Iraq	Percentage
1.	Ischemic Heart Disease (Ischemia)	12.03
2.	Malignant neoplasms	9.33
3.	Cerebrovascular Diseases	8.40
4.	High Blood Pressure Diseases	6.80
5.	Other Forms of Heart Disease	5.90
6.	**Kidney Failure**	**5.30**
7.	Traffic Accidents	4.90
8.	Diabetes Mellitus	4.80
9.	Respiratory and Cardiovascular Disorders Perinatal Period (for Newborn)	4.10
10.	Other Bacterial Diseases	2.60
Mortality ratio for the first ten causes of the total crude deaths for Iraq		**64.16**

Source: Ministry of Health and Environment / Health Sector / Department of Planning and Resources Development / Department of Health and Life Statistics

Environment Statistics Department - Central Statistical Organization / Iraq

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الأسباب العشرة الأولى للوفيات في العراق لسنة 2019

جدول (16)

ت	الأسباب العشرة الأولى للوفيات في العراق	النسبة المئوية
1 .	أمراض القلب الإقفارية (الأسكيمية)	12.03
2 .	الأورام الخبيثة	9.33
3 .	أمراض دماغية وعائية	8.40
4 .	أمراض فرط ضغط الدم (أمراض ارتفاع ضغط الدم)	6.80
5 .	أشكال أخرى من مرض القلب	5.90
6 .	الفشل الكلوي	5.30
7 .	الحوادث المرورية	4.90
8 .	داء السكري	4.80
9 .	الإضطرابات التنفسية والقلبية الوعائية الخاصة بالفترة حول الولادة (للمولود)	4.10
10 .	امراض جرثومية اخرى	2.60
	نسبة الوفيات للأسباب العشرة الأولى من الوفيات الخام الكلّية للعراق	64.16

المصدر : وزارة الصحة والبيئة / القطاع الصحي / دائرة التخطيط وتنمية الموارد / قسم الإحصاء الصحي والحياتي

The top ten causes of death in Iraq for the year 2019

Table (16)

percentage	The top ten causes of death in Iraq	
12.03	ischemic heart disease (ischemia)	. 1
9.33	Malignant neoplasms	. 2
8.40	Cerebrovascular diseases	. 3
6.80	high blood pressure diseases high blood pressure diseases	. 4
5.90	Other forms of heart disease	. 5
5.30	Kidney failure	. 6
4.90	traffic accidents	. 7
4.80	Diabetes mellitus	. 8
4.10	Respiratory and cardiovascular disorders perinatal period (for newborn)	. 9
2.60	other bacterial diseases	. 10
64.16	Mortality ratio for the first ten causes of the total crude deaths for Iraq	

Source: Ministry of Health and Environment / Health Sector / Department of Planning and Resources Development / Department of Health and Life Statistics

الرئيسية « صحة « مرضى غسيل الكلى في العراق بين الإهمال واللامبالاة

مرضى غسيل الكلى في العراق بين الإهمال واللامبالاة

مخاطر عديدة تواجههم وعشرات الكيلومترات تفصل بينهم وبين وجهة علاجهم

شذى العاملي صحافية عراقية @ShadhaAlamili

الثلاثاء 5 أبريل 2022 10:35

يحتاج مرضى الكلى إلى التخلص من الفضلات والسوائل الزائدة في الجسم من خلال عملية غسيل للكلى، وهي عملية اصطناعية يُجريها المرضى عندما تتعطل وظائف الكلى وتعجز عن القيام بمهامها بالشكل المناسب.

وفي العراق، يعاني مرضى الفشل الكلوي نقص السائل المستخدم في غسيل الكلى، والذي يسمى السائل "البريتوني"، بسبب فشل وزارة الصحة في تأمين مواد ومتطلبات عملية الغسيل.

قلة كفاءة

يقول أخصائي في أمراض وجراحة الكلى والمسالك البولية، إنه منذ عام 2003، تعرضت الوزارات للتخريب المتعمد والفساد المالي والإداري، وهي تخضع تارة لإدارة مسؤول غير كفوء، وتارة أخرى تُدار من قبل شخص غير نزيه، ويتبع لجهة تطالبه بتوفير حصة من أموال الوزارة وعقودها، ولم يتوقف هذا الخراب المتعمد على مفصل دون آخر، إذ يُعاني مرضى الكلى نقصاً في توفير مواد وأجهزة "الديلزة" (أجهزة غسيل الكلى)، وعدد كبير مما يتوفر في المستشفيات الحكومية معطل أو مفقود، وكأن هناك من يتعمد إهمالها.

ويضيف، "أقولها بصراحة إن عدداً من المافيات التي تتعمد التخريب والفساد لديها أسهم في المستشفيات الأهلية التي أنشئت في الآونة الأخيرة، ومن مصلحتها تدني مستوى الخدمات في المستشفيات الحكومية لحساب الأهلية من الاختصاص نفسه، والتعمد واضح منذ عام 2003، ونحن بحاجة إلى فرق دولية محايدة لإنقاذنا من مستنقعات الفساد، وهناك سنة أخرى ابتدعت منذ سنوات، بعد 2003، عبر إخلاء المرضى ذوي الحالات المستعصية ومعالجتهم خارج العراق عبر لجان خصصت مبالغ كبيرة لهذا الغرض، بينما كان من الممكن إنشاء مستشفى كبير داخل العراق، وهو باب من أبواب الفساد، وتعمل بعض الجهات

خانه » سلامت » بیماران دیالیزی کلیه در عراق بین سهل انگاری و بی تفاوتی

بیماران دیالیزی در عراق بین غفلت و بی تفاوتی

خطرات زیادی که با آن روبرو هستند و ده ها کیلومتر آنها را از مقصد درمانشان دور می کند

شذه العامیلی یک روزنامه نگار عراقی @ShadhaAlamili است

سه شنبه 5 آوریل 2022 ساعت 10:35

بیماران کلیوی باید از طریق دیالیز از شر مواد زائد و مایعات اضافی بدن خلاص شوند، این یک فرآیند مصنوعی است که بیماران زمانی که کلیه ها به درستی کار نمی کنند انجام می دهند.

در عراق، بیماران مبتلا به نارسایی کلیه از کمبود مایع مورد استفاده در دیالیز رنج می برند که به آن مایع صفاقی گفته می شود، زیرا وزارت بهداشت در تامین مواد و الزامات مورد نیاز برای فرآیند دیالیز ناتوان است.

عدم کارایی

یک متخصص بیماری‌های کلیه و اورولوژی و جراحی می‌گوید: وزارتخانه‌ها از سال 1382 مورد کارشکنی عمدی و فساد مالی و اداری قرار گرفته‌اند و گاهی توسط یک مقام نالایق اداره می‌شوند و گاهی توسط یک فرد نادرست اداره می‌شوند. وابسته به طرفی است که از او می‌خواهد سهمی از بودجه و قراردادهای وزارتخانه تامین کند و او این کار را انجام نداده است. و دستگاه‌ها (دستگاه‌های دیالیز کلیه)، و تعداد زیادی از وسایل موجود در بیمارستان‌های دولتی شکسته یا گم شده‌اند، گویی کسی عمداً از آنها غفلت می‌کند.

و می افزاید: «به صراحت می گویم که تعدادی از مافیاها که عمدا خرابکاری و فساد می کنند در بیمارستان های خصوصی که اخیراً تأسیس شده اند، سهام دارند و به نفع آنهاست که سطح خدمات بیمارستان های دولتی را به دلیل واجد شرایط بودن پایین آورند. همین تخصص و نیت از سال 2003 مشخص است و ما به تیم‌های بین‌المللی بی‌طرف نیاز داریم.» تا ما را از باتلاق‌های فساد نجات دهند و سال‌ها پیش یعنی بعد از سال 2003، با تخلیه بیماران مبتلا به موارد شدید و درمان آن‌ها یک سال دیگر ابداع شد. در خارج از عراق از طریق کمیته هایی که مبالغ هنگفتی را به این منظور اختصاص دادند، در

جاهدة لعرقلة توفير أي أجهزة كفؤة تؤمن معالجة المريض، وتمنع لجوءه إلى دول الجوار أو الهند أو خضوعه للمؤسسات الأهلية".

ويتراوح عدد المرضى المتوافدين على مراكز غسيل الكلى بين 12000 و15000 مريض أسبوعياً.

أعباء إضافية وخطر على الحياة

وعن مصاعب عملية غسيل الكلى يتحدث الأكاديمي نهاد حامد الذي رافق والدته طوال مراحل علاجها. ويقول إن عملية غسيل الكلى هي المنقذ الوحيد للمرضى الذين يعانون الفشل الكلوي. ما يعانونه من مشقة وألم نفسي قد يصل بهم إلى الاكتئاب، كون المريض أصبح سجين هذه العملية، فالنوع الأول، أي "البريتوني"، وهو النوع الأقدم الذي يستطيع أن يقوم به المريض في المنزل بمساعدة متخصص مع توفر المواد اللازمة للغسيل الكلوي، أما الطريقة الثانية والأكثر تطوراً، فهي ما يعرف بـ"الديلزة"، أو الغسيل الدموي الذي يتم في المستشفيات ووفق آلية معقدة تحتاج إلى أجهزة متطورة تقوم بعملية فلترة الدم وتخليصه من المواد الضارة نتيجة تراجع عمل الكلى، وهنا يبقى المريض بحدود ثلاث ساعات في الجلسة الواحدة، ويحتاج إلى ثلاث جلسات في الأسبوع الواحد.

ومع تأخر توفير مواد الغسيل عن المريض، يصبح الأمر أكثر تعقيداً، ما يعرض حياته للخطر، خصوصاً أن بعض المرضى يكونون في وضع اقتصادي سيئ، بالتالي تكون عملية شراء مستلزمات الغسيل مكلفة جداً، وتصبح حياة المريض تحت رحمة توفر هذه المواد التي تعجز وزارة الصحة عن توفيرها في أحيان كثيرة نتيجة صفقات الفساد وانعدام الضمير الذي طاول حتى المريض في العراق، وكأنها تترك المريض ليواجه مصيره بنفسه، ولا من يحاسب.

الغسيل مجاناً على حساب الدولة

ويتحدث المدير التجاري لإحدى شركات المنتجات الطبية في العراق قائلاً، "يوجد مصنع لمحاليل الديلزة في العراق وفيه خط إنتاج لمادة الغسيل البريتوني، ولم يتم حتى الآن الانتهاء منه، المصنع تابع لوزارة الصحة وتشترك فيه الشركة المصنعة ويحمل شعار الوزارة". ويضيف، "آلية العمل في العراق هي شراء خدمة، وأعني بذلك أن الشركة مسؤولة عن توفير كل الاحتياجات كالمبنى المجهز بالتقنيات والمواد اللازمة، فيدخل المريض لإجراء عملية الغسيل، سواء البريتوني أو العادي الدموي، ويغادر مجاناً، وتدفع الوزارة للشركة المجهزة مبلغاً محدداً عن كل عملية غسيل".

حالی که امکان ایجاد یک بیمارستان بزرگ در داخل عراق وجود داشت که یکی از درهای فساد است و برخی کارها تلاش می کنند تا از تامین هرگونه تجهیزات کارآمد جلوگیری کنند. که درمان بیمار را تضمین می کند و او را از مراجعه به کشورهای همسایه یا هند و یا ارائه او به نهادهای مدنی باز می دارد.

تعداد بیمارانی که به مراکز دیالیز می رسند بین 12000 تا 15000 بیمار در هفته است.

بار اضافی و خطر برای زندگی

و در مورد دشواری های فرآیند دیالیز، نیهاد حامد دانشگاهی که در تمام مراحل درمان مادرش را همراهی می کرد، می گوید. او می گوید که دیالیز تنها نجات دهنده بیماران مبتلا به نارسایی کلیه است. آنچه از سختی و درد روانی رنج می برند ممکن است آنها را به سمت افسردگی سوق دهد، زیرا بیمار زندانی این فرآیند شده است، بنابراین نوع اول یعنی "صفاق" که قدیمی ترین نوع است که بیمار می تواند با کمک در خانه انجام دهد. یک متخصص با در دسترس بودن مواد لازم برای دیالیز و روش دوم پیشرفته ترین روش آن چیزی است که به نام "دیالیز" یا همودیالیز شناخته می شود که در بیمارستان ها و بر اساس مکانیزم پیچیده ای انجام می شود که نیاز به دستگاه های پیشرفته ای دارد که فیلتر را فیلتر کنند. خون و دفع مواد مضر در نتیجه کاهش عملکرد کلیه در اینجا بیمار حداکثر تا سه ساعت در هر جلسه می ماند و به سه جلسه در هفته نیاز دارد.

و با تأخیر در تهیه لوازم رختشویی برای بیمار، موضوع پیچیده تر می شود که جان وی را به خطر می اندازد، به ویژه اینکه برخی از بیماران در وضعیت بد اقتصادی قرار دارند و به همین دلیل فرآیند خرید لوازم لباسشویی بسیار گران است و جان بیمار به واسطه در دسترس بودن این مواد می شود که وزارت بهداشت قادر به تهیه آن نیست و در بسیاری از موارد در نتیجه معاملات فساد مالی و بی وجدانی فراهم می شود که حتی بیمار در عراق را تحت تأثیر قرار می دهد. بیمار را رها می کند تا به تنهایی با سرنوشت خود روبرو شود، بدون اینکه کسی پاسخگو باشد.

خشکشویی رایگان با هزینه دولت

مدیر بازرگانی یک شرکت محصولات پزشکی در عراق می گوید: کارخانه محلول های دیالیز در عراق وجود دارد و خط تولید دیالیز صفاقی دارد و هنوز تکمیل نشده است، کارخانه متعلق به وزارت بهداشت است. و شرکت سازنده در آن مشارکت و دارای آرم وزارتخانه است.» وی افزود: سازوکار کار در عراق خرید خدمات است و منظورم این است که این شرکت وظیفه تامین تمامی نیازها از جمله ساختمانی مجهز به تکنیک ها و مصالح لازم را بر عهده دارد تا بیمار برای انجام کار وارد شود. پروسه دیالیز اعم از صفاقی یا عادی خونی و مجانی انجام می شود و وزارتخانه برای هر عمل مبلغ مشخصی را به شرکت تامین کننده می پردازد."

وعن تعمد بعض الجهات الفاسدة تعطيل أجهزة الكلى باهظة الثمن لغرض الاستفادة من صفقات الشراء، يتابع المدير التجاري لإحدى شركات المنتجات الطبية في العراق، "هذا موضوع غير دقيق، فالأجهزة توضع من قبل الدولة في المراكز من دون مقابل، وضمان الجهاز على عهدة الشركات، ولن تستفيد الدولة من تلف الجهاز، لأن الشركة ستوفر جهازاً جديداً بدل الجهاز التالف، ومنذ أشهر عدة تزود الشركات هذه المراكز بخدمات منها عمال التنظيف ومواد التنظيف، فضلاً عن الممرضين المتخصصين".

معلوم أن هناك شركات عدة معروفة في أنحاء العالم لـ"الديلزة" تتنافس في تقديم عروضها بالمحافظات العراقية من خلال توفير المستلزمات الطبية الضرورية، والتواصل مع الأطباء، وغير ذلك من المهام.

مشروع "البريتوني" المعطل

نعم، هناك تلكؤ في الخدمة المقدمة من إحدى الشركات التي التزمت بعقد، ولم تنجز المشروع بسبب تغيير الوكيل، وعادت الشركة الأم وقامت بتجهيز الوكيل القديم.

وعن توفر السائل "البريتوني" في محافظات دون غيرها، يقول المدير التجاري لإحدى شركات المنتجات الطبية إن الحكومة منحت صلاحية للمحافظات باختيار الشركة الأنسب لها والكمية المطلوبة وفترات التسديد، والتزمت الحكومة بالتعاقد مع هذه الشركات.

وتوفر إحدى الشركات مواد "البريتوني" في المركز الصحي في محافظة النجف استثناءً عن باقي المحافظات، والسبب أن هذا المركز قدم للوزارة مقدار حاجته، وفعلاً تم تزويده بالمواد لمدة سنة كاملة، أما في بغداد، فلا يطلب الأطباء حاجتهم الحقيقية، لهذا يحصل قصور وكثيرون من المرضى في العاصمة يتزودون بحاجتهم من مركز النجف، وهذا ما يجب معالجته جدياً.

الخلل في المراكز الطبية

أما عن خطة الوزارة بهذا الخصوص، فيضيف المدير التجاري أن الوزارة أعدت خطة كاملة لتقدير الحاجة من خلال إرسال تعاميم للمحافظات تطالبها بإعلامها بحاجتها من هذه المستلزمات، للسنوات الخمس المقبلة، إضافة إلى تزويدها بعدد المرضى المطلوب علاجهم، معتبراً، في الوقت عينه، أن الخلل لا يكمن في سياسة الوزارة، بل في المراكز الطبية التي تتأخر في إعلام الوزارة بما تحتاج إليه.

وتقول إحدى الطبيبات التي تعمل في مركز غسيل الكلى في النجف، إن المركز يوفر مادة "البريتوني" حالياً بشرائها من إحدى الشركات وليس

مدیر بازرگانی یک شرکت محصولات پزشکی در عراق با توجه به قصد برخی از مفسدان مبنی بر غیرفعال کردن دستگاه های گران قیمت کلیه به منظور بهره مندی از معاملات خرید، ادامه می دهد: «این موضوع نادرست است، زیرا دستگاه ها توسط دولت در داخل کشور قرار داده شده است. مراکز به صورت رایگان می باشد و ضمانت دستگاه در اختیار شرکت ها می باشد و دولت از خسارت دستگاه منتفع نمی شود زیرا شرکت دستگاه جدیدی را جهت جایگزینی دستگاه آسیب دیده و به مدت چندین ماه ارائه می نماید. این شرکت ها خدماتی از جمله کارگران نظافتی و مواد نظافتی و همچنین پرستاران متخصص را به این مراکز ارائه می کنند.

مشخص است که چندین شرکت معروف در سراسر جهان برای "دیالیز" وجود دارد که در ارائه پیشنهادات خود در استان های عراق با تهیه لوازم پزشکی لازم، ارتباط با پزشکان و سایر وظایف با یکدیگر رقابت می کنند.

پروژه متوقف شده "برتونی".

بله، خدمات ارائه شده توسط یکی از شرکت هایی که متعهد به قرارداد بوده و به دلیل تغییر عامل پروژه را به اتمام نرسانده، تاخیر دارد و شرکت مادر عامل قدیمی را برگردانده و تجهیز کرده است.

مدیر بازرگانی یکی از شرکت های فرآورده های پزشکی در خصوص وجود مایع صفاقی در سایر استان ها می گوید: دولت به استانداری ها اختیار داده است که مناسب ترین شرکت، مقدار و دوره پرداخت مورد نیاز را انتخاب کنند و دولت نیز متعهد به عقد قرارداد با این شرکت ها است.

یک شرکت در مرکز بهداشتی درمانی استان نجف به استثنای سایر استان ها مواد صفاقی را تهیه می کند و دلیل آن این است که این مرکز میزان نیاز خود را در اختیار وزارت قرار می دهد و در واقع مواد لازم را در اختیار وزارتخانه قرار می دهد. یک سال کامل است، اما در بغداد، پزشکان نیاز واقعی خود را نمی پرسند، بنابراین کمبودهایی وجود دارد و بسیاری از بیماران در پایتخت نیازهای خود را از مرکز نجف تامین می کنند و باید با این موضوع برخورد جدی شود.

خرابی در مراکز درمانی

مدیر بازرگانی در خصوص برنامه وزارتخانه در این زمینه می‌افزاید: این وزارتخانه با ارسال بخشنامه‌هایی به استانداری‌ها، طرح کاملی را برای نیازسنجی تهیه کرده و از استانداری‌ها خواسته است علاوه بر این، نیاز خود به این لوازم را برای پنج سال آینده به اطلاع آنها برسانند. ارائه تعداد بیماران مورد نیاز برای درمان به آنها، در عین حال، با توجه به اینکه نقص در سیاست وزارتخانه نیست، بلکه در مراکز درمانی است که با تأخیر وزارتخانه را از نیازهای خود مطلع می کنند.

یکی از پزشکان شاغل در مرکز دیالیز در نجف می گوید: در حال حاضر این مرکز با خرید مستقیم مواد صفاقی از یک شرکت و نه

عبر الوزارة مباشرة، لكن الصعوبة لمرضى باقي المحافظات تكمن في وجوب فتح ملف للمريض في النجف، إضافة إلى إجراءات معينة حتى يتم شموله بحصة من السائل، ولأن مركز النجف هو الوحيد حالياً الذي يزود مرضى بغداد والمحافظات بالسائل "البريتوني"، فهناك ضغط كبير من باقي المحافظات.

الفيروس ينتقل من المعالج

وعن إمكان تلوث الأجهزة والأماكن التي يتلقى فيها المرضى العلاج، يوضح المدير التجاري لإحدى شركات المنتجات الطبية أن جهاز غسيل الكلى غير ناقل للفيروسات، لأن الدم يصفى خارج الجهاز فلا تدخل أي قطرة دم عبره، والمواد تستخدم، مرة واحدة، لكل مريض، بالتالي لا يمكن التقاط عدوى عن طريق الجهاز، والخطورة تكمن في حال التعامل مع ممرض أو أي حامل لفيروس معين، في غياب التدابير الوقائية اللازمة. ويختم المدير التجاري قائلاً، "المبلغ المخصص للقطاع الصحي في الموازنة لا يغطي حاجة الوزارة".

جريمة بحق المرضى

وتلكؤ وزارة الصحة في تنفيذ العقود واستمرارية تأمين المواد الطبية اللازمة يترك تداعياته السلبية على حياة آلاف المرضى، والفكرة الأساسية هي ضرورة عدم إجبار المريض على استخدام طريقة معينة للغسيل ما دام الخيار متاحاً، إلا أن المريض في بغداد مجبر حالياً على الغسيل الدموي لعدم توفر مادة الغسيل "البريتوني".

ويستخدم مرضى الكلى بنسبة 80 إلى 90 في المئة الغسيل الدموي الذي يستغرق أربع ساعات، أما الغسل "البريتوني" فيتم من دون الحاجة إلى جهاز، فقط استخدام أدوات عدة هي عبارة عن كيس فيه سائل معين، وآخر للتفريغ وأنابيب، ويشرح أحد المرضى أنه يخضع لهذه العملية أربع مرات يومياً، وهي وسيلة أكثر أماناً كونها تجرى يدوياً، وهي سهلة جداً ولا تحتاج إلى مستشفى وحجز سرير، بينما مريض الغسيل الدموي يضطر إلى المستشفى فضلاً إلى إمكان تعرضها إلى مضاعفات صحية عدة.

ليس باستطاعة كل مريض يخضع للغسيل "البريتوني" تحمل الغسيل الدموي، لأسباب عدة، مثل فشل عمل فتحة ما بين الشريان والوريد، أو بسبب التهاب البنكرياس الحاد، أو ارتفاع حرارة الجسم، أو انخفاضها جداً، أو بسبب تجمّع عالٍ للسوائل الزائدة في التجويف "البريتوني" للمريض أصلاً وغير ذلك من الأسباب.

مستقیماً از طریق وزارتخانه، مواد صفاقی را تهیه می کند، اما مشکل بیماران در استان های دیگر در لزوم بازکردن پرونده برای بیمار است. در نجف، علاوه بر اقدامات خاص برای گنجاندن آن، با سهمی از مایعات، و به دلیل اینکه مرکز نجف در حال حاضر تنها مرکزی است که در بغداد و استان‌ها مایع صفاقی را تامین می‌کند، فشار زیادی از سوی بقیه استان ها

ویروس از پردازنده منتقل می شود

مدیر بازرگانی یک شرکت فرآورده های پزشکی در خصوص احتمال آلودگی دستگاه ها و محل های درمان بیماران توضیح می دهد که دستگاه دیالیز ناقل ویروس نیست، زیرا خون در خارج از دستگاه فیلتر می شود، بنابراین قطره ای از خون وارد نمی شود. و از مواد برای هر بیمار یک بار استفاده می شود و بنابراین نمی توان از طریق دستگاه عفونت گرفت و خطر در صورت برخورد با عامل بیماری زا یا هر ناقل ویروس خاص در صورت عدم وجود اقدامات پیشگیرانه لازم مدیر بازرگانی در پایان می گوید: مبلغی که در بودجه برای حوزه سلامت در نظر گرفته شده جوابگوی نیاز وزارتخانه نیست.

جنایت علیه بیماران

عدم تمایل وزارت بهداشت به اجرای قراردادها و تداوم تامین تجهیزات پزشکی ضروری، پیامدهای منفی خود را بر زندگی هزاران بیمار بر جای می گذارد، ایده اصلی این است که تا زمانی که بیمار نباید مجبور به استفاده از روش خاصی برای شستشو شود. این گزینه در دسترس است.اما بیمار در بغداد در حال حاضر به دلیل کمبود مواد شستشو مجبور به همودیالیز شده است.«برتونی».

بیماران کلیوی 80 تا 90 درصد از همودیالیز استفاده می کنند که 4 ساعت طول می کشد و در مورد دیالیز صفاقی بدون نیاز به دستگاه انجام می شود و فقط از چند ابزار که کیسه ای حاوی مایع خاص است استفاده می شود. برای تخلیه و لوله و یکی از بیماران توضیح می دهد که او این عمل را انجام می دهد این عمل چهار بار در روز است و روش مطمئن تری است زیرا به صورت دستی انجام می شود و بسیار آسان است و نیازی به بیمارستان و رزرو تخت ندارد. در حالی که بیمار همودیالیزی باید در بیمارستان بستری شود، علاوه بر این احتمال قرار گرفتن در معرض چندین عارضه سلامتی نیز وجود دارد.

همه بیمارانی که تحت دیالیز صفاقی قرار می‌گیرند نمی‌توانند همودیالیز را تحمل کنند، به دلایل متعددی، مانند نارسایی سوراخ بین شریان و ورید، پانکراتیت حاد، دمای بالا یا بسیار پایین بدن، یا تجمع زیاد مایع اضافی در حفره صفاقی. در وهله اول و دلایل دیگر.

فرزینیوس عراق

Faruk Medical City

شهر پزشکی فاروق

شنبه - چهارشنبه 8 صبح الی 17
رادیولوژی، آزمایشگاه و اورژانس 7/24

جاده کمربندی ملک محمود، سلیمانیه، کردستان، عراق

مرکز تماس 7/24 07709000000

واحد دیالیز کلیه

واحد دیالیز در شهر پزشکی فاروق بالاترین مراقبت های پزشکی و طیف کاملی از مراقبت های درمانی کلیوی را ارائه می دهد که شامل دیالیز، استخراج پلاسما یا آفرزیس پلاسما برای بیماران می شود.

واحد دیالیز در شهر پزشکی فاروق در سال 2015 تاسیس شد و از آن زمان تاکنون به هزاران بیمار خدمات رسانی کرده است .این واحد از سه تخت و سه دستگاه نسل جدید Fresenius 4008s تشکیل شده است.

این واحد از ساعت هشت صبح تا نه شب از شنبه تا چهارشنبه به صورت مستمر کار می کند اما پس از ساعات کاری و روزهای کاری، موارد اضطراری را دریافت می کند .محیطی راحت و دلپذیر متشکل از اتاق های دارای تهویه مطبوع و امکانات رفاهی مانند تلویزیون را فراهم می کند .و دسترسی به غذا و نوشیدنی.

واحد دیالیز شهرک پزشکی فاروق در راستای ارائه خدمات عالی و مراقبت بهینه برای بیماران مبتلا به بیماری های حاد و مزمن کلیوی است .ما همچنین در تلاش هستیم تا با بیماران خود و خانواده های آنها رابطه اعتماد برقرار کنیم و آنها را قادر به ایفای نقش فعال در انتخاب درمان خود کنیم و اطمینان حاصل کنیم که سلامت و ایمنی بیماران ما اولویت اصلی ما است .برای اطمینان از دستیابی به این اهداف، نفرولوژیست ها و پرستاران مقیم با تجربه همیشه در داخل واحد حضور دارند.

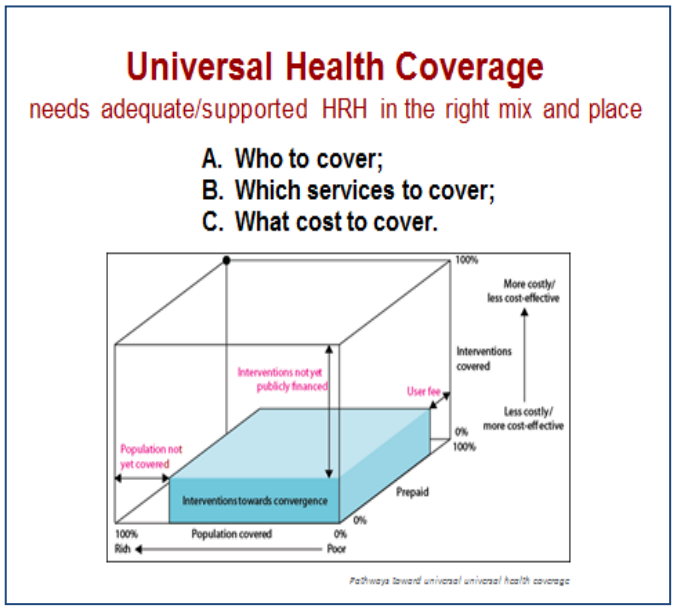
Republic of Iraq

Ministry of Health

National Health Policy

For All Iraqi Citizens

Advancing Universal Health Coverage;
Improving Governance and Leadership;
Building Capacity at all Levels;
Effective Planning and Progress towards
Equitable Allocation of Resources;
Greater Community Involvement
Promoting Accountability at all levels



2014-2023

FORWAD

" كلمة السيدة وزيرة الصحة الدكتورة عديلة حمود حسين "

إن رؤية الحكومة ووزارة الصحة العراقية تتجه الى تحسين وازدهار الحالة الصحية للمواطن من خلال تهيئة بيئة تمكينية ونظم صحية قوية حيث يجب أن يكون لجميع المواطنين فرصة تحقيق والمحافظة على أعلى مستوى من الصحة. وتلتزم وزارة الصحة للقيام بكل ما هو ممكن لتعزيز وتشجيع الرفاهية البدنية والعقلية والاجتماعية.

صيغت السياسة الصحية الوطنية من قبل وزارة الصحة بالتشاور والتعاون مع الجهات ذات العلاقة بالقطاع الصحي لتحقيق أقصى قدر من المكاسب الصحية لجميع العراقيين خلال العقد المقبل. وتسعى هذه السياسة الى تحديد المبادئ والأهداف لتحسين صحة السكان والمضي قدماً في عمل القطاع الصحي العراقي نحو التغطية الصحية الشاملة ليتمكن كل مواطن من الحصول بسهولة على خدمات الرعاية الصحية اللازمة وفق معايير الجودة المناسبة والحد من التفاوت في الصحة في جميع أنحاء البلاد.

وكذلك توفر وتأسس هذه السياسة إطاراً ونموذجاً للاستثمار والعمل في المستقبل في القطاع الصحي. وسيتم تطوير الخطط الإستراتيجية والتفصيلية والتشغيلية لتنفيذ الإجراءات المحددة في هذه السياسة من خلال تنسيق التنفيذ والمراقبة من قبل الجهات المعنية متعددة القطاعات.

وختاماً اشكر جميع من قام بوضع الصيغة الاساسية للسياسة الصحية الوطنية وكذلك كل من ساهم في مراجعتها وتحديثها من فريق العمل في وزارة الصحة والشركاء الاخرين من ذوي العلاقة ((لجنة الصحة والبيئة في البرلمان العراقي ، الامانة العامة لمجلس الوزراء ، مجلس الوزراء ووزارة الصحة في اقليم كردستان ، الوزارات (التخطيط ، المالية ، التعليم العالي)، النقابات المهنية)) والدعم الفني من قبل منظمة الصحة العالمية.

الدكتورة

عديلة حمود حسين

وزيرة الصحة

Minister of Health

ACKNOWLEDGEMENT

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ABBREVIATION

AOP	Annual Operational Plan
BPHS	Basic Package of Health Services
CBRF	Capacity Building for Results Facility
DHCC	District Health Coordination Committee
DGs	Directors General
DM	Deputy Minister
DPHO	District Public Health Office/Officer
EPI	Extended Programme of Immunization
EPHS	Essential Package of Health Services
EU	European Union
HR	Human Resource
HRH	Human Resources for Health
HSS	Health Systems Strengthening
IFHS	Iraq's Family Health Survey
MDGs	Millennium Development Goals
M & E	Monitoring and Evaluation
MoF	Ministry of Finance
MoHESR	Ministry of Higher Education, Scientific Research
MoH	Ministry of Health
MSH	Management Sciences for Health
NGOs	Non-Government Organizations
NHPW	National Health Policy Workshop
NHS	National Health Strategy
TA	Technical Assistance
TB	Tuberculosis
UHC	Universal Health Coverage
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WB	World Bank
WHO	World Health Organization

EXECUTIVE SUMMARY

Iraq's national health policy defines the principles, objectives and vision for improving population health and nutrition status and reducing inequalities in health all over the country. The policy provides a framework, concrete foundation and attainable direction for future investment and action in the health sector development. Strategic and detailed operational guidance for implementing the action plans identified in this policy will turn the policy into tangible change accordingly. Implementation will be coordinated, monitored and governed by multi-sectoral stakeholders to deliver change, modernization and the planned health gains.

The Ministry of Health has formed a core technical team representing all the key departments and with the dynamic participation of other relevant sectors like Finance, Planning, Parliament, Professional Associations supported by World Health Organization at Eastern Mediterranean Regional Office as well as WHO Country Office; all those experts have effectively pooled their knowledge and experience into drafting the Iraqi National Health Policy.

Central to the policy directions of the new Iraqi Government is to attain health care goals and overcome systemic challenges particularly what is related to cost and access to quality health care services. Several principles that guide the evolution of health care policy are spelt out in this document. Particularly important is that health is a constitutional right to all Iraqi citizens. Then that the legitimate mandate of the Governments as the overall "legislate, enforce and adjudicate authority for the safety, welfare and public order of everyone within its jurisdiction. The public justice the essential public health programmes like vaccinations promote safety and public order; a network of quality health care providers facilitates the well-being of society by meeting people's physical, social and mental needs.

Public justice in health policy demands that the Iraqi Government work effectively to ensure adequate access to quality health care as a means of preventing intractable burden of disease. This means that governments should ensure that everyone has access to some basic level of "good" health care. The Iraqi health care system should contribute to improving overall health of the population and reductions in poverty related to health expenditures particularly the out of pocket expenditure that reached 41% of the total health expenditures[1]. The question is setting the stage for greater equity, improving standards, assuring efficiency and value for money in health care and modernizing the Iraqi health care systems on feasible and sustainable grounds.

The core of the National Health Policy is to move forward the Iraqi health sector agenda towards Universal Health Coverage so that every citizen will have ready access to the needed health care services at the right quality standards. The National Health Policy discussed and analysed during the last few months and further refined during a series of consultation meetings and concluded over a four days high level workshop to reflect the

[1] Ministry of Health; National Health Account (2015); Baghdad, Iraq

strong ownership of the Ministry of Health at central, regional and Governorate levels and raise the major issues, challenges and commitments for scaling up good governance, stewardship, systems strengthening, continued professional development and securing logistics and supplies for health services to meet the needs of the population.

It is within this context that the health policy is being proposed. The policy views health in its broadest sense as a multi-sectoral programme focusing on the physical, social, economic, and balancing the pressing emergency and humanitarian needs of the country with the health sector development and reform dimensions which can bring total health gains to individuals, their families and communities. There is therefore a paradigm shift from curative action to health promotion and the prevention of ill-health; meanwhile health systems modernization and strengthening are eminent in this vision.

The policy argues that a healthy population can only be achieved if there are robust leadership and good governance, adequate financial, human and physical resources in the health sector, improvements in environmental hygiene and sanitation proper housing and town planning provision of safe water provision of safe food and nutrition encouragement of regular physical exercise improvements in personal hygiene immunization of mothers and children prevention of injuries in our work places prevention of road accidents practicing of safe reproductive life. The disease profile and mortality patterns of the country are directly linked to these factors.

The Government and Ministry of Health of Iraq articulated their vision towards a future of a healthy and prosperous Iraq through an enabling environment and strong responsive health systems whereby all citizens should have the opportunity to achieve and maintain the highest level of health and wellbeing. The Ministry of Health is committed to do all what is possible to enhance and promote physical, mental and social wellbeing.

The strategic objectives of MoH are:

1. To scale up progress towards universal health coverage and increase geographical and financial access to basic services;

2. To ensure that people live long, healthy and productive lives without increased risks of injury, disability or financial hardship;

3. To creating and sustain effective and efficient health systems that deliver quality health care services for all;

4. To ensure availability of adequate resources in the health sector and adopt a firm balance of emergency services and health sector development,

5. To reduce the excessive risk and burden of morbidity, mortality and disability, especially among the poor and vulnerable groups;

6. To address inequalities of access to health, populations and nutrition services and health outcomes;

7. To foster closer collaboration and partnership between the health sector and communities, other sectors and private providers.

The national health policy is founded on the principle that health is a multisectoral outcome and as a result all sectors, governmental and non-governmental agencies in society should be responsible for creating those conditions, but the primary responsibility for ensuring the conditions for good health lies with the collective agencies that represent the interests of the population (freely expressed through democratic institutions)—that is, the public authorities and their public administration.

The Government of Iraq and its public institutions led by Ministry of Health (at the national, regional, and local levels), to programme the implementation and monitor progress and challenges along the course of the policy. Therefore, it is important to note that MoH is the primary public institution responsible for developing a national health policy.

Iraq's national health policy is drafted by the Iraqi Ministry of Health in consultation and collaboration with key health stakeholders. The process was guided by the developments, challenges and achievements of health sector over the last few decades and also incorporating evidence and experiences from the region and world-wide scrutinizing what worked and what did not aiming to build on those experiences and maximize health gains for all Iraqis during the next decade.

The policy was developed through a dynamic participatory process and followed the WHO health systems components namely; governance and stewardship, financing health, human resources for health, health information system, health service delivery, medical technology and pharmaceuticals. The policy covers ten year from 2014 to 2023 with the overarching ambition to achieve universal health coverage for all the Iraqi population equitably and cost effective.

INTRODUCTION

Health is a multisectoral social sector that is affected by all sorts of determinants; economic, political cultural, environmental and others. Iraq has been subject to a rapidly changing and complex geo-political and socio-economic context that has impacted upon the health status and health systems alike. The Ministry of Health has embarked on setting the national health policy particularly to influence the health systems' response to the external environment and regulate the dynamics that determine health services and ultimately health status of the population. The World Health Organization has worked very closely with the technical teams of the Ministry of Health from the very inception phase of policy making throughout the consultations, provided technical assistance and guidance until the production of the final version of the Iraqi national health Policy.

The health system in Iraq has been exposed to exceptional challenges and damages during the last two decades. The infrastructure was compromised and many of the skilled health professionals have fled the country leaving behind the population with inadequate access to the basic health care services they need. The burden of disease, in 2012, attributable to communicable diseases is 19.1%; non-communicable diseases are 61.6% and injuries are 19.2%. The share of out-of-pocket spending was 36.5% in 2013 and density of health workforce in 2014 for physicians was 0.61 physicians per 1000 population.

The public health issues facing the country are presented in the following sections: communicable diseases, non-communicable diseases, promoting health across the life course, health systems and preparedness, surveillance and response. Each section focuses on the current situation, opportunities and challenges faced and the way forward. In addition, several trends in population dynamics and in selected health indicators are analysed to provide policy-makers with evidence and forecasts for planning.

Taking into account the country complex context, as well as the regional and global contexts, the Ministry of Health, in collaboration with all the health stakeholders, analysed and mapped out a process to develop this first ever Iraqi national health policy to guide the country's health strategy and future investments and development in health. According to the World Health Organization, an explicit health policy can achieve several things: it defines a vision for the future; it outlines priorities and the expected roles of different groups; and it builds consensus and informs people[23]

The process started with a situation analysis of the current health and health sector status, health determinants, the organisation, management and functionality of the health systems. Based on the outcome of the situation analysis, a framework was prepared to assess the gaps identify Government priorities taking into consideration the current and foreseen resources available and trends in the social determinants of health; the National Health Policy has been developed.

[2] World Health Organization. Health Policy, accessed 22 March 2011.

[3] Harvard School of Public Health, Department of Health Policy and Management About Health Care Policy, accessed 25 March 2011.

The strategic direction of improving human capital makes health central to the development goals of the Government of Iraq. Only a healthy population can bring about improved productivity and subsequent increase in GDP, and by doing so ensure economic growth. Hence the old adage “a healthy population is a wealthy population”.

The high level of participation from the Ministry of Health, Council of Ministers, Parliament, Professional Associations of Physicians, Pharmacists and Dentists, supported by World Health Organization of Iraq Country Office as well as the Eastern Mediterranean Regional Office in a highly participatory dynamics that incorporated excellent contributions and set timeframe to finalize the National Health Policy for the next decade. The thematic groups suggested what policy options could be included in the new policy. These options were also discussed and consensus was built through national stakeholder and regional consultation meetings.

The policy and health sector priorities are based on achievements of the Ministry of Health during the past years and what work remains to truly transform the health system to better meet the needs of all the population on a planned roadmap towards universal health coverage. It is always hard to generate priorities for health at times of emergencies because all illnesses, diseases and humanitarian needs should be on high priority.

The national health policy is a living document and as such flexibility is endorsed so that regular monitoring and review will be undertaken at regular intervals and corrective measures will be pursued as deemed necessary so that the overall pathway of the policy leads Iraq to achieve universal health coverage for all citizen with equity, quality and cost effectiveness.

SITUATION ANALYSIS

Macroeconomic, political and social context:

Iraq is facing complex challenges and still recovering from long periods of conflict and political turmoil. While modernization of the public sector remains a top priority, limited focus on good governance is affecting the implementation of laws, provision of services and effective management of the country's resources. The Iraq Five Year National Development Plan 2013–2017, reflected the shift in perspective and approach to development, strengthening a democratic and consultative political base, reforming governance and administration and optimizing the utilization of national natural and human resources.

The context in Iraq should be seen as one of the most complex in the region. Particularly the reality of decades of wars and conflicts has dramatically exhausted the health and social sectors capacity to deliver the quality and coverage of services needed by the population. Over and above an estimated 2.9 million Internally Displaced Persons (IDPs) in need of immediate and prolonged humanitarian and health care support from the stretched and fable health care system in the country.

Demographic Context

Iraq's population growth has jumped between 1970 (10 million) and 2014 (more than 36 million) and the United Nations Population Division estimates that by 2030, it will have reached almost 50 million. Currently, the Iraqi population present a broad-based youthful age composition, with 39% under the age of 15 years. Children under 5 represent 13% of the population. Over two thirds (69.6%) of the population live in urban areas. Baghdad has the highest urban population (93%) and Diyala the highest rural population (56%). Though fertility rates have decreased in the past decade, fertility in Iraq remains high with a total fertility rate of 4.7 and a population growth rate of 3%. The average life span is 73.1 years; 71.9 for males and 74.4 for females.

The continued insecurity and armed conflict has resulted in exceptional pressure on the health systems through the growing number of IDPs and mounting humanitarian needs particularly in Nainawa, Salaheddin, dyala, Anbar and Kerkuk Governorates[4]. Since January, 2014, 2·9 million people have fled their homes and presently 8·2 million people in Iraq require immediate humanitarian support. 6·9 million Iraqis need immediate access to essential health services and 7·1 million access to water, sanitation, and hygiene assistance[5]. The situation is bad, really bad, and rapidly getting worse", said WHO Director-General Margaret Chan in her keynote address to launch a new humanitarian response plan for Iraq in June 2015.

[4] Ministry of Planning. 2014. IDPs Survey. Baghdad, Iraq.
[5] The Lancet. 2015. Volume 385, No. 9985, p2324, 13 June 2015

Socio-economic Indicators:

Iraq's unprecedented population growth, with its youth/adolescent bulge, is of concern from a social, economic and health perspectives. The sharp drop of oil prices was a shocking to an economy that is 93% of the national income comes from oil. The latest household survey (2012)[6] has found that 19.9% of the population are under the poverty line. High unemployment rates of 18% overall that is highest among women (32%) and youth (30%)[7]. Limited economic opportunities and poor service delivery, coupled with forced migration, all have a negative impact on health and well-being of the people of Iraq and adversely affect the country's ability to achieve the MDGs. There are remarkable disparities between rural and urban population in terms of economic opportunities and access to social services including health.

Prevailing insecurity and terrorism aggravated since January 2014 and June 2015 with Anbar crisis and ISIS attack on Mosul respectively and subsequent spread of armed opposition groups activities to other governorates with pressure on an already weakened health system. Reliance of the economy on one single commodity (oil) with price fluctuation exposes the government to enormous pressure in financing health and social services. It is believed that private sector can contribute in many ways to health sector development if the regulatory framework and investment legislations are modernized to make this possible. Finally, it is overall perceived that there has been increasing levels of social vulnerability that needs a new dynamic policy to address it for the needy Iraqi population.

Health status of the population:

The drop of health indicators during the 1990s has been reversed showing steady improvement in the Iraqi health status. Under-5 mortality for example is currently 21.7 per 1000 live births and infant mortality rate is 17.3 per 1000 live births. The immunization rate during the first year of life has reached 64% and for tetanus toxoid for pregnant women is 40%. The Ante Natal Care visits with at least once has reached 63% while the ANC rate for at least four visits per woman remain low (35%) and the Post Natal Care visits is 61%. Maternal Mortality Ratio is 30 per 100,000 live births and 87% of women deliver with skilled births attendants; of which 77.7% in health care institutions – both public and private. Prevalence of contraceptive use is very low (5%) with low access to contraceptive commodities through public facilities while it is available through expensive in the private sector.

Burden of communicable diseases:

Despite the critical security situation, communicable disease prevention and control have remarkable progress. This was largely attributed to the good surveillance system in place.

[6] Iraq Household Survey (2012).
[7] World Bank (2014). Republic of Iraq Public Expenditure Review: Toward More Efficient Spending; Washington DC.

However, due to the armed conflict and poor environmental health conditions particularly in IDPs' camps and the damage of water supply and sewerage system since 2003, the incidence of water-related infectious diseases has risen. Contaminated water supply, unsafe sanitation and poor hygiene practices are the main causes of the spread of water-borne infections. Currently, an unacceptable percentage of drinking-water samples fail quality checks, and raw sewage is discharged directly into rivers.

In urban areas; 72% of the population in Iraq have access to the network of safe drinking water compared with only 47% in rural areas with a national average of 65%. Out of the 1.4 billion cubic meter of waste water from Baghdad alone; only 34% is treated while the rest is drained directly into rivers and the likes with enormous hazards on health and safety. As for sanitation services, it was documented that only 30 % of the population have access to sanitary disposal of waste water.

The heavy burden of the IDPs' health needs was demonstrated through spiking rise of infectious diseases including water borne, air born, skin diseases and mental illnesses.

Typhoid fever, a waterborne and foodborne disease, is endemic in Iraq. Hot weather and the frequent interruptions of electricity and water supply during the summer months have resulted in increased incidence. As a result, numerous interventions were implemented to prevent and control outbreaks. Cholera is also endemic in the country. Following a large outbreak in 2007, smaller scale outbreaks were also reported in 2008, 2009 and 2010.

In 2011, 9248 cases of tuberculosis were reported, with a notification rate of 28 cases per 100 000 population. No indigenous malaria cases have been reported in Iraq since 2008. The last indigenous case due to P. falciparum was reported in 1969, while the last two local cases due to P. vivax were recorded in 2008. The cumulative number of HIV/AIDS cases registered from 1986 up to 2007 was 269. Although the prevalence of HIV is currently less than 0.1% of the population, there is a need for improving public awareness about HIV transmission.

There has been remarkable improvement in the Expanded Programme on Immunization (EPI) despite lack of security, poor access and sub-standard primary health care services. Although the Ministry of Health is using its own resources for purchase of all vaccines and supplies, UNICEF and WHO support is still needed to bridge gaps. More than 56% of primary health care centres provide immunization. The EPI surveillance system works well and more than 90% of the reporting sites provide regular and timely data. Hib, rotavirus and pneumococcal vaccines were made available to all eligible children in 2011. More efforts are needed to ensure that all hospital maternity wards and health centres have delivery facilities and trained staff to give BCG and Hepatitis B first dose at birth. The immunization programme has a robust surveillance system and committed staff but needs further capacity building, particularly in the area of forecasting.

Burden of non-communicable diseases:

Non-communicable diseases account for 44.3% of mortality in Iraq. Chronic illnesses such as heart disease, stroke, cancer, respiratory diseases and diabetes are the leading causes of mortality in Iraq. According to Iraq Family Health Survey (IFHS) 2006/2007, the most frequently reported chronic conditions are high blood pressure (41.5 cases per 1000 population), diabetes (21.8 cases per 1000), joint diseases (18.6 cases per 1000), heart disease (12.0 cases per 1000) and gastrointestinal disease (11.2 cases per 1000). The chronic non-communicable diseases stepwise risk factor survey 2006 showed that 41.4% of the adult population (aged 25–65 years) suffered from raised blood pressure, 10.8% had hyperglycaemia, and 37.7% had hyper-cholesterolaemia. The survey also showed that 66% of the adult population was overweight and 33% were obese. Smokers constituted 21.9% of the adult population while 90.5% of the population had low fruit and vegetable consumption and 56.7% had low levels of physical activity. The 2008 Global Youth Tobacco Survey results showed that 7.4% of students aged 13–15 years in Baghdad had ever-smoked cigarettes (males 7.4%, females 6.8%).

The non-communicable disease unit at the primary health care department of the Ministry of Health is engaged in prevention and control of non-communicable diseases. A national action plan for the prevention and control of non-communicable diseases in line with the global and regional plans has been developed and being implemented. The integration of non-communicable diseases into primary health care centres has been successful and is gradually moving towards 50% coverage. At this stage the focus is on hypertension and diabetes.

The mental health programme has been active since 2003 with multiple sources of donor funding. Many high level international and national forums and conferences have been held on mental health and policies and strategies to deliver quality mental health services have been discussed and developed. The national mental health strategy developed for the period 2008–2013 needs to be reviewed and updated. Psychosocial care and support to address posttraumatic stress disorders are grossly inadequate, particularly given the intensity and the frequency of traumas faced by Iraqis since 1980. Six trauma centres have been established: two in Baghdad, one in Mosul, one in Basra, one in Dahuk and one in Diwaniyah. Based on various surveys, it is estimated that the prevalence of mental disorders among the population is 35.5%12, while the treatment gap for management of mental disorders is estimated at 94%.13

In 2007, the Ministry of Health reported 1794 deaths due to road traffic crashes. Sentinel sites have been established in northern and central Iraq in efforts to develop injury surveillance, violence prevention and treatment and rehabilitation programmes. Preliminary reports from these sites suggest that the leading causes of injuries registered at emergency rooms for the period 2007–2008 were traffic crashes (17.3%) and domestic accidents (17.2%).

Maternal and child health:

Improvement of women's health is articulated in the Ministry of Health's strategic plan for 2014–2018. Reproductive health services deteriorated sharply immediately after the 2003 conflict, but have since made a gradual recovery. However, access to reliable data on reproductive health remains somewhat limited. Estimates for maternal mortality vary widely, with a national average of 30 maternal deaths per 100 000 live births. Marriage at young age is prevalent in some parts of the country, although fertility rates have decreased in the past decade.

The total unmet need for contraception is high, and evidence of male involvement in fertility control is largely lacking. Family planning services are offered in less than 5% of primary health care centres and family commodities are rarely available except through private pharmacies at a high cost. Although the rate of first-visit to antenatal care facilities is relatively high, the percentage of pregnant women who follow the recommended number of visits (four visits and above) is still low (35%). The same is true for postnatal coverage (61%). It is reported that 22.3% of births occur outside health institutions, with 22% of deliveries at high risk and in need of advanced medical support.

The under-5 mortality rate was 21.7 per 1000 live births in 2014, with wide disparities between governorates. Because of unsanitary environmental conditions, unsafe water supply and poor hygiene practices, there is a high incidence of diarrhoeal diseases. Diarrhoeal and acute respiratory infections, compounded by malnutrition, account for two-thirds of deaths among children under 5 years of age. A Multiple Indicator Cluster Survey (MICS) carried out in 2012 showed acute malnutrition (wasting) at 7%, underweight at 8% and chronic malnutrition (stunting) at 22%. The exclusive breastfeeding rate was 25.1%. Based on available data, the prevalence of anaemia among women of reproductive age (15–49 years) is estimated at 35.5%, and 38% among pregnant women.

Iraq is faced with significant environmental challenges with decades-long drought, desertification, flooding, manmade disasters including conflict and deterioration of the physical infrastructure. The government has identified environment as a priority within the national development plan, in order to meet international treaty obligations and to ensure that its plans for economic and human development include environmental considerations. As a consequence of the environmental situation, Iraq is the only country within the immediate region to show a decline in access to improved drinking-water sources from 1990 to 2006 (from 83% to 89%). The Baghdad Sewage Administration estimates that of the nearly 1.4 billion litres of wastewater/sewage generated daily in Baghdad city, only 34% is treated. The rest remains untreated and is disposed of directly into rivers and waterways, with severe implications for public health and the environment. Waterborne diseases are widespread due to contamination of drinking-water. Sustainable access to sanitation and safe water is poor, with 21% of households unable to access an improved water source and 16% without an improved source of sanitation. Disposal of hospital waste remains a major issue with a direct bearing on the health sector.

Health systems and services:

The Iraqi health sector faces considerable and complex challenges. These challenges encompass the demand for improving access to quality health services by transforming the hospital-oriented system to a primary health care model, overcoming recurring shortages of essential medicines, dealing with budget deficits, rehabilitation of infrastructure, training and deployment of human resources. In any health system there is a dual focus on the individual (health care system) and on public health measures and interventions the target of which is a specific population group or the population at large (public health system). Both sub-systems have been affected by the prevailing circumstances in Iraq.

Service delivery:

The health care delivery system in Iraq has historically been a hospital-oriented and capital-intensive model with less emphasis on preventive measures. The Ministry of Health is the main provider of health care, both curative and preventive. The private sector also provides curative services. About half the health centres are staffed with at least one medical doctor. The rest have trained health workers (medical assistants and nurses).

The Ministry of Health has a network of health care facilities which in 2014 comprised 2632 primary health care centres, out of which 37 centres deliver family health care. In addition, the Ministry operates 257 public hospitals of various levels and a group of specialized health care centres. Public health care facilities are not equitably distributed across governorates and between rural and urban populations. While medical services in the public sector hospitals are free apart from nominal charges, many people choose to seek care in the private sector health centres to avoid longer waiting times in the public facilities and adverse perceptions of quality.

The private health sector plays an important role in delivering personal health care, in part due to the omnipresent "dual practice" – health staff employed in the public sector and working privately inside and outside government facilities. The total number of private hospitals in 2014 was 111, many of which are small and mainly concentrated in Baghdad. The main concern in service delivery is the quality of publicly provided services. Bed occupancy rate in public hospitals was recorded as 58.7% in 2014 with an average 2.7 days stay per in-patient.

Coverage: Universal health coverage is the national objective and the core strength of the Iraqi national health policy. All Iraqi citizens have the right to access health care services with minimal financial contributions.
Access: On average citizens seeking health care services can reach a health facility with 20 minutes. This can extend to 32 minutes for those living in remote rural areas. Among the main barriers to access health care services is the shortage of skilled health workers.

Quality: It is documented by the IPSM project that the quality of primary health care services is better in public facilities that private.

Equitable distribution: In principle health care resources are distributed according to the population density and distribution in the country. It is not unique to Iraq that district and central specialized hospitals and skilled health professionals are located more in big cities and fewer are in rural districts and remote villages.

Health Financing:

The WHO has provided technical assistance and guidance to the Ministry of health in producing the National Health Account (NHA) for 2012 that was released recently. The NHA revealed that Total Health Expenditure (THE) in Iraq reached ID 10,000 billion; 58.5% of which came from the Government sources. The Ministry of Health is the biggest financing agent of health sector expenditure, followed by the 41.1% was out of pocked i.e. private sector contributions. Other ministries contributions account for less than 3.2% and only a small fraction of THE; came from donor (0.4%).

The Total Health Expenditure represented 4.2% of the Gross Domestic Product (GDP) and the per capita health expenditure was US$ 270. The NHA also reflected the sharp increase in the health investment plan from ID 35 billion in 2008 to ID 516.9 billion in 2012. Despite the impressive increase in health expenditures over the recent years, the budget allocated to health remains relatively low compared with the average expenditures in countries with proportionate income levels to Iraq. In addition, most of the increase in the health budget allocations is consumed in the rising salaries of health workforce rather than a net contribution to health services improvement or the investment plans. The biggest share of health expenditures goes to salaries of the large health workforce (47%); followed by pharmacies of the Ministry of Health accounting for 30% of total health care expenditure. In general, health care expenditure in Iraq is primarily spent on curative.

It is noted that the Iraqi health budgeting model is a traditional incremental one that does not reflect strategic reform measures or evidence based budgeting arrangements like those in dynamic financing systems. Also the current Iraqi health financing system lacks a coherent pre-payment financial health protection trends towards sustainable universal health coverage and social protection of the population.

Health workforce:

Approximately 47% of the Ministry of Health budget is allocated for human resources. Despite the relatively high numbers of health workforce in the health system (32 doctors, nurses and midwives per 10,000 population), the proportion of funds allocated to personnel in total Ministry of Health expenditure is lower than the average of middle-income countries. In 2014, according to the Ministry of Health's annual report of 2014, Iraq had 274,515 health workers. The density of physicians per 10,000 population in 2014 is 8. The density of nurses per 10,000 population is 24 leaving the ratio of nurses per physician at 3:1. The majority of nurses (53.6%) graduated from nursing high schools of the Ministry of Health. 34% of midwifes were working in Ministry of Health facilities. The remaining 66% worked in the private sector, and only 66% were certified. The production of health workforce is coordinated by two major partners: the Ministry of Health and Ministry of

Higher Education and Scientific Research. The Ministry of Health manages nursing high schools and midwifery high schools. The education and training of various categories of health professionals is carried out in the public sector, where education is free. There is no education policy or pre-service education strategy to guide the country's health workforce production. There is no database on pre-service qualifications or in-service training completed by staff.

Health technologies and pharmaceuticals:

Medicines and other health technologies encompass a wide range of critical input in the health care industry. Since 2003, the state-run company Kimadia distributes medicines and other health technology-related supplies to the public sector. Health and biomedical technologies, including pharmaceuticals, constitute the second major input in the provision of health care services. Access to medicines and health technology are among the indicators of health system responsiveness.

Health information system:

The health information system supports all health system functions and building blocks and is often considered as a proxy for the level of development of the health system. Data are collected through the national information system and supplemented by population-based surveys, vital registration system and health research.

The routine information system is part of the main activities of the health management information system, which deals with three types of data records:

1) Health and disease records (including surveillance);
2) Health service records; and
3) Resource records.

Another health-related population-based data source is the vital registration system, which the Ministry of Health coordinates with the Ministry of Interior at national and subnational levels. To date, evidence based decision making, planning and management of health activities remain inadequate in Iraq and needs strategic investment and strengthening of the health information system and the capacity at national and subnational levels.

Health infrastructure:

Iraq is blessed with a good network of health facilities at primary, secondary and tertiary levels. This wealth of national and highly technical infrastructure is in various standards of quality, performance and maintenance. The Ministry of Health envisions the future where medical technology and state of the art equipment will shape up the status of the Iraqi health and well-being. The national target for bed capacity is to reach 1.5 beds per 1000 population. Establishing new hospitals of various capacity and specialization is in the plan of implementation. The health investment plan needs to keep pace of the rapidly growing population as well as the depreciation rate of existing in-patient facilities. Equally strategic

is the need to develop and strengthen the maintenance systems to preserve and sustain the health infrastructure in a cost-effective approach.

Health governance:

The Ministry of Health plays the leading role in health development through the formulation of a national vision, policies and strategic health planning and management. The Ministry is constitutionally mandated to provide the necessary health care services in partnership with the private sector and to guarantee health and social security to all citizens. The function of standard-setting, an important element of health governance related to the quality of health care services, is relatively weak in Iraq. National accreditation standards for centres were prepared in June 2010 with technical support from International Medical Corps. However, the accreditation system is still in 'pilot' stage.

A. Key documents used for policy development and strategic planning include:

a) The Strategic plan of the Ministry of Health;
b) The national development plan;
c) The population policy;
d) The roadmap for health sector reform;
e) Various specific health strategies;

B. Decentralization:

Based on law number 21 for the year 2008 amendment number 19 for the Governorates Council; the Ministry of Health will activate specialized technical working groups to discuss, analyse designation and delegation of authorities across the system aiming to transform the centralized health care management system into a more decentralized one.

C. Legislations:

With the forward looking of this document; there is a need for a comprehensive review of all existing health related legislations and legal frameworks in order to respond to the aspirations and strategic needs of the Iraqi population for better health and health care services. One of the major areas highlighted in this document is the regulatory capacity of the Ministry of Health and the need to give it even greater emphasis and support. The capacity is be capable of analysing the needs and to formulate appropriate health policies, guidelines, legislations for health and health care fit for purpose in Iraq.

D. Licensing:

The standards and mechanisms used for regulating health professions are complex and relatively out of date in Iraq. Professional associations are currently entrusted with the licensing authority for professional practices of different cadres in public and private sectors alike. However, there is no mechanism in place to monitor performance, improve competencies and institutionalize continuous professional development.

E. Accreditation:

The core concept of accreditation is the recognition that there are levels of quality below which patient care should be prohibited. If a service provider is unable to provide such fundamental resources as adequate hygiene, stable power and water supply and qualified physician and nursing care, it should not be allowed to remain open. Accreditation in Iraq is at its beginning and it is not yet institutionalized.

Goal and Purpose of Accreditation are:

- Provide recognition and reward to those hospitals that demonstrate they are evaluating and improving the quality and safety of care;
- Allow future financial rewards to those who succeed in becoming accredited;
- Continuously improve the quality of health care and services;
- Enhance public confidence in their health care;
- Improve national pride in the health care system;
- As a mechanism to renew licensing.

The Ministry of Health is determined to enhance quality of health care services through accreditation and licensing in a systemic and sustainable approach.

Health system challenges:

- Planning is constrained by the political and insecurity context in parts of the country. It needs to be evidence-based and clarify what is strategic and what is short term interventions;
- The re-emergence of vaccine preventable diseases like poliomyelitis - after 14 years of a polio-free status - is a major set-back to the sector capacity;
- Iraqi high population growth rate poses a serious additional constrain to the sector;
- Brain drain of skill health professionals not only in rural areas but even urban and high level positions leads to shortage of skills base and overall capacity to serve the population;
- The on-going conflict in multiple locations in Iraq exacerbates the system challenges and diverts Governments resources from health and social services to defence and related costly mandates;
- Accountability and transparency are weak and need be deeper in the organizational context and culture of good governance;
- Regulation of the health service delivery mechanisms is weak in the public and private sectors.
- Decentralization in the health care delivery system has been addressed to certain degree in national legislation; however, implementation of these mechanisms presents major challenges.

- The budget-making process faces issues in preparation and in passage by the legislature. Disbursement of funds in a timely and predictable manner is a major challenge. Also noted the limited absorption capacity in the sector;
- Lack of resource allocation capacity and effective financial management needed to speed up implementation of programmes and projects;
- Stronger national capacity is needed to identify alternate means of health financing, such as social insurance, prepaid options, risk-pooling mechanisms and targeting vulnerable communities, in order to move towards universal health coverage.
- The quality of care in both the public and private sectors in Iraq is far from desired levels. Effective standards and an accreditation system for health service providers is urgently need to be put into place.
- The dual practice model (civil servants working in the private sector) in Iraq is a major management issue leading to the unavailability of adequate health staff in public sector facilities. This adds to the problem of inequitable distribution of human resources for health across the country.
- There is no integrated information system that brings data from across different information subsystems in Iraq.
- Management of health technology is weak, starting from needs assessment to selection, procurement, maintenance and disposal.
- An effective medicine policy is needed which includes regulation, rational use and equitable access.

National Health Policy

The key objective of the Iraqi national health policy is to create the conditions and enabling environment that ensure good health for the entire population. The Policy recognizes the challenges of consolidating the principles of the previous health policy in community involvement, improved health services provision, access and equity while addressing the different dimensions of reforms that are taking place in the Public Sector.

The national health policy is founded on the principle that health is a multisectoral outcome and as a result all sectors, governmental and non-governmental agencies in society should be responsible for creating those conditions, but the primary responsibility for ensuring the conditions for good health lies with the collective agencies that represent the interests of the population (freely expressed through democratic institutions)—that is, the public authorities and their public administration.

The Government of Iraq and its public institutions led by Ministry of Health (at the national, regional, and local levels), to programme the implementation and monitor progress and challenges along the course of the policy. Therefore, it is important to note that MoH is the primary public institution responsible for developing a national health policy.

Since the Health Policy is a living document and dynamic, interactive in nature, the Ministry of Health would like to welcome positive and constructive comments and contributions from all stakeholders. The comments will be used for the regular review and monitoring of the policy implementation, which will be undertaken after ten years of life time of this policy.

VISION

The Government of Iraq's vision is towards a future of healthy and prosperous Iraq whereby all citizens have the opportunity to achieve and maintain the highest level of health and wellbeing.

MISSION

The Ministry of Health is committed to do all what is possible to enhance and promote physical, mental and social wellbeing for all the Iraqi population through dynamic, responsive, modern, effective, efficient and sustainable health systems. The Government adopts the Universal Health Coverage approach through a broad base family health model that delivers quality services for all Iraqi population regardless to their financial or social status.

HEALTH SECTOR OBJECTIVES

The goal of the health sector – of a healthy and prosperous Iraq - will be achieved through the pursuit of the following interrelated and mutually reinforcing objectives:

1. To scale up progress towards universal health coverage and increase geographical and financial access to basic services;

2. To ensure that people live long, healthy and productive lives without increased risks of injury, disability or financial hardship;

3. To creating and sustain effective and efficient health systems that deliver quality health care services for all;

4. To reduce the excessive risk and burden of morbidity, mortality and disability, especially among the poor and vulnerable groups;

5. To address inequalities of access to health, populations and nutrition services and health outcomes;

6. To foster closer collaboration and partnership between the health sector and communities, other sectors and private providers.

The Ministry of Health aims at enhancing effectiveness and efficiency of the Iraqi health systems so that it promotes health of individuals and the society as a whole through creating the enabling environment, provision of the systems, resources, guiding principles and strategies that secures the attainment of the maximum health outcomes for all the population.

GUIDING PRINCIPLES

The following principles are adopted to create the enabling environment of the Iraqi health policy:

1. **Health is a right for all Iraqi population:**
   Access to health is a constitutional right for all Iraqi population;

2. **Equity:**
   Every citizen has equitable opportunity to attain health without discrimination of race, gender, geographical or socio-economic status;

3. **Accessible and sustainable quality health care services for all:**
   Provision of attainable resources and interventions that guarantee effective and efficient delivery of quality health services that the country can afford and sustain;

4. **Decentralization:**
   The Government of Iraq adopts and systematically promotes the necessary reform measures that make authority and responsibility for health services effectively respond to community needs in a more dynamic, participatory and accountable approach. This demands a new governance model and a redistribution of roles, responsibilities, authorities and resources over the period of this policy framework appropriate to the Iraqi existing and foreseen socio-economic and political context;

5. **Accountability:**
   The Government and Ministry of Health are committed to promote greater transparency and clarity in decision making within the health sector so that responsibility and accountability are promoted as a positive organizational culture. This will enable monitoring and evaluation and overall sector productivity to grow;

6. **Family Health is the model to pursue and promote by Iraqi health sector:**
   The Ministry of Health will expand and deliver family health care services as a comprehensive system that meets the needs of all the population. The system is strategically tailored to entail preventive, diagnostic, curative and public health services specific for the Iraqi health and health care needs;

7. **People have the right for safe medical practice:**
   This is an ethical and legislative right that the Ministry of Health is committed to promote sector wide;

8. **Promoting professionalism:**
   Health providers belonging to diverse professional groups are well valued, protected, professionally and holistically developed and motivated. This is a prerequisite to deliver the highest level of professionalism, performance and quality of care to the whole nation;

9. **Partnerships:**
   Effective collaboration and partnerships are essential for maximizing the collective delivery of health to all the population. The Ministry of Health is the custodian and constitutional leading public authority to drive the health agenda but it is not the only sector that contributes to health of the nation. As such the Ministry of Health is and will partner with all relevant public, non-Governmental, national and international institutions to synergize for health and health care delivery in Iraq;

ASSUMPTIONS

The national health policy is formulated based on the following assumptions:

1. The Government of Iraq will continue to be the chief financer of health and health care and human resources development;
2. The Government of Iraq will increase financial allocations to health and the health sector over the next decade from Government revenues and sources to sustain implementation of this policy;
3. The Government will continue to promote decentralization of public sectors and civil services including health sector and services and support it with the necessary legislative frameworks and reforms;
4. The Government will support and promote private sector engagement and investments in health in an effective complementary and partnership framework that add value to health sector effectiveness and performance.

DURATION OF THE POLICY

The National Health Policy of the Government of Iraq will guide the health development of the country for next 10 years (2014-2023). Continuous and rigorous monitoring and evaluation will be conducted regularly on the implementation of the Policy.

PRIORITIES

This is a ten years vision of the Ministry of Health that is articulated in line with the priorities of the national development plan; with particular emphasis on the following areas:

1. Strengthen health sector **governance** at all levels supported by an enabling organizational and administrative environment;
2. Promote effective and efficient use of all available financial **resources.** Expand financial risk protection through innovative financing mechanisms based on adequate prepayment arrangement while ensuring efficiency, transparency and sustainability;
3. Plan, train and make available competent and adequate number of skilled, motivated and supported **health workforce** to manage health services with gender perspective at all levels. Build capacity of human resource at all levels in management and clinical health care services delivery;
4. Ensure the availability of medicines, reagents and medical supplies and infrastructures;

5. Reduce the **burden of disease**, communicable, non-communicable, maternal and child mortality and increase life expectancy;

6. Ensure provision of **essential package of health care services** that is based on the family health model. Quality improvement is a major dimension across the board and Universal Health Coverage is the sector's overall strategic objective;

7. Improve **quality of care** in line with the international standards and best practices;

8. Scale up **maternal, reproductive and child health** care services;

9. Strengthen **life-saving medicines, crises management and safe blood transfusion** services. Improve health and social support services for the disabled with rehabilitation and support services;

10. Facilitate the promotion of **environmental health** and sanitation, promotion of adequate nutrition, control of communicable diseases and treatment of common conditions;

11. Enhance **mental health** care and effective management of drugs abuse and addicts recovery services;

12. Support to **private sector** investments in health and health care services within a robust strategy and regulatory framework;

13. Effective **community participation** and promotion of philanthropy in health care.

National Health Policy Specifics

Iraq's national health policy is drafted by the Iraqi Ministry of Health in consultation with key stakeholders. The process was guided by the developments, challenges and achievements of health sector over the last few decades and also incorporating evicence and experiences from the region and world-wide scrutinizing what worked and what did not aiming to build on those experiences and maximize health gains for all Iraqis during the next decade.

The policy was developed through a dynamic participatory process and followed the WHO health systems components namely; governance and stewardship, financing health, human resources for health, health information system, health service delivery, medical technology and pharmaceuticals.

1. GOVERNANCE AND ORGANIZATIONAL POLICY:

1.1 The MoH is the national authority mandated with health sector policy formulation and setting strategic directions that responds to health needs of the population;

1.2 The MoH will expand and promote decentralization in an incremental and phased approach so that responsibilities and authorities will be transferred from central MoH to Directorates of Health guided by capacity, resources and performance;

1.3 Organizational reviews and provision of new organizational structures at difference levels will be pursued over the next years in a gradually phased approach. Modernization of health sector infrastructures and systems – within a decentralized governance approach - will endeavor to make the best use of available specialized and communication technologies to facilitate and enhance effective decision making for greater efficiency and improve universal access to quality health care services;

1.4 The stewardship role of the MoH will be strengthened at central, regional and governorate levels. Effective monitoring and supportive supervision will be streamlines within the decentralization governance approach to ensure effective and sustainable high performance;

1.5 The MoH is the prime regulatory authority for all health related activities and standards of health products and services. Modernizing health sector for better performance demands legislative reviews and proposals of new acts/laws that the MoH will pursue in collaboration with the stakeholders involved aiming to support essential reform measures adopted in this policy;

1.6 The role of private sector will continue to grow within a transparent and well regulated partnership framework.

2. HEALTH SERVICES DELIVERY:

2.1 Health services levels:

The MoH mandate is to improve, promote and sustain health status through expanding access to social and health protection, promoting affordable services for every citizen and eliminating health inequality in all possible ways. Particularly for the poor and vulnerable, the existing safety nets will be further improved and consolidated to ensure wider access to public health care services. The existing health infrastructures location and functionality as a result of insecure and conflict situations should be addressed for increasing access particularly by vulnerable groups. This will call for health services planning to be need-based.

Iraqi health services delivery system is classified into three main levels, namely; primary, secondary and tertiary levels of care. The MoH have identified family health model as its strategic choice for reform. Family health approach is founded on an integrated model of health care services that include preventive, diagnostic, curative and rehabilitation inter-linked services that are integrated through a well-defined referral protocol.

2.1.1. Primary health care:

An essential preventive, basic diagnostic, curative and promotive services supported by effective community participation in planning and decision making are provided through a network of primary health care facilities, mobile clinics and well trained health teams following well defined clinical protocols and services quality standards. Community involvement and active participation in PHC entails identification of problem areas, planning, implementation, monitoring and evaluation of health care services.

Multisectoral collaboration is important through involving other sectors such as Water, Agriculture, Education and Ministries that impact on health.

Empowerment through decentralization of health services to regions, governorates and districts need effective coordination, implementation, supervision and provision of quality health care to the community;

2.1.2. Secondary health care:

Secondary health care services are provided to patients referred from primary health care facilities both public and private. This is largely through general

hospitals, maternal and child care hospitals and emergency care centres. Often those services are available around the clock 24/7. Those centres also provide specialized training opportunities and clinical research.
Secondary care services are integrated collection of cost effective interventions that address the main diseases, injuries and risk factors in Iraq;

2.1.3. Tertiary health care:

These highly advanced clinical services are delivered through specialized medical centres and tertiary hospitals that are well equipped and operated by highly skilled medical professionals. Patients who need tertiary health care services are often referred by secondary health care service providers based on clearly defined clinical guidelines. Tertiary centres also provide highly specialized training and research opportunities and their strategies are intimately linked with the non-communicable disease burden.

2.2 Essential package of health services:

The MoH is reviewing and developing the essential package of health services at the three levels – primary, secondary and tertiary – to effectively respond to the burden of communicable and non-communicable diseases, reproductive, mental and emergency medical services. Family health model is adopted as the national approach for health care services throughout Iraq. The MoH is developing evidence based standards of health care service delivery and operationalizing a set of clinical protocols that aim at provision of high quality standards health care services to all.
MoH is committed to strengthening District Health Services so that essential clinical and public health packages are provided so that the burden of disease, crude death rates, maternal and infant mortality are reduced, and life expectancy is increased;
MoH is also strengthening Referral System that it is efficient and cost effective from the household/community level to the tertiary care level;

2.3 Designation of catchment areas:

In line with the family health model, the population is organized into clusters of health care users attached to designated service providers on geographical basis. Those clusters are referred to as catchment areas.
Organizing beneficiaries is critical for access to the needed services particularly for the poor and vulnerable population. The majority of the poor and specifically

the rural poor suffer from a higher burden of preventable conditions. The MoH will increase resource allocation to address these cost effective interventions, while at the same time join hands with other stakeholders, the communities and development partners to reorient the services to be more responsive to the needs of the population, and specifically targeting the indigent and the vulnerable groups.

2.4 Emergency services:

The Government is Iraq is responsible for developing effective emergency medical services, with the essential infrastructure and systems led by the Ministry of Health and supported by relevant sectors in a coordinated and integrated approach. Ensure preparedness of all emergency related entities for prompt and effective response and make the best use of evidence and available technology.

The Government is to pursue and sustain a robust emergency and disasters information system to provide up to date information that can be collated, analyzed for decision support and dissemination on regular basis. Emergency information mapping is to be institutionalized and population at risk are to be promptly identified and analyzed with reference to demographic, cultural, and socio-economic data sheet.

The MoH is to develop and sustain emergency specific guidelines and train all relevant workforce and institutions on the health impact of emergency situations and natural disasters aiming to enhance preparedness for effective response. Surveillance system should be well in place. Community participation is also to be encouraged and supported in the process.

2.5 Safe blood transfusion:

The MoH organizes and put the guidelines and specifications that ensure safe and sustained blood transfusion services in a systemic approach. Guidelines and quality standards are in line with the regional and international standards.
Organizational structures and the legislative framework of the national blood transfusion system is the mandate of the MoH and should be strictly clear in terms of roles, responsibilities, resource allocations, well communicated nation-wide and effectively operationalized to guarantee the highest quality and safety levels.

2.6 Rehabilitation services:

The MoH promotes physical and mental rehabilitation services for all the population in need with particular emphasis on the disabled or those who have special health care needs.

Support is provided to enhance prosthetic and supplementary aids industry making the best use of available technology and building capacity for the relevant institutions and personnel.

The MoH will establish linkages, partnerships with centres of excellence inside and outside Iraq to build and sustain capacity in this highly technical area.

2.7 Mental health:

Enhance and promote mental health care services in an integrated approach so that it is incorporated in primary, secondary and tertiary health care services packages. Also important is to promote community participation and support to mental health care. Clinical protocols will be updated so that preventive, diagnostic, curative and rehabilitative mental health care services are enforced.

2.8 Health promotion and environmental safety:

The MoH in partnership with relevant stakeholders will collaborate to enhance environmental safety. This entails effective and robust interventions for containing and minimizing environmental pollution of all kinds possible. This will also ensure access to safe drinking water and effective sanitary services. It is also important to improve industrial health and safety standards all over Iraq. The MoH will also invest in promoting healthy lifestyle as a critical strategy for prevention and control of Non-Communicable Diseases (NCDs).

- Partnership mechanisms and linkages between the Ministry of Health and health-related sectors need to be strengthened;
- The Ministry of Health will develop a stronger health advocacy role and presence for influencing policies and actions of other sectors and stakeholders including nongovernmental organizations (environment, nutrition, human rights, gender, etc.). Communicable diseases;
- MoH will continue to scale up gains made in communicable disease prevention and control in general and minimizing the occurrence of public health threats due to communicable diseases. Non-communicable diseases, healthy lifestyles and mental health;

- Non-communicable disease prevention and control are to be integrated into the agenda of the national development plan. This will facilitate the adoption of integrated policies and programmes by all sectors with a role in the prevention and control of non-communicable diseases;
- A multisectoral approach is to be developed for promoting healthy lifestyles, such as tobacco control and engaging in a healthy diet and physical activity.

2.9 Nutrition:

Balanced food quality, safety and adequate nutritious value and supply, is important and essential for the maintenance of physical and mental health.
It is fundamental for a good nutritional state to enable individuals, and families to lead socially and economically productive lives and contribute towards national economic development.
Vitamin A, protein, iron, folate, iodine and trace elements are among the key nutritious elements that health sector is concerned with.
MoH in collaboration with other sectors shall:

- The Government of Iraq shall ensure political commitment to prevention and reduction of malnutrition in all its forms and support actions aimed at promoting food security to all Iraqis;
- The Government shall promote best nutrition practices and effective care of vulnerable groups including children, pregnant women, IDPs and allocate adequate human and financial resources to ensure implementation;
- MoH shall promote appropriate child feeding practices including optimal breastfeeding and adequate complementation;
- MoH shall develop micronutrient deficiency control guidelines in line with WHO EMRO's nutrition strategy, ICN-2 recommendations and best available practices;
- MoH shall ensure detection and early treatment of nutrition disorders;
- The Government shall ensure the quality and safety of food at all stages of production, handling, processing, distribution, storage and preparation;
- MoH shall strengthen surveillance and Nutrition Information Systems at the community, district, regional and national levels.

3. HEALTH FAINANCING

The mechanisms by which health financial resources are raised, pooled and allocated, and the way services are paid for, all have a major impact on access to health care and, in turn, on efforts to alleviate poverty through attainment of the highest level of health status.

3.1 The Government shall ensure availability of adequate financial resources for a prepaid package of essential health interventions so that the services are made available to all Iraqi population. MoH shall finance national health plans towards universal health coverage. The Government of Iraq shall continue to be the chief financer of health and health care and human resources development;

3.2 MoH shall develop and expand social and health protection, promoting affordable services for every citizen so that population are protected against catastrophic health expenditure. MoH will develop the mechanisms appropriate to thee Iraqi's socio-economic and political context;

3.3 The MOH shall develop a health financing strategy that will guide the financing of the entire health sector. The MOH shall periodically review all its financial sources, collection mechanisms and financial allocations while measuring health outcomes in order to ensure efficiency and cost effectiveness of service delivery;

3.4 The MoH shall put in place mechanisms to strengthen health financing systems at all levels so that all services financing dynamics and transactions including infrastructure, human and material resources are provided in a transparent, efficient and cost-effective manner;

3.5 The MOH shall formulate and periodically review and update resource allocation formulae for equitable and timely disbursement of funds to all governments and health facilities as well as ensuring financial decision making and best practices including regular internal and external financial audits;

3.6 MoH will ensure continued capacity building of the health financing, costing, actuarial skills, social health insurance and health economics functions within its related Departments at central and governorate levels and will institutionalize national health accounts in collaboration with health stakeholders particularly the World Health Organization;

4. HUMAN RESOURCES FOR HEALTH:

Human resources for health (HRH) are the backbone of service delivery in the health sector. Creating an appropriately skilled, highly motivated, client focused health workforce is critical for Iraq to attain its ambition of ensuring an enabling environment, in which all the Iraqi population has the opportunity to reach and maintain the highest attainable level of health through highly skilled, supported and motivated health workforce within well-functioning health systems.

4.1 MoH shall continue to build capacity of Departments of Human Resources for Health at central and sub-national levels and provide them with the essential infrastructure, institutional arrangements, human capital with the essential skills particularly leadership and systems that enable them to effectively plan and manage the health workforce nation-wide;

4.2 The MoH shall strategically forecast and plan the HRH needed at all level, taking into account the multiplicity of professions and skills mix; service delivery facilities and providers (public, private and NGOs); population health needs and their growth; and geographical distribution. The MoH in collaboration with its partners shall develop, resource, implement and monitor health workforce strategic plans effectively;

4.3 The MoH shall work collaboratively with MoHESR to plan, resource and implement the medical/health education programmes that are tailored to local needs and shall ensure equitable production of an adequate and appropriately skilled health workforce to provide health services at all levels of the health care delivery while fulfilling national and international quality and accreditation requirement;

4.4 The MoH in collaboration with the MoHESR shall plan and oversee the type, and quality of training institutions, clinical and non-clinical programmes, registration and re-certification through collaboration with health professional authorities, governing bodies, and other stakeholders;

4.5 The MoH shall develop and review guidelines for admission, academic progress, completion and certification of health training institutions to ensure compliance to the highest attainable training quality standards;

4.6 The MoH in collaboration with its partners shall harmonize the recruitment and deployment criteria of the health workforce to reduce turnover and ensure continuity of care;

4.7 The MoH in collaboration with relevant government sectors shall periodically review the conditions of service (salary, housing, professional advancement, contractual obligations, involvement in decision making, recognition of staff contribution and other incentives) and develop appropriate recruitment and retention strategies both for national and expatriate health workers within the public sector;

4.8 The MoH shall ensure that all data generated in pre- and in-service training, recruitment, deployment and migration of health workers shall be captured, stored in a database, analyzed, and interpreted for decision-making and to inform future national policy direction. g) The MOH shall ensure that the IHSP incorporates the Health Workforce Strategic Plan outlining the right number of staff, with the right skills, is in the right place to deliver the package of services;

4.9 The MoH shall develop and periodically update staff norms/skills-mix by care level based on research including users' views to ensure well informed pre-service training, and efficient recruitment and deployment of the health workforce and to ensure uninterrupted provision of essential health services;

4.10 The Government shall promote the formation of, and strengthen professional associations and unions to ensure well informed involvement in decision making and amicable settling of disputes

5. INFRASTRUCTURE:

Infrastructure refers to physical structures, management offices, etc. The main emphasis is the need to standardize health facility infrastructure by level of care and local need. It is essential to ensure progressive continuity of care through effective referral systems. MoH will ensure that health infrastructures are adequate and equitably distributed to meet the unique needs of health services, taking into account architectural, engineering, safety, and environmental standards as well as local need.

5.1 The MOH shall develop standardized criteria for infrastructure by level of care, type of health services and specifications and periodically review adherence to technical and safety standards taking into account the architectural, engineering, environmental and cost effectiveness;

5.2 The MOH shall review the procedures of construction and procurement, to ensure that it entails appropriate maintenance, provision of adequate training for on asset management including asset registration;

5.3 The MOH shall develop and periodically review transparent criteria for distribution of health facility infrastructure based on availability of resources, population, disease burden/pattern and geographical layout;

5.4 The MOH in collaboration with other sectors shall ensure that all health facility buildings have the provision for the special needs of users with disabilities;

5.5 The MOH shall collaborate with relevant sectors and shall ensure adherence to policies and regulations related to environmental standards.

6. MEDICAL TECHNOLOGY:

The demand for medical equipment and maintenance services has increased dramatically over the past years as a result of advancement in technology and increased complexity and burden of medical conditions. Some equipment is expensive and may be underutilized or of low value for money. Currently equipment is not universally standardized, nor based on the type of service or level of service delivery or disease pattern. Servicing and maintenance standards are also essential to increase the longevity of equipment.

6.1 The MOH shall develop standardized criteria for medical equipment by level of care, type of health services and specifications;

6.2 The MOH shall select, forecast and procure medical equipment based on standardization criteria and health service needs at all health facilities;

6.3 The MOH shall review the procedures of medical equipment procurement, to ensure that it entails appropriate training, maintenance and repair of the equipment by the supplier;

6.4 The MOH shall build capacity of medical equipment users so as to attain maximum possible equipment benefits, life span, cost-effectiveness, quality and safety of care;

6.5 The MOH shall institutionalize regular inventory of medical equipment to ensure effective planned preventive maintenance;

6.6 The MOH shall develop cut-off points for decentralization of procurement and maintenance of some medical equipment in order to reduce inefficiency and interruption of critical health services.

7. PHARMACEUTICALS:

Medicines, vaccines and other medical products are fundamental resources and essential ingredients in the provision of health care services. There is already a comprehensive national medicines commitment for addressing such areas as selection, procurement, storage, etc. Overall, the Government guarantees safety, quality and fair pricing of medicines and health care products available for citizens in need. This National Health Policy will focus on areas that need further emphasis and clarification of critical functions.

7.1 The Government shall assess the feasibility of establishing a national authority for food and drugs safety to guarantee and promote population access to safe food and medicines;

7.2 The Government shall undertake a comprehensive review of all legislations, regulatory mechanisms and guidelines related to food and medicines and maintain them relevant to the current needs and aspirations;\

7.3 The MOH shall review the Essential Medicines List (EML) to match with changes in the EHSP, advancement in medical technology;

7.4 The MOH shall ensure the selection, forecasting and quantification of medicines and vaccines in collaboration with needs of the health services;

7.5 The MOH shall develop and periodically review a National Medicine Formulary and Standard Treatment Guidelines, and impart training to encourage rational use by the health service providers and their clients at all levels in the health sector;

7.6 The MOH shall develop a web-based tracking system for the drug/medicine management system;

7.7 The Government shall explore possibilities, through Local Preference Scheme, for collaboration with other countries to promote, where feasible, local production of medicines, vaccines and other medical products;

7.8 The Government, through re-engineering the existing Pharmaceuticals Regulatory Unit, shall setup an autonomous independent body as Medicine Regulatory Authority to institutionalize pharmaco-vigilance so as to ensure universal access of quality, efficacious and safe medicines, vaccines, reagents and other medical products through regulating manufacture, import, export, distribution, sale and dispensing of medicines and the sale of related substances including cosmetics.

8. HEALTH INFORMATION:

The MoH shall develop and strengthen this vital domain. Health information concerns availability, completeness and timeliness of data that is used for evidence–based policy, planning and implementation. Data collection, collation, analysis and interpretation require norms, standards and guidelines for it to be efficiently

utilized. For effective monitoring and evaluation of health services and programmes a viable information system is essential.

8.1 The MoH is committed to modernize health information management through a rigorous review of the institutional arrangement that should harmonies and link all the key functions and teams including data management units with the aim of reducing duplication and wastage and maximizing effectiveness and efficiency;

8.2 The MoH shall build capacity of information planning, systems thinking, data collection, processing, analysis and presentation in user friendly databases and reports for effective utilization;

8.3 The MoH shall clarify the roles and functions of different stakeholders in data management in order to minimize duplication and maximize optimal utilization of resources;

8.4 The MoH shall strategically and effectively ensure timely, wide and need-based dissemination of data to all stakeholders and develop regulations regarding mandatory reporting of defined information requirements;

8.5 The MoH shall endeavor to keep pace with the rapid technological developments and modernize health information system as the foundation of knowledge, evidence and national health archive.

9. RESEARCH:

9.1 The Government shall strengthen public health institutional capacity to carry out research on health and health care areas of public interest. The public health leadership at national level is charged with the responsibility of undertaking, coordinating and disseminating health and health care research information. The Iraqi institutions of higher medical education have among other objectives, responsibilities of training various health cadres to conduct research. In addition, the MoH has established a Health Systems Research agenda and action plans to coordinate all health research in the country in accordance with national research priorities;

9.2 The MoH will continue to conduct research in priority areas, develop evidence to enhance control of the non-communicable diseases and improve the management of the increasing workload of patients with these conditions. This will include increasingly important areas of injuries and trauma, mental health and substance abuse. The Essential Package of Health Services

includes a strategy to manage non-communicable diseases. As the population pyramid changes with more citizens living longer than before special measures will be elaborated to care for the health of the elderly;

9.3 The MoH will continue to encourage health research covering both Public and Private Sector services which assist the Government and the Community at large to make informed choices regarding health services;

9.4 The MoH shall:

- Formulate national a strategy for health research policies in all countries;
- Build capacity to generate quality research that addresses priority health needs in accordance with the national health priorities and the strategic plan;
- Enhance good governance and establish ethical review committees for health research;
- Promote dissemination and utilization of health research results;
- Enhance communication, collaboration and networking for research activities within Iraq and between Iraq and other countries; and
- Mobilize more resources for health research.

10. EMERGENCY PREPAREDNESS

10.1 The Government is accountable and shall develop a comprehensive emergency preparedness system within a multi-sectoral approach. The Ministry of Health will be appropriately accountable for the health and medical care plan bearing in mind the proactive early warning readiness putting in place lessons learned and best practices;

10.2 A dedicated emergency/disasters information module should be put in place for capturing, storing, analyzing, mapping risks and the vulnerable population including demographic, cultural and socio-economic indicators;

10.3 MoH shall modernize the ambulance services and the fleet of equipped vehicles for effective and responsive lifesaving interventions;

10.4 Upgrade the ambulance and emergency related communication system so that it connects the components of the systems and maximizes its response and impact in saving lives;

10.5 Invest in community participation and volunteering support for emergency preparedness with emphasis on building human capacity and sustainable integrated systems;

11. FORENSIC MEDICINE:

The MoH shall strengthen and effectively regulate the operational framework of the forensic medicine sector. Build institutional and human resources capacity in the technical components of this specialized multi-sectoral discipline in line with the new law number 37 for the year 2013.

12. PARTNERSHIPS & COMMUNITY PARTICIPATION

12.1 Effective collaboration and partnerships are essential for maximizing the collective delivery of health to all the population. The Ministry of Health is the custodian and constitutional leading public authority to drive the health agenda within a multi-sectoral approach. As such the Ministry of Health shall enhance effective partnerships with all relevant public, non-Governmental, national and international institutions to synergize for health and health care delivery in Iraq;

12.2 The MoH shall develop and scale up voluntary work and community participation in both urban and rural areas. Community participation offers various advantages in health care and development among which are helping communities to develop problem solving skills, making them to take responsibility for their health and welfare, ensuring that the need and problems of the community are adequately addressed, ensuring that the strategies and methods used are culturally and socially appropriate or acceptable and finally it enhances sustainability;

12.3 It is the responsibility of the government at various levels to help the community to organize themselves and be involved in their health care and development. There should be well established or institutionalized framework of making sure that people are consulted, persuaded, and given responsibility in decision making under technical and professional guidance of health care professionals.

13. QUALITY OF CARE:

Quality of care is a vital cross cutting topic that has dramatically evolved in health care systems particularly over the last 2 decades. The primary aims of improving quality standards and safety in health care systems in Iraq is to protect the population from harm and to improve the quality of health service provision. MoH is committed to ensure provision of quality services in both public and private

facilities through relevant systems in place to ensure the essential standards of safety and quality are met, and a quality improvement mechanism that allows health services to realize aspirational or national health developmental goals.

13.1 MoH shall develop a national guideline for quality assurance and continuous quality improvement of health care services delivery;

13.2 MoH shall mobilize adequate resources including human, financial and material, and systems dedicated to quality systems and safe medical practice;

13.3 MoH shall institutionalize accreditation systems as it is recognized as an important driver for safety and quality improvement;

13.4 The Government shall attract additional investments in infrastructure, human resource development, and management systems, and resources to fund recurrent expenditures;

13.5 The MoH shall institutionalize quality assurance and ensure availability of skilled health professionals dedicated to improving quality of health care services in a systemic and sustainable approach;

13.6 The MoH shall also strengthen continuous monitoring and assurance of quality, efficacy and safety of services and medicines, reducing underlying inefficiencies and improving operations management should reflect on improved quality of care.

14. SUPPORTING PRIVATE SECTOR:

The Government will adopt diversified complementary health care financing options, which are sustainable involving **private sector** investments in health and health care services, medical and health sciences education and training in close coordination and under regulatory frameworks of the Ministry of \Health and Ministry of Higher Education and Scientific Research. The Government will also encourage and provide operational frameworks for **Public-Private Partnership (PPP)**. PPP is a transparent cooperation and collaboration mechanism between Public and Private Sectors with mutual understanding for a common goal with clearly defined roles. The MoH anticipates that a mutually beneficial cooperation of public and private sectors shall entail jointly mobilizing and sharing resources for development and efficient delivery of well-regulated health services while ensuring accountability to the public they serve. The MoH shall continue to communicate, coordinate and collaborate with the private sector providers in the Health Sector. Health services provided by private sector shall abide to the standards and guidelines set by MoH.

Proposed Strategic Directions for Iraq's National Health Policy

Accelerate progress towards Universal Health Coverage as the overarching objective of National Health Policy of Iraq

Develop a clear roadmap that progressively ensures extending health coverage, access to quality care and protection from financial hardship, to all population in Iraq irrespective of their socioeconomic, geopolitical or ethnic status

1. **Ensure financial risk protection for all population groups – including, the poor, vulnerable and those working in the informal sector:**

   1.1 Increase current level of funding for the health sector and diversify the sources of funds by considering alternative financing sources, including: sin taxes, taxes on unhealthy food and others;

   1.2 Enact necessary legislations to ensure the implementation of the health financing reform, including a UHC law, and advocate for its endorsement by all stakeholders;

   1.3 Ensure covering all population groups through different prepayment arrangements that include general government revenue and social health insurance;

   1.4 Implement strategic purchasing approaches and introduce innovative provider payment methods to ensure the delivery of a comprehensive package of health services, which is of good quality and increases efficiency;

   1.5 Continue generating evidence (thorough health accounting and health financing policy analysis tools; e.g., using OASIS) to facilitate monitoring of progress and evaluation of new policies;

2. **Expand people-centred and integrated health care services, based on the principles of primary health care, and responsive to the health needs of the Iraqi population**

   2.1 Adopt family practice as the principal approach for the expansion of health services that are comprehensive, of high quality, and ensure continuum of care;

   2.2 Implement a comprehensive package of health services that includes promotive, preventive, curative and rehabilitative services and responds to the:

   - increasing burden of non-communicable diseases and their associated risk factors;
   - continuing challenge of maternal and child health
   - emerging and remerging communicable diseases [such as tuberculosis] including the capacity to respond to outbreaks;

- high burden of mental illnesses in all population groups;

2.3 Ensure quality and safety of care at all levels through establishment of a quality assurance programme complemented by an independent health care accreditation programme;

2.4 Empower and engage populations by increasing health literacy, involving patients in clinical decisions and promoting self-management and care;

3 Enhance production of a motivated health workforce, with the relevant skill mix, equitably deployed and effectively managed:

3.1 Strengthen the Human Resources Management function of the MoH for effective leadership and governance of the HRH at all levels;

3.2 Develop HRH plans including projections for future needs and monitor and evaluate implementation of plans;

3.3 Build a human resources information system for decision support and effective HRH management;

3.4 Establish strategic partnership between MoH and Ministry of Higher Education for the optimal production of the various cadres of health professionals, and the accreditation of educational programs and institutions;

3.5 Devise incentive systems for a range of HRH issues that improve staff retention, regulate dual practice, minimize out-migration and encourage diaspora to return.

4 Strengthen national regulatory capacity to ensure access to and rational use of essential medicines and health technologies:

4.1 Building capacity of National Regulatory Authority to oversee all aspects of medicines and technologies ranging from registration, assessment, quality assurance, rational use and others;

4.2 Establish a Good Governance for Medicines (GGM) programme that promotes increased accountability and transparency across the pharmaceutical and technology sector;

4.3 Improve the use of medicines by reinforcing generic substitution policies and/or other measures such as information on prescribing and use patterns and standard treatment guidelines;

4.4 Build capacity in health technology assessment, management and regulation to promote rational use and optimize costs;

4.5 Strengthening the national pharmaco-vigilance programme, including post-marketing surveillance, to monitor the adverse events related to the use of medicines, vaccines, and biological.

5 Strengthen capacity to effectively undertake essential public health functions and respond to public health emergencies:

5.1 Develop an integrated disease (and risk-factor) surveillance system and use of surveillance data for planning, forecasting, health promotion, communication and knowledge-brokering to ensure evidence-informed policies;

5.2 Promote healthy behaviour through Health in All Policies and implement evidence-informed interventions in the areas of road safety, occupational health, and NCD risk factors namely: food, sugar, salt, nutrition and tobacco across the population;

5.3 Strengthen human resource capacity in public health at all levels, with specific attention to developing skills in key areas related to health promotion and diseases prevention, surveillance, determinants of health, health information and research;

5.4 Strengthen core capacities required under the International Health Regulations (2005) for improving public health preparedness for response to acute emerging health security threats and other natural, man-made and technological hazards.

6 Strengthen health information and research capacity for better and informed decisions:

6.1 Improve civil registration and vital statistics as well as cause of death reporting for monitoring health status and outcomes;

6.2 Strengthen routine facility based information, including data quality assessment and reporting mechanism;

6.3 Build integrated systems and progressively move towards e-health through the architecture of information communication technology and web-based platform;

6.4 Report annually on the core list of indicators [proposed by WHO] and strengthen capacity to generate data necessary for accurate and complete reporting;

6.5 Build capacity at the institutional level in Iraq to undertake health policy and systems research to respond to the concerns of policymakers as well as to provide evidence for informed decisions.

7 Decentralise authority and responsibility to the peripheral level to improve health system performance:

7.1 Decentralise authority and responsibility to health directorates and/or local governments in the governorates of Iraq and map the functions that will be decentralised to the peripheral levels;

7.2 Build the capacity of regional managers and provide a supportive environment in order to effectively exercise the newly acquired functions, at the same time reorient the managers at the central level to better comprehend their new roles and responsibilities;

7.3 Develop targets and indicators to monitor the outcome of decentralization in terms of improving health system performance and take timely corrective action.

8 Strengthen governance and promote a multi-sectoral approach while ensuring the stewardship function of the MOH:

8.1 Strengthen institutional capacity of the MoH at central and sub-central level to translate the updated national health policy into viable interventions and activities;

8.2 Establish a multi-sectoral mechanism to promote health in all polices in order to address priority public health problems that requires non-health stakeholders and to tackle the growing inequities through action on social determinants of health;

8.3 Strengthen the regulatory function of the MoH by updating laws and regulations related to public health and health services and ensure their enforcement;

8.4 Align and coordinate external assistance to ensure that public sector funding and development partners' assistance are aligned and harmonized in accordance with one national plan;

8.5 Increase accountability of policymakers, managers and providers in decision making and ensure transparency through making information accessible to citizens and stakeholders.

9 Engage with the non-state actors through partnerships as well as regulatory measures:

9.1 Encourage involvement of the private sector in multi-sectoral forums such as the high health council;

9.2 Promote partnership with the private sector, for- and not for-profit, especially where it has comparative advantage over the public sector by outsourcing specific tasks;

9.3 Introduce measures to regulate the private sector at entry, as well as, by regulating the quality, volume, price and distribution of services being offered.

10 Develop resilient health system that responds to the acute as well as longstanding emergency situations:

10.1 Adopt a holistic approach to national health security based on an all-hazard, whole health and multisectoral approach;

10.2 Develop, test and adopt (through legislation) comprehensive emergency preparedness and response plans;

10.3 Identify and implement mitigation measures to assure continuity of health care during periods of acute emergency;

10.4 Adapt the health system to be able to provide a functioning platform for medical surge in the event of an acute emergency;

10.5 Develop the capacity of health care providers to effectively participate in the overall community emergency response;

10.6 Facilitate support from public safety agencies and community response entities to ensure effective health care system response to major events.

ARYA TEB FIROUZ

WHO, WORLD BANK & German Government reports on Iraq

Iraq health profile 2015

Health profile 2015

Iraq

World Health Organization
Regional Office for the Eastern Mediterranean

WHO Library Cataloguing in Publication Data

World Health Organization. Regional Office for the Eastern Mediterranean
Iraq health profile 2015 / World Health Organization. Regional Office for the Eastern Mediterranean
p.
WHO-EM/HST/233/E
1. Health Status - Iraq 2. Delivery of Health Care - organization & administration 3. Communicable Disease Control 4. Chronic Disease 5. Health Promotion 6. Civil Defense - organization & administration 7. Public Health Surveillance I. Title II. Regional Office for the Eastern Mediterranean
(NLM Classification: WA 300)

Contents

Foreword

The Government of Iraq and WHO are working together to effectively improve the public health situation in the country with special emphasis on the five key regional priorities:

- health security and prevention and control of communicable diseases;
- noncommunicable diseases, mental health, violence and injuries, and nutrition;
- promoting health through the life-course;
- health systems strengthening; and
- preparedness, surveillance and response.

The strategic directions to address these priorities are broadly in line with WHO's 12th General Programme of Work, the Programme Budget 2016–2017 endorsed in May 2015 by the 68th World Health Assembly and the five strategic areas of work endorsed by the WHO Regional Committee for the Eastern Mediterranean in 2012.

Reliable and timely health information is essential for policy development, proper health management, evidence-based decision-making, rational resource allocation and monitoring and evaluation of the public health situation. While the demand for health information is increasing in terms of quantity, quality and levels of disaggregation, the response to these needs has been hampered because of fragmentation and major gaps and weaknesses in national health information systems.

The strengthening of health information systems is a priority for WHO in the Region. Intensive work with Member States since 2012 has resulted in a clear framework for health information systems and 68 core indicators that focus on three main components: 1) monitoring health determinants and risks; 2) assessing health status, including morbidity and cause-specific mortality; and 3) assessing health system response. In order to successfully achieve this important goal, concerted and aligned action at national and international level are required to address the gaps and challenges in the health information systems of all countries. This will ensure the generation of more effective evidence to monitor improvement in the health situation, nationally, regionally and globally.

This comprehensive health profile is intended to serve as a tool to monitor progress in the health of the population. WHO's collaboration with its Member States will strengthen the national health information systems, and enable the generation of timely and reliable evidence to assess the health situation and trends, and the health system response. Most important, it will provide the information needed by health policy and decision-makers.

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WHO Regional Director for the
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H.E. Dr Adeelah Hammood Hussein

Minister of Health
Iraq

Introduction

The population of Iraq has increased by 51.0% in the past 25 years, reaching 35.8 million in 2015. It is estimated that 31.0% of the population live in rural settings (2014), 14.1% is between the ages of 15 and 24 years (2015) and life expectancy at birth is 73.1 years (2014). The literacy rate (2012) is 82.2% for youth (aged 15 to 24 years), 79.0% for total adults and 72.2% for adult females.

The burden of disease (2012) attributable to communicable diseases is 19.1%, noncommunicable diseases 61.6% and injuries 19.2%. The share of out-of-pocket expenditure is 41.0% (2013) and the health workforce density (2014) is 8.0 physicians per 10 000 population and 24.0 nurses per 10 000 population.

The public health issues facing the country are presented in the following sections: communicable diseases, noncommunicable diseases, promoting health across the life course, health systems strengthening, and preparedness, surveillance and response. Each section focuses on the current situation, opportunities and challenges faced, and the way forward. In addition, several trends in population dynamics and in selected health indicators are analysed to provide policy-makers with evidence and forecasts for planning.

Communicable diseases

HIV

Tuberculosis

Malaria

Neglected tropical diseases

Vaccine-preventable diseases

Communicable diseases

- Diagnosis and treatment for HIV/AIDS is free of charge.
- A national tuberculosis strategy has been developed and is being implemented with a strong monitoring and evaluation component.
- Malaria case reporting is mandatory in the public and private sectors.
- The incidence of schistosomiasis is decreasing thanks to the national control programme, with no cases reported since 2011.
- *Haemophilus influenzae* type b and rotavirus vaccines were introduced in 2012.

HIV

The HIV prevalence is low. As of December 2014, less than 100 people living with HIV were reported, most of them in Baghdad. The first HIV cases were reported in 1986 among haemophilia patients who had received contaminated blood products. From 1986 to 2014, a slight increase occurred in officially reported HIV cases, half of which were nationals and half foreigners. The large majority were males, with more than half between 15 and 29 years of age. Of reported cases, 57% were infected by blood transfusion and blood products, though sexual transmission has become the main reported mode of transmission since 2003. There are no reported cases due to injecting drugs, sex work or men having sex with men. The crisis of internally displaced people poses an increased risk of HIV/AIDS and sexually transmitted disease transmission.

There is no national strategic plan on HIV and AIDS in place, but a draft plan has been developed and is awaiting final endorsement by the authorities. The current annual plan of the National AIDS Centre includes the following areas of focus: surveillance; prevention of transmission; medical treatment and social care; training of health service staff; health education; research; monitoring and evaluation of the programme; and coordination and partnerships. Diagnosis and treatment are free of charge. Measures to prevent mother-to-child transmission and ensure safe blood transfusion are part of the strategy.

The transmission of hepatitis type A and E is facilitated by poor infrastructure, poor quality of potable water, unsafe food and poor hygiene. A majority of health workers do not follow medical guidelines in dealing with blood and its derivatives, which has led to the spread of hepatitis B and C in communities. The country is a low endemicity country for hepatitis B and C. The usual mode of transmission is blood transfusions or repeated exposure to blood and its derivatives (post-transfusion non-A non-B hepatitis). The priorities of the Ministry of Health are to establish an efficient hepatitis surveillance system, build the capacity of

health personnel to manage patients, and provide medicines and diagnostic services at governorate level.

Tuberculosis

The tuberculosis-related mortality rate is estimated at 2.3 per 100 000 population *(1)*. A total of 8883 detected tuberculosis cases were reported in 2013, of which 2738 were new sputum smear positive cases *(1)*. The treatment success rate of new and relapsed cases registered in 2012 was 91.0% *(1)*. Drug-resistant tuberculosis is estimated at 3.7% among new cases and 20.0% among previously treated cases *(1)*.

Tuberculosis is a public health priority for the Ministry of Health. A national tuberculosis strategy has been developed and is being implemented with a strong monitoring and evaluation component. The available evidence suggests that the incidence is falling in males, while notifications are increasing in females. However, there is a significant gap between incidence and notifications indicating that cases are not being detected, or are being detected but not notified to the national tuberculosis programme. HIV associated with tuberculosis is not a major problem so far, but multidrug-resistant tuberculosis is. The national tuberculosis programme and Ministry of Health are working to improve case detection through application of more sensitive, molecular diagnostic tests and expansion of directly observed treatment, short-course strategy to the districts so far unreached. There are plans to treat 54 000 patients in 2015–2019.

A focus area is establishing ex-tuberculosis patient associations to assist in actively detecting presumed cases and in encouraging patients to complete treatment. Contact tracing needs to be expanded and the role of the private sector enhanced. A priority for the national tuberculosis programme is the management of tuberculosis in the vulnerable groups, namely internally displaced persons and Syrian refugees.

Malaria

Iraq is considered a low burden and low risk country for malaria. Total confirmed malaria cases decreased by 97.7% from 347 in 2003 to 8 in 2012, of which 100% were imported, 75.0% from Pakistan and 25.0% from India *(2)*. In 2013, of confirmed cases, 100% were *Plasmodium vivax (2)*.

The country has been free from endemic malaria cases for more than six years. Epidemiological surveillance is being strengthened to detect introduced malaria cases, and is on track to eliminate malaria. There is risk of re-introduction of malaria from visitors including those coming for religious tourism and employment, as well as mass population movement, either by refugees or internally displaced populations. Diagnosis and treatment of malaria is free of charge and malaria case reporting is mandatory in the public and private

sectors. The main challenges for prevention of malaria reintroduction are population movements, the difficulty or impossibility of proper supervision and monitoring due to security concerns, and the loss of expertise.

The main priorities for keeping the country malaria-free include: strengthening disease surveillance and vigilance; use of appropriate vector control interventions when needed; updating national antimalarial drug policy to include artesunate injection for treatment of severe malaria cases; provision of free diagnostics and antimalarial medicines, including rapid diagnostic tests for areas where malaria microscopy of assured quality is not available; monitoring and evaluation; and human resource development, particularly training or refresher courses for physicians and laboratory technicians on malaria treatment and diagnosis. There is also a need to procure medicines for the management of detected malaria cases.

Neglected tropical diseases

The country was certified free of dracunculiasis in 1998, but is still endemic for cutaneous and visceral leishmaniasis, and is under surveillance for blinding trachoma *(3)*. In 2012, there were 2486 reported cases of cutaneous leishmaniasis and 1045 reported cases of visceral leishmaniasis, while 3 cases were reported of leprosy in 2013 *(3)*.

Leishmaniasis (visceral and cutaneous), rabies and schistosomiasis are among the neglected tropical diseases found in the country. Population movements, overcrowding, lack of safe water and hygiene, and poor access to health services are common factors that can cause the spread of these diseases. Free diagnosis and treatment is available for all tropical diseases in public sector. Historically, leishmaniasis cases have been located in the greater Baghdad area, but the situation has now shifted to the poorer suburbs of Mosul, as well as to rural areas, mostly in the northern and western governorates. There is seasonal variation, and both internal migration and movements of refugees may result in epidemic visceral leishmaniasis. The incidence of schistosomiasis is decreasing due to the national control programme, with no cases reported since 2011. The last cases were detected in Balad Ruz, Diyala province. Furthermore and in the framework of the country's mechanisms to prevent communicable diseases, work plans are in place to prevent and control all neglected tropical diseases in order to monitor these diseases. As a response to spraying campaigns, no evidence of Bulinus truncatus has been reported since 2010; at present, the country is in the elimination phase, with the aim of WHO certification. A soil-transmitted helminth control programme is ongoing and there is availability of anthelmintic drugs.

There is a need to maintain the disease-free status for dracunculiasis and implement a plan for the care and control of leishmaniasis.

Vaccine-preventable diseases

Immunization coverage decreased among one year olds between 1990 and 2013 for BCG from 96.0% to 90.0%, DTP3 from 83.0% to 68.0%, measles from 75.0% to 63.0% and polio from 83.0% to 70.0% *(4)*. Neonatal tetanus coverage has improved during the same period from 70.0% to 72.0% *(4)*. In 2013, hepatitis B (HepB3) vaccine coverage among one year olds was 66.0% *(4)*.

The country's immunization strategy is to administer routine vaccination, conduct national immunization days and maintain surveillance. *Haemophilus influenzae* type b and rotavirus vaccines were introduced in 2012. Other achievements have included validation of maternal and neonatal tetanus elimination by WHO and the United Nations Children's Fund, expansion of vaccine storage capacity and the development of a draft comprehensive multi-year plan for the Expanded Programme on Immunization (EPI). An EPI coverage survey will be conducted in 2015–2016. Due to the serious measles situation, the Ministry of Health is implementing a measles follow-up campaign, and two nationwide polio eradication campaigns will be undertaken in the remaining part of 2015 and two in the first half of 2016. In addition, the country is currently introducing injectable polio vaccine as part of the pentavalent vaccine and is switching from trivalent oral polio vaccine (tOPV) to bivalent oral polio vaccine (bOPV). Action has been taken to scale up national/subnational campaigns and mop-ups against poliomyelitis, measles, rubella and seasonal influenza. There have been more than 14 campaigns from 2014 to October 2015. Now, the country is using vitamin A in conjunction with the measles vaccine and oral cholera vaccine (Shanchol) to vaccinate vulnerable groups amongst displaced persons in camps and gatherings.

The main priorities are to improve coverage by all vaccines to at least 90% by 2015, stop the ongoing measles outbreaks and other vaccine-preventable diseases among internally displaced people, introduce pneumococcal conjugate vaccine and inactivated polio vaccine by November 2015, and replace trivalent oral polio vaccine with bivalent oral polio vaccine in April 2016. A comprehensive communications strategy for secure and insecure areas needs to be developed for vaccinating all children.

Noncommunicable diseases

Noncommunicable diseases

Mental health and substance abuse

Violence and injury

Disabilities and rehabilitation

Nutrition

Noncommunicable diseases

- Noncommunicable diseases management and care has been introduced as an integral part of primary health care services.
- The strategy for mental health is to support and promote preventive, diagnostic, management and rehabilitation services at primary, secondary and tertiary level integrated within community mental health services.
- Rehabilitation centres, prosthetics and orthotics workshops, rehabilitation hospitals and physiotherapy units in hospitals, and disability registration projects are in place.
- A nutrition strategy (2012–2022), adopted by the government, promotes nutrition education and research related to nutrition and food safety.

Noncommunicable diseases

The burden of noncommunicable diseases causes 61.6% of all deaths. Cardiovascular diseases account for 33.2%, cancers 10.3%, respiratory diseases 2.8% and diabetes mellitus 3.5% of all deaths *(5).* As a result, 24% of adults aged 30–70 years are expected to die from the four main noncommunicable diseases *(6).* Around 7.4% of adolescents (13–15 years of age, 7.4% boys, 6.8% girls) have ever smoked cigarettes, while 32.3% report being affected by passive smoking *(7),* and per capita consumption of alcohol is 0.5 litres of pure alcohol *(8).* Prevalence of insufficient physical activity in adolescents is 85.1% (11–17 years of age, 80.3% boys, 91.4% girls) and in adults over 18 years of age is 46.3% (49.6% males and 43.1% females) *(9).* Raised blood pressure, in adults above 18, affects 24.4% of the population (25.5% males, 23.3% females), while obesity affects 27.0% of the population (20.6% males, 33.4% females) *(6).* Only nine of 11 essential medicines for treatment of noncommunicable diseases are available in the public health sector.[1]

A national strategy has been developed for prevention and control of noncommunicable diseases that involves relevant ministries and other partners, and noncommunicable diseases prevention and control plans are multidisciplinary with multilevel implementation. Noncommunicable diseases management and care has been introduced as an integral part of primary health care services in many areas including screening and early detection for hypertension, diabetes, selected cancers, obesity and preventable causes of blindness, and provision of primary care for the major noncommunicable diseases based on national guidelines and standards. Noncommunicable diseases control is also integrated into programmes such as school health, maternal, child and reproductive health, and nutrition.

[1] Regional Office for the Eastern Mediterranean, unpublished data, 2013.

Secondary and tertiary care services are provided through more than 200 general and teaching hospitals countrywide, in addition to specialized centres and clinics including diabetes and endocrine centres and clinics, cardiovascular surgical clinics at major hospitals, ophthalmology centres, radiotherapy centres, breast cancer specialized centres and clinics, and a number of centres and clinics in the specialties of gastrointestinal and hepatic diseases, renal transplantation, dialysis, neurosurgery, toxicology, clinical haematology, hereditary blood disorders and allergy. Basic technologies and essential medicines generally available in the public and private health sectors for most major noncommunicable diseases, with public clinics acting as a source of essential drugs for chronic diseases and a system in place for registration and support to patients with noncommunicable diseases with monthly medications upon presentation of cards. Advanced treatment of cancers remain a challenge, as does the increasing burden posed by mass displacement of populations due to the prevailing political instability and conflict. The country enacted a smoking control law (no. 19) in 2012. Indicators were established for a series of measures to prevent and control noncommunicable diseases. These indicators are monitored in effective collaboration with other ministries and relevant stakeholders. A STEPwise approach to surveillance (STEPS) survey of risk factors was conducted in November 2015.

Mental health and substance abuse

Neuropsychiatric disorders are estimated to contribute 6.1% of the burden of disease *(10)* and the suicide rate is 1.7 per 100 000 population per year *(11)*. Estimated prevalence for substance use disorders among adult (15 years and over) males is 0.7% and females 0.2% *(12)*.

The national strategy for mental health is to support and promote preventive, diagnostic, management and rehabilitation services at primary, secondary and tertiary level integrated within community mental health services. There is a higher committee of narcotics with an ambitious plan of reforming the centres for management of people who use drugs. The committee is launching a substance-abuse survey to evaluate the extent of the problem as a first step towards developing a comprehensive action plan in line with the new legislation.

Priorities in the national mental health council's national strategy for mental health and action plan for the next five years include: integrating mental health into primary health care services; moving from an institution-based model of mental health care to an integrated community-based care model; developing specialty services for children, adults and forensic patients; establishing a psychological services programme for trauma victims; developing substance abuse treatment programmes; defining a health system framework for rebuilding mental health infrastructure, human resources, community education and research; protecting human rights and quality control of services; improving the registration and recording system; and updating mental health legislation to be integrated into primary health care.

Violence and injury

The percentage of deaths caused by injuries in 2012 was 19.2%; of this, unintentional injuries accounted for 59.7% (of which 51.5% were due to road traffic injuries and 3.6% as a result of fire, heat and hot substances), while intentional injuries accounted for 40.3% (77.1% due to collective violence and legal intervention and 20.0% interpersonal violence) *(5)*. In 2010, the estimated road traffic fatality rate was 31.5 per 100 000 population *(13)*. For post-injury trauma care, there is no universal emergency access telephone number and 11%–49% of the seriously injured are transferred by ambulance *(13)*.

There is a vital registration system and injury surveillance system, but gaps exist between information that is reported and what is estimated. Laws covering key risk factors exist but need to be strengthened. There is specialized national emergency care training for both doctors and nurses. Challenges include the unstable security situation, the lack of a specific and clear injury prevention and control programme structure in the Ministry of Health, and the high turnover of designated focal persons.

There is a need to scale up and strengthen the injury surveillance and vital registration systems. An in-depth assessment of the existing trauma care system is needed in order to identify and address gaps to improving services. The health sector response to victims of violence also needs to be strengthened through clear protocols and an action plan that are socially and culturally acceptable.

Disabilities and rehabilitation

The disability prevalence is 2.8%, and is higher among males (3.4%) compared to females (2.3%) *(14)*. Age-specific disability prevalence is highest in the above 65 age group (11.3%) and lowest among those aged 0–9 years (1.3%) *(14)*. Types of disability include: physical and locomotor (44.9%), blindness (7.3%), mental (14.6%), deafness (3.1%) and muteness/speech (8.0%) *(14)*. Multiple disabilities constitute 6.0% of all disabilities *(14)*.

The UN Convention on the Rights of Persons with Disabilities was ratified in 2013 and the overarching disability legislation is the Law on the Welfare of Persons with Disabilities and Special Needs (2013). The need for rehabilitation services has increased over the past two decades due to continuous armed conflict, ongoing violence and the breakdown of community support systems. The disability and rehabilitation programme of the Ministry of Health aims to provide quality rehabilitation services. Its objectives are to: strengthen and reconstruct existing rehabilitation centres; build national capacity and adopt evidence-based national guidelines; and develop the national registration system for persons with disabilities. Rehabilitation centres, prosthetics and orthotics workshops, rehabilitation hospitals and physiotherapy units in hospitals, and disability registration projects are all in place. Challenges include an inadequate number of rehabilitation medicine specialists

despite the existence of a two-year postgraduate diploma in the country. Recently, efforts have been made to introduce primary ear and hearing care at primary health care centres.

Future priorities include the construction or rehabilitation of hospitals and centres, and the introduction of rehabilitation services in all general hospitals. Existing plans for health-related disability and rehabilitation action within the broader multisectoral context could be further strengthened through the adoption of the WHO global disability action plan 2014–2021. An integrated national action plan on universal access to ear care needs to be developed and the national coordinator for the prevention of hearing impairment and deafness is working towards this with the Ministry of Health.

Nutrition

The estimated prevalence of various conditions due to malnutrition in children under 5 years of age is summarized in the following indicators: 8.5% underweight, 7.4% wasting, 3.6% severe wasting, 22.6% stunting and 11.8% overweight *(15)*. Initiation of breastfeeding within one hour after birth is 42.8%, while 19.6% of children under 6 months are exclusively breastfed; low birth weight is 13.4% *(16)*.

Nutrition programmes are carried out by the Ministry of Health and the Nutrition Research Institute. The implementation of the national nutrition strategy 2012–2022 aims to promote nutrition education and research on nutrition and food safety. The strategic approach to addressing nutrition-related challenges includes: prevention and control of anaemia through fero-folic supplementation for pregnant women and lactating mothers; wheat flour fortification and nutrition education; prevention of vitamin A deficiency through vitamin A supplementation for children under 5 and lactating mothers, coupled with nutrition education; iodine deficiency disorders prevention through salt iodization with legislation to ensure all salts in the market are iodized together with nutrition education; management of malnutrition and its complications through nutrition education; a public distribution system of a number of food items; management of severely malnourished children at nutrition rehabilitation centres; a diet, physical activity and health programme to control overweight and obesity; and diet therapy for inpatients and outpatients with conditions such as diabetes and hypertension. In order to reduce fat intake, action has been taken by the Ministry of Trade to remove palm oil and ghee or shortening from the food subsidy system. Other steps include the establishment of a task force and action plan to initiate salt intake reduction using bread as the first entry point.

Promoting health across the life course

Reproductive, maternal, newborn, child and adolescent health

Ageing and health

Gender, equity and human rights mainstreaming

Social determinants of health

Health and the environment

Promoting health across the life course

- Maternal and child health services are available as a comprehensive package of services at different levels.
- A national action plan has been incorporated into the noncommunicable diseases prevention and control strategy to improve health support for the elderly.
- The recently developed 10 year health policy enshrines a human rights-based approach to health and gender equality.
- The government has endorsed the WHO regional strategy on health and environment and framework for action 2014–2019.

Reproductive, maternal, newborn, child and adolescent health

The maternal mortality ratio is 25 per 100 000 live births in 2014 and the under-5 mortality rate is 27 deaths per 1000 live births in 2014*(17)*.[2] The leading direct causes of maternal mortality are haemorrhage, thromboembolism, pre-eclampsia/eclampsia, maternal sepsis and obstructed labour. The leading causes of under-5 mortality are acute respiratory infection (16.0%), prematurity (20.0%), intrapartum-related complications (15.0%) and congenital anomalies (13.0%) *(20)*. The proportion of women receiving antenatal care coverage (at least one visit) is 77.7% and (at least four visits) 49.6% *(16)*. Unmet need for family planning is 8.0% and contraceptive prevalence rate is 53.0% *(19)*.

A comprehensive package of maternal and child health services are available at different levels of the health system. An increasing number of primary health care centres provide family planning, antenatal care and postnatal care services. The provision of quality care for mother and newborn infants around time of delivery, including the first 24 hours, is available in both central and district hospitals, while labour rooms exist at the primary health care level providing care to non-complicated deliveries in remote and peripheral areas. Higher level care for both women and children under 5 years is provided by general and maternal and child hospitals. There are 203 hospitals for maternity and child care, including 16 specialized paediatric hospitals, 13 specialized maternity hospitals, and 19 specialized maternal and child hospitals. Tertiary centres with intensive care units for maternity care are also available in governorates. Essential drugs for maternal and child health services,

[2] UN estimates for the maternal mortality ratio declined between 1990 and 2015 from 107 to 50 maternal deaths per 100 000 live births *(18)* and the under-5 mortality rate decreased from 54 to 32 deaths per 1000 live births *(19)*.

and basic equipment and technologies are available at the primary health care level and at hospitals, and the essential drugs list is being updated according to international standards. A four-year plan of action for scaling up family planning services and their access to the population has been developed and a three-year maternal and child health acceleration plan, which will contribute to a reduction of maternal and child morbidity and mortality in priority governorates, has also been developed in alignment with priorities defined in the recently revised reproductive health and maternal and child health strategy. Young people represent a fifth of the population, providing an opportunity to invest in the health and other social priorities of adolescents. However, the security situation has a negative impact on the optimum functioning of programmes and services.

The country needs to strengthen emergency obstetric and neonatal health care services in remote and underserved areas, expand family planning services and improve the role of midwives in provision of maternal care services.

Ageing and health

Life expectancy at birth is 73.1 years *(17)*. In 2010, the ageing population, above 60 years, represented 4.8% of the population (*21*).

Several strategic initiatives have been endorsed by the government to improve financial, social and health support for the elderly. A national action plan has been incorporated into the noncommunicable diseases prevention and control strategy, endorsed in 2013. The Ministry of Health leads a multisectoral committee tasked to address the health and other social needs of the elderly. There are 18 elderly clinics in major hospitals (one per governorate) and 17 elderly-friendly primary health care clinics providing elderly care services. Medical care units in elderly residential homes have been strengthened and staffed with paramedics to provide medical and other care. Clinical care for the elderly is provided by specialists in internal medicine, but the number of geriatric medicine specialists is insufficient to meet the needs of the target population; specific measures have been taken by the government to encourage physicians to take up the geriatric subspecialty.

The capacity-building of primary health care workers and further integration of geriatric health services into the primary health care system are important steps towards addressing existing challenges and widening the coverage of older persons with essential age-specific and elderly-friendly preventive, curative and rehabilitative health services.

Gender, equity and human rights mainstreaming

The country falls among the medium human development countries ranking 120 among 152 countries in terms of gender inequality (*22*). Female adult (above 15 years of age) literacy is 72.2% *(23)*, while participation in the labour force is low at 14.7% (*24*).

The Constitution emphasizes the right to health and the government's obligation to establish health centres and meet the needs of the disabled. The recently developed 10-year health policy enshrines a human rights-based approach to health and gender equality, focusing on universal health coverage that guarantees basic care provision irrespective of financial status with a monitoring framework that includes indicators disaggregated by age and sex. Challenges include the negative impact of long years of conflict and unrest on the health system and its capacity for full implementation of policies and strategies or effective management of available resources for provision of accessible, acceptable, affordable and quality health care. Poor health care delivery, coupled with forced migration, has also had a negative impact on the right to health. Disparities exist between urban and rural areas, with poverty almost twice as prevalent in the latter.

There is a need to develop and implement policies to promote a human rights- and health equity-based approach with a special focus on gender and to establish appropriate coordination mechanisms at the interface of health and other structures to minimize vulnerabilities and ensure equitable access to health care. Improving data collection, monitoring by age, sex, location and socioeconomic status, tracking refugees and internally displaced persons, and ensuring health care provision in rural and hard-to-reach areas are also needed.

Social determinants of health

The *Human development report 2014* ranked the country at 120 out of 187 countries across the world on the human development index *(22)*. The population at poverty level was 18.9% in 2012 *(24)*. The urban population has remained almost constant from 1990 to 2012, decreasing from 69.7% to 69.2%, while the access of the rural population to improved water sources increased from 39.1% to 68.5% (*24*). In 2010, the age group 0–24 years was 61.1% of the total population (*21*). Adult literacy rates in 2010 were 65.0% (*25*), while overall unemployment was 15.1%, and for youth (15–24) it was 32.1% in 2012 (*24*).

The government is a signatory to regional and global treaties addressing the social determinants of health. Many interventions have been undertaken by Ministry of Health and other ministries, and a large amount of resources earmarked by the government to support the implementation of the poverty reduction strategy. However, implementation has been fragmented and there is no specific programme structure within the Ministry of Health. Moreover, the unstable security situation has had a negative impact on sustainable action for full implementation of interventions.

More robust action is needed at the federal and governorate level. The prioritization of social determinants of health is needed for the government to allocate adequate resources and put in place clear structures to manage and monitor the implementation of interventions.

Health and the environment

It is estimated that 87 200 people a year die as a result of environmental factors and the percentage of disability-adjusted life years attributable to the environment is estimated 22.0% *(26)*. Access to improved sanitation facilities is 85.0%, while access to improved drinking-water is 85.0% *(19)*, resulting in an estimated 1300 deaths in 2012 due to inadequate provision *(27)*. It is estimated that 0.8% of the population uses solid fuels (biomass for cooking, heating and other usages) *(28)*, resulting in 600 deaths per year as a result of indoor pollution *(29)*.

The government has identified the environment as a priority within the national development plan. The data shows a decline in access to drinking water sources between 1990 and 2006. The enormous capacity gap results in solid waste accumulating on the streets or being dumped into depressions and empty lots. Inability to appropriately dispose of solid waste poses grave public health and environmental risks, including contamination of water tables. The current capacity of the sector is estimated at about 25% of total needs. Air pollution is not properly monitored and reported, although remotely-sensed data show high levels of particulate matter in the air. The government has been working on strengthening national capacity to use norms and standards in developing policies and plans for preventing and managing the health impact of environmental and occupational risks, and for environmental health preparedness and response to emergencies related to climate, water, sanitation, chemicals, air pollution and radiation, as well as on developing water safety plans to improve water quality.

The government has endorsed the WHO regional strategy on health and the environment and its framework for action 2014–2019. The next step is to initiate a national multistakeholder process to update the national strategy on health and the environment in 2015–2016.

Health systems

National health policies, strategies and plans

Integrated people-centred health services

Access to medicines and health technologies

Health systems, information and evidence

Health systems

- The new government has developed a national development plan entailing specific health interventions that require a review of national health policy.
- The strong network of primary health care services that allows the majority of the population to access basic health services has helped mitigate the risk of communicable disease outbreaks, despite difficult conditions.
- Access to health products is still a top priority for the Ministry of Health.
- A three years civil registration and vital statistics road map (2013–2015) has been developed to address the gaps in the system identified by a rapid and comprehensive assessment.

National health policies, strategies and plans

The country has a national health policy strategy and plan for 2010–2014. Total expenditure on health per capita at the international exchange is US$ 270.0, *(17)* in 2014. General government expenditure on health as percentage of total expenditure on health is 59.0%; total expenditure on health as a percentage of the gross domestic product is 4.2% *(17)*. In addition, the share of household out-of-pocket spending was 41.0% in 2014 *(17)*. Total expenditure on health from external sources in 2014 is 0.4% *(17)*.

A new national health policy was endorsed by the health and environment committee of Parliament in January 2014. However, the new government has developed a national development plan entailing specific health interventions that required a review of the national health policy. A designated committee was formed and a consensus building workshop conducted in Istanbul in March 2015, supported by WHO, to provide guidance and technical support. The revised national health policy was then finalized and endorsed by the Minister of Health. The current health sector strategic plan outlines national priorities that include the health workforce, national medicines and technology, scaling up the family practice programme, improving quality and safety, and reinforcing the health information system. The Ministry of Health is moving towards adopting a programme-based budget, which requires a three-year strategic plan, and plans to review and develop a robust mechanism for the licensing, regulation, accreditation and quality assurance of health care providers. National accreditation standards for primary health care centres were prepared in June 2010 with technical support from International Medical Corps. However, the accreditation system is still at the pilot stage. Health financing has witnessed continual changes over the last 50 years, shifting from the model of the welfare state to the introduction of user charges and the establishment of self-sustaining hospitals, with recent large increases in out-of-pocket payment. Per capita health spending has increased

more than four-fold over the last 10 years. External support to the health sector has always been minimal, except during the period of embargo when public financial resources were strained. Contributive mechanisms in the form of social and private health insurance are being considered by some policy-makers and representatives of private sector professional associations. National health accounts were published in 2015, using 2012 data, and completed through a collaborative effort between the Ministry of Health and WHO.

The Ministry of Health plans to review the roles and responsibilities for health care provision at all levels to facilitate the move towards a decentralized health care delivery system and the re-launch of a national health policy for 2014–2023 that provides a vision and roadmap for reforming the health sector over the next decade. Another priority is improving leadership and management capacity at central Ministry level and in the health directorates through a wide range of specialized training programmes both in-country and overseas. Other areas of focus include promoting continuous annual increases in the budget allocated to the health sector from central government, strengthening the health economics unit within the Ministry of Health and implementing a new round of national health accounts using a new approach.

Integrated people-centred health services

The number of hospital beds per 10 000 population was 13.8 in 2014 *(17)*. The health workforce density in the Ministry of Health (2014) is estimated at 8.4 per 10 000 population for physicians, 17.6 for nurses, 2.2 for dentists and 2.4 for pharmacists *(17)*,

The health care delivery system has historically been based on a hospital-oriented and capital-intensive model. The Ministry of Health has a network of health care facilities comprising primary health care centres, public hospitals and specialized health care centres. Health care facilities in both the public and private sectors are not equitably distributed across governorates and between rural and urban populations. Primary health care facilities are responsible for providing services to a defined population. The catchment area of each primary health care facility differs ranging from 10 000 to 45 000 people and depends on density of population, geographical location of the health facility and number of available staff. Multiple conflicts have destroyed a large number of the health facilities affecting access of the population to health services. However, the strong network of primary health care services which allow the majority of the population to have easy access to basic health services has assisted in mitigating the risk of communicable disease outbreaks despite these difficult conditions. Continued national political support and commitment through the public sector modernization programme provides opportunities and options for reform of the health sector. The presence of active international donors and nongovernment organizations is a great resource for supporting the health sector. There is a steady progress in the numbers of skilled health workforce as a result of the increased capacity of medical

and health sciences educational institutions and the growing health care budget of recent governments.

Among the challenges for the health workforce are the lack of coherent human resources management structures and capacity within the Ministry of Health and governorates to strategically plan, mobilize resources, identify priorities and devise innovative and cost-effective solutions for the health workforce. The internal and external "brain drain" of professional expertise and the need to improve the quality of health professionals' education, especially nursing and allied health workers, are other challenges. In early 2012, the Ministry of Health started to establish family practice as an overarching strategy for service provision. A basic health services package has been approved and is currently being implemented and expanded to cover more districts countrywide. The changing burden of disease, with the rising epidemic of noncommunicable diseases, and current technological advancements demand a renewed approach to health services, and accordingly medical education and health systems strategies that bring about a robust and integrated model of health care that blends prevention, early diagnosis and effective treatment and rehabilitation of cases for longer periods of time. Therefore, a new mix of skills and competencies is needed that requires policy-makers to act now to transform the current model of medical education and strengthen health research for the future.

Improving the quality and safety of health care services in hospitals and primary health care centres through clinical governance and/or accreditation programmes is a key priority for the country. Another priority is to develop a national strategic plan for the health workforce including strengthening nursing education, scaling up the family practice programme, improving the quality and safety of care and developing a system for health professionals' regulation to protect the public from unsafe medical practice. Multisectoral collaboration is needed through the involvement of the Ministries of Defence, Higher Education and Interior, and others, along with the continued commitment of United Nations agencies, including WHO, in providing technical and financial support to the Ministry of Health. In addition, the government will focus on: establishing a supreme committee for strengthening medical education and research, with representation of both ministries; developing a strategic plan for modernizing medical education and research; and building capacity in university management and leadership. Furthermore, the government will focus on reviewing the institutional arrangements for higher education quality assurance, establishing a national general medical council-equivalent institution and pursuing a comprehensive reform agenda to transform medical education and research.

Access to medicines and health technologies

Access to health products is a top priority for the Ministry of Health in response to population needs and the lack of regular access to essential medicines. All components of the national medicine policy are regularly reviewed by the pharmacy department and

Kimadia, the state company for medicines and medical appliances. However, the existing national medicines policy document is still in a draft form with no implementation plan. The functions of the national regulatory authority are in place with the exception of clinical trials control. There is a list of essential medicines for primary health care in place and a multisectoral committee on rational use of drugs that focuses on combating antibiotic resistance. Challenges for access to health technologies include: the absence of a national policy on health technologies; weaknesses in the procedures for resource allocation; limited local production capacity; limited capacity to assess the clinical safety, appropriateness, efficacy and efficiency of new technologies; and the lack of an independent entity to regulate medical products, particularly in the private sector.

Reviewing the administrative and functional structure of Kimadia, strengthening national regulatory authorities to ensure the quality, safety and efficacy of all health technologies including medicines, vaccines, devices and diagnostics, and adopting a national medicines and health technology policy are key priorities for the country.

Health systems, information and evidence

The Ministry of Health has recently embarked on several initiatives to strengthen the health information and evidence system. In 2012, a civil registration and vital statistics road map (2013–2015) was developed to address the gaps in the system outlined by a rapid and comprehensive assessment. Similarly, a comprehensive review of all the statistical forms used at different levels of the health system has been conducted to update forms, identify duplication and remove those no longer needed. A three-year maternal death surveillance and response plan for the country has been developed outlining priority interventions to address the shortcomings in the maternal death surveillance and response system thereby reducing morbidities and mortalities related to maternal health. Maternal death surveillance and response plan tools have been updated, in particular death certificates and registers, and a report produced and disseminated to stakeholders. A comprehensive internal evaluation plan has also been developed. Once the internal evaluation is completed, a comprehensive plan for external evaluation will be devised. A maternal death surveillance and response plan committee has been established and is tasked to provide guidance and to monitor programme performance. In addition, reinforcing health information systems, including civil registration, risk factor and morbidity monitoring, and health systems performance are also priorities.

Preparedness, surveillance and response

Alert and response capacities

Epidemic and pandemic-prone diseases

Emergency risk and crisis management

Food safety

Poliomyelitis eradication

Outbreak and crisis response

Preparedness, surveillance and response

- Protocols and procedures to follow in a major crisis have been developed and an operations room is open to coordinate the emergency response.
- Despite decades of conflict, the public health surveillance system has proven to be resilient in detecting and responding to the threats of outbreaks.
- An emergency medicine training centre has been established.
- A national Codex Alimentarius committee has been formed.

Alert and response capacities

Long and protracted crises, armed conflict, insecurity and population displacement, as well as communicable disease and other outbreaks, have focused attention on emergency response. However, this high burden of acute crises has delayed implementation of International Health Regulations (IHR) 2005, resulting in the government requesting a second extension to June 2016 to meet its obligations. The new public health law addresses IHR and the role of focal points in coordinating the response to emergencies. The government has established an inter-ministerial committee to oversee the implementation of IHR and the Ministry of Health has nominated a focal point whose role is to ensure that other ministries are well informed of the progress made.

Laboratory capacities continue to be strengthened and capacity-building of staff at points of entry (airports, ports and land border check points) who may be handling hazardous materials is being undertaken. New blood transfusion centres have been built in Basrah, Ninewah, Najaf and Erbil. The government has participated in regional training courses on risk assessment and on handling risks caused by chemical hazards. Protocols and procedures to follow in the case of a major crisis have been developed and an operations room is open to coordinate emergency response. An additional risk, in the wake of ongoing conflict in the neighbouring Syrian Arab Republic, is that of chemical weapons. The government has ensured training of key staff to deal with hazardous materials, chemicals, and zoonotic and food safety-related incidents. The Ministry of Health has mechanisms in place for rapid alert and response to an event of major public health concern. This includes the activation of an emergency operations room and focal points for surveillance and communication. However, despite the progress made, challenges and gaps remain in human resources and the expertise to deal with radiological and nuclear events, and with some pandemic-prone diseases.

The priorities for the government are to implement all IHR obligations, adopt a new public health law and develop an implementation action plan to enforce the legislative provisions and procedures contained in the law.

Epidemic and pandemic-prone diseases

Despite decades of conflict, the country's public health surveillance system has proven to be resilient in detecting and responding to the threats of outbreaks of avian influenza A (H5N1), cholera, seasonal influenza, anthrax and other emerging zoonotic infections such as Crimean–Congo haemorrhagic fever and rabies. The surveillance system for monitoring and predicting threats from epidemic- and pandemic-prone diseases has undergone a major reform and an electronic system for the early warning of disease outbreaks has been successfully established in some of the camps and informal settlements that host a large number of displaced Syrian refugees. The protracted conflicts in the country, with large populations being internally displaced, make the detection and prevention of endemic and epidemic-prone diseases extremely challenging. The government participates in regional initiatives on pandemic-prone diseases and in particular on Middle East respiratory syndrome (MERS).

In view of the situation in the country, the country's progress in establishing early warning surveillance system for disease outbreaks needs to be sustained and where possible expanded to cover the entire country and a fully functional and enhanced laboratory diagnostic service needs to be established.

Emergency risk and crisis management

Iraq is susceptible to both natural and man-made disasters that cause a significant loss of life, livelihoods and infrastructure, reversing development gains. The annual loss attributable to natural disasters (based on data from 1994–2013), is on average 1.7 deaths, or 0.01 per 100 000 inhabitants, while losses in purchasing power parity are US$ 38.8 million and losses to gross domestic product amount to 0.01% *(30)*.

In the last two years, the country has been experiencing violence and unrest in many parts of the country. In 2014, the situation worsened with the crisis in Anbar governorate that started in January 2014 and escalated in June with the attack of Mosul by armed opposition groups and the spread of violence in other governorates, including Ninewah, Salah El-Din, Kirkuk and Diyala. This has led to over 3.2 million people being displaced as of August 2015 *(31)*. In addition to these man-made disasters, two flooding episodes were experienced, one of which was a man-made flood provoked by armed groups. These complex emergencies have led to increased mortality and morbidity among internally displaced persons in both host communities and camps. While the impact of the conflict on health facilities continues

to be reassessed, it is estimated that at least 40% of facilities have suffered infrastructural damage or lack an adequately trained health workforce in sufficient numbers. An emergency medicine training centre has been constructed and training programmes developed. These include courses on emergency management, preparedness and mass casualty management. The Ministry of Health in Baghdad and the Ministry of Health in the Kurdistan Regional Government have embarked on programmes to increase skills in conducting risk assessments and developing plans for emergency preparedness and response, including developing capacities for contingency planning. The Ministry of Health has continued to invest in strengthening emergency medical services and new ambulance dispatch centres.

The priority for the country remains finding durable solutions to the root causes of the ongoing conflict that is resulting in massive population displacement, as well as strengthening the Ministry of Health's capacity to respond to health needs and to coordinate assistance from health partners.

Food safety

Food safety and foodborne-disease surveillance is coordinated by the Ministry of Health acting as the Secretariat to the Inter-ministerial Committee on Food and Nutrition, which also includes the Ministry of Agriculture and Ministry of Planning. There is a nutrition research institute that, together with the central public health laboratory, has some capacity to monitor foodborne diseases, including food poisoning. The system is integrated into the national disease surveillance system under the communicable diseases control department. A national strategy for food safety has been developed and the option to develop an independent food safety authority is being explored. The national Codex Alimentarius committee has been formed and the government regularly participates in Codex-supported international technical meetings on food safety.

A priority is the development of a plan of action to implement the national food safety strategy. This should include strengthening the capacity of food safety public health laboratories and putting in place conditions for the application of hazard analysis critical control points (HACCP) principles in the food industry sector.

Poliomyelitis eradication

The Ministry of Health has developed a robust communicable diseases control department and all notifiable diseases are reported on and trends analysed. This helped to keep the country polio-free for 14 years, but the proximity of the Syrian Arab Republic, combined with the most recent crisis, have rendered the system fragile and polio has re-emerged. However, the health system is once again being strengthened in order to respond to the challenges. Following the confirmation of polio cases in the Syrian Arab Republic, the

country has been part of the regional polio response plan along with other countries of the Region that are affected by the Syrian conflict.

However, despite efforts to vaccinate all target groups, the country reported its first case of poliomyelitis in February 2014 and a second case in April 2014; nucleotide sequencing of the polio virus related them to virus identified in the Syrian Arab Republic *(32)*. Although no new case has been detected since April 2014 and Iraq has now been removed from the list of countries infected by wild poliovirus, the country remains vulnerable and the Ministry of Health and other partners have tried to ensure that all target groups are reached. While access to security-compromised zones is challenging, all necessary steps have been taken to increase oral polio vaccine coverage. Similarly, acute flaccid paralysis surveillance has been strengthened and will continue to be supported, including by enhancing the capacity of the national polio laboratory in Baghdad. The main challenges remain insecurity and the inaccessibility of large numbers of children in conflict affected areas. The deterioration in the routine immunization system and the health system in general are also challenges.

The government needs to improve routine immunization coverage and implement high quality immunization campaigns to boost the population's immunization status. Establishing an environmental surveillance system to supplement acute flaccid paralysis surveillance will also be considered.

Outbreak and crisis response

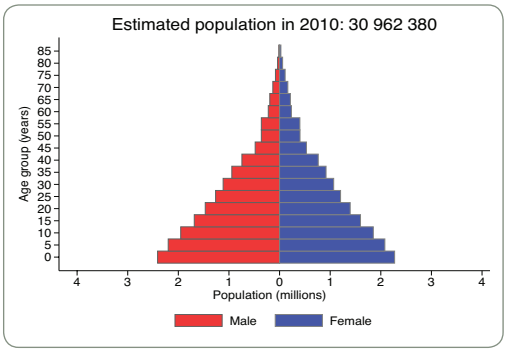
The country has been facing a humanitarian crisis, with 3.2 million internally displaced persons, as a result of the ongoing violence since 2014 *(31)*. In addition, as a consequence of the crisis in the Syrian Arab Republic, there are over 250 000 Syrians seeking refuge in the country. Of these refugees and displaced people, roughly 64% are women and children *(33)*. Some 5.2 million Iraqis require interventions to ensure access to health care *(34)*.

Following the successive crises that the country has faced, the humanitarian actors have launched successive regional response plans and a central emergency response fund appeal, totalling US$ 12.1 million, for their operations. Although, there has been a limited response to the regional response plans in terms of financial contributions, various actors in health have shown the capacity to respond to urgent needs. Another review was done in September 2014 after the conflict expanded to further governorates and a US$ 500 million contribution from Saudi Arabia, of which about US$ 50 million was for health, was exhausted by June 2015 leaving insufficient resources to respond to the growing needs of over 1.8 million internally displaced persons and refugees. An adequate response to the crisis continues to be challenged by insecurity and the political instability in the country, and the limited access to many areas where populations in urgent need are living. In late 2014, the government began scaling up its preparedness for Ebola virus disease by assessing their level of preparedness using the WHO assessment checklist and identifying critical gaps for improvement.

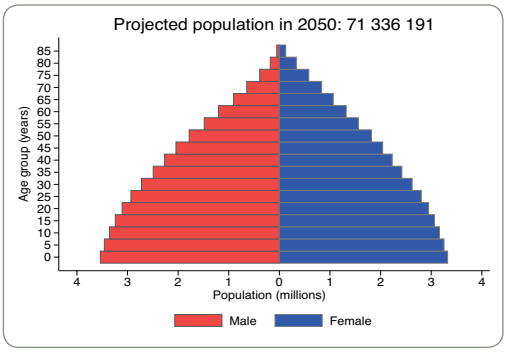
Moving forward will include continuing to invest in strengthening the health system so that the disease surveillance system is sensitive enough to detect changes in disease trends and robust enough to timely respond to and manage outbreaks. The Ministry is pursuing ways of implementing the recommendations from the Ebola assessment mission to increase the resilience to respond to disease outbreak.

Demographic profile

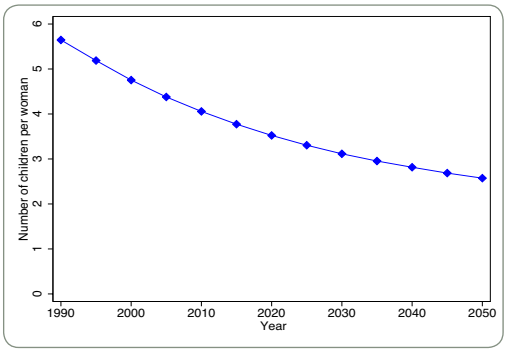
Population pyramid 2010



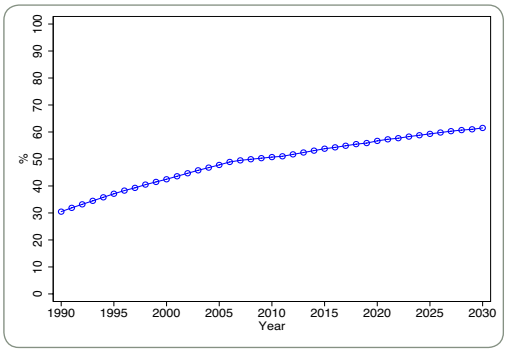
Population pyramid 2050



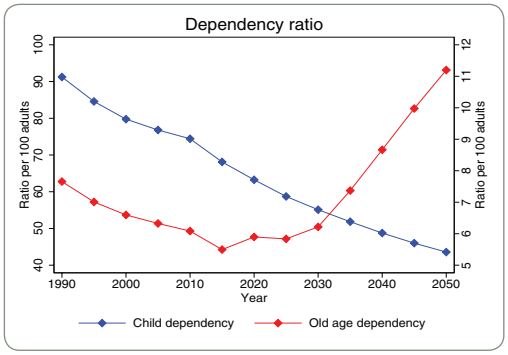
Total fertility rate



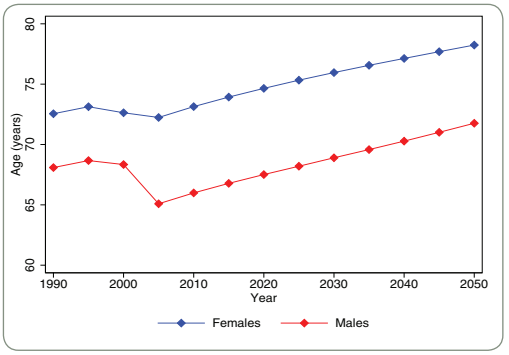
Need for family planning satisfied



Dependency ratio



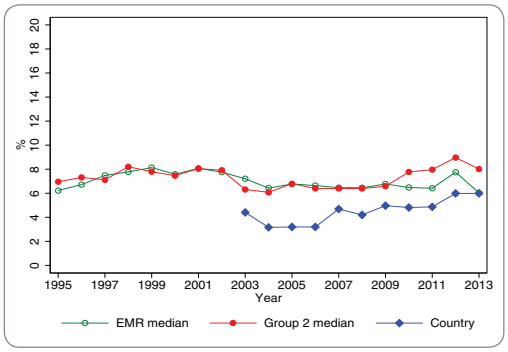
Life expectancy at birth



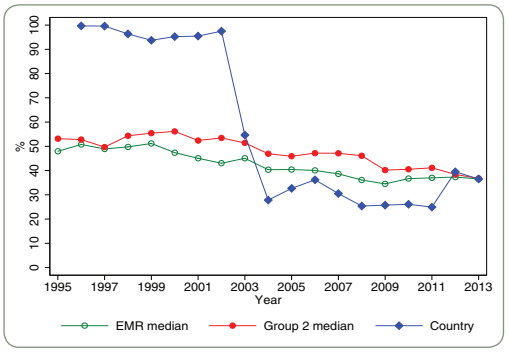
Sources for all graphs: *(21)*

Analysis of selected indicators

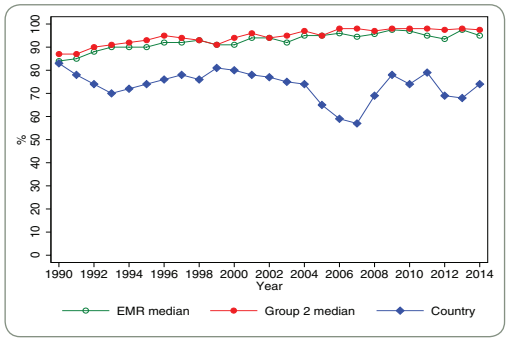
General government expenditure on health as % of general government expenditure *(35)*



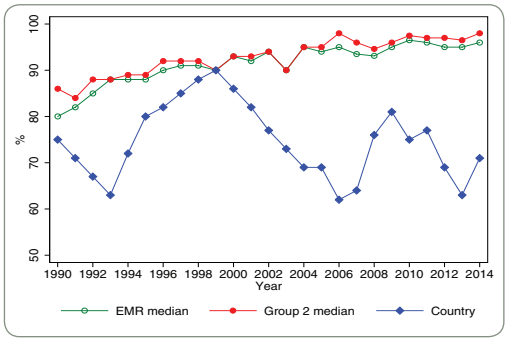
Out-of-pocket expenditure as % of total health expenditure *(35)*



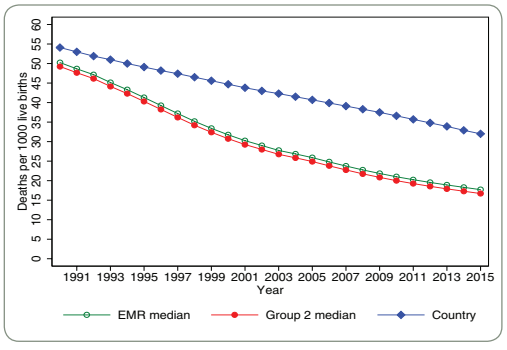
DPT3/pentavalent coverage among children under 1 year of age (%) *(4)*



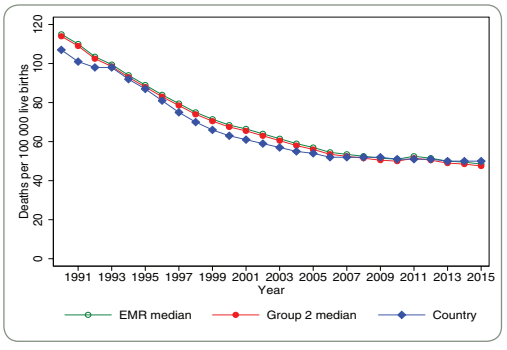
Measles immunization coverage (%) *(4)*



Under-5 mortality (per 1000 live births) *(19)*



Maternal mortality ratio (per 100 000 live births) *(18)*



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WHO-EM/HST/233/E

ARYA TEB FIROUZ

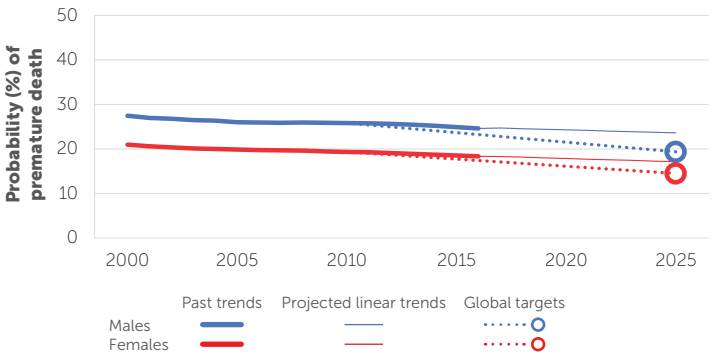
WHO, WORLD BANK & German Government reports on Iraq

WHO Noncommunicable Diseases Country Profiles- Iraq- 2018

IRAQ

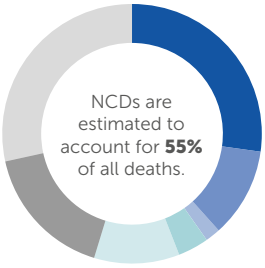
2016 TOTAL POPULATION: 37 203 000
2016 TOTAL DEATHS: 190 000

RISK OF PREMATURE DEATH DUE TO NCDS (%)*



PROPORTIONAL MORTALITY*

- 27% Cardiovascular diseases
- 11% Other NCDs
- 11% Cancers
- 17% Communicable, maternal, perinatal and nutritional conditions
- 2% Chronic respiratory diseases
- 28% Injuries
- 4% Diabetes



16 600 LIVES CAN BE SAVED BY 2025 BY IMPLEMENTING ALL OF THE WHO "BEST BUYS"

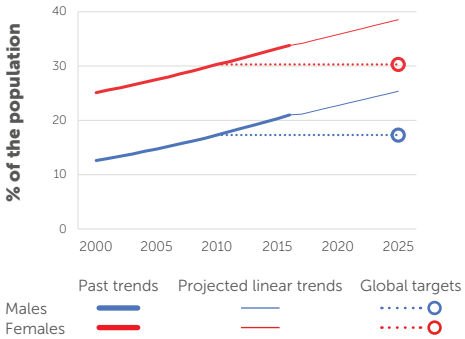
	NATIONAL TARGET SET		DATA YEAR	MALES	FEMALES	TOTAL
MORTALITY*						
Premature mortality from NCDs	✓	Total NCD deaths	2016	50 700	53 100	103 800
		Risk of premature death between 30-70 years (%)	2016	25	18	21
Suicide mortality	-	Suicide mortality rate (per 100 000 population)	2016	-	-	3
RISK FACTORS						
Harmful use of alcohol	X	Total alcohol per capita consumption, adults aged 15+ (litres of pure alcohol)	2016	1	0	0
Physical inactivity	✓	Physical inactivity, adults aged 18+ (%)	2016	37	64	50
Salt/Sodium intake	X	Mean population salt intake, adults aged 20+ (g/day)	2010	10	9	10
Tobacco use	✓	Current tobacco smoking, adults aged 15+ (%)	2016	...	...	...
Raised blood pressure	✓	Raised blood pressure, adults aged 18+ (%)	2015	20	19	19
Diabetes	✓	Raised blood glucose, adults aged 18+ (%)	2014	13	14	13
Obesity	✓	Obesity, adults aged 18+ (%)	2016	21	34	27
		Obesity, adolescents aged 10-19 (%)	2016	12	13	13
Ambient air pollution	-	Exceedance of WHO guidelines level for annual PM2.5 concentration (proportion)	2016	-	-	6
Household air pollution	-	Population with primary reliance on polluting fuels and technologies (%)	2016	-	-	<5

SELECTED ADULT RISK FACTOR TRENDS

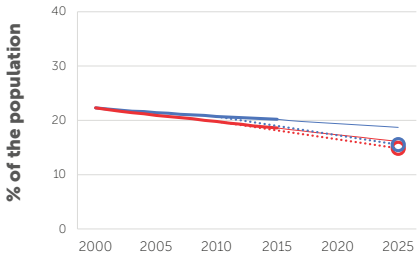
CURRENT TOBACCO SMOKING

NO DATA AVAILABLE

OBESITY



RAISED BLOOD PRESSURE



NATIONAL SYSTEMS RESPONSE

Drug therapy to prevent heart attacks and strokes	✓	Proportion of population at high risk for CVD or with existing CVD (%)	2015	12
		Proportion of high risk persons receiving any drug therapy and counselling to prevent heart attacks and strokes (%)	2015	69
		Proportion of primary health care centres reported as offering CVD risk stratification	2017	Less than 25%
		Reported having CVD guidelines that are utilized in at least 50% of health facilities	2017	Yes
Essential NCD medicines and basic technologies to treat major NCDs	✓	Number of essential NCD medicines reported as "generally available"	2017	10 out of 10
		Number of essential NCD technologies reported as "generally available"	2017	5 out of 6

... = no data available
* The mortality estimates for this country have a high degree of uncertainty because they are not based on any national NCD mortality data (see Explanatory Notes)

World Health Organization - Noncommunicable Diseases (NCD) Country Profiles, 2018.

ARYA TEB FIROUZ

WHO, WORLD BANK & German Government reports on Iraq

WHO Comprehensive assessment of Iraq's health information system 2019

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World Health Organization
REGIONAL OFFICE FOR THE Eastern Mediterranean

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WHO Library Cataloguing in Publication Data

World Health Organization. Regional Office for the Eastern Mediterranean

Comprehensive assessment of Iraq's health information system 2019 / World Health Organization. Regional Office for the Eastern Mediterranean

p.

ISBN: 978-92-9022-316-0

ISBN: 978-92-9022-317-7 (online)

1. Health Information Systems 2. Health Information Management 3. Database Management Systems 4. Health Status Indicators 5. Vital Statistics - Iraq I. Title II Regional Office for the Eastern Mediterranean

(NLM Classification: W 26.55.I4)

Contents

Foreword

A well-functioning national health information system (HIS) is a prerequisite for the generation of reliable and timely health-related information. This information is essential for policy development and evidence-informed decision-making; proper health management and rational resource allocation; and monitoring and evaluation of health systems and the performance of other related social services.

The generation, availability and accessibility of timely and quality information for key health indicators is also essential for monitoring progress towards the targets of the health-related Sustainable Development Goals (SDGs). A lack of reliable, timely and comparable information often hampers tracking and evaluation of progress. As a result, there has been reliance on estimates and modelling to substitute, which does not always reflect reality in the countries.

This situation calls for effective and sustained action to strengthen national systems, as well as reinforce capacity in generating, compiling, analysing, disseminating and reporting reliable data for the monitoring of health situations.

The aim of this comprehensive HIS assessment is to review Iraq's national situation, identify constraints and collectively develop and implement strategic directions to address these and to support the country in reinforcing informed decision-making and strengthening our capacity to monitor national health development.

HE Dr Ala Alwan
Minister of Health and Environment
Iraq

Preface

The role of the health information system (HIS), including civil registration and vital statistics (CRVS) systems, in generating health information data for programme and performance monitoring, quality of care, planning and policy-making is widely acknowledged. Within the context of the 2030 Agenda for Sustainable Development, countries are encouraged to generate reliable data to track progress and inform decision-making. In line with WHO's Thirteenth General Programme of Work 2019–2023, the Organization is providing technical support to Member States to improve their HISs, develop analytical capacity and improve reporting to monitor country progress towards universal health coverage. In particular, the Organization is supporting countries to develop comprehensive and efficient systems to monitor health risks and determinants; track health status and outcomes, including cause-specific mortality; and assess health system performance. WHO also supports countries to disaggregate data in order that progress made on gender equality and health equity can be measured.

Since 2012, WHO has been working with Member States to agree on priority actions to strengthen their HISs. Through a consultative process and intensive work with Member States, WHO has developed a framework for the HIS and 75 core indicators, focusing on three main components: monitoring health determinants and risks; assessing health status, including morbidity and cause-specific mortality; and assessing health system response.

As part of WHO efforts to support Member States to meet their national, regional and international obligations in reporting health indicators, a number of comprehensive assessments have been conducted in the Eastern Mediterranean Region since 2016 to identify key gaps and strategies to strengthen HISs. The first comprehensive assessment was conducted in Jordan, followed by subsequent assessments in Libya, Pakistan, Afghanistan and Iraq. The assessments identified gaps in the HIS and generated recommendations and priority actions aimed at improving country health data systems. Other key interventions focus on capacity-building in death certification, International Classification of Diseases (ICD) coding, data analysis and use of the District Health Information Software (DHIS-2) platform to enhance collection, processing, analysis and use of health-related data for decision-making.

It is hoped that this report will guide decision-makers in the Ministry of Health and Environment and all development partners and stakeholders in planning and implementing effective interventions to enhance Iraq's HIS. WHO expects that the priority areas identified by the assessment team and the ongoing strategies to improve the CRVS, including the quality of cause of death data, will enhance Iraq's efforts to monitor the health situation and measure progress towards the targets of the SDGs.

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Acknowledgements

This report is the product of an assessment mission jointly conducted by WHO and the Ministry of Health and Environment. The contributions of all individuals at the national and governorate level who assisted the assessment team during the mission, as well as those who participated in the subsequent national assessment workshop, is gratefully acknowledged. Special thanks go to His Excellency Dr Ala Alwan, Minister of Health and Environment; Dr Ali Mahmood Hasan in the Minister's Office; and heads of all the departments in the Ministry of Health and Environment for their assistance and willingness to make themselves and their staff available. The assessment team also acknowledges with appreciation input received from development partners in identifying strategies to strengthen the national HIS.

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Acronyms

CRVS	Civil registration and vital statistics
DHIS	District Health Information Software
HIS	Health information system
HIV	Human immunodeficiency virus
ICD	International Classification of Diseases
ICT	Information, communication and technology
IT	Information technology
PHC	Primary health care
SDGs	Sustainable Development Goals
SOPs	Standard Operating Procedures
WHO	World Health Organization

Executive summary

Assessment

Health information systems (HISs), including civil registration and vital statistics (CRVS) systems, remain key sources of data for evidence-based decision-making, both at the national and subnational level. In order to enhance the operations of Iraq's HIS, the World Health Organization (WHO), in collaboration with the Ministry of Health and Environment, conducted an assessment during 13–17 January 2019 in two parts: three-day field visits to the governorates and a two-day national workshop in Baghdad. The assessment team reviewed the operations of the HIS in terms of its adherence to sound policy and institutional environment; utilization of well-functioning data sources; availability of strong institutional capacity for data collection, management, analysis, use and dissemination; and implementation of effective mechanisms for review, data use and action. Using a methodology developed by the WHO Regional Office for the Eastern Mediterranean to undertake a comprehensive HIS assessment, the assessment team was guided by the WHO monitoring and evaluation assessment and planning tool, which provides an overview of the strengths and weaknesses of the country's monitoring and evaluation systems and enables identification of priority actions based on those findings.

Findings

Overview

One of the main strengths of the HIS is the existence at national level of a health and vital statistics department in the Directorate of Planning and Resource Development that defines roles and responsibilities for collecting, managing and disseminating health data, including confidentiality. A recent CRVS system assessment has also generated momentum to improve the quality of cause of death data. International standards are also followed in presenting key indicators to ensure comparability of results between populations and over time. Standard case definitions are also available for all diseases and syndromes under surveillance. With respect to reporting of core health indicators, the percentage of indicators reported to WHO increased from 71% in 2014 to 78% in 2018.

Despite a number of interventions that have been implemented to enhance the HIS, the assessment team found that the HIS across all components fulfils only about 24% of the attributes of a functional HIS. Some of the weaker elements include key strategic areas, such as lack of a comprehensive and costed monitoring and evaluation plan for the national health sector strategy and lack of a common investment framework to be used as a basis for partners and domestic support. There is also a lack of national policy/strategy for e-health and information, communication and technology (ICT) development and use, including governance and legal frameworks; enterprise architecture; standardization and interoperability; and research and evaluation on e-health. Independent reviews of data in strategically important programmes, such as maternal, child and perinatal deaths, are not conducted regularly. There is also a lack of institutional collaboration within the Ministry of Health and Environment, which results in duplication of activities; weak collaboration between different directorates and departments (and sometimes between units of the same directorate); duplication of data collection at the facility level (e.g. paper and electronic formats used for the same data); and limited incorporation of results from health sector reviews into decision-making, including resource allocation and financial disbursement. Facility reporting systems do not use web-based systems such as District Health Information Software 2 (DHIS-2) even when implementation is a feasible option. The HIS also lacks institutionalization of regular and independent data quality assessments. A system for automated coding of causes of death is also not used and there is a lack of trained human resources to conduct verbal autopsies. The conducting of household surveys is irregular owing to weak coordination with the Ministry of Health and Environment, thereby limiting the ability to effectively monitor progress

on key health-related indicators. Annual statistical reports of the Ministry of Health and Environment are published a year after the reporting year, and there is a lack of regular analysis and reporting on progress towards national and global targets and performance of the system.

Below are the main recommendations arising from the assessment.

Governance and policy

- Establish a high-level national committee to monitor implementation of HIS assessment recommendations and operations.
- Develop a costed monitoring and evaluation plan with clearly defined baselines and targets for all indicators.
- Implement annual reviews of health system data to assess progress in line with the monitoring and evaluation plan.
- Develop a unified strategy for e-health and ICT.
- Develop a plan to harmonize national surveys to ensure that the country is able to report on the maximum number of core health indicators. This will ensure that key surveys, such as health examination surveys, are able to provide data on most of the core health indicators.
- Regulate private health sector operations, including reinforcing private sector compliance for data sharing.

Infrastructure and support

- Adopt technology that provides greater storage capacity (mostly cloud-based), a safer databank and easier data recovery.
- Improve the existing infrastructure to ensure that technological and staffing needs are in line with existing demands for capacity to collect, process, analyse, disseminate and use data for decision-making, particularly for public financial management systems and across all sub-information systems.
- Strengthen the functionality of the hospital laboratory system by using a centralized web-based and integrated system.
- Roll out DHIS-2 across all facilities in order to support implementation of a unified and standardized system of data collection.

Data management and standards

- Conduct regular workshops on data analysis and use at the national and subnational levels to build the capacity of relevant staff across all levels and ensure timely generation of key health reports.
- Develop standard operating procedures (SOPs) on analysis, use and evaluation of data at national and subnational level.

Quality assurance

- Conduct periodic reviews of all routine health management information systems, including civil registration and vital statistics data, at the national level using international standards for data quality reviews.
- Develop and/or review SOPs for regular supportive supervision visits to enhance functionality of all sub-information systems and ensure that data are easily accessed, retrieved and utilized for decision-making.
- Conduct regular data analysis, independent reviews of data and performance reviews at the national and subnational levels and incorporate results from the reviews into decision-making.

Data dissemination and use

- Implement information technology (IT) platforms such as DHIS-2 that facilitate the development of dashboards to support the use

of information for decision-making at all levels, including for senior level health managers.

- Promote feedback mechanisms on data collected at lower levels.
- Promote and establish a national health observatory and open data access policy subject to rules and regulations governing the type of data that can be shared publicly.
- Conduct regular workshops for journalists and civil society organizations on disseminating health-related data.

Way forward

Across all the functional areas of the HIS, 81 priority actions were identified during working group sessions to enhance its operations. The detailed priority actions presented in this report provide guidance for the Ministry of Health and Environment, in collaboration with other stakeholders and development partners, on interventions to enhance the HIS in the short, mid and long term. Some of the interventions could be implemented with limited effort or significant change to the existing system. However, to ensure effective monitoring of progress in implementing interventions, a coordinating committee should be established to take ownership of the process. The agreed set of recommendations/priority actions can be costed to facilitate domestic and external resource mobilization. The timelines for implementation of the interventions can be adjusted depending on local circumstances.

1. Background

1.1 Overview of the health situation

The population of Iraq was estimated at 38 million in 2018, spread across 18 governorates, including three governorates in the semi-autonomous region of Kurdistan. The estimated population living in rural settings is 30.1% (2017), with 40.5% of the total population under the age of 15 years (2017). The annual population growth rate is 2.4% (2017) and life expectancy at birth is 70.3 years (2017).[1] The country has experienced significant armed conflict in recent years with concomitant disruption of health service delivery and destruction of livelihoods. Protracted emergencies have taken a heavy toll on the health sector with many of its resources diverted to emergency response. Health services are offered mostly through the public sector, with the private sector and nongovernmental organizations also gradually establishing their own health facilities. Weakened infrastructure and public services are less able to address the basic needs of the population, especially the most vulnerable – women, children, older people, those who have been injured or displaced, and people with physical disabilities.

Key health challenges include burden of disease attributable to communicable diseases (19.1%), noncommunicable diseases (61.6%) and injuries (19.2%), which are largely a result of armed conflict and requiring post-operative care and long-term rehabilitation. The share of out-of-pocket expenditure is 76.5% (2015) and the health workforce density is 9.4 physicians per 10 000 population (2017). The main causes of mortality include cerebrovascular disease, malignant neoplasm, cardiovascular diseases, renal failure, respiratory and cardiovascular disorders specific to the perinatal period, armed conflict, road traffic crashes and diabetes mellitus.

There are capacity constraints related to overall governance, financial management, human resources management, procurement, surveillance, monitoring and evaluation, and laboratory services. Despite these challenges, the Ministry of Health and Environment, with support from the Iraq Health Cluster,[2] has continued efforts to improve routine health care, public health functions and health system development. Current government efforts focus on the development of the health sector with a particular focus on enhancing the HIS and generating evidence for decision-making. In line with current efforts to respond to national, regional and global demands for reliable and timely health information, this comprehensive assessment aims to align national efforts to improve health outcomes with accelerating progress towards universal health coverage.

1.2 Overview of the HIS in Iraq

1.2.1 National HIS structure and data flow system

As one of the six building blocks of the health system an effective HIS is essential; it provides data for all health system functions and health facilities. These data are collected through the routine national HIS, population-based surveys, the CRVS system and public health surveillance system.

Recently, key steps have been taken to strengthen the national HIS at various levels. The use of information technology (IT) in data collection, storage and analysis has increased and many health professionals working in public hospitals have been trained on the WHO International Classification of Diseases (ICD-10).

The department in charge of the national information system, the Health and Vital Statistics Department, is hosted in the Planning and Resource Development Directorate of the Ministry of Health and Environment and has units in the planning

[1] Iraq Annual Statistical Report, 2017.

[2] The Iraq Health Cluster consists of international nongovernmental organizations, local nongovernmental organizations and United Nations agencies.

departments of all directorates of health at governorate level, (the health and vital statistics section). The Health and Vital Statistics Department at the national level has a staff of 37 persons, including physicians, statisticians, IT programmers and administrative staff, with various levels of statistical skills. Health statistics in the health and vital statistics sections in the directorates of health are usually handled by an individual with skills in information management and analysis. Most hospitals have a statistics unit for data compilation and coding staffed by at least one person skilled in birth and death registration, as well as the compilation of monthly statistical reports. In PHC facilities, data recording and compilation is generally done by a person with some training in information management. A summary of health facilities that provided data for the health statistics at different levels as of 2017 is presented in Table 1.

All the data collected in the facilities are disaggregated by sex, age and residence at intake and remain disaggregated when compiled for monthly/annual reports at all levels. There is also the private health sector, which delivers health services through private hospitals, clinics, pharmacies and medical laboratories. The Ministry of Health and Environment does not capture health data from the private sector, except for the number of inpatients and reason for admission. This information is contained in private hospital reports sent to the Health and Vital Statistics Department. In 2018, the total statistical workforce across all facilities was 3444, of whom 521 (15%) were statisticians, 1822 (53%) were medical and paramedical staff and 1100 (32%) were administrative staff.[3]

The same certificate is used for the registration of births and deaths in private and public health facilities, and then endorsed in the birth and death offices of the Ministry of Health and Environment. The Health and Vital Statistics Department is mainly concerned with collecting statistical data, analysing them and producing annual reports for dissemination.

There are also a number of vertical programme information systems that provide data for the national HIS. These include systems for noncommunicable diseases, tuberculosis, HIV/AIDS, cancer registration, maternal mortality surveillance, immunization, surveillance of notifiable diseases (infectious diseases), substance

Table 1. Health facilities and administrative sectors in Iraq, 2017

Indicator	No.
PHC centres	2658
Main PHC centres (≥ 10 000 population, having at least one physician)	1295 (48.2%)
Subcentres (5000–7000 population, run without a physician)	1363 (51.8%)
Primary health care sectors	135
Public hospitals	273
Private hospitals	127
Specialized health centres	27
Births and deaths registration offices	284

Source: Ministry of Health and Environment of Iraq, Annual statistical report, 2017.

[3] Data from Ministry of Health and Environment, Statistics Department, 2018.

abuse, national health accounts; the Early Warning and Response Network (EWARN); the Electronic Community Assessment Programme (e-CA), the Health Resources Availability Monitoring System (HeRAMS), and Monitoring of Events Against Safe Use and Running of Health Services in Complex Emergencies (MEASURES). These are not national level systems but are used in selected areas.

2. Purpose and objectives

The role of an HIS, including the CRVS system, in generating health information data for programme and performance monitoring, quality of care, planning and policy-making is widely acknowledged. Within the context of the 2030 Agenda for Sustainable Development, countries are encouraged to generate reliable data to track progress and inform decision-making. In line with the WHO General Programme of Work 2019–2023, WHO is collaborating with Member States to improve their HISs, develop analytical capacity and improve reporting for universal health coverage. In particular, the Organization is supporting countries to develop comprehensive and efficient systems to monitor health risks and determinants; track health status and outcomes, including cause-specific mortality; and assess health system performance. The Organization is also providing support to countries to disaggregate data in order that progress made on gender equality and health equity can be measured.

Since a previous assessment of the HIS in 2011, the Ministry of Health and Environment and other stakeholders have implemented a number of interventions to strengthen the health information system. In 2012, a CRVS system road map (2013–2015) was developed to address the gaps in the system identified through a rapid and comprehensive assessment and all statistical forms used at different levels of the health system were reviewed and updated. A three-year maternal death surveillance and response plan for the country was developed outlining priority actions to address deficiencies in the maternal death surveillance and response system, thereby reducing maternal morbidity and mortality. A maternal death surveillance and response plan committee was established to provide guidance and monitor programme performance. In spite of these initiatives, the current assessment aims to identify key gaps and challenges in line with increasing demands for countries to generate reliable data to monitor progress towards universal health coverage and enhance its reporting capacity on the 100 core health indicators (plus health-related SDGs) and the 75 regional core health indicators. This assessment reviews a checklist of attributes of the five main components of the monitoring and evaluation system: governance; infrastructure; data management and standards; quality assurance; and data dissemination and use.

The assessment aims to facilitate:

- a common understanding of information systems and databases available in country to identify areas for improvement, particularly on information flow;
- provision of documentation on different sources of data for HIS (i.e. population-based, institution-based, service and individual records, and surveillance or community system);
- understanding of their content, data elements, associated reporting burden, and how these information systems are used and by whom;
- assessment of the strengths and weaknesses of these components and operations within the HIS, including aspects of governance, infrastructure, data management and standards, quality assurance, and data dissemination and use;
- development of recommendations to improve the system in order that it complies with global and regional HIS standards, indicator frameworks and guidelines;
- development of strategies to build capacity and produce core indicators on disease burden, health access and utilization, mortality, HIV surveillance, and human resources, including responding to the information requirements of SDGs and universal health coverage;

- development of a roadmap to strengthen the HIS based on the findings of the assessment, including priority actions, responsible parties or stakeholders and timeline.

3. Assessment methodology

The assessment team adopted a methodology that sought to develop a common understanding of available information systems and databases, assess the strengths and weaknesses of these components and operations within the HIS and provide recommendations consistent with international standards, indicator frameworks and guidelines. The methodology was based on an approach developed by the WHO Regional Office for the Eastern Mediterranean for comprehensive assessment of HISs (Fig. 1). Discussions during the assessment were guided by the WHO monitoring and evaluation assessment and planning tool,[4] which provides an overview of the weaknesses and strengths of a country's monitoring and evaluation systems and enables identification of priority actions based on those findings.

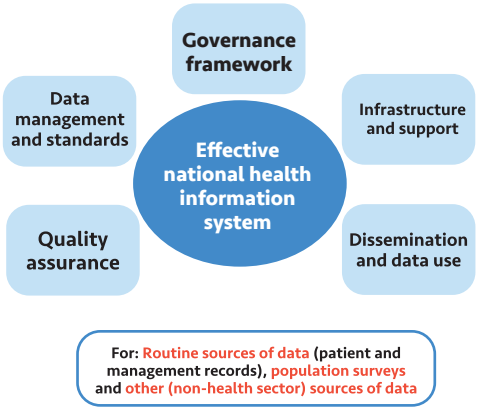


Fig. 1. Adapted model of an effective national health information system

3.1 Document reviews

The assessment team reviewed documents provided by the Ministry of Health and Environment and other development partners, the 2011 HIS assessment report and documents available in the public domain.

3.2 Field visits

Field visits were conducted during 13–15 January 2019 by three teams, who visited different governorates of Iraq. The first team visited the following institutions and establishments in Baghdad: the Ministry of Health and Environment, Baghdad Medical City, Bab Al Muatham PHC Centre, and Baghdad General Hospital. They also conducted two focus group discussions with disease-specific surveillance programmes and Geographic Information System team. The second team was assigned to Basra and Mysann and made visits to Basra Directorate of Health, Al Razi PHC Training Centre, Basra Teaching Hospital, Mysann Directorate of Health, Al Auroba PHC Centre and Al Sader Teaching Hospital. The third team visited Kirkuk and the Kurdistan Region and visited Kirkuk Directorate of Health, Azadi Hospital, Tesseen PHC Centre, the Kurdistan region Ministry of Health and Environment, Erbil Directorate of Health, Rizgary Hospital and Brayati PHC Centre. The assessment team members met with managers of facilities, service providers and HIS officers.

3.3 Assessment workshop

A two-day workshop was conducted in Baghdad on 16–17 January 2019 to learn about and document information on the different systems (manual and automated). An overview of systems was presented on behalf of the Ministry of Health and Environment. Four working group sessions[5] were held focusing on key issues of a functioning HIS:

[4] O'Neill K, Viswanathan K, Celades E, Boerma T. Monitoring, evaluation and review of national health policies, strategies and plans. In: Schmets G, Rajan D, Kadandale S, editors. Strategizing national health in the 21st century: a handbook. Chapter 9. Geneva: World Health Organization; 2016.

[5] Each of the four working group sessions was facilitated by one participant with experience in the key HIS issues for discussion. The facilitators were assisted by the review team members.

policy and governance, data sources (CRVS system, routine HIS, disease surveillance), institutional capacities, and mechanisms for review, data use and decision-making. Discussions focused on the types of systems used, challenges related to data collection and flow, data quality, timeliness and efficiency in data flows, challenges in reporting compliance, analysis and interpretation, capacity of staff, use of information for decision-making, and difficulty in assembling information from different sources at all levels. The assessment team also highlighted the value for Iraq in implementing DHIS-2 as a data collection tool across all facilities as a road map for its implementation had already been developed by the Ministry and initiatives to pilot the system had started in other parts of the country such as the Kurdistan region. Discussions were guided by the quantitative WHO monitoring and evaluation assessment and planning tool. A debriefing meeting was held with officials from the Ministry and other stakeholders on the last day to present observations and discuss next steps.

3.4 Synthesis of findings, recommendations and report preparation

In addition to document reviews and working group discussions with Ministry officials and other stakeholders, the team also made technical judgements and consolidated the findings according to the thematic areas of the monitoring and evaluation assessment and planning tool. The team used this information to formulate priority actions or recommendations for health information strengthening in Iraq. A report was compiled and shared with Ministry officials and other stakeholders for review and feedback and a final report was shared with these groups.

4. Key findings

Improved collection, processing, analysis, dissemination and use of health information is a key step in achieving better health outcomes in Iraq. Evidence-based decision-making can be realized if a country has a functional, integrated and comprehensive HIS. Within the context of the Sustainable Development Agenda and the need to monitor progress towards the triple billion targets of WHO's Thirteenth General Programme of Work, the growing demand for health-related information by policy-makers, programme managers, development partners, the public at large and other stakeholders calls for enhancement of data collection and reporting systems from the health facility to the national level.

In Iraq, as is the case with most countries, the HIS serves multiple users and a wide range of purposes. The discussion of the key findings on HIS focuses on two key components: observations from field visits in selected facilities and a quantitative assessment of the availability of key attributes of a functional HIS. This is followed by a discussion on key steps needed to enhance Iraq's HIS.

4.1 Observations from field visits

Three teams conducted field visits aimed at understanding the operations and functionality of the various components of the HIS at the governorate level and identifying areas for improvement. While the selected facilities were not representative at the national level and within the constraints of the available time, this approach enabled the assessment team to gain insights into the current practices at the facility level. The findings (strengths and weaknesses) from each of the teams are consolidated according to the four functional areas of policy and governance, data sources, institutional capacities, and mechanisms for review, data use and decision-making (Table 2).

4.2 HIS assessment and planning tool: scoring

The assessment team used the HIS assessment and planning tool to obtain an overview of the current status of the different components of a functional HIS and to identify priority areas that required further strengthening or development. The tool consists of a checklist of attributes of the four main components of a functioning HIS platform: sound policy and institutional environment, well-functioning data sources, strong analytical capacities, and mechanisms for review and action.

Table 2. Key observations on the health information system from field visits

Key HIS component	Strengths	Areas for improvement
1. Sound policy and institutional environment	Availability of list of indicators and targets to monitor health status in some governorates; list includes mostly WHO regional core health indicators Availability of priority disease lists for surveillance, including case definitions HIS staff have job descriptions in many locations Supportive monitoring visits are conducted (six facilities per month) Implementation of electronic/ automated platforms for data collection, particularly for PHC programs, but not in all locations Data from private sector collected (for in-patients) in some locations Interest to implement DHIS-2 at the national level. Availability of capacity-building programmes Human resources plan is available in some areas	Matching existing indicators with SDG indicators across all data collection units Master list of national core indicators Comprehensive and budgeted plan for a health management information system – developed with involvement of key stakeholders, as well as engagement of relevant units/departments in planning and implementation SOPs for core HIS operations related to data collection, management, analysis and reporting Integrating all subinformation systems Implementing electronic systems that can meet growing data demands, in terms of volume of data, quality and real time reporting Policy on data collection from private sector Communication between health facilities and ministry level Mechanisms to address staff turnover Assessing the current human resources capacity and developing a plan for human resources Enhancing capacity of existing staff in relevant areas of HIS functionality Mobilizing development partners to support HIS operations to ensure that the system is able to generate data that can be used by the Ministry of Health and Environment and all development partners

Key HIS component	Strengths	Areas for improvement
2. Data sources	Data collection for many indicators, including SDG 3 indicators Data collection from all subreporting units Completeness and timeliness of data relatively good at facility level in some areas Local servers available for storage in all areas Although not scaled nationally, the Health Visitor Programme with: 1) georeferenced coding to track health events; 2) data that benefit other programmes to define their interventions; and 3) opportunities to track unvaccinated children, including SMS alerts to minimize defaulters	Standardization of HIS tools and platforms; includes definitions (and job titles) for the human resources database Upgrading and standardization of software for use across facilities for data collection and processing Upgrading HIS software to easily manage HIS data since the current and common HIS software (FoxPro and MS Excel) has limitations related to flexibility and the ability to handle transactional data Overburdened and duplicated data collection processes (i.e. paper forms and electronic data entry for the same data) Completeness of data and ICD-10 coding, including registration of infant deaths Staff capacity to monitor and implement ICD10 Quality and completeness of birth registration data In areas where the Health Visitor Programme is operational, efforts should be made to collect other relevant data instead of only vaccination data as was the case at the time of the assessment Systematic feedback to reporting units Adequacy of surveys and assessments to generate data for planning Electronic document archiving system Back-up or cloud storage Tracking system for patients with multiple visits

Key HIS component	Strengths	Areas for improvement
3. Strong institutional analytical capacities	Data analysis conducted at the Ministry of Health and Environment and partially at the Directorate of Health level Basic analyses of data recently started at the district level in some areas using FoxPro and MS Excel Willingness to analyse data at the lowest level of data collection to guide decision-making Timeliness and completeness of data checks as part of monitoring visits ArcGIS and MapInfo used in the sites visited for georeferenced data to enhance visualization of data	Detailed analyses of data in some areas for decision-making Staff capacity and technical resources to conduct detailed analyses of data
4. Mechanisms for data use, review and action	Data collection to support annual reporting of data, with limited use for decision-making in some areas	Systematic approach for data reviews or quality assurance Use of data for planning

The tool was presented to the participants in a plenary session.

During the national workshop, participants were divided into four groups to score 71 attributes on the checklist, covering the following categories:

- Group 1: Sound policy and institutional environment and effective country mechanisms for review and action;
- Group 2: Well-functioning data sources related to routine HISs;
- Group 3: Well-functioning data sources related to household surveys, censuses and CRVS and strong institutional capacity for data collection, management, analysis, use and dissemination;
- Group 4:Well-functioning data sources related to disease surveillance and health systems.

Fig. 2 displays the results from scoring of the attributes. Complete scoring results for each component (by working group) are presented in Annex 1.

According to the assessment conducted by the workshop participants, 28% of the attributes of a functioning platform are not present, distributed across all components. Although several initiatives have been implemented to enhance the HIS in Iraq, there is no comprehensive costed monitoring and evaluation plan for the national health sector strategy and no mechanisms established for a common investment framework to be used as a basis for partners and domestic support. There is also the absence of an monitoring and evaluation plan that includes a framework specifying a balanced and limited set of core indicators with well-defined baselines, targets, frequency of measurement, and data sources. There is also the lack of a national policy/strategy for e-health and ICT development and use, including governance and legal frameworks, enterprise architecture, standardization and interoperability, and research and evaluation on e-health. Independent reviews of data in strategically important programmes such as maternal, child and perinatal deaths are not conducted regularly.

Other key attributes which are not present include engagement of civil society organizations to actively participate in country reviews of progress

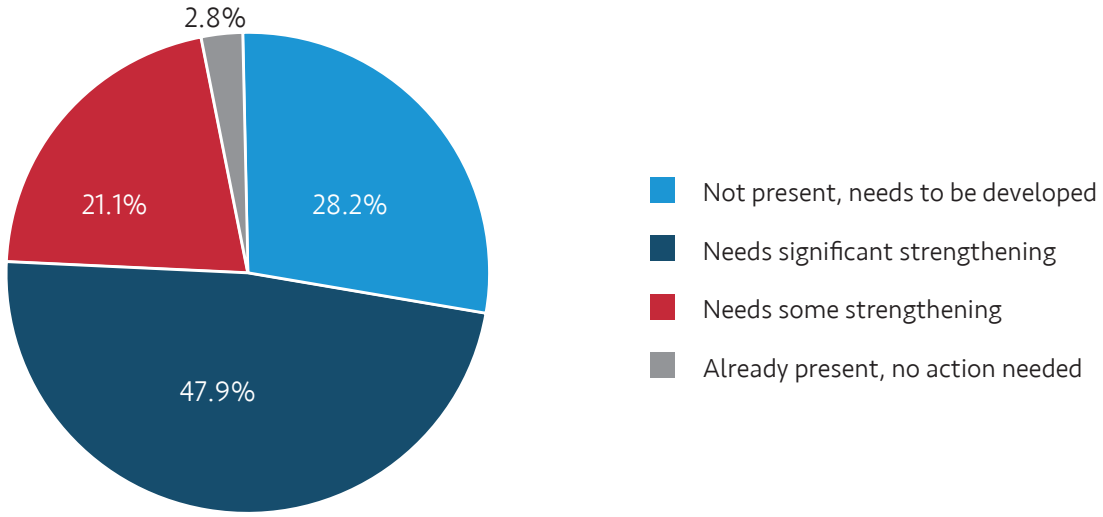


Fig. 2. Summary of scores from the assessment and planning tool

and performance at all levels. The results from reviews are also not incorporated into decision-making, including resource allocation and financial disbursement. Facility reporting systems do not use web-based systems such as DHIS-2, even when implementation is a feasible option. The HIS also lacks institutionalization of regular and independent data quality assessments. The system for automated coding of cause of death is also not used, and there is a lack of trained resources to conduct verbal autopsies. Conduct of household surveys is irregular, thereby limiting the ability to effectively monitor progress on key health indicators. There is also lack of regular (annual) reports of progress and performance covering progress on the objectives and targets.

A collaborative approach involving all key stakeholders to synthesise and analyse national data from all relevant sources is lacking, in addition to effective processes to support analysis and use of data at subnational level. Country-specific routine recording systems for tracking private health expenditures (e.g. by nongovernmental organizations, enterprises and private insurances), to replace annual surveys for health accounts are lacking. Health accounts results are not used for policy planning and evaluation, from overall health system policies to health system financing policy specifically. To a large extent, health systems information subsystems are not interoperable nor are they integrated into the health management information system.

Almost 48% of the attributes need significant strengthening, meaning that although key attributes of a well-functioning HIS are in place, there is still significant room for improvement. This includes key strategic areas such as disease- and programme-specific monitoring and evaluation mechanisms, including indicators, aligning with the monitoring and evaluation plan; ensuring availability of agreed indicators, means of measurement and targets for monitoring and evaluation of health-related SDGs; and the existence of an effective country-led coordination mechanism for monitoring and evaluation and review, with the active involvement and support of relevant development partners, civil society and other actors. Other areas requiring significant strengthening include the development of up-to-date legislation and detailed regulations for health information, including all data sources; a regular and transparent system of reviews of progress and performance on national and locally defined priorities with broad involvement of key stakeholders; the availability of systematic linkages between health sector reviews and disease- and programme-specific reviews; and ensuring that health information flows include regular feedback and use of data locally to improve services and programmes

Other key areas requiring a great deal of strengthening include building the capacity of hospital information systems to report deaths with cause of death through medical certification using ICD 10; enhancing the IT infrastructure to enter information on the deceased, including individual records of cause of death; developing strategies and mobilizing resources to strengthen the notification of births and deaths and medical certification of cause of death. To ensure regular availability of data generated from population-based surveys, there is a need to develop a national survey plan and research agenda for household surveys detailing content, sequencing, periodicity and funding aligned with the monitoring and evaluation plan and the national health strategy.

Plans are also needed to ensure that there is adequate country-level capacity for census and survey data collection, analysis, report writing and dissemination. Furthermore, considerable strengthening is needed in areas related to building strong analytical institutional capacities to support the synthesis of data. At the national level, much strengthening is needed for: delivering periodic performance reviews/analytical reviews based upon robust analysis of health data from all sources, including contextual and qualitative information; affording a range of dissemination strategies to enhance health information, census and vital statistics, including reports, policy-briefs and web-based dissemination; and ensuring that health data are transparent and accessible. Ensuring that national public health and academic institutions, advocacy groups and media are engaged by the Ministry of Health and Environment and the Central Statistical Organization to disseminate key health information is another area requiring strengthening.

With respect to surveillance and health systems, the following are areas requiring much strengthening: defining a list of priority diseases and syndromes under the current national surveillance; ensuring that public and private health care facilities, laboratories and communities contribute to routine case detection; enhancing capacity to diagnose and record cases of notifiable diseases; analysing data on a regular basis at all levels to detect events involving cases or deaths above expected levels for the particular time and place; and defining alert/action thresholds for priority diseases and syndromes. Similar areas relate to integration of all disease surveillance programmes; effective and sufficient deployment of equipment and logistics across the country to appropriately conduct public health surveillance activities; recruitment or redeployment of sufficient staff at all levels to conduct public health surveillance and response; and ensuring that there is a reliable and transparent system for tracking the aggregate availability of human resources. Interventions requiring a great deal of strengthening relate to the development of an electronic registry (human resources information system) with up-to-date data on each individual health worker, including a unique identifier, qualifications and key characteristics (e.g. name, date of birth, sex, contact and place of work). Annual health expenditures tracking the use of the global standard of the System of Health Accounts; development of logistics information system for tracking commodities, medicines, equipment and supplies; and the development of a functional laboratory information system remain key areas that require much strengthening.

Almost 21% of the attributes need some strengthening. These include the development of SOPs that define roles and responsibilities for collecting, managing and disseminating health data, including confidentiality; development of unique facility identifiers and geocodes for all health facilities; ensuring that disease- and programme-specific data elements and indicators are integrated into the national common data repository; and reviewing the performance of the current CRVS system to identify any existing gaps. Other critical areas requiring some strengthening include the availability of a functional multisectoral HIS coordination committee; up-to-date legislation and regulations for the CRVS system; a mechanism to coordinate plans for national censuses and surveys; ensuring that the Central Statistical Organization publishes timely and reliable annual population estimates for various demographic and geographic groups (e.g. live births, surviving

Table 3. Key areas of the HIS requiring improvement as identified in the working groups

Key HIS component	Substantial support is needed	Some support is needed
Group 1. Sound policy and institutional environment	Implementing the costed monitoring and evaluation plan for the national health sector strategy Developing a mechanism to engage domestic and external development partners to discuss HIS initiatives and align their support with national needs Developing a national strategy for e-health and ICT Developing national core health indicators with baselines, targets and frequency of measurement Establishing coordination mechanisms to improve HIS operations and monitoring and evaluation-related activities	Developing SOPs on roles and responsibilities for collecting, processing, analysing and disseminating data
Group 1. Effective country mechanisms for review and action	Operationalizing the progress and performance review system to include engagement of all stakeholders Using data for decision-making Developing and implementing effective feedback mechanisms	N/A
Group 2. Routine HISs	Ensuring adequate staffing, supervision and analytical capacities Improving feedback mechanisms and use of web-based systems across all reporting facilities Rolling out DHIS-2 as a data collection tool across all facilities Improving current infrastructure for a functional routine HIS in place Developing an electronic medical records system	Integrating disease- and programme-specific data elements into the national common data repository Completing and updating exact georeference codes for health facilities
Group 3. Household surveys; censuses; CRVS	Improving data on cause of death through medical certification using ICD-10 Automating cause of death Developing national survey plans Conducting population censuses	Improving conduct and frequency of multisectoral coordination committee Following up with parliament to endorse amended CRVS legislation

Table 3. Key areas of the HIS requiring improvement as identified in the working groups

Key HIS component	Substantial support is needed	Some support is needed
Group 3. Strong institutional capacity for data collection, management, analysis, use and dissemination	Developing data analytical capacities at national and subnational levels	Following international standards in analysing and presenting key health indicators
	Establishing collaborative approaches to analysing health data at the national level	
	Making health data transparent and accessible	
Group 4. Disease surveillance	Identifying priority diseases at the national level	Updating standard case definitions for all diseases and syndromes under surveillance
	Engaging private sector to report data	
	Building capacity in data analysis	
Group 4. Health systems information (logistics management information system, national health accounts, human resources).	Tracking private health expenditure	Improving financial management system
	Developing electronic human resources registry	
	Using effective system of national health accounts	
	Developing national policy on HIS	

A detailed table with a summary of the scores for the attributes and components of the monitoring and evaluation platform is presented in Annex 2. The priorities emerging from the discussion and presented in Table 3 have also been included into the roadmap (Section 5).

infants, women of reproductive age, by district); following international standards for analysis and presentation of key indicators to ensure the compatibility of results between populations and over time; and establishing a time frame to verify an event and to report all relevant weekly aggregated data at all levels. Critical areas that require additional strengthening include developing a strong public financial management system, and tracking government budgets, disbursements and expenditures at all levels (from facility to central level).

Finally, only one attribute (about 3% of the attributes) was already present and did not require further action: standard case definitions were available for all diseases and syndromes under surveillance.

Table 3 summarizes some of the key issues discussed for key components in each of the working groups, aggregated in two main domains: "substantial support needed" (which includes attributes scored as 1 and 2); and "some support needed" (scored as 3).

A detailed table with a summary of the scores for the attributes and components of the monitoring and evaluation platform is presented in Annex 2. The priorities emerging from the discussion and presented in Table 3 have also been included into the roadmap (Section 5).

4.3 Fragmentation

In Iraq, data collected from various health service delivery points are sent to the relevant Directorate of Health or the Health and Vital Statistics Section at the governorate level. These data are compiled

and prepared in specially designed statistical tables and transmitted on fixed dates. The statistical copies are available in hard copy and in electronic format (DVDs) for further aggregation and analysis to the Health and Vital Statistics Department at the national level.

In the health facilities, while most services are provided from the same premises, each service is managed independently of other closely interrelated services. To a large extent, most of the data come from the various programmes that operate concurrently with a vertical management information system. By implication, the service delivery systems and subinformation systems are fragmented.

5. Roadmap of key priority actions

During the working group sessions of the national workshop, stakeholders identified priority actions based on the scores for the attributes and the qualitative information gathered during Day 1. Workshop participants discussed the priorities extensively in a plenary session. The tentative time frame, responsible actors and other key actors needed for implementation were identified. The key priorities are presented in Table 4.

Table 4. Key priority interventions to enhance the HIS in Iraq: roadmap of key priority actions

Roadmap of key priority actions		Time frame				
Strategic dimensions	**Key priority actions**	**2019**	**2020**	**2021**	**2022**	**2023**
1. Policy, governance and institutional environment	Establish high level national committee to monitor implementation of HIS interventions	X				
	Develop monitoring and evaluation indicators for the disease programmes as part of the monitoring and evaluation plan	X				
	Develop a national core indicator list for inclusion in the monitoring and evaluation plan and in line with global and regional standards	X				
	Develop a comprehensive costed monitoring and evaluation plan in a workshop format with relevant partners, including Ministry of Finance	X				
	Disseminate comprehensive monitoring and evaluation plan		X			
	Establish metadata dictionary to standardize data collection and processing at all levels		X			
	Conduct annual review of health systems data to assess progress in line with the monitoring and evaluation plan		X	X	X	X
	Update national standardized mechanisms for unifying health data and health data collection across all reporting units and institutions		X			

Table 4. Key priority interventions to enhance the HIS in Iraq: roadmap of key priority actions

Roadmap of key priority actions		Time frame				
Strategic dimensions	**Key priority actions**	**2019**	**2020**	**2021**	**2022**	**2023**
	Establish a common investment framework for the monitoring and evaluation plan, in collaboration with relevant stakeholders	X	X			
	Update legislation and detailed regulations for disseminating health information, including use and sharing of all data sources		X			
	Establish a unified strategy for e-health and ICT		X			
	Update/develop SOPs for data collection	X	X			
2. Routine HISs	Develop ICT/data management infrastructure for health facilities and offices		X	X	X	X
	Increase financial resources for enhancing the logistic support of statistic units		X	X	X	X
	Build capacity of relevant staff within the health management information system unit at national and subnational levels	X	X	X	X	X
	Recruit/redeploy and train subnational health information officers	X	X			
	Update field supervision checklist in line with international standards	X	X			
	Develop and implement SOPs for regular supervisory visits (central, intermediate and peripheral), including feedback mechanisms		X	X	X	X
	Implement mechanisms to evaluate actions taken regarding the recommendations of the supervisory visits		X			
	Conduct training workshops on data collection, processing and analysis for relevant staff using data from facility- and community-based information		X	X	X	X
	Develop SOPs on analysis of facility data, including how to deal with incompleteness, inconsistency and implausibility	X	X			
	Develop standards for evaluation of data analysis conducted at Directorate of Health level by involving all stakeholders	X	X			
	Develop, print and disseminate quarterly reports, dashboards and summary reports		X	X	X	X
	Update the master list of health facilities	X	X			
	Roll out DHIS-2 to all districts/facilities, including capacity-building		X	X	X	X
	Upgrade/establish a national online common data repository to meet national and international needs	X	X	X	X	X

Table 4. Key priority interventions to enhance the HIS in Iraq: roadmap of key priority actions

Roadmap of key priority actions		Time frame				
Strategic dimensions	**Key priority actions**	**2019**	**2020**	**2021**	**2022**	**2023**
	Develop a unified electronic medical records systems, ensuring interoperability			X	X	X
	Implement facility assessments to assess service delivery and quality of care		X			
	Conduct annual data quality assessment reviews, including data verification based on international standards	X	X	X	X	X
	Assess available community-based HIS (e.g. health visitors, Korea International Cooperation Agency project) to identify potential for upgrading at national level	X				
3. Health systems monitoring	Review the human resources tracking system to identify gaps and challenges for further strengthening		X			
	Adopt the electronic registry (human resources information system) system and link it with the human resources department in the Directorate of Planning			X		
	Build capacity of staff responsible for managing the human resources information system database			X	X	
	Allocate funds to train relevant staff working on health systems data		X	X	X	X
	Track national health expenditures in line with international standards for the System of Health Accounts	X	X	X	X	X
	Implement studies on the economic burden of diseases as part of the System of Health Accounts		X	X	X	X
	Develop infrastructure and technology to improve public financial management system		X	X	X	X
	Develop a routine recording system to track private health expenditures (e.g. by nongovernmental organizations)		X	X	X	X
	Implement mechanisms for using data from national health accounts in decision-making		X	X	X	X
	Implement an electronic logistics management information system to track commodities, medicines, equipment and supplies		X			
	Enhance functionality of public health laboratory information system by using a centralized, web-based, integrated system			X	X	X
	Develop a national identification system for each patient		X	X		
	Adopt a national policy for HIS in line with international standards (i.e. electronic and interoperable systems)		X			

Table 4. Key priority interventions to enhance the HIS in Iraq: roadmap of key priority actions

Roadmap of key priority actions		Time frame				
Strategic dimensions	**Key priority actions**	**2019**	**2020**	**2021**	**2022**	**2023**
4. Surveillance	Revise/develop communicable and noncommunicable disease lists for age categories	X				
	Identify priority diseases for monitoring at the national level	X	X			
	Include private health sector in the priority disease surveillance list	X	X	X		
	Develop mechanisms (including legislation) to collect data from the private health sectors	X	X	X	X	
	Develop SOPs on the diagnosis of communicable and noncommunicable diseases		X			
	Develop timelines for verification of events and reporting weekly aggregated data from the public and private sector	X				
	Build capacity of Ministry of Health and Environment staff to analyse and disseminate disease surveillance data	X	X	X		
	Develop emergency response for activation based on relevant thresholds for events		X			
5. Household surveys and censuses	Increase participation of national coordination mechanisms for censuses and surveys to include involvement of relevant ministries and the private sector	X				
	Develop a national survey plan which includes type of survey and implementing partners	X				
	Implement the national survey plan		X	X	X	X
	Conduct national population census		X			
	Implement capacity-building for census and survey data collection, analysis, report writing and dissemination	X	X	X	X	X
	Review progress in implementing interventions to improve CRVS based on the CRVS assessment conducted in 2013		X			
6. Civil registration and vital statistics	Establish a functional, multisectoral, CRVS committee which includes representation from relevant stakeholders at the national level	X	X	X	X	X
	Follow-up with the Health and Environment Committee to endorse the recently amended CRVS legislation	X				
	Conduct training of trainers on ICD-10, including medical certification	X				
	Develop and implement curriculum to train medical doctors on medical certification using ICD-10	X	X	X	X	X

Table 4. Key priority interventions to enhance the HIS in Iraq: roadmap of key priority actions

Roadmap of key priority actions		Time frame				
Strategic dimensions	**Key priority actions**	**2019**	**2020**	**2021**	**2022**	**2023**
	Assess capacity of existing IT infrastructure and staff to collect and process information on the deceased, including cause of death, in individual records	X				
	Conduct training of relevant staff to enhance their skills in core areas of processing and managing CRVS data, including automated coding of causes of death	X	X	X	X	X
	Establish standards and legislation to ensure that reports on births and deaths (with medical certification) are not delayed by responsible persons or reporting units	X	X			
7. Analysis, use and dissemination of data, including mechanisms for review and action	Redistribute and train staff trained in statistics specialty for those working in the Ministry of Health and Environment office	X	X	X	X	X
	Establish a health analysis unit within the Health Statistics Department		X			
	Develop electronic dashboards for policy-makers to support decision-making	X	X			
	Develop an action plan to analyse national data from all relevant sources with involvement of Ministry of Health and Environment, Central Statistical Organization, technical experts and public and private sector	X	X			
	Implement mechanisms to start reporting on core indicators that are not yet reported to WHO	X	X	X		
	Develop SOPs on analysis and use of data at national and subnational levels	X	X			
	Develop multisectoral strategy on dissemination and use of health data	X	X			
	Implement mechanisms for annual review of health data	X	X			
	Analyse and revise priority health programmes		X	X	X	
	Review maternal mortality surveillance system		X			
	Implement systems to link health sector reviews with disease- and programme-specific reviews		X	X		
	Engage civil society organizations in country reviews of progress and performance through training workshops and meetings	X	X	X	X	X
	Prepare annual plans using results from annual health sector reviews	X				

6. Recommendations

6.1 Sound policy and institutional environment

Implementation of the following recommendations could improve the management, coordination and efficiency of HIS operations across the country.

- Enhance the operations of the national HIS under the leadership of the Ministry of Health and Environment and establish a national coordination committee. The Ministry should continue its leading role in mobilizing stakeholders and developing mechanisms for the mobilization of domestic and external resources and the committee should convene regular meetings with all relevant stakeholders at the governorate and national level.
- Strengthen HIS operations by developing legislation, policy and SOPs to improve all data-related processes, including legislation on data access and sharing.
- Develop a national strategy for e-health and ICT development within the context of the data revolution.

6.2 Data sources

6.2.1 Health systems, health facility and community information systems

Robust health system, health facility and community information systems are the backbone of any HIS. Initiatives to enhance these data building blocks need to be valued by all stakeholders. This can be achieved by implementing the key recommendations itemized below.

- Improve the existing ICT/data management infrastructure to ensure that technological and staffing needs match existing demands for data to monitor progress towards universal health coverage. This can be achieved through capacity-building and purchasing relevant ICT equipment.
- Update the master list of facilities, including for the private sector.
- Pilot and scale up the use of DHIS-2 to collect, process and disseminate data across the country.
- Conduct facility assessments to generate data that can be used to assess service delivery and quality of care.
- Identify required data, sources and reporting mechanisms to establish a national online common data repository to meet national and international needs.
- Set up a mechanism and regulate private sector data reporting on the priority epidemic-prone diseases and routine data collection.

6.2.2 Disease surveillance

Recognizing the critical role of public health surveillance in improving health outcomes, the following recommendations have been identified to strengthen the disease surveillance system.

- Review the list of communicable and noncommunicable diseases for relevant age groups.
- Develop mechanisms (including legislation) to collect data from the private health sector.
- Develop timelines for reporting weekly aggregated data, including verification of events, from the public and private sectors.
- Involve the private sector in reporting on the priority epidemic-prone diseases.
- Build capacity of staff at all levels on epidemiological data analysis and reporting.
- Develop and adapt the DHIS-2 platform to reinforce disease surveillance system.

6.2.3 Civil registration and vital statistics, household surveys and census

Population-based data sources provide valuable information for the entire population on overall health status and access to health services, etc. While several interventions have been implemented in Iraq to strengthen population-based data sources, the following areas should be the focus for improvement.

- Develop sustained collaboration between the various agencies that are responsible for the CRVS system, including a timely schedule for meetings to improve CRVS operations and increase utilization of CRVS data for policy-making.
- Develop and implement standard quality assurance tools (such as coding) to monitor key components of the CRVS system.
- Consolidate efforts to ensure that cause of death statistics from northern governorates are included in the national statistics.
- Develop a multisectoral mechanism to coordinate plans for the national census and national surveys.
- Develop a harmonized national surveys plan to ensure that the country is able to report on the maximum number of core health indicators. This will ensure that findings from key surveys, such as health examination surveys, provide data on most of the core health indicators.
- Follow up with the Health and Environment Committee to endorse the recently amended CRVS legislation.
- Build capacity of doctors in ICD coding and medical certification of cause of death. Capacity-building should also be extended to relevant staff responsible for analysis of cause of death data in order to promote timely production of vital statistics reports.

6.3 Institutional capacity for data management and analysis

Institutional capacity for data management and analysis can be enhanced by addressing the following key areas.

- Conduct regular workshops on data analysis and use at the national and subnational levels to build capacity of relevant staff across all levels and ensure timely generation of key health reports.
- Implement mechanisms to start reporting on core health indicators (that are not reported to WHO), including other health-related SDG indicators.
- Develop a multisectoral strategy on dissemination and use of health data.
- Implement mechanisms for annual review of data.

6.4 Mechanisms for data use, review and action

Data collection and processing are not an end in themselves. Ensuring the existence of mechanisms to use the data, regularly reviewing them and implementing evidence-based interventions are critical steps towards measurement of health outcomes. Key areas to strengthen these mechanisms include the following.

- Revamp the national data warehouse to address fragmentation challenges by ensuring that all facilities are able to report and access the data to monitor their progress and promote experience.
- Promote and establish a national health observatory and an open data access policy.
- Develop SOPs on analysis and use of data at the national and subnational level.
- Engage civil society organizations in country reviews of progress and performance through training workshops and meetings.

6.5 Addressing fragmentation

While global standards call for implementation of an integrated management information systems, many countries, including Iraq, are running vertical management information systems that do not provide an opportunity to assess the performance of the health system. The design of information systems should be influenced by the management design of a country's health system. While some management information systems demonstrate key strengths, they are also beset by a number of limitations, such as gross underuse of the information they collect. Comparison of related data (i.e. triangulation) from all vertical management information systems provides an opportunity to use them at the national, regional and international level. Addressing management information system fragmentation requires, among other things, adopting a holistic approach that can easily be applied simply by changing the management practices without adding any financial burden to the system.

One of the key steps in enhancing HIS operations is to define indicators and identify data needs. This should be followed by comparing additional data needs and what is already existing or collected in the current subinformation systems. Once gaps are identified, data collection tools are modified or additional tools are developed to ensure that all the required data are collected and reported. This is very important, particularly for Iraq where 16 out of the 75 WHO regional core health indicators were not reported at the time of the assessment (Annex 3).[6] These additional operations should be reflected in the entire integrated HIS. Periodic reviews of data needs and operations, guided by a national HIS strategic plan, should be made by all stakeholders. The following recommendations were developed to address fragmentation.

- Define health indicators that are required for the country to respond to national, regional and international demands for health data.
- Develop integrated data aggregation mechanisms across all facilities to ensure that they are responsive to system needs and data demands.
- Implement or customize an electronic tool such as DHIS-2 with the capability of storing the data required to calculate all national priority indicators.
- Carry out periodic reviews of data to identify alignment and promote triangulation of data for effective decision-making.
- Conduct periodic reviews of HIS performance based on existing resources and emerging needs.

6.6 Key considerations in using the DHIS-2 package

6.6.1 Implementation

A pilot DHIS-2 implementation was carried out in Erbil and at the time of the assessment, DHIS-2 was being used in 10 health facilities and the Directorate of Health to enhance the collection of population data and improve access to and quality of public health care. While DHIS-2 is one of the available web-based solutions to support and enhance collection, processing and analysis of routine HIS data, its use in low- and middle-income countries has been widely acknowledged. The Iraq HIS may benefit from some of the key features and functionality of DHIS-2. If the country makes progress in piloting and implementing DHIS-2 nationwide (to replace the existing system), it should not be considered as "another, parallel, health management information system running alongside" but as a reference medium for the national surveillance and response system. The following sections provide key areas for consideration for a smooth transition to DHIS-2.

[6] A list of indicators reported through United Nations estimation processes is presented in Annex 4.

6.6.2 Key considerations for transitioning to DHIS2 in Iraq

A successful implementation of DHIS-2 at the national level entails the following:

- **Establishing a national DHIS-2 steering committee:** A steering committee should consist of a multidisciplinary team comprising decision-makers/authorities in charge of current health management information systems. The committee is responsible for managing and monitoring, among others, the transition roadmap, monitoring and evaluation plans and indicators and resource allocation. The committee is also in charge of establishing workgroups responsible for policy definition, standards development and capacity-building.

- **DHIS-2 capacity-building plan:** Capacity-building for any new technology is critical to enable a consistent understanding of the technology across all stakeholders, from end-users to high-level country-wide decision-makers. Such capacity-building should include not only professional-based training on how to implement and make DHIS-2 operations a success in Iraq but also focus on training all key players or individuals at the governorate or local level.

- **National HIS standards:** Every national HIS strategy requires a health information standard plan and a committee defining key elements such as the coding, case definition and terminology to address the local to international expectations of indicator monitoring and surveillance reports. In addition, standards development facilitates the transition from the current health management information system using detailed data mapping of existing databases.

- **DHIS2 storage and access policy:** During the field visits, the assessment team found that data were being stored on local servers with no option for cloud storage or backup. The steering committee is expected to develop a clear policy on where and how health information data is stored, and who can access such information. This is particularly important as it defines the rights of every stakeholder and contributor in regard to the data produced. It is also recommended that the Ministry of Health and Environment invests in infrastructure required to install and implement DHIS-2.

A successful implementation of DHIS-2 also entails the engagement of a consultancy team to carefully study the current health management information system databases, the available human resources and the Ministry of Health and Environment data and develop a realistic timeline for DHIS-2 implementation. This would be used as a basis for further investment and budget expenditure for the national HIS system.

6.6.3 DHIS-2: a practical platform for nationwide data collection

In countries with limited or irregular power supply, a triple-class solution using a combination of the DHIS-2 platform plus mHealth (mobile-based health care IT solutions), particularly in areas with no Internet access, can be considered as a practical IT-based solution for Iraq. Using this solution, three classes of incidence report can be made feasible:

- **Class One (no-Internet nonliterate to literate protocol):** According to this protocol, a non-literate community health worker reports any case of incidence (such as a death) to a literate body at a designated call centre. The call centre agent can further transfer the data to the DHIS-2 system using either Class 2 or 3.

- **Class Two (no-Internet GSM-based short data message):** In this class, any case of disease outbreak, incidence or death can be reported using a coded SMS (with less than 20 characters), containing only name, event code and location code, sent to an SMS server connected to DHIS-2 servers. This could greatly resolve the current issue of outdated reporting and weak death report, particularly in areas of poor access.

- **Class Three (Internet-based mobile/tablet solutions)**: In this class, a basic tablet or smartphone is used by literate and trained people for data entry and reporting at the service point or facilities; DHIS-2 has a well supported network for such devices to be defined within its data entry platforms. Using this class, any basic service, such as community health worker visits, vaccination and medicine distribution can be recorded and monitored instantly.

The use of DHIS-2 has been piloted elsewhere in Iraq and there is potential to use the platform for data collection at the facility level across the country. While DHIS-2 allows customization of HIS data collection, aggregation and reporting, there is a need to carefully plan its roll-out at the national level as discussed in Section 6.6.2.

7. Next steps

Enhancing HIS operations in Iraq requires a plan which identifies the key HIS components, the expected output, financial cost, responsible stakeholders and key recommended areas for improvement. An HIS improvement plan can be implemented effectively with involvement of all stakeholders across the country. This can be achieved by development of a strategic plan that highlights existing HIS strengths and opportunities and builds on the information provided in Section 4 on key findings on the HIS (including the priority actions in Section 5).

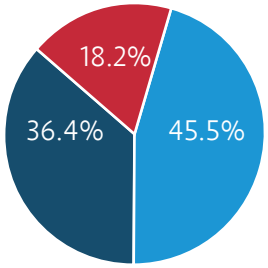
Within the context of monitoring the sustainable development agenda, a seamless and well-integrated HIS is the ultimate goal for any country. The priority actions should provide sufficient background information to develop an HIS strategy which will act as a resource mobilization document to enhance HIS operations. Development of detailed short-, mid- and long-term plans for HIS strengthening should be a main priority. The focus should be on implementing HIS interventions that can enhance HIS operations without much change ("quick wins"). The HIS strategy should then be costed based on the type of intervention, the estimated person/days and any other additional materials or equipment needed.

Development of the HIS strategy should also take into consideration the need to ensure that the national HIS is able to generate data that can be used to report on the core health indicators that were not being reported to WHO at the time of the assessment. The priority actions identified in this report can yield significant results if their implementation builds on the interventions and efforts of the Ministry of Health and Environment and other development partners to enhance the Iraq HIS. This approach is in line with strategies adopted by the Health Data Collaborative,[7] an inclusive partnership of international agencies, governments, philanthropies, donors and academics with the common aim of improving health data.

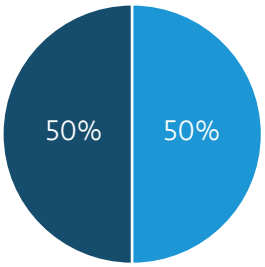
[7] Details about the Health Data Collaborative are available at: https://www.healthdatacollaborative.org/.

Annex 1. Summary of scores for each working group

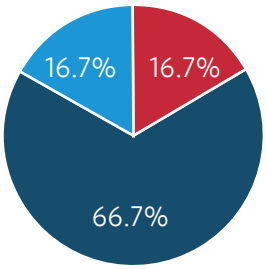
Group 1. Policy & institutional environment



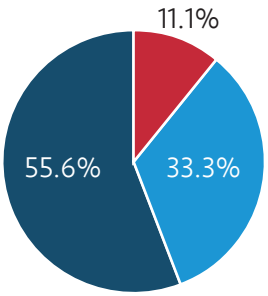
Group 1. Effective country mechanisms for review and action



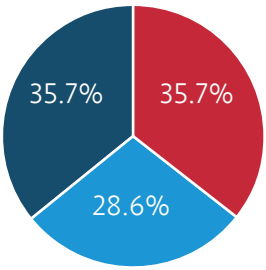
Group 2. Routine health information systems



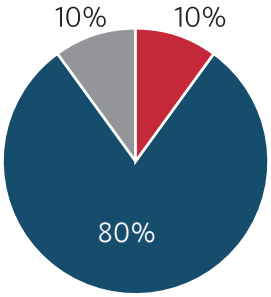
Group 3. Strong institutional capacities



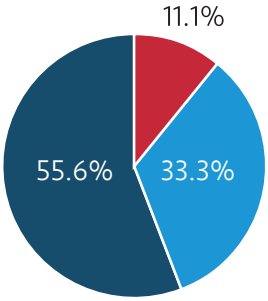
Group 3. Household surveys; censuses; CRVS



Group 4. Disease surveillance



Group 4. Health systems



Key

- Not present, needs to be developed
- Needs significant strengthening
- Needs some strengthening
- Already present, no action needed

Annex 2. Results of the scoring exercise: components and attributes

The table below captures the results of the scoring exercise by working group and attribute.

Component	Not present, needs to be developed	Needs significant strengthening	Needs some strengthening	Already present, no action needed
Policy and institutional environment	There is a comprehensive costed monitoring and evaluation plan for the national health sector strategy. The monitoring and evaluation plan has been informed by a recent (< 2 years) assessment of current monitoring and evaluation /HIS. The monitoring and evaluation plan includes a framework that specifies a balanced and limited set of core indicators with well-defined baselines, targets, frequency of measurement and data sources. There is a common investment framework used as the basis for partner and domestic support. There is a national policy/strategy for e-health and ICT development and use, including governance and legal frameworks; enterprise architecture; standardization and interoperability; and research and evaluation on e-health.	Disease- and programme-specific monitoring and evaluation mechanisms, including indicators, are aligned with the monitoring and evaluation plan. There are agreed indicators, means of measurement and targets (developed in collaboration between relevant ministries and agencies) for monitoring and evaluation of health-related SDGs. Existence of an effective country-led coordination mechanism for monitoring and evaluation and review with active involvement and support of relevant development partners, civil society and other actors. There is up-to-date legislation and detailed regulations for health information, including all data sources.	Standard operating procedures have been written that define roles and responsibilities for collecting, managing and disseminating health data, including confidentiality. There is an overall unifying health data architecture and health data collection standards.	

The table below captures the results of the scoring exercise by working group and attribute.

Component	Not present, needs to be developed	Needs significant strengthening	Needs some strengthening	Already present, no action needed
Routine HISs	Facility reporting systems use web-based systems (e.g. DHIS) when feasible. Regular and independent data quality assessments are institutionalized.	There is adequate infrastructure and staffing for a functional routine HIS. Effective supervisions are in place (up-to-date checklist, resources). Local level decision-makers and community members analyse and use facility and community-based information to develop responsive and appropriate service delivery strategies and community-based interventions. Feedback is systematically provided to all subreporting units. There is adequate training and capacity-building for a functional routine HIS. There is a system for collection and use of patient management data at the point of service. There is a harmonized system of facility assessments to verify service delivery and quality of care. Data on community-based health programmes are available in formats that are easy to access and linked to facility-based databases.	There is a comprehensive list of health facilities, with unique facility identifiers and geocodes. Disease- and programme-specific data elements and indicators are integrated into the national common data repository.	

The table below captures the results of the scoring exercise by working group and attribute.

Component	Not present, needs to be developed	Needs significant strengthening	Needs some strengthening	Already present, no action needed
Household surveys, censuses, CRVS	Systems for the automated coding of cause of death are progressively used. There are trained resources to conduct verbal autopsies. Use of verbal autopsy is being gradually expanded to generate nationally representative cause of death statistics. Household surveys are conducted every 2–3 years to monitor progress on key health indicators of the national health strategic plan.	Hospitals are reporting deaths, with cause of death, through medical certification using ICD 10. There is IT infrastructure for entering information on the deceased, including the cause of death, by individual record. There are strategies and resources to strengthen the notification of births and deaths and medical certification of cause of death. There is a national survey plan and research agenda for household surveys detailing content, sequencing, periodicity and funding, aligned with the monitoring and evaluation plan and the national health strategy. There is adequate country level capacity for census and survey data collection, analysis, report writing and dissemination.	A comprehensive assessment has been conducted of current CRVS performance. A functional multisectoral coordination committee is in place (National Statistical Office, Ministry of Health and Environment, etc.). There is up-to-date legislation and regulations for CRVS. A coordination mechanism is in place to coordinate plans for the national census and national surveys. The National Statistical Office publishes timely and reliable annual population estimates for various demographic and geographic groups (e.g. live births, surviving infants, women of reproductive age, by district).	Household surveys are conducted every 2–3 years to monitor progress on key health indicators of the national health strategic plan.

The table below captures the results of the scoring exercise by working group and attribute.

Component	Not present, needs to be developed	Needs significant strengthening	Needs some strengthening	Already present, no action needed
Disease surveillance		A list of priority diseases and syndromes under current national surveillance is defined. Public and private health care facilities, laboratories and communities contribute to routine case detection. The country has adequate capacity to diagnose and record cases of notifiable diseases. Data are analysed on a regular basis at the different levels to detect events involving cases or deaths above expected levels for the particular time and place. Alert/action thresholds have been defined for priority diseases and syndromes. There is integration of all disease surveillance programme equipment and logistics (forms and registers, computers, telephones, communication, including Internet connectivity, cars and motorbikes) are sufficient and appropriately disseminated in the country to conduct public health surveillance activities. Enough staff is available at all levels to conduct public health surveillance and response.	The time frame to verify an event and to report weekly aggregated data is defined at all levels.	Standard case definitions are available for all diseases and syndromes under surveillance.

The table below captures the results of the scoring exercise by working group and attribute.

Component	Not present, needs to be developed	Needs significant strengthening	Needs some strengthening	Already present, no action needed
Health systems	There are country-specific routine recording systems for tracking private health expenditures (e.g. by nongovernmental organizations, enterprises, private insurance, etc.), to replace annual health accounts surveys. Health accounts results are used for policy planning and evaluation, from overall health system policies to health system financing policy, specifically. Health systems information subsystems are interoperable in, or have been integrated into, the health management information system.	There is a reliable and transparent system for tracking the aggregate availability of human resources. These aggregate data, by cadre and by health facility, are widely available for purposes of assessing equity productivity. There is an electronic registry ("human resources information system") with up-to-date data on each individual health worker, including a unique identifier, qualifications and key characteristics (name, date of birth, sex, contact, place of work, etc.). Health expenditures are tracked on an annual basis, using the global standard of the System of Health Accounts 2011. There is a logistics information system for tracking commodities, medicines, equipment and supplies. There is a functional laboratory information system.	There is a strong public financial management system, tracking government budgets, disbursements and expenditures at all levels (from facility to central level).	

The table below captures the results of the scoring exercise by working group and attribute.

Component	Not present, needs to be developed	Needs significant strengthening	Needs some strengthening	Already present, no action needed
Strong institutional capacities	There is a regular (annual) report of progress and performance that covers progress vis-à-vis the objectives and targets, equity and efficiency. Synthesis and analysis of national data from all relevant sources is conducted using a collaborative approach involving health ministries, national statistics offices, technical experts and the public and private sectors. There are effective processes to support analysis and use at the subnational level.	Strong analytical institutional capacity for supporting synthesis of data is in place. At national level, there are periodic performance reviews/ analytic reviews based on robust analysis of health data from all sources, including contextual and qualitative information. A range of dissemination strategies exist for health information, censuses and vital statistics, including reports, policy-briefs and web-based dissemination. Health data are transparent and accessible. National public health and academic institutions, advocacy groups and the media are engaged by the Ministry of Health and Environment and the National Statistical Office to disseminate key health information.	International standards are followed for analysis and presentation of key indicators in order to ensure comparability of results between populations and over time.	

The table below captures the results of the scoring exercise by working group and attribute.

Component	Not present, needs to be developed	Needs significant strengthening	Needs some strengthening	Already present, no action needed
Effective mechanisms for review and action	Independent reviews of data in strategically important programmes, such as maternal, child and perinatal deaths, are conducted regularly. Civil society organizations actively and meaningfully participate in country reviews of progress and performance at all levels. Results from reviews are incorporated into decision-making, including resource allocation and financial disbursement.	A regular and transparent system of reviews of progress and performance vis-à-vis nationally and locally defined priorities with broad involvement of key stakeholders is in place. There are systematic linkages between health sector reviews and disease- and programme-specific reviews. Health information flows include regular feedback and use of data locally to improve services and programmes.		

Annex 3. Regional core health indicators not reported to WHO

Major domain	Indicator name
Health determinants and risks	Literacy rate among persons aged 15–24 years
	Children under 5 years who are obese
	Tobacco use among persons aged 15+ years
	Anaemia among women of reproductive age
Health status	Estimated number of new HIV infections/cases
	Number of people requiring interventions against neglected tropical diseases (leishmaniasis, leprosy, rabies and mycetoma)
	Population at risk of neglected tropical diseases (subject to treatment campaigns)
Health system response	Population with catastrophic health expenditure
	Population impoverished due to out-of-pocket health expenditure
	International Health Regulations technical areas
	Availability of selected essential medicines in health facilities
	Surgical wound infection rate
	Treatment coverage for opioid dependence
	Antiretroviral therapy (ART) coverage among all adults and children living with HIV
	Percentage of key populations at higher risk (e.g. those who inject drugs, sex workers, men who have sex with men) who have received an HIV test in the past 12 months and know their results

Annex 4. Regional core health indicators reported through the United Nations estimation process

- Life expectancy at birth
- Estimated number of new HIV cases
- Adolescent fertility
- Access to improved drinking water
- Access to improved sanitation
- Neonatal mortality rate
- Infant mortality rate
- Child mortality rate
- Maternal mortality ratio
- Mortality by cause of death
- Mortality attributed to household and ambient air
- Mortality attributed to unsafe water and sanitation
- Cancer incidence (all types)
- Demand for family planning satisfied
- Adults and children currently receiving antiretroviral therapy (ART).

This report presents the findings of a comprehensive assessment of Iraq's health information system undertaken by WHO in 2019 at the request of the Ministry of Health and Environment. Health information systems, including civil registration and vital statistics systems, provide health information data for programme and performance monitoring, quality of care, planning and policy-making. The assessment resulted in a set of recommendations to enable the Ministry of Health and Environment and other stakeholders to develop comprehensive and efficient systems to monitor health risks and determinants; track health status and outcomes, including cause-specific mortality; and assess health system performance. The recommendations also provide an opportunity for the country to respond to the growing demands for health data to measure progress towards the health-related Sustainable Development Goals.

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ARYA TEB FIROUZ

WHO, WORLD BANK & German Government reports on Iraq

WHO Joint External Evaluation of IHR Core Capacities of Iraq- 2019

JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES of the REPUBLIC OF IRAQ

Mission report:

12-17 March 2019

World Health Organization

JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES of the

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WHO/WHE/CPI/2019.61

Suggested citation. Joint external evaluation of IHR core capacities of the Republic of the Philippines. Geneva: World Health Organization; 2019 (WHO/WHE/CPI/2019.61). Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at http://apps.who.int/iris.

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ACKNOWLEDGEMENTS

The Joint External Evaluation (JEE) Secretariat of the World Health Organization (WHO) would like to acknowledge the following, whose support and commitment to the principles of the International Health Regulations (2005) have ensured a successful outcome to this JEE mission.

- The Government and national experts of the Republic of Iraq for their support of, and work in, preparing for the JEE mission.
- The governments of Australia and the Lebanese Republic for providing technical experts for the peer-review process.
- The Food and Agriculture Organisation of the United Nations (FAO), the World Organization for Animal Health (OIE) and the Eastern Mediterranean Public Health Network for their contribution of experts and expertise.
- The following WHO entities: the WHO Country Office of Iraq the WHO Regional Office for the Eastern Mediterranean and the Department of Health Emergencies at the WHO headquarters.
- The Global Health Security Agenda for its collaboration and support.
- The governments of Germany and United States of America for their financial support to this mission.

ABBREVIATIONS

AMR	antimicrobial resistance
AWaRe	access, watch and reserve
BSC Class 2	Class 2 biosafety cabinets
BSL	bio safety level
CAC	Crisis Action Cells
CBRN	chemical/biological/radiological/nuclear
CPHL	Central Public Health Laboratory
CVL	Central Veterinary Laboratory
DQS	data quality self-assessment
EML	Essential Medicines List
EMPHNet	Eastern Mediterranean Public Health Network
EMT	Emergency Medical Team
EOC	Emergency Operations Centre
EOC-NET	Public Health Emergency Operations Centre Network
EMT	Emergency Medical Team
EMVAP	EMRO Regional Vaccine Action Plan
EPI	expanded programme on immunization
EPR	emergency preparedness and response
EQA	external quality assessment
EVM	effective vaccine management
FAO	Food and Agriculture Organization of the United Nations
FETP	field epidemiology training programme
GAP	Global Action Plan
GEC	Governorate Emergency Cell
GLASS	Global Antimicrobial Resistance Surveillance System
GOARN	Global Outbreak Alert and Response Network
GVAP	Global Vaccine Action Plan
HAI	health care-associated infection
HR	human resources
IAEA	International Atomic Energy Agency
IHR	International Health Regulations (2005)
IMS	incident management system
INFOSAN	International Food Safety Authorities Network
INMA	Iraqi National Monitoring Authority
IPC	infection prevention and control
ISO	International Standards Organisation
ISST	Infectious Substances Shipping Training
IT	information technology
JEE	Joint External Evaluation

LQSI	Laboratory Quality Stepwise Implementation
MCV	measles-containing vaccine
MICS	multiple indicator cluster surveys
MoA	Ministry of Agriculture
MOC	Medical Operations centre
MoE	Ministry of Environment
MoF	Ministry of Finance
MoH	Ministry of Health
MoHER	Ministry of Higher Education and Research
MoI	Ministry of Interior
MoP	Ministry of Planning
MoT	Ministry of Trade
NAP-AMR	National Action Plan on Antimicrobial Resistance
NBMC	National Biorisk Management Committee
NCC	National Coordination Centre
NFP	National Focal Point
NMOC	National Medical Operations Centre
NOC	National Operations Centre
NRL	National Reference Laboratory
OIE	World Organisation for Animal Heath
OPCW	Organization for the Prohibition of Chemical Weapons
PHEIC	Public Health Emergency of International Concern
PHEOC	Public Health Emergency Operations Centre
PHEP	Public Health Empowerment Programme
PoE	point of entry
RPC	Radiation Protection Centre
RC	risk communication
SARI	severe acute respiratory infection
SHF	simian haemorrhagic fever
SOP	standard operating procedure
ToRs	terms of reference
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
VHF	viral haemorrhagic fever
VPD	vaccine-preventable disease
VSSM	vaccine supplies stock management
WAHIS	World Animal Health Information System
WASH	water, sanitation and hygiene
WHO	World Health Organization

EXECUTIVE SUMMARY

Introduction

The Republic of Iraq is doubling its population every 23–25 years, increasing from 7.28 Million in 1960 to 38.28 Million in 2017. The burden of disease attributable to communicable diseases is 19.1%, noncommunicable diseases 61.6% and injuries 19.2% (2012). The proportion of out-of-pocket health expenditure is estimated to be 76.5% (2015), and the health workforce density is 9.4 physicians per 10 000 population (2017).

Iraq consists of 18 governorates, which includes three governorates in the semi-autonomous region of Kurdistan. The country has been in a state of emergency for decades. Iraq is susceptible to both natural and human-made disasters, which cause a significant loss of life, livelihoods and infrastructure, and reverse the development gains that have been achieved. The annual burden attributable to natural disasters averages 4.9 deaths per 100 000 inhabitants (1997–2016).

The Iraq Constitution mandates the state to protect health and social security, and a law has been enacted to endorse the decentralization of health services and their management. Since the 2003–2017 invasion the country has been pursuing a major state reform under a new constitution, as well as dealing with an ongoing and complex armed conflict. The health system in Iraq has been severely affected by this situation, as has the capacity for the early detection, investigation and response to public health events and emergencies. Considerable effort has been made to strengthen surveillance systems, including through the implementation of an electronic surveillance system at the central level with expansion to cover all administrative levels planned.

Emergency responses dominate the health sector and absorb most existing resources. Nevertheless, there have been parallel efforts to improve routine health care, public health functions and health system development. Furthermore, the Ministry of Health (MoH) is working on increasing the skills and capacities for emergency preparedness, as well as response and disaster risk reduction. The MoH has 10-year National Health Policy (2014–2023) and four-year National Health Strategic Plan (2018–2022).

The country is transitioning from the acute emergency stage into recovery. National health authorities and humanitarian actors are heavily involved in revitalizing health services in areas of return. The humanitarian response plans submitted by humanitarian organization in 2018 appealed for US$ 67.4 million to finance response operations of the health cluster.

Findings from the joint external evaluation

The Joint External Evaluation (JEE) of Iraq revealed strengths and gaps in capacities across 19 technical areas. The mission comprised plenary discussion sessions and selected site visits held from 12–17 March 2019 in Baghdad City. Evaluation results were based on interactive discussions over Iraq's self-assessment using the JEE tool, technical presentations and background documents that were made available to the JEE team. The report catalogues the mutually agreed strengths, challenges and priority areas for improvement of International Health Regulations (IHR) (2005) implementation in the country. Two targeted missions took place to specifically assess antimicrobial resistance and food safety.

Cross-cutting issues

- The country has several coordination mechanisms focusing on preparedness and response. A review and update of these committees is needed with clear terms of reference and level of representation in order to meet the expected deliverables and strengthen multisectoral coordination for health security.
- Human resources emerged as a major gap across various technical areas. Although substantial human resources/capacities exist at the central level, their distribution at the various administrative levels must be reviewed and mapping according to public health needs.
- The country hosts around 20 mass gathering events annually. The number of pilgrims participating in these events ranges from three to twenty million. Thorough planning is required to enhance public health capacities and functions, and to safely accommodate the influxes of people. Implementing the priority actions identified by the JEE must also be considered in the context of such mass gatherings, as applicable.
- Risk assessment has been identified as an urgent requirement to cover all hazards, and as a prerequisite to planning and prioritizing support.
- Transfer from manual to computerized information and networking systems has been achieved at the central level. However, planning and resources need to be allocated to expand the computerized system to cover the various administrative levels in the country, in order to facilitate the real-time information as well as rapid and efficient decision-making.
- The country does not have a financing strategy for health emergencies. An urgent need exists to assess the financing situation in the country, review allocation of available resources to optimize financing of preparedness, and establish a mechanism to fast-track resource mobilization for emergency response.
- The Supreme Health Council was established in accordance with Public Health Law 89/1981. The mission recommends consideration to reactivate the council to function as the overarching entity for policy-making across health sector service providers.

Iraq has existing laws in many of the areas required to support core capacities under IHR. These laws are in need of review. Such a review should consider: whether they are fit for purpose (as many are almost 40 years old); if they align with each other in order to enable a seamless multi-hazard response; and whether they integrate vertically with national risk management powers under the National Risk Reduction Law. The Iraq Constitution enables the use of executive power to make regulations or instructions, which involves a simpler process than amending laws. It is recommended that laws be reviewed in the short to medium term, and that the more flexible executive power be considered for immediate use.

In 2010, the country established an IHR unit within the MoH to coordinate with all IHR-bound sectors. An IHR multisectoral technical committee was also established in the same year with representation from all IHR-related sectors. A committee to coordinate issues related to mass gathering events also exists, with defined functions. Other disease-specific coordination committees also exist. Reporting and coordination between sectors are present although very weak. Sharing information is not systematic and mainly occurs during crisis events rather than in a regular and continuous manner.

Iraq has developed multisectoral national action plan (NAP) on antimicrobial resistance (AMR), which is awaiting final approval. Implementation of the AMR NAP faces some challenges as there is currently no national surveillance of AMR pathogens under the 'One Health' approach, and no dedicated funding for AMR surveillance activities. A national infection prevention and control (IPC) programme and guidelines exist in the MoH and Ministry of Agriculture (MoA) but training and monitoring of IPC practices needs to be established in both human and animal health sectors. Efforts are ongoing to enforce the available regulations that ban dispensing of antibiotics without a physician prescription.

A rapid, effective response to zoonotic diseases requires extensive multisectoral collaboration and information management. In addition to a national multisectoral strategy for preparedness and response to zoonoses, formal coordination and information sharing mechanisms that involve all stakeholders should be developed and implemented. Zoonotic committees exist at the national and regional levels, but information sharing and collaboration needs to be improved, especially outside crisis situations.

A timely and effective response to water and foodborne hazards requires effective multisectoral collaboration and information management. A national multisectoral strategy for preparedness, coordination and information-sharing mechanisms should be established involving all food safety actors. Iraq food safety laboratories need to be reinforced to ensure quick responses to case clusters and help prevent outbreaks.

A multisectoral National Biorisk Management Committee (NBMC) was established in 2012 and is functioning actively. A comprehensive national biosafety and biosecurity regulatory framework has been developed and will be submitted for endorsement. However, ensuring facilities are suitable for laboratory operations and provide a safe working environment remains a challenge.

Immunization is mandatory in Iraq and is provided free of charge to all target populations regardless of their nationality. Routine immunization services are delivered through a fixed strategy involving 1748 health facilities. In addition, the programme has been implementing vaccination campaigns as part of the national vaccine preventable diseases control, elimination and eradication strategies, as well as multi-antigen campaigns to improve population immunity in high risk populations. Vaccine shortages have been reported at both the national and peripheral levels, highlighting important gaps in the vaccine forecasting, procurement and distribution systems. An estimated 40% of functioning facilities at the service deliv¬ery level do not provide immunization services.

As there are many stakeholders contributing to laboratory services – at national and sub-national levels as well as across sectors – there is a need to develop a national laboratory policy and strategy. The current poor status of many laboratory's infrastructure, malfunctioning and maintenance of key equipment, and difficulty in procuring reagents and validated kits, hamper their performance and accreditation against international or national standards. Given the current reliance of on in-country specimen referral, completion of a multisectoral simulation exercise is needed to further improve established mechanisms.

Indicator-based surveillance is performed through a mandatory notification system for priority diseases. The 1450 surveillance sites include all government hospitals. Event-based surveillance is yet to be fully implemented at the national and subnational levels. The signals that are passively detected by the system are followed up by the rapid response teams in accordance with the type of threat detected. The Epidemiology Department of the MoH has the capacity to analyse surveillance data and produce epidemiological reports.

The concept of notification under IHR is not fully understood within all sectors. Notification to WHO includes human infectious diseases only, but not diseases from other origins. Also, endemic diseases are not commonly notified at the time of outbreaks. The national IHR focal point responds to the verification requests received from WHO but not within the timeframe explained in Article 6 of the IHR.

The MoH directorate of planning and resources development has a multi-year strategy (2018–2022) for human resources. This strategy focuses on medical tracks and doesn't include the public health tracks essential for IHR implementation. The country offers some in-service opportunities, through a mix of regular and well-planned training courses as well as ad-hoc capacity-building workshops, supported mostly by partners. Since 2010, the country has been sustaining a national field epidemiology training programme (FETP), as a part of the Regional FETP Network, coordinated and supported by the Eastern Mediterranean Public Health Network (EMPHNET).

Iraq has been exposed to exceptional challenges and damage to infrastructure and its health system over the past couple of decades and has conducted a few risk assessments across various sectors, but has not conducted a comprehensive multi-hazard risk assessment with the associated resource-mapping across the whole country. The national response plan that exists at cabinet level defines reporting and information exchange and in Iraq. The National Strategy and Plan for Disaster Risk Reduction are currently being drafted.

There is a national disaster management framework at the level of the Prime Minister's Office that covers all hazards. This includes the National Operations Centre (NOC) that oversees the initial response through the crisis action cell at the national level, which coordinates the response with governorates through Governorate Emergency Cells. The latter are responsible for the initial response to any public health event or disaster, and surge capacity can be provided from the central government authority. The MoH has pursued the development of a number of documents that outline the policies, and guidelines for public health emergency management in Iraq.

Given the tightly interlinked nature of risk communication and health promotion, confusion often prevails regarding the two concepts when addressed by the national health authorities. There are no strategic documents, guidelines or standard operating procedures (SOPs) directly related to risk communication other than a draft national risk communication concept note. A governmental media cell has been created under the general secretariat of the Council of Ministers to lead and coordinate communications during emergencies. A spokesperson is appointed in each ministry, but roles and responsibilities are still not well defined in case of emergency responses. Coordination, standardization and uniform implementation of communication interventions at all levels (including rumour verification) are inadequate.

The country has 26 points of entry (PoE) that carry international traffic. Of which, only two are designated for IHR implementation. Several stakeholders serve at these points of entry, and a reasonable level of coordination between the stakeholders and routine IHR capacities exist at the designated points of entry. The designated PoEs have public health contingency plans for preparedness and response to public health emergencies, which are an integral part of the provincial public health emergency preparedness and response. Capacities including human resources to apply measures for effective responses to public health events and for cross-border collaboration need strengthening.

Capacity for detecting and responding to major chemical events is lacking and scattered between different stakeholders in Iraq. Guidelines, manuals and SOPs on surveillance, assessment and management of chemical events, intoxication and poisoning are available but fragmented among different stakeholders. The capacity of the poison centres is limited and not available 24/7. Surveillance of toxicity and human poisonings needs to be further strengthened. The current indicator and event-based surveillance systems do not capture chemical events and poisonings adequately.

Iraq's capacity to detect and respond to radiation and radio-nuclear events are developed. Nevertheless, SOPs, guidelines and health sector resources need to be strengthened for clinical management of radiation victims. A radiation emergency response plan exists with clear roles of related sectors, but the roles of the health sector need to be streamlined and clarified.

SCORES AND PRIORITY ACTIONS

Technical areas	Indicator no.	Indicator	Score	Priority Actions
PREVENT				
National legislation, policy and financing	P.1.1	The State has assessed, adjusted and aligned its domestic legislation, policies and administrative arrangements in all relevant sectors to enable compliance with the International Health Regulations (IHR) (2005)	2	Review Iraq laws to update laws and provide clarity about available powers, designations of responsibility and scope of powers across sectors. Use available constitutional powers to draft subordinate legislation or regulations, or instructions to provide more detail on: management of communicable disease (including meeting basic data collection requirements); quarantine; and arrangements to align with the National Strategy and Plan for Disaster Risk Reduction. Utilize executive power to make a regulation or instruction nominating the IHR National Focal Point (NFP) and setting our his or her powers and responsibilities and those of all focal points of affected agencies in support of this function. In the short to medium term, conduct a review to consider a new Public Health Law to be made by the Parliament to replace the 40-year-old existing law.
	P.1.2	Financing is available for the implementation of IHR capacities	1	
	P.1.3	A financing mechanism and funds are available for timely response to public health emergencies	1	
IHR coordination, communication and advocacy	P.2.1	A functional mechanism established for the coordination and integration of relevant sectors in the implementation of IHR	2	Establish an electronic platform for information sharing between IHR-bound sectors re. risk assessment and early interventions. Review terms of reference (ToR) of existing coordination mechanisms to ensure integration and clarity of roles and responsibilities. Conduct advocacy and training activities on IHR for IHR-bound sectors, with wide dissemination of related documents. Advocate for the representation of IHR NFP in high-level coordination structures with clear line of information sharing among the members of the IHR multisectoral committee. Organize regular drills/simulation exercises to test coordination and communication mechanisms including at points of entry (PoEs).
Antimicrobial resistance	P.3.1	Effective multisectoral coordination on antimicrobial resistance (AMR)	3	Approve, fund and implement the national antimicrobial resistance plan. Develop national AMR surveillance plans in both the human and animal sector. Update the national infection prevention and control (IPC) guidelines and train health care workers on its implementation. Add antimicrobials to the national Essential Medicines List (EML), in line with the WHO guidelines. Monitor appropriate use of antimicrobials in human and animal health and agricultural sectors.
	P.3.2	Surveillance of AMR	2	
	P.3.3	Infection prevention and control	2	
	P.3.4	Optimize use of antimicrobial medicines in human and animal health and agriculture	1	

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Zoonotic disease	P.4.1	Coordinated surveillance systems in place in the animal health and public health sectors for zoonotic diseases/ pathogens identified as joint priorities	3	Review and update the sector and level representation in the national zoonotic committee to ensure functionality. Ensure that the development of a 'One Health' strategy is among its responsibilities. Establish a joint surveillance plan with all relevant sectors under the One Health strategy. Based on assessment of training needs, offer training opportunities to veterinarians such as access to the field epidemiology training programme (FETP). Expand active surveillance to cover all priority zoonotic diseases. Identify opportunities to fully apply compensation for diseased livestock. Upgrade laboratory capacity for the detection of zoonotic diseases. Review the existing plans for zoonotic disease preparedness and response to cover all priority zoonotic diseases.
	P.4.2	Mechanisms for responding to infectious and potential zoonotic diseases established and functional	1	
Food safety	P.5.1	Surveillance systems in place for the detection and monitoring of foodborne diseases and food contamination	2	Finalize the plan of action based on the recommendations of WHO food safety mission. Establish clear procedures to improve the coordination between food safety actors. Integrate with the Arab League strategy on health and the environment. Disseminate International Food Safety Authorities Network (INFOSAN) focal point contact details among actors. Enhance in-country laboratory capacity for the identification of all foodborne and waterborne contaminants.
	P.5.2	Mechanisms are established and functioning for the response and management of food safety emergencies	2	
Biosafety and bios-ecurity	P.6.1	Whole-of-government biosafety and biosecurity system in place for all sectors (including human, animal and agriculture facilities)	2	Endorse and implement the national regulatory framework for biosafety and biosecurity. Provide (refresher) trainings in biosafety and biosecurity for laboratory staff in all sectors, including field staff. Areas of training to include attention to risk assessment and managing high-threat pathogens. Continue to maintain an updated inventory of dangerous pathogens and toxins.
	P.6.2	Biosafety and biosecurity training and practices in all relevant sectors (including human, animal and agriculture)	3	

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Immuni-zation	P.7.1	Vaccine coverage (measles) as part of national programme	3	Conduct an extensive mapping of potential new vaccine delivery opportunities to support the ongoing programme immunization network wherever needed to improve physical access. In order to prevent further vaccine stock-outs at both central and peripheral levels, use the opportunity of the support being provided by United Nations Children's Fund (UNICEF)/ Eastern Mediterranean Public Health Network (EMPHNET) to undertake a comprehensive assessment of the vaccine procurement system (within the forthcoming effective vaccine management (EVM) assessment), to identify major hurdles and undertake necessary correction measures.
	P.7.2	National vaccine access and delivery	2	Urgently address the data quality and accuracy problem through conducting a national coverage survey to get a better indication of the country achievement; and a data quality self-assessment (DQS) to identify weaknesses and improve the programme data management system. Expand the ongoing microplanning improvement process (capacity-building and 'micro-plans' development) to remaining districts and governorates, while improving mapping of low immunity population groups and areas and micro-plans updating accordingly. Update the national strategy and plans.
DETECT				
National laboratory system	D.1.1	Laboratory testing for detection of priority diseases	4	Develop, endorse and implement a national laboratory policy to guide future activities in a coordinated and sustainable manner, and by making optimal use of resources. Subsequently, to develop, endorse and implement a national laboratory strategic plan to translate the national laboratory policy into strategic objectives. Develop, endorse and implement national laboratory quality standards that can be adapted and applied to laboratories throughout the country. Conduct a situational analysis summarizing locations and capacities of key laboratories across the country serving different sectors, including public health, clinical, animal health, food safety, chemical and radiation, to support tier-specific testing strategies and national referral testing. Test the functionality of the national specimen referral system through conducting a simulation exercise, specifically a 'skills drill'.
	D.1.2	Specimen referral and transport system	4	
	D.1.3	Effective national diagnostic network	2	
	D.1.4	Laboratory quality system	2	

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Surveillance	D.2.1	Surveillance systems	2	Establish a database to capture all public health events. Formalize the current event-based surveillance system. Integrate laboratory information into existing indicators and event-based surveillance. Enhance in-country laboratory capacity to allow for the prompt identification of national priority pathogens.
	D.2.2	Use of electronic tools	2	
	D.2.3	Analysis of surveillance data	3	
Reporting	D.3.1	System for efficient reporting to FAO, OIE and WHO	2	Develop a policy and standard operating procedures (SOPs) for notification of a potential Public Health Emergency of International Concern (PHEIC) for all reporting entities, and from IHR NFP to WHO. Improve understanding of WHO, World Organisation for Animal Heath (OIE) and Food and Agriculture Organization of the United Nations (FAO) notification/reporting requirements through multisectoral discussions. Disseminate information on roles and responsibilities of INFOSAN, World Animal Health Information System (WAHIS), International Atomic Energy Agency (IAEA) and IHR focal point to relevant stakeholders. Conduct training to enhance knowledge and use of the IHR decision instrument for the notification of potential all-hazard PHEIC. Review previous event compliance of IHR notification to identify gaps and recommend improvements.
	D.3.2	Reporting network and protocols in country	2	
Human resources (animal and human health sectors)	D.4.1	An up-to-date multi-sectoral workforce strategy is in place	2	Identify/develop an intersectoral mechanism to coordinate the exercise of developing, implementing, monitoring and sustaining an adequate intersectoral work force to implement IHR at all country administrative levels, through: • Establishing a sustainable incentive mechanism to attract and sustain a critical number of good quality experts in the various IHR capacities at the various country administrative levels. • Developing adequate budgeted action plans in all IHR relevant sectors for in-service training to sustain HR capacities, building on available opportunities. • Accelerating, diversifying and expanding the country EMPHNET-supported FETP programme to laboratory, animal health (vets and animal health technicians) and environmental health in order to better respond to the priorities of various administrative levels more rapidly.
	D.4.2	Human resources are available to effectively implement IHR	2	
	D.4.3	In-service trainings are available	3	
	D.4.4	FETP or other applied epidemiology training programme in place	4	

Technical areas	Indicator no.	Indicator	Score	Priority Actions
RESPOND				
Emergency preparedness	R.1.1	Strategic emergency risk assessments conducted and emergency resources identified and mapped	1	Accelerate ongoing work for Sendai Framework for Disaster Risk Reduction by conducting national multi-hazard strategic risk assessment to prioritize public health threats, from all sources, and identify resource requirements for response activities. Map the resulting resource requirements for public health and identify critical information requirements (correlated to nationally notifiable diseases) for the national Public Health Emergency Operations Centre (PHEOC) within the National Medical Operations Centre (NMOC) to monitor on a daily basis. Conduct a needs assessment for training needs (including material, equipment and infrastructure). Continue to engage the interministerial, intersectoral operations-level working group, including development partners, in reviewing the national public health response plan that reflects a whole-of government approach to responding to priority public health threats.
	R.1.2	National multisectoral multi-hazard emergency preparedness measures, including emergency response plans, are developed, implemented and tested	2	
Emergency response operations	R.2.1	Emergency response coordination	4	Establish a national poison registry. In view of the ongoing evaluation commissioned by H.E. Minister of Health and Environment, consider establishing a unique national emergency call number. Review and update standard terms of reference and operating principles while upgrading the EOC and consider joining the Public Health Emergency Operations Centre Network (EOC-NET). Establish routine after-outbreak or after-action reviews related to all public health events and document lessons learnt with outcomes reflected in updated response plans.
	R.2.2	Emergency Operations Centre (EOC) capacities, procedures and plans	3	
	R.2.3	Emergency Exercise Management Programme	3	
Linking public health and security authorities	R.3.1	Public health and security authorities (e.g. law enforcement, border control, customs) linked during a suspect or confirmed biological, chemical or radiological event	3	Plan and conduct joint training programmes between public health and security sectors, especially at the governorate levels. Document the collaboration between public health and security sectors in responding to public health threats.

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Medical counter-measures and per-sonnel deploy-ment	R.4.1	System in place for activating and coordinating medical countermeasures during a public health emergency	3	Ensure fast-track approval procedures are in place for sending and receiving medical countermeasures with allocated emergency funding. Develop protocol/guidance/procedures for active participation in Global Outbreak Alert and Response Network (GOARN) and development of Emergency Medical Teams (EMTs). Develop and disseminate policies and protocols for sending and receiving personnel to other organizations/agencies in country and internationally to respond to public health events. Develop and provide training on case management guidelines for cases contaminated with chemical and radiation contamination.
	R.4.2	System in place for activating and coordinating health personnel during a public health emergency	1	
	R.4.3	Case management procedures implemented for IHR relevant hazards	2	
Risk com-munica-tion	R.5.1	Risk communication systems for unusual/ unexpected events and emergencies	2	Develop a multisectoral and multi-hazard risk communication strategy and action plan that is integrated with national plans for public health emergencies. Establish a multisectoral and multi-disciplinary technical advisory board to guide evidence-based development and implementation of risk communication. Review and upgrade the structure and functions of the risk communication unit at MoH to better fulfil its mandate across all IHR-bound sectors. Formalize the existing risk communication coordination mechanism among relevant ministry's entities and stakeholders. Establish a network and build the risk communication capacity of existing communication staff at national and provincial level. Develop and formalize a system for rumour and misinformation tracking and response.
	R.5.2	Internal and partner coordination for emergency risk communication	2	
	R.5.3	Public communication for emergencies	1	
	R.5.4	Communication engagement with affected communities	2	
	R.5.5	Addressing perceptions, risky behaviours and misinformation	2	
IHR-RELATED HAZARDS AND POINTS OF ENTRY				
Points of entry (PoEs)	PoE.1	Routine capacities established at points of entry	3	Using the risk assessment approach, review and update the list of designated PoEs. Develop a plan for IHR implementation for designated PoE(s). Conduct cost-effectiveness analysis for goods storage sites (i.e. private versus governmental) to recommend reactivation of public storage sites. Ensure MoH is part of the 'single window' system for trade facilitation. Establish/integrate vector surveillance and control at designated PoE(s). Develop a training plan on IHR-related requirements for staff at PoE(s). Over the long term, develop a plan to renovate infrastructure.
	PoE.2	Effective public health response at points of entry	3	

Technical areas	Indicator no.	Indicator	Score	Priority Actions
Chemical events	CE.1	Mechanisms established and functioning for detecting and responding to chemical events or emergencies	2	Identification of the most hazardous chemicals in Iraq through evidence-based multisectoral health risk assessments. These chemicals shall be the back bone of the national poisoning surveillance and clinical management systems. In close coordination with chemical/biological/ radiological/nuclear (CBRN) teams, designating specific hospital(s) for clinical management of victims of chemical events. This will require training and supply of needed equipment, antidotes and other medicines. Strengthen the capacity of the poison consultation centre for providing information and advisory services 24/7 to all parts of Iraq. This requires networking with other poison centres at national and regional levels; in order to improve the technical capacity of existing surveillance, laboratories and linkages with response teams. Improving the coordination between the different sectors responsible for management of chemical events in line with the multi-hazard national public health emergency preparedness and response plan to meet IHR core capacity requirements. Strengthening the capacities for chemical event detection, reporting and response. Updating the chemical waste management mechanisms and SOPs.
	CE.2	Enabling environment in place for management of chemical events	2	
Radiation emergencies	RE.1	Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	3	Update the national plan of action for responding to radiation hazards by streamlining and clarifying the role of the health sector in clinical management, surveillance and risk communication In close coordination with CBRN teams, designating specific hospital(s) for clinical management of victims of radiation and radio-nuclear emergencies. This will require training and supply of needed equipment, antidotes and other medicines. Improving the coordination between health, environment, industry, science and technology, CBRN and other related sectors responsible for management of radiation and radio-nuclear events in line with the multi-hazard national public health emergency preparedness and response plan to meet IHR core capacity requirements. Improving the technical capacity of existing surveillance, laboratory and response teams, and networking with neighbouring countries for radiation and radio-nuclear event detection, reporting and response Updating the radioactive waste management mechanisms and standard operating procedures.
	RE.2	Enabling environment in place for management of radiological and nuclear emergencies	3	

Scores: 1=No capacity; 2=Limited capacity; 3=Developed capacity; 4=Demonstrated capacity; 5=Sustainable capacity.

PREVENT

NATIONAL LEGISLATION, POLICY AND FINANCING

INTRODUCTION

The IHR (2005) provide obligations and rights for States Parties. In some States Parties, implementation of the IHR (2005) may require new or modified legislation. Even if new or revised legislation may not be specifically required, States may still choose to revise some regulations or other instruments in order to facilitate IHR implementation and maintenance. Implementing legislation could serve to institutionalize and strengthen the role of IHR (2005) and operations within the State Party. It can also facilitate coordination among the different entities involved in their implementation.[1] In addition, policies that identify national structures and responsibilities as well as the allocation of adequate financial resources are also important.

Target

Adequate legal framework for States Parties to support and enable the implementation of all their obligations and rights made by the IHR. Development of new or modified legislation in some States Parties for the implementation of the Regulations. Where new or revised legislation may not be specifically required under a State Party's legal system, the State may revise some legislation, regulations or other instruments in order to facilitate their implementation in a more efficient, effective or beneficial manner. States Parties ensure provision of adequate funding for IHR implementation through the national budget or other mechanisms. Country has access to financial resources for the implementation of IHR capacities. Financing that can be accessed on time and distributed in response to public health emergencies, is available.

LEVEL OF CAPABILITIES

Iraq has made considerable efforts to comply with its obligations under the IHR (2005) and to prepare for the Joint External Evaluation (JEE). Iraq has many laws that have some impact on its ability to meet the JEE core capacities, which might be summarized as detect, assess, notify, report and respond.

Iraq has a Public Health Law No 89 (1981), which is the principal law to address management of communicable disease and health emergencies. It is an impressively modern and forward-thinking law, and all the more remarkable because it was passed in 1981, almost forty years ago. The law recognizes and attempts to give effect to the right to health, establishes a MoH Council which has broad planning and policy-making responsibility, and for the provision of instructions and guidance in the implementation of the law.

According to the law, the Council of the MoH also has a coordination role with similar councils at the provincial level. The extreme disruption caused by the war, sanctions and other system shocks since passage of the law has led to inevitable problems with its implementation. The MoH Council does not yet exist, and Iraq is experiencing problems in implementing the various rights and programmes the law embodies. Nonetheless, the Public Health Law is robust, and is capable of being amended to better suit Iraq's current health system, current health strategy and current health priorities.

1 See detailed guidance on IHR (2005) implementation in national legislation at http://www.who.int/ihr/legal_issues/legislation/en/index.html.

Several relevant legislation reviews have already been undertaken.

A review of the provisions of the Public Health Law 1981, which provide powers to manage communicable diseases, has clearly been assessed with a view to incorporating capacity to respond under the IHR (2005). This is evidenced by provisions on the management of communicable disease, which refer to IHR and communicable disease management under IHR.

Iraq MoH reports that the Public Health Law is currently under review to improve core capacities under IHR and for other system purposes, noting that it is almost forty years old. It is understood that the review is considering more immediate promulgation of subordinate legislation such as issuance of rules, instructions and decisions for the purpose of implementing the law. The review is also considering amendments to the principal law to be eventually made by Parliament. No copy of the review and amendment instruction has been provided to date so no comment may be made on its content.

The Public Health Law is also being separately reviewed for its provisions in relation to food safety and the management of foodborne diseases. The review of food safety, including regulatory support, was recently undertaken by WHO and made recommendations as to the development of a stand-alone modern food law.

In 2013, the United Nations Development Programme (UNDP) undertook a review of Iraq's legislative framework for disaster risk response. That review is a useful resource in assisting Iraq to consider use of legislation to meet core capacities under IHR.

The MoH National Health Policy 2014–2023 also mentions the need for legislation review to improve governance and the function of the MoH.

The Iraq Constitution provides some powers to declare a state of emergency, but these require Parliament to meet and a high proportion of votes in support. This might be both too cumbersome and too slow, and may be subject to political agendas. The Constitution also protects rights, which may be inconsistent with some of the powers in the Public Health Law. This should be considered in any review, as the Constitution will always prevail, potentially reducing available power under the Public Health Law.

Iraq has capacity in relation to management of communicable disease and reports that the relevant provisions in the Public Health Law 1981 were successfully used by the MoH to address pandemic influenza in 2009. It provided power to take necessary steps such as the closure of schools.

Despite this, the provisions to manage communicable diseases are weak and in need of updating.

Indicators and scores

P.1.1 The State has assessed, adjusted and aligned its domestic legislation, policies and administrative arrangements in all relevant sectors to enable compliance with the IHR – Score 2

Strengths and best practices

- The Public Health Law 1981 is a strong law that is capable of being amended to better suit Iraq's current health system, current health strategy and current health priorities.
- The Constitution enables the use of executive power to issue regulations or instructions, which is easier than development of a new law.
- Several relevant legislation reviews have already been undertaken and may be used to identify and address current gaps in the legislative framework.
- The MoH reports intersectoral collaboration including with international organizations and donors, although this could be strengthened.

Areas that need strengthening and challenges

- It is suggested that the Law would benefit from regulations or instructions providing considerably more detail about available powers to manage communicable diseases and other health risks; the circumstances in which the powers may be exercised; the scope of the powers and the rights and responsibilities of those charged with the powers and those subject to/affected by them.
- The Law could also be strengthened in the areas of support for the disease control function of identification of risk, reporting and data collection.
- It is understood that drafting instructions for amendments to the Public Health Law have been developed but these have not been seen by the JEE team, so no comment may be made on the extent to which they fill the identified gaps.
- There is also a gap in relation to quarantine laws governing risk management activities at borders and ground crossings. The Animal Health Law No. 32 (2013) covers animal but not human quarantine.
- There are gaps in relation to management of foodborne diseases and these are currently being addressed.
- Laws to manage safety in the use, transport, disposal etc of radiation sources and chemicals exist but are close to forty years old, so a review of laws covering these areas is suggested, if action is not already being taken in these areas.
- Intersectoral collaboration is required in relation to alignment of laws, cooperation during risk responses and/or national emergency responses, and in data gathering and sharing.

P.1.2 Financing is available for the implementation of IHR capacities – Score 1

- Financing is provided from the budget of the MoH. Requests may be made for additional budget from cabinet to deal with specific emergencies.
- This is not an ideal arrangement to ensure availability of adequate funds to reach core capacities under IHR.
- Financing remains inadequate for responding and needs more strengthening.
- Domestic financing is still insufficient for responding to emergencies.
- No proportion of the national health budget has been delineated for these purposes.

Strengths and best practices

- MoH commitment to support improvement in financing mechanisms.

Areas that need strengthening and challenges

- Domestic financing is still insufficient for responding to emergencies.
- There is a need to delineate a proportion of the national health budget for these purposes.

P. 1.3 A financing mechanism and funds are available for the timely response to public health emergencies – Score 1

- Financing is provided from the budget of the MoH. Requests may be made for additional budget from cabinet to deal with specific emergencies.
- There is no specific financing mechanism available for the timely response to public health emergencies.

Strengths and best practices

- MoH commitment to support improvement in financing mechanisms.

Areas that need strengthening and challenges

- Iraq needs a financing mechanism with available funds for the timely response to public health emergencies.

Recommendations for priority actions

- A review of Iraq laws should be undertaken to update laws and provide clarity about available powers, designations of responsibility and scope of powers across sectors.
- Use available Constitutional powers to draft subordinate legislation or regulations, or instructions to provide more detail on management of communicable disease (including meeting basic data collection requirements); and quarantine and arrangements to align with the National Strategy and Plan for Disaster Risk Reduction.
- It is suggested that executive power be utilized to make a regulation or instruction nominating the IHR National Focal Point and setting out their powers and responsibilities, as well as those of all focal points of affected agencies in support of this function.
- In the short to medium term, Iraq should conduct a review to consider a new Public Health Law to be made by the Parliament to replace the 40-year-old existing law.

IHR COORDINATION, COMMUNICATION AND ADVOCACY

INTRODUCTION

The effective implementation of the IHR requires multisectoral/multidisciplinary approaches through national partnerships for efficient alert and response systems. Coordination of nationwide resources, including the designation of a national IHR focal point (NFP), and adequate resources for IHR implementation and communication, is a key requisite for a functioning IHR mechanism at country level.

Target

Multisectoral/multidisciplinary approaches through national partnerships that allow efficient, alert and response systems for effective implementation of the IHR. Coordinate nationwide resources, including sustainable functioning of an IHR National Focal Point – a national centre for IHR communications which is a key obligation of the IHR – that is accessible at all times. States Parties provide WHO with contact details of National IHR Focal Points, continuously update and annually confirm them.

LEVEL OF CAPABILITIES

Once IHR was adopted by the WHA in May 2005 and entered into force on 15 June 2007, Iraq completed the ratification of IHR 2005 (Law 68) in December of 2007, established the Higher National Committee with participation from various concerned ministries and chaired by MoH in February 2009, and established an IHR unit within the MoH to coordinate with all IHR-bound sectors in 2010. An IHR technical committee has been established within the MoH, chaired by the Director-General of the Public Health Directorate with participants (contact points) from sectors involved in country-level IHR implementation including those responsible for public health, food safety, veterinary medicine, emergency management, environment, POEs, economy and trade, agriculture (including animal health), radio-nuclear safety and chemical safety, industry, transportation, finance, defence, and all other IHR-bound sectors. Awareness on IHR is limited among sectors in terms of coordination and reporting.

It is essential to have information-sharing arrangements and collaboration in place between sectors, both on a routine basis as well as during emergencies. They allow the IHR to meet the goal of preventing, protecting against, controlling and responding to the international spread of disease while avoiding unnecessary interference with international traffic and trade. Iraq has a limited coordination mechanism within and between relevant ministries in place (national operating procedures for coordination between the IHR National Focal Point and relevant sectors).

Annual updates on the status of IHR implementation to stakeholders including WHO are conducted and confirm the efficiency and effectiveness of the coordination, communication and advocacy arrangements across all relevant sectors. Action plans for IHR event detection and response in POEs is in place.

The IHR-bound ministries coordinate through sharing of data, a multisectoral committee of experts and Emergency Operations Centre during emergencies, as well as through field visits. Reporting and coordination between MoH and Ministry of Agriculture (MoA) is present but very weak. Sharing information is not systematic and mainly occurs during crisis events rather than through a regular and continuous process.

Indicators and scores

P.2.1 A functional mechanism established for the coordination and integration of relevant sectors in the implementation of IHR – Score 2

Strengths and best practices

- IHR multisectoral committee with representation from IHR-bound sectors.
- There are well-developed multisectoral committees for coordination, collaboration and communication between all relevant sectors, specifically during religious visits (mass gatherings) and during outbreaks.

Areas that need strengthening and challenges

- Clear ToRs, functions and level of representation for the IHR multisectoral committee.
- Coordination and reporting are weak among different sectors.
- Awareness on IHR is limited in terms of reporting incidents/events of public health concern among sectors and to the WHO.
- Systemic information exchange between district/provincial health offices, animal surveillance units, laboratories and other relevant sectors regarding potential zoonotic risks, urgent zoonotic events is low to zero due to the fact that there is no reporting mechanism in place.
- There is a limited capacity of involved human resources and a high staff turnover.
- Wide dissemination of IHR documents among all sectors for better awareness raising.
- Test the functionality of the multisectoral committee to respond to real events under the framework of IHR and document lessons learned.

Recommendations for priority actions

- Establish an electronic platform for information sharing between IHR-bound sectors for risk assessment and early interventions.
- Review the ToR of existing coordination mechanisms to ensure integration and clarity of roles' division and responsibilities.
- Conduct advocacy and training activities on IHR for IHR-bound sectors with wide dissemination of related documents.
- Advocate for the representation of IHR NFP in high-level coordination structures, with clear line of information sharing among the members of the IHR NFP and IHR multisectoral committee.
- Organize regular drills/simulation exercises to test coordination and communication mechanisms, including at PoE(s).

ANTIMICROBIAL RESISTANCE

INTRODUCTION

Bacteria and other microbes evolve in response to their environment and inevitably develop mechanisms to resist being killed by antimicrobial agents. For many decades, the problem was manageable as the growth of resistance was slow and the pharmaceutical industry continued to create new antibiotics.

Over the past decade, however, this problem has become a crisis. Antimicrobial resistance is evolving at an alarming rate and is outpacing the development of new countermeasures capable of thwarting infections in humans. This situation threatens patient care, economic growth, public health, agriculture, economic security and national security.

Target

A functional system in place for the national response to combat antimicrobial resistance (AMR) with a 'One Health' approach, including:

a) Multisectoral work spanning human, animal, crops, food safety and environmental aspects. This comprises developing and implementing a national action plan to combat AMR, consistent with the Global Action Plan (GAP) on AMR.

b) Surveillance capacity for AMR and antimicrobial use at the national level, following and using internationally agreed systems such as the WHO Global Antimicrobial Resistance Surveillance System (GLASS) and the OIE global database on use of antimicrobial agents in animals.

c) Prevention of AMR in health care facilities, food production and the community, through infection prevention and control measures.

d) Ensuring appropriate use of antimicrobials, including assuring quality of available medicines, conservation of existing treatments and access to appropriate antimicrobials when needed, while reducing inappropriate use.

LEVEL OF CAPABILITIES

Iraq established an AMR multisectoral committee in April 2017. The AMR committee is headed by the Director-General of the Public Health Directorate in the MoH. The ministries of health, agriculture, education, pharmacy syndicate and environment are represented. The MoH has instituted the AMR unit to coordinate the work of the committee and activate the decisions it takes. The MoA has set up equivalent unit.

The MoH has approved the National Action Plan on Antimicrobial Resistance (NAP-AMR), which is awaiting approval by the MoA. The NAP-AMR identifies the MoH and MoA as the main implementers, and nine other ministries and authorities as contributors to the implementation. The NAP-AMR has seven strategic priorities for Iraq to respond to the AMR threat, which are in line with the GAP. Implementation of the NAP-AMR faces some challenges as there is currently no national surveillance of AMR pathogens under the 'One Health' approach, and no dedicated funding for AMR surveillance activities. Awareness about AMR among health care workers and the public is still poor, and there is weak coordination of AMR awareness activities by the government and its partners. Coordination is still weak with other government ministries and agencies that are not part of the national AMR committee (e.g. municipalities).

Iraq has enrolled to the GLASS platform and has reported AMR data during the last data call in 2018. The MoH has designated the Central Public Health Laboratory as the National Reference Laboratory (NRL) to identify and diagnose AMR pathogens. Laboratory capacity exists in some hospital settings but there are challenges with sustainability of laboratory supplies and reagents.

The MoH has designated the AMR unit as the National Coordination Centre (NCC) for collecting data from different sectors and generating epidemiological reports for dissemination. The capacity of the AMR unit needs further support and training to be able to perform this function. Currently four hospitals have been identified as AMR surveillance sites. Iraq should develop a plan and a strategy in order to be able to establish national AMR surveillance that is representative of its health care facilities and capable of monitoring AMR burden and impact of interventions.

Although an infection prevention and control section exists in MoH, IPC guidelines are outdated and not appropriately utilized. IPC critical supplies suffer from poor budgetary support in health facilities. Only 70% of hospitals have access to safe water, sanitation and hygiene.

Similar IPC units exist in the MoA and a national plan for animal vaccination is available. Further work is needed to promote hygienic practices in farms and slaughterhouses. The MoA has contributed to the latest OIE report on antimicrobial agents intended for use in animals. Further collaboration between MoH and MoA is needed to foster integrated AMR surveillance and sharing of information on antimicrobial use in both sectors. Legislations and regulations that ban the use of antimicrobial agents as growth promoters in animals do not exist in Iraq.

Currently, antimicrobials are available over the counter in community and private pharmacies in Iraq. Efforts are ongoing to enforce the available regulations that ban dispensing antibiotics without a physician prescription. Although the AMR unit at the MoH has developed a protocol to establish an antimicrobial stewardship committee at national and health care facility levels, antimicrobial stewardship is lacking in both the private and public health sectors.

Indicators and scores

P.3.1 Effective multi-sector coordination on AMR – Score 3

Strengths and best practices

- A National Action Plan on Antimicrobial Resistance (NAP-AMR) has been developed, in line with the AMR GAP, with operational costing and monitoring and evaluation components.
- NAP-AMR is approved by the MoH and awaits MoA approval.
- NAP-AMR identified MoH and MoA as the main implementers, with nine other ministries and authorities highlighted as implementation contributors.
- An AMR committee was formulated in 2017 and conducts regular meetings in which recommendations are made for different programme aspects and followed up to ensure implementation.
- AMR units established in both MoH and MoA.

Areas that need strengthening and challenges

- Authority and coordination of the national AMR committee to be strengthened.
- There is inadequate funding available for implementing the plan.
- Implementation of the plan has just started.
- Improve communication between MoA and both OIE and FAO

P.3.2 Surveillance of AMR – Score 2

Strengths and best practices

- Iraq has enrolled to WHO GLASS system and AMR surveillance data were uploaded contributing to global mapping of AMR.
- Central Public Health Laboratory has been designated as the AMR National Reference Laboratory (NRL).
- The MoH AMR Unit has been designated as the AMR National Coordination Center (NCC).
- The first phase of implementation of AMR surveillance (human sector) has started in four sentinel sites.

Areas that need strengthening and challenges

- A strategic plan on AMR surveillance is to be developed in alignment with the requirements of the WHO GLASS system.
- Limited laboratory supplies to support AMR diagnosis.

P.3.3 Infection prevention and control – Score 2

Strengths and best practices

- IPC sections exist in both MoH and more recently in MoA, and IPC teams and committees exist in every major MoH hospital.
- National guidelines for IPC and sterilization of medical/surgical instruments are available.

Areas that need strengthening and challenges

- Current national IPC guidelines need to be updated (current version is from 2009).
- Systematic surveillance of health care-associated infection (HAI) at the national and facility levels has not yet been established.
- Plan for systematic training of infection control teams.
- Expand IPC to include primary health care facilities.
- Establish water, sanitation and hygiene (WASH) component for hospitals and other health care facilities.

P.3.4 Optimize use of antimicrobial medicines in human and animal health and agriculture – Score 1

Strengths and best practices

- Measures are in place to assure access to antimicrobials for humans and animals.
- A national selection committee for recommended antibiotics exists at MoH.
- Drug monitoring department performs quality control of antimicrobials.

Areas that need strengthening and challenges

- Enforce the regulations to restrict dispensing of antimicrobials without medical prescription in private pharmacies.
- Establish antimicrobial stewardship programmes at national and hospital levels.
- Update Essential Medicine List to include antimicrobials according the access, watch and reserve (AWaRe) categories.
- Develop guidelines on the appropriate use of antimicrobial in animals and crops in line with Codex and OIE standards.

Recommendations for priority actions

- Approve, fund and implement the National Action Plan on Antimicrobial Resistance.
- Develop national AMR surveillance plan in both human and animals.
- Update the national IPC guidelines and train health care workers on its implementation.
- Add antimicrobials to the Essential Medical List in line with the WHO guidelines.
- Monitor appropriate use of antimicrobials in both human and animal sectors.

ZOONOTIC DISEASES

INTRODUCTION

Zoonotic diseases are communicable diseases that can spread between animals and humans. These diseases are caused by viruses, bacteria, parasites and fungi carried by animals, insects or inanimate vectors that aid in its transmission. Approximately 75% of recently emerging infectious diseases affecting humans are of animal origin; and approximately 60% of all human pathogens are zoonotic.

Target

Functional multi-sectoral, multidisciplinary mechanisms, policies, systems and practices are in place to minimize the transmission of zoonotic diseases from animals to human populations.

LEVEL OF CAPABILITIES

The zoonotic diseases of greatest national public health concern currently present in Iraq are rabies, haemorrhagic fever and anthrax with an immediate notification. Since 2018, the MoH introduced case-based surveillance for leishmaniasis (cutaneous and visceral), brucellosis, toxoplasmosis, and hydatid cysts. The surveillance, prevention and control of zoonotic diseases involve various competent authorities operating at national and governorates levels, in both the human and animal sectors. A list of the priority zoonotic diseases has been agreed between the MoH, the MoA and other partners.

The MoA has a good understanding of the epidemiological situation regarding animal diseases in the country, and conducts routine passive disease surveillance and monitoring for key animal diseases including zoonotic diseases (e.g. brucellosis, avian influenza) with limited capacity for wildlife disease surveillance. Active surveillance is in place only for avian influenza, primarily due to financial constraints. Veterinary services in Iraq have been traditionally supplied by the government. They consist of specialized central facilities and coordination functions located in Baghdad, veterinary hospitals at the governorate level and district veterinary clinics at over 235 decentralized locations. The major functions of the animal health service have been provision of vaccines and drugs through a veterinary distribution chain down to the district level, disease diagnosis and surveillance, animal quarantine, banning of animal importation, quality control of veterinary products and animal food safety. The MoA report continually to OIE on zoonotic diseases as well as the animal disease occurrence.

The veterinary laboratory has capacity testing for rabies, avian influenza, anthrax, brucellosis, toxoplasmosis, hydatid cysts and leishmaniasis. However, there is a need to extend capacity to include diagnosis of haemorrhagic fever.

Iraq has established a National Zoonotic Diseases Committee since 2005 that gathers all relevant authorities and stakeholders to address zoonoses in a coordinated way, including information sharing and response to zoonotic diseases. However, a joint rapid investigation team is yet to be established. In 2009, when avian influenza was a national issue, a higher national committee for influenza was established. It included the same representatives as the National Zoonotic Diseases Committee in order to ensure the best outbreak response. This committee ceased operation in 2016.

Iraq has 14 veterinary schools with 11 000 graduates registered in the Iraqi veterinary association, 1600 working within the veterinary services across the country and 252 as a veterinary public health within the MoH.

Indicators and scores

P.4.1 Coordinated surveillance systems in place in the animal and public health sectors for zoonotic diseases/pathogens identified as joint priorities – Score 3

Strengths and best practices

- Political commitment during outbreaks and 24 hours/7 days information-sharing during outbreaks.
- Existence of a legislative framework for the National Zoonotic Disease Committee with a specific budget line.
- MoH and MoA have an agreed a list of priority zoonotic diseases.
- Surveillance systems to detect the priority zoonoses are in place in both the MoH and MoA.

Areas that need strengthening and challenges

- Joint surveillance plan for priority zoonotic diseases.
- The MoA has insufficient epidemiology capacity.
- Communication and collaboration between MoA and MoH occurs on an ad hoc basis. There is no mechanism for routine information sharing between MoA, MoH and laboratories.

P.4.2 Mechanisms for responding to infectious and potential zoonotic diseases established and functional – Score 1

Strengths and best practices

- In outbreak situations of priority zoonotic diseases (with or without human cases), there has been a rapid, effective, coordinated and multisectoral response led by the MoH, MoA and other relevant governmental and private stakeholders, with appropriate reporting to relevant international organizations (e.g. the H5N1 avian influenza event).
- A compensation system is legally in place.

Areas that need strengthening and challenges

- Improve the implementation of compensation for diseased livestock to improve the control of the zoonotic diseases.
- The coordination between different sectors involved in the surveillance and response of the zoonotic disease need to be improved.
- Active surveillance for relevant priority zoonotic diseases.
- There is no overall multisectoral preparedness and response plan for zoonoses, thus no standard collaborative mechanisms for systematically responding to most zoonotic events.

Recommendations for priority actions

- Review and update the sector and level representation in the National Zoonotic Disease Committee to ensure functionality. Ensure that the development of One Health strategy is among its responsibilities.
- Establish a joint surveillance plan with all relevant sectors under the One Health strategy.
- Based on assessment of training needs, offer training opportunities to veterinarians, such as access to FETP.
- Expand active surveillance to cover all priority zoonotic diseases. Identify opportunities to fully apply compensation for diseased livestock. Upgrade laboratory capacity for the detection of the zoonotic disease.
- Review the existing plans for zoonotic disease preparedness and response to cover all priority zoonotic diseases.

FOOD SAFETY

INTRODUCTION

Foodborne and waterborne diarrhoeal diseases are leading causes of illness and death, particularly in less developed countries. The rapid globalization of food production and trade has increased the potential likelihood of international incidents involving contaminated food. The identification of the source of an outbreak and its containment is critical for control. Risk management capacity with regard to control throughout the food chain continuum must be developed. If epidemiological analysis identifies food as the source of an event, based on a risk assessment, suitable risk management options that ensure the prevention of human cases (or further cases) need to be put in place.

Target

A functional system is in place for surveillance and response capacity of States Parties for foodborne disease and food contamination risks or events with effective communication and collaboration among the sectors responsible for food safety.

LEVEL OF CAPABILITIES

Iraq has a multi-agency food safety system, where nine ministries are involved and led by the MoH. The food safety programme is part of the Health and Nutrition Cluster and implemented by three-line ministries (MoH, MoA and the Ministry of Interior (MOI)) with coordination of United Nations agencies (WHO, FAO and the United Nations Industrial Development Organization (UNIDO)). The government is in the process of developing and updating the national food safety system. Iraq is a member of the International Food Safety Authorities Network (INFOSAN) with an identified focal point based is the ministry of agriculture. The Iraq food safety system is fragmented in relation to its governance.

The country has a surveillance and monitoring system in place, governed by laws and regulations in concerned ministries such as MoH, MoA and the Ministry of Planning (MoP), as well as the Baghdad Municipality. Case definitions for each of the waterborne and foodborne diseases exists as well as an updated list of the laboratories that can perform the necessary testing during foodborne disease outbreaks or contamination events.

Furthermore, there is a plan documenting response procedure to address food safety emergencies included in the Public Health Law (PHL) No. 89 (issued in 1981) and Food Law no. 4 (issued in 2011), and regulations and decisions of the inter-ministerial Food Consultative Council.

Health workers and sanitary/food inspectors are trained on reporting foodborne events, which is part of executive annual plans and training courses/workshops.

Iraq has a structured food inspection system especially for manufacturing and importation of pre-packaged foods. The country has authority over meat inspection in slaughterhouses. The training capability to perform laboratory tests and identify disease aetiology is in place for most potential foodborne and waterborne contaminants. However, there is a gap in the testing of pesticide residues and other chemical contaminants such as heavy metals, industrials pollutants and mycotoxins.

A comprehensive WHO mission took place to evaluate the food safety capacity in the country a few months before the current JEE took place. This was followed by a workshop to develop a plan of action based on the recommendations of the mission. The recommendations emerging from the external evaluation were consistent with the recommendations of the previous food safety mission.

Indicators and scores

P.5.1 Surveillance systems in place for the detection and monitoring of foodborne diseases and food contamination – Score 2

Strengths and best practices

- Existence of laws, legislation and regulations related to food safety.
- Health care workers and sanitary inspectors trained on reporting of foodborne events.
- Rapid response teams exist at national and subnational level.
- Inter-ministerial Food Consultative Council has made 226 formal decisions.
- Existence of laboratory capacity for waterborne and foodborne diseases.

Areas that need strengthening and challenges

- Update the food safety section in the current Public Health Law.
- Improve laboratory capacity, especially for the identification of chemical contaminants and strain characterization, allowing investigation of linkages between human and food isolates and in order to provide quicker responses to case clusters and help prevent outbreak spread.
- Improve collaboration, coordination and data sharing between the sectors involved in surveillance.
- Strengthen the human resources capacity required for implementation of the food safety programmes at national and subnational levels.
- Enhance national surveillance systems to ensure outbreaks of foodborne diseases are captured, including support to establishment of a national database.
- Coordinate communication between the INFOSAN focal point and other actors involved in the food safety system.

P.5.2 Mechanisms are established and functioning for the response and management of food safety emergencies – Score 2

Strengths and best practices

- Existence of the food safety plan documenting response procedures to address food safety emergencies included in the Public Health Law (PHL) No. 89 and Food Law no.4, as well as regulations and decisions of the inter-ministerial Food Consultative Council.
- Existence of religious mass gathering preparedness plan.
- Existence of communication channels between relevant ministries.
- Various laws and regulations reviewed and updated recently.

Areas that need strengthening and challenges

- Strategies, guidance and procedures (SOPs) for communication between partners, stakeholders, the general public and international organizations.
- Improve capacities of analytical services.
- National preparedness for chemical food safety response.

Recommendations for priority actions

- Finalize the plan of action based on the recommendations of WHO food safety mission.
- Establish clear procedures to improve coordination between the food safety actors.
- Integrate with the Arab League Strategy for Health and Environment.
- Disseminate INFOSAN focal point contact information among various stakeholders.
- Enhance in-country laboratory capacity for the identification of all foodborne and waterborne contaminants.

BIOSAFETY AND BIOSECURITY

INTRODUCTION

It is vital to work with pathogens in the laboratory to ensure that the global community possesses a robust set of tools – such as drugs, diagnostics and vaccines – to counter the ever-evolving threat of infectious diseases.

Research with infectious agents is critical for the development and availability of public health and medical tools that are needed to detect, diagnose, recognize and respond to outbreaks of infectious diseases of both natural and deliberate origin. At the same time, the expansion of infrastructure and resources dedicated to work with infectious agents have raised concerns regarding the need to ensure proper biosafety and biosecurity to protect researchers and the community. Biosecurity is important in order to secure infectious agents against those who would deliberately misuse them to harm people, animals, plants or the environment.

Target

A whole-of-government multisectoral national biosafety and biosecurity system with dangerous pathogens identified, held, secured and monitored in a minimal number of facilities according to best practices; biological risk management training and educational outreach conducted to promote a shared culture of responsibility, reduce dual-use risks, mitigate biological proliferation and deliberate use threats, and ensure safe transfer of biological agents; and country-specific biosafety and biosecurity legislation, laboratory licensing and pathogen control measures in place as appropriate.

LEVEL OF CAPABILITIES

Iraq is putting efforts into developing and implementing a biosafety and biosecurity programme to ensure sustained adequate laboratory practices throughout the country. A multisectoral National Biorisk Management Committee (NBMC) was established in 2012. Members include representatives from the consulted commission for the Minister's Cabinet, Prime Minister's Office, National Security Services, Intelligence Services, MoH, MoA, Ministry of Higher Education and Research (MOHESR), Ministry of Industry(MoIn), Ministry of Trade (MoT), Ministry of Environment (MoE) (previously), Ministry of Defense (MoD), (MoI), Ministry of Foreign Affairs (MoFA), Ministry of Finance (MoF), Ministry of Science and Technology (MoST) (previously), Iraqi National Monitoring Authority (INMA). There are three subcommittees for legislation, the pathogen list and awareness raising. The whole committee meets every three months. Subcommittees meet more frequently.

Some, but not all, elements of a comprehensive biosafety and biosecurity system are in place. The country has started with keeping an inventory of dangerous pathogens. A comprehensive national biosafety and biosecurity regulatory framework is currently being finalized before submission for endorsement. All laboratories in the country must be licensed by the MoH in line with the Public Health Law 89 (1981), and subsequent revisions, in order to operate.

The highest biosafety level (BSL) in the country is BSL2+ (work with microorganisms is conducted in a BSL2 laboratory with selected BSL3 biosafety practices and procedures). The Central Public Health Laboratory (CPHL) and Central Veterinary Laboratory (CVL) are facing a poor status of their infrastructure as well as malfunctioning/lack of their maintenance of key equipment. This is especially important for the class 2 biosafety cabinets (BSC Class 2), which have not received maintenance and were not certified since they were first installed. There are no longer qualified engineers or essential calibrated equipment in the country to maintain and certify BSC Class 2. The lack of properly functioning equipment is likely an equally important issue for laboratories across other sectors.

Aside from biosafety in the laboratory, more attention is needed to training fieldworkers across sectors to safely collect, handle, pack and transport specimens.

Indicators and scores

P.6.1 Whole-of-government biosafety and biosecurity system in place for all sectors (including human, animal and agriculture facilities) – Score 2

Strengths and best practices

- Country has started the process of monitoring and keeping an updated record and inventory of pathogens within facilities that store or process dangerous pathogens and toxins.
- A comprehensive national biosafety and biosecurity regulatory framework has been developed but is not yet endorsed.

Areas that need strengthening and challenges

- A comprehensive reporting system that ensures all incidents are reported and processed is currently lacking.
- Ensuring facilities are suitable for laboratory operations and provide a safe working environment. Maintenance and certification of equipment, in particular BSC Class 2.

P.6.2 Biosafety and biosecurity training and practices in all relevant sectors (including human, animal and agriculture) – Score 3

Strengths and best practices

- Presence of biosafety and biosecurity training programmes of various scope and quality across sectors.
- Country is developing sustained academic training proportionate to the assessed risks, including for those who maintain or work with dangerous pathogens and toxins.

Areas that need strengthening and challenges

- Training for fieldworkers to safely collect, handle, pack and transport specimens.
- Continue academic training and training of laboratory staff in all aspects of biosafety and biosecurity in line with the latest national and international guidelines.

Recommendations for priority actions

- To endorse and implement the national regulatory framework for biosafety and biosecurity.
- To provide (refresher) trainings in biosafety and biosecurity for laboratory staff in all sectors, including field staff. Areas of training to include attention to risk assessment and managing high-threat pathogens.
- To continue to maintain an updated inventory of dangerous pathogens and toxins.

IMMUNIZATION

INTRODUCTION

Immunization is one of the most successful global health interventions and one of the most cost-effective ways to save lives and prevent disease; and in the majority of cases, immunization delivery systems and strategies have been the most effective ways to reach everywhere and deliver health preventive interventions, including in emergency settings.

Target

A functioning national vaccine delivery system – with nationwide reach, effective distribution, access for marginalized populations, adequate cold chain, and ongoing quality control – that is able to respond to new disease threats.

LEVEL OF CAPABILITIES

The national expanded programme on immunization (EPI) programme in Iraq was established in 1985, targeting infants, with six antigens. Since that time, the programme evolved to expand to older age groups and include 11 antigens (i.e. hepatitis-B, tuberculosis, polio (OPV/IPV), pertussis, diphtheria, tetanus, rotavirus, measles, rubella, mumps and pneumococcal infections), in addition to other vaccines specific to special high-risk populations (such as typhoid and meningococcal vaccines). The latest vaccines that were introduced to the national EPI schedule were Haemophilus influenzae type B (Hib) and rotavirus (both in 2012), inactivated polio vaccine (IPV) (2016) and pneumococcal conjugate vaccine (PCV) (2017).

Immunization in Iraq is mandatory (public health law) to all children and is provided free of charge to all target populations living in the country regardless of their nationality.

The programme was able to achieve high level performance in the past, but has been heavily affected by the crisis, resulting in much lower coverage rates and increased morbidity and mortality with vaccine preventable diseases (VPDs). Huge efforts are now being made by MoH, in collaboration with partners, to rebuild capacities throughout the country and to strengthen the various components of the immunization system.

The programme budget is almost 100% secured through government resources, except for some vaccination campaigns where contributions from WHO, UNICEF and other partners have been received. However, some of the important programme functions (like training, supervision, etc.) have been facing financial challenges.

The country relies on a vaccine self-procurement mechanism run by KEMADIA (an MoH institution that has a monopoly for drugs and vaccine procurement in Iraq), based on districts/provinces expressed needs. Vaccine shortages have been reported at both national (shortage in oral polio vaccine for 2 months, resulting in a lower coverage with OPV3) and peripheral level, highlighting important gaps in vaccine forecasting, procurement and distribution systems.

A vaccine inventory assessment was recently performed by UNICEF and EMPHNET (Dec 2017–Jan 2018) and an operational cold chain replacement plan developed. This activity was followed by intensified capacity-building activities of relevant staff at various geographic levels on Vaccine Stock Management (VSSM) and with, very soon, a full Effective Vaccine Management Assessment (EVM).

Routine immunization services are delivered through a fixed strategy involving 1748 health facilities out of the 2183 ones that are available in the country, as reported by the EPI program during the JEE mission, while the above-mentioned recent cold chain equipment inventory (see above) showed that 40% of the functioning facilities at the service deliv¬ery level are not providing immunization services.

In addition to routine immunization, the programme has been implementing vaccination campaigns as part of their national VPD control, elimination and eradication strategies (i.e. polio eradication, measles elimination, rubella prevention and control, etc.), in addition to some focused multi-antigen campaigns to improve population immunity, particularly in high risk populations. Health education and population awareness activities have been very episodic and mostly restricted to vaccination campaigns, resulting in insufficient awareness and engagement from both health practitioners and the general population.

The programme operates through a multi-year plan (the current one covers the period 2017–2022), translated into operational annual action plans that are in line with the global and regional goals, strategies and action plans (e.g. the Regional Vaccine Action Plan of the Regional Office for the Eastern Mediterranean (EMVAP) 2016–2020 and the Global Vaccine Action Plan (GVAP) 2011–2020).

Programme reporting, monitoring and evaluation systems have been put in place, including a VPDs surveillance system. However, the relatively important discrepancies between the data collected by the administrative system and the results provided by multiple indicator cluster surveys (MICS) in 2010 and 2018, points to important data quality and accuracy issues (probably in terms of the programme routine reporting system as well as denominator figures). No national vaccine coverage survey has been for more than 10 years.

Analysis of the programme achievements in terms of reported coverage figures – with the various programme schedule doses – indicates increasing drop-out rates throughout the various immunization schedule contacts (e.g. in 2017, reported coverage with BCG at birth was 96%, decreasing to 85% with Hexa 3 at 6 months), indicating a clear service utilization problem.

In terms of zoonotic diseases, reports from animal sectors indicate relatively well-sustained activities for some diseases like brucellosis and rabies, against which around 6 million sheep and goats, and 150 000 dogs, are respectively vaccinated annually.

Indicators and scores

P.7.1 Vaccine coverage (measles) as part of national programme – Score 3

Strengths and best practices

- National policy supported by a public health law and high-level government commitment.
- Almost 100% national financing, except for some specific vaccination campaigns (partners' contribution).
- Vaccination mandatory to all target populations living in the country regardless of their nationality, including internally displaced populations.
- Strong national immunization schedule with expanded age groups, 11 Antigens included into the routine EPI services, in addition to other vaccines for specific population groups (such as health professionals, pilgrims etc.) and multiple booster doses.
- Mixed vaccine delivery strategy, including fixed routine immunization services by 1748 vaccination points, supported by acceleration as well as VPDs control, elimination and eradication vaccination campaigns.
- 85% of children under 12 months of age have received measles vaccine in 2017, as per the programme administrative reporting system; while WHO and UNICEF estimates this rate to 71%).

Areas that need strengthening and challenges

- Programme facing financial and human resources difficulties that are heavily affecting capacities to deliver high-quality immunization services to all areas and population groups.
- Problems of sustainable access and utilization of immunization services as attested by the inadequate measles coverage rates, the important drop-out rates between the consecutive immunization contact points, and the high proportion of low performing districts (37% of the 139 districts not being to achieve 80% Hexa 3 coverage (with 2 districts reporting rates less than 50%) and only 19% achieving the global measles elimination coverage target of 95%).
- Significant proportions of primary health care facilities are not delivering routine immunization services.
- Health education and communication activities are restricted to immunization campaigns, with lack of a clear strategy for sustainable programme awareness and communication to improve population demand, effectively address the increasing rumours and hesitancy in a timely way, and strengthen professionals' engagement.
- A sustained relatively high transmission of some VPDs, such as pertussis, mumps and measles, as reported by the WHO VPD Monitoring System.

P.7.2 National vaccine access and delivery – Score 2

Strengths and best practices

- Vaccine delivery system with relatively good cold chain maintenance is available to 60 to 79% of target population within the country.
- Ongoing important efforts by MoH, with the support of UNICEF and EMPHNET, to strengthen vaccine supply chain management. In early 2018, this included a nationwide vaccine equipment inventory, followed by an improvement/replacement plan, as well as intense capacity-building activities with relevant staff at various geographical levels, focused on vaccine supplies stock management (VSSM). A full effective vaccine management (EVM) assessment is planned to take place in the near future.
- 100% of routine immunization required vaccines are purchased through the national budget.
- A centralized vaccine self-procurement mechanism run by KEMADIA (an MoH institution that has the monopoly for drugs and vaccine procurement in Iraq), with a bottom-up forecasting approach).

Areas that need strengthening and challenges

- Sustained vaccine availability is a challenge at the delivery level, with reported shortages at peripheral as well as national levels, highlighting problems in both vaccine forecasting and procurement, as well as distribution and management.
- Vaccine procurement mechanisms and procedures, including considering the global vaccine stock levels and market size.
- Evidence-based estimation of vaccine needs by the various country administrative levels, for a better stock management.
- More than 40% of primary health care facilities are not delivering routine EPI services.

Recommendations for priority actions

- Conduct an extensive mapping of potential new vaccine delivery opportunities to support the ongoing programme immunization network wherever improvement to physical access is needed.
    - Start first with integrating immunization services in relevant primary health care facilities that do not provide vaccines to their clients (upgrade their technical and logistical capacities accordingly).
    - Consider other options wherever needed and possible, through other MoH and public opportunities, as well as potential public–private partnerships.
    - Conduct bottleneck analyses to identify gaps in vaccination coverage, particularly in the districts with consistent low coverage, and develop local plans to address these gaps.
    - Update/upgrade health promotion activities considering the local social context
- In order to prevent further vaccine stock-outs at both central and peripheral levels, use the opportunity of the support being provided by UNICEF/EMPHNET to undertake a comprehensive assessment of the vaccine procurement system (within the forthcoming EVM assessment) in order to identify major hurdles and undertake necessary correction measures.
- Urgently address the data quality and accuracy problem through conducting a national coverage survey to obtain a better indication of the country achievement; a data quality self-assessment (DQS) will also identify weaknesses and improve the programme data management system.
- Expand the ongoing microplanning improvement process (capacity-building and micro-plans development) to remaining districts and governorates, while improving mapping of low-immunity population groups and areas, and updating of micro-plans accordingly.
- Update the national strategy and plans to ensure:
    - A proper and regular mapping and addressing of low coverage areas and population groups (Focus on stronger monitoring and data use for action, microplanning ('Reaching Every Community' approach), and raising awareness among both health workers and targeted populations).
    - Electronic data reporting and analysis system gaps.
    - Vaccine-preventable diseases surveillance gaps (in particular in high risk areas and private sector).

DETECT

NATIONAL LABORATORY SYSTEM

INTRODUCTION

Public health laboratories provide essential services including disease and outbreak detection, emergency response, environmental monitoring and disease surveillance. State and local public health laboratories can serve as a focal point for a national system, through their core functions for human, veterinary and food safety including disease prevention, control and surveillance; integrated data management; reference and specialized testing; laboratory oversight; emergency response; public health research; training and education; and partnerships and communication.

Target

Surveillance with a national laboratory system, including all relevant sectors, particularly human and animal health, and effective modern point-of-care and laboratory-based diagnostics.

LEVEL OF CAPABILITIES

Iraq has a multisectoral laboratory system with most of the diagnostic capacities at national level. Ministries with laboratories include MoH, MoA, MoHESR, MoT and MoP. Laboratories at the MoP are responsible for issuing Iraq standards for food and water safety. Under the supervision of the MoH there are clinical primary health care laboratories, secondary and tertiary laboratories and public health laboratories, including food safety and water. There are also chemical and radio nuclear laboratories under the MoE.

The CPHL and CVL are the main reference laboratories for public and animal health, respectively. While the indicator laboratory testing for detection of priority diseases (D.1.1) was scored as demonstrated capacity, it should be noted that there is still room for improvement. This is especially true for laboratory quality and safety. CPHL is not accredited against international standards (e.g. ISO15189). Although progress has been made in this area, funds are lacking to fully achieve this. National laboratory quality standards do not exist. The highest biosafety level (BSL) in the country at CPHL is BSL2+ (work with microorganisms is conducted in a BSL2 laboratory with selected BSL3 biosafety practices and procedures). All laboratories in the country must be licensed by the MoH in line with Public Health Law 89 (1981), and subsequent revisions, in order to operate. A laboratory information management system is not in place. Laboratory surveillance for antibiotic resistance is underway at four surveillance sites, including through automated culturing and VITEK 2, with early implementation of data collection through WHONET (see P.3.2, Surveillance of AMR for more details). The current poor status of the facility's infrastructure; malfunctioning and maintenance of key equipment, including biosafety cabinets; and difficulty in procuring reagents and validated kits in a sustainable manner, hamper the performance of the CPHL.

As there are many types of laboratory services in the country at national and subnational levels, as well as across sectors, there is need for strategic direction and coordination across these laboratories. Iraq would benefit from developing, endorsing and implementing a national laboratory policy and a subsequent national laboratory strategy to provide direction and streamline laboratory services. The national laboratory strategy would also describe a tiered laboratory network, outlining test capacities at different levels within the system.

District level laboratories rely in large part on referral to national laboratories for (advanced) testing or confirmation. There are procedures in place through the MoH to manage specimen referral from all districts to national level laboratories. Given the country's current high reliance of on specimen referral, it is important to ensure that these operations are functioning properly by performing a multisectoral simulation exercise to identify areas for improvement.

Indicators and scores

D.1.1 Laboratory testing for detection of priority diseases – Score 4

Strengths and best practices

- The country, mainly at national level, is able to perform six core tests and related antimicrobial susceptibility testing and participation in external quality assessment programmes, including for: (1) PCR for influenza; (2) virus culture for poliovirus; (3) serology for HIV; (4) microscopy for Mycobacterium tuberculosis; (5) rapid diagnostic testing for Plasmodium spp; and (6) bacterial culture for Salmonella Typhi. Additional tests selected by the country are for detection of viral hepatitis, Vibrio cholerae, and bacterial meningitis.

Areas that need strengthening and challenges

- The infrastructure of the CPHL has deteriorated over time and is currently in poor condition, which may negatively impact laboratory performance. Additionally, some departments are struggling with ensuring that their equipment is properly functioning and well maintained. Investment in improving the CPHL facility and equipment is needed.
- At the national level, aside from core tests, public and animal health laboratories need to continue to improve the safe, accurate, and rapid detection of high-threat pathogens in-country or through international referral.

D.1.2 Specimen referral and transport system – Score 4

Strengths and best practices

- A system is in place to transport specimens from all districts in the country to the national reference laboratories for testing, facilitated by the MoH.
- A cohort of shippers from district and national levels was recently trained and certified by WHO using the Infectious Substances Shipping Training (ISST).

Areas that need strengthening and challenges

- Shipping of specimens, including high-threat pathogens, from district to national levels can be further improved by performing drills reviewing the functioning of specimen collection, packing, transportation and receipt. The exercise scenario should be based on a (fictional) zoonotic disease outbreak to test multisectoral coordination.
- Investigate opportunities to engage with the national airline and its pilots for shipping of specimens by air to the national reference laboratory.

D.1.3 Effective national diagnostic network – Score 2

Strengths and best practices

- National reference laboratories for public and animal health are well connected to subnational laboratories in terms of referral of specimens.

Areas that need strengthening and challenges

- Subnational laboratories rely on referral of specimens to national laboratories and improving diagnostic capacities at subnational level in line with a tiered laboratory network would improve the overall functioning of the system.
- Sustainable procurement of reliable point of care tests, including rapid diagnostic tests, remains a challenge and options to improve this should be investigated.

D.1.4 Laboratory quality system – Score 2

Strengths and best practices

- CPHL has a quality management team and it is progressing with the WHO Laboratory Quality Stepwise Implementation (LQSI) tool towards ISO 15189 accreditation.
- National-level laboratories participate in several international external quality assessment (EQA) programmes (see D.1.1).

Areas that need strengthening and challenges

- No national laboratory quality standards currently exist that serve as a minimum set of standards that can be readily adapted and applied to laboratories at every level of the health care system.
- Coordination among (national level) laboratories that organize EQA schemes for subnational laboratories to avoid duplication of efforts and best use of resources.

Recommendations for priority actions

- Develop, endorse and implement a national laboratory policy to guide future activities in a coordinated and sustainable manner and by making optimal use of resources. Subsequently, to develop, endorse and implement a national laboratory strategic plan to translate the national laboratory policy into strategic objectives.
- Develop, endorse and implement national laboratory quality standards that can be adapted and applied to laboratories throughout the country.
- Conduct a situational analysis summarizing locations and capacities of key laboratories across the country serving different sectors, including public health, clinical, animal health, food safety, chemical and radiation, to support tier-specific testing strategies and national referral testing.
- Test the functionality of the national specimen referral system through conducting a simulation exercise, specifically a drill.

SURVEILLANCE

INTRODUCTION

The purpose of public health surveillance is to ensure both, the early warning function across jurisdictional levels – so that risk assessment and management actions related to an acute public health event can be taken without unnecessary delays – and the generation of information to drive the public health related decision-making process as an acute public health event evolve.

Target

The public health-related early warning function, as well as the ability to generate information to drive the public health-related decision-making for acute public health event management purposes, require seamless connections across multiple jurisdictions – potentially from the local to the international levels and, potentially, across multiple disciplines and sectors.

LEVEL OF CAPABILITIES

Iraq is comprised of 18 provinces with twenty Departments of Health (DoHs) (Baghdad Resafa, Baghdad Kergh and Medical City). At the district level there are 146 primary health district sites. In each province there are veterinary hospitals and many veterinarian clinics. In Iraq, surveillance of infectious diseases for human health under the MoH and MoE with the mandate for the provision of health services in Iraq. Public health surveillance systems are coordinated by the epidemiology unit within the MoH.

Iraq has a long experience of surveillance of human infectious diseases. Event-based surveillance is yet to be fully implemented at the national and subnational levels. The signals detected passively by the system are followed up by rapid response teams to respond to the type of threat detected.

Indicator-based surveillance is performed through a mandatory notification system of priority diseases and the 1450 surveillance sites include all government hospitals. The notification system involves reporting from clinicians and laboratories to the national level. District level data is paper-based and collected on a weekly basis from all surveillance sites. Thereafter, the districts enter the data electronically (into an Epi-Info 7 template) and send it to the DoH (via email), which in turn sends the data to CDC (via email) where it is appended to a master file.

The list of diseases requiring immediate notification includes cholera, diphtheria, malaria, measles, meningococcal meningitis, rabies, acute flaccid paralysis, rubella, bilharzia, poliomyelitis, severe acute respiratory infection (SARI), cutaneous anthrax, pulmonary anthrax, tetanus, simian haemorrhagic fever (SHF), Ebola virus disease, food poisoning and any unusual health event. All data is analysed by the epidemiology department of the MoH and MoE, and reports are produced and disseminated regularly to stakeholders. In addition, there is a list of case-based diseases and weekly reported diseases.

Iraq has established National Committees for Communicable Diseases Such as: National Zoonotic Diseases Committee (since 2005); Higher National Committee for Influenza (since 2009); Higher National Committee for Cholera Control; and Higher National committee for Vector Control. All stakeholders are represented in these committees and meet as required, with any recommendation(s) arising from committees being mandatory to the stakeholders.

Indicators and scores

D.2.1 Surveillance systems – Score 2

Strengths and best practices

- The reporting chain is clearly identified.
- There is legislation mandating the reporting of infectious diseases.
- Registry book for communicable diseases: Unified case definitions are included in the registry book.
- Reporting tools are standardized: Availability of immediately notifiable and case-based forms, and aggregated or weekly notification forms.
- Completeness of notification forms

Areas that need strengthening and challenges

- Laboratory capacity to confirm disease occurrence.
- Timelines of disease notifications from all service providers.
- Update the Registry book for communicable diseases. The last edition was published in 1999.
- Formally establish event-based surveillance.

D.2.2 Use of electronic tools – Score 2

Strengths and best practices

- Electronic versions of the paper forms are used (Epi-info 7) at the central level to facilitate the analysis and reporting of surveillance data (via e-mail).
- Surveillance data from vertical disease programmes are linked under the health information system.

Areas that need strengthening and challenges

- A single electronic surveillance platform that allows data to be entered at the point of care and for recording all public health events.
- Electronic reporting for animal health.

D.2.3 Analysis of surveillance data – Score 3

Strengths and best practices

- Capacity exists in the country, in the epidemiology department, to conduct analysis of surveillance data.
- Production of weekly, monthly and annual epidemiological bulletin and reports.

Areas that need strengthening and challenges

- An electronic system that automatically analyses data and shows trends and alerts.
- Capacity of surveillance officers at the different administrative levels.
- Capacity to conduct timely risk assessment at the different administrative levels.

Recommendations for priority actions

- Establish database to capture all public health events.
- Formalize current event-based surveillance system.
- Integrate laboratory information into existing indicator and event-based surveillance.
- Enhance in-country laboratory capacity to allow for the prompt identification of national priority pathogens.

REPORTING

INTRODUCTION

Health threats at the human–animal–ecosystem interface have increased over the past decades, as pathogens continue to evolve and adapt to new hosts and environments, imposing a burden on human and animal health systems. Collaborative multidisciplinary reporting on the health of humans, animals and ecosystems reduces the risk of diseases at the interfaces between them. The IHR National Focal Points, the OIE delegate, and WAHIS focal point should have access to a toolkit of best practices, model procedures, reporting templates, and training materials to facilitate rapid (within 24 hours) notification of events that may constitute a public health emergency of international concern (PHEIC) to WHO, and listed diseases to OIE, and will be able to rapidly (within 24/48 hours) respond to communications from these organizations.

Target

Timely and accurate disease reporting according to WHO requirements and consistent reporting to/information of FAO and OIE.

LEVEL OF CAPABILITIES

A key provision of the IHR is that a country must report any event that may constitute a PHEIC to WHO within 24 hours. Some diseases always require reporting under the IHR, while others require reporting only if they represent a risk of cross-border spread. Any other diseases or biological, radiological or chemical events with potential health consequences that meet the criteria established by the IHR must also be reported.

Iraq has a Higher Committee as well as a Technical Committee established as per an official ministerial order with defined terms of reference (ToRs), roles and responsibilities of the designated focal points.

In Iraq, the notifiable diseases are selected as per Annex 2 of the IHR (2005). Notification is based on the event status, namely whether it is a public health threat, unusual event, its geographical distribution and if it poses danger on trade and travel. This concept is not fully understood by all sectors, which highlight the need to intensify advocacy activities to raise awareness of IHR among the IHR-bound sectors.

The veterinary department reports notifiable diseases to OIE on regular basis, including immediate reporting for some diseases. However, information is not shared in a timely way with the IHR National Focal Point, whereas all occurring diseases are reported in the annual report.

The endemic diseases are not commonly reported when they reach to an outbreak level. The IHR National Focal Point is part of a common diseases committee that conducts regular meetings to share information on how to respond to any outbreak, notification to WHO is usually not part of the discussion.

The national IHR focal point responds to WHO verification requests but not within the timeframe identified in article 6 of the IHR. Also, the national IHR focal point is not making use of the consultation article under IHR concerning the public health events and their notification.

Although a broad understanding among the human resources (HR) sectors that early notification of public health events ensures early response and thereby prevents disease spread affecting national and global health security, coordination and information sharing are more present in times of emergency than in the day to day activities.

Indicators and scores

D.3.1 System for efficient reporting to FAO, OIE and WHO – Score 2

Strengths and best practices

- Iraq has identified the IHR National Focal Points, an OIE focal point and they also have access to the learning package and best practices as provided by WHO, OIE and FAO.

Areas that need strengthening and challenges

- Improve coordination and collaboration with OIE contact point in order to exchange information when needed, specifically when it comes to legislation and regulations.
- Multisectoral process in place for assessing potential events, and for reporting and systemic information exchange between district/provincial health offices, animal surveillance units, laboratories and other relevant sectors regarding potential zoonotic risks. Urgent zoonotic events are low to zero due to the fact that there is no reporting mechanism in place.
- Ability to identify a potential PHEIC and file a report to WHO and similarly to the OIE (according to OIE processes) for relevant zoonotic diseases, based on an exercise or real event.

D.3.2 Reporting network and protocols in country – Score 2

Strengths and best practices

- Iraq has established processes, governing reporting and processes for multisectorial coordination, specifically during mass gathering events (mainly religious in nature) as well as during outbreaks.
- Iraq has established IHR multisectoral coordination that includes representation from all IHR-related sectors.

Areas that need strengthening and challenges

- Event-based surveillance (EBS) is weak, especially in the area of the required legislation to conduct EBS.
- Capacity building (intensive training) on IHR including notification under IHR for staff in different ministries and sectors.
- Improve information sharing among sectors (e.g. integrated electronic surveillance system for immediate reporting and disease/event notification).
- Establish protocols, processes and SOPs for reporting of a potential PHEIC to WHO and to OIE for relevant zoonotic diseases in alignment with national and international standards and multisectoral coordination to respond to a potential PHEIC to WHO and to the OIE for relevant zoonotic diseases

Recommendations for priority actions

- Develop a policy and SOPs for notification of a potential PHEIC for all reporting entities and from IHR National Focal Point to WHO.
- Improve understanding of WHO, OIE, FAO notification/reporting requirements through multisectoral discussions.
- Disseminate information on roles and responsibilities of INFOSAN, WAHIS, IAEA and IHR focal points to relevant stakeholders.
- Conduct training to enhance knowledge and use of the IHR decision instrument for the notification of potential all-hazard PHEIC.
- Review previous event compliance of IHR notification to identify gaps and recommend improvements.

HUMAN RESOURCES

INTRODUCTION

Workforce development is important in order to develop a sustainable public health system over time by developing and maintaining the highly qualified public health workforce with appropriate technical training, scientific skills and subject-matter expertise.

Target

States Parties with skilled and competent health personnel for sustainable and functional public health surveillance and response at all levels of the health system and the effective implementation of the IHR. Human resources include nurses and midwives, physicians, public health and environmental specialists, social scientists, communication, occupational health, laboratory scientists/technicians, biostatisticians, information technology (IT) specialists and biomedical technicians. There is a corresponding workforce in the animal sector of veterinarians, animal health professionals, para-veterinarians, epidemiologists and IT specialists.

The recommended density of doctors, nurses and midwives per 1000 population for operational routine services is 4.45 plus 30% surge capacity. The optimal target for surveillance is one trained (field) epidemiologist (or equivalent) per 200 000 populations who can systematically cooperate to meet relevant IHR and Performance of Veterinary Services core competencies. One trained epidemiologist is needed per rapid response team.

LEVEL OF CAPABILITIES

A multisectoral, skilled and competent, workforce at national, regional and local levels is critical for the implementation of IHR core capacity requirements.

MoH directorate of planning and resources development has a multi-year strategy (2018–2022) for human resources. This strategy deals with HR as a package of general practitioner and specialist doctors and aims at securing one physician per 1000 population, with no categorization for specific medical specialties, especially relevant to IHR implementation, such as epidemiologists, veterinarians and community health workers. The strategy has a general classification for HR that is not based on job description and positions, and includes a performance appraisal system. The MoH intend to begin revising the RH development strategy soon, to reflect IHR requirements.

A MoH/MoHER coordination committee meets on regular basis to maintain consistency between the real HR needs of the MoH and HR production. However, there is no indication that IHR implementation needs in terms of HR has been duly considered.

The country offers in-service opportunities, through a mix of regular and well-planned training courses as well as ad-hoc capacity building workshops, supported mostly by partners. However, IHR implementation capacities do not seem to be adequately considered, with a few exceptions by virtue of the country FETP programme as well as the ongoing RRT cascade ad-hoc training supported by EMPHNET. In addition, there are no clear incentives from MoH to attract people towards some public health careers such as epidemiology and family medicine.

The country has been sustaining a national FETP programme since 2010, as a part of the Regional FETP Network, coordinated and supported by EMPHNET. FETP Iraq has been getting strong technical support from the Faculty of Medicine, Baghdad as well as the relevant technical departments from MoH. However, only 52 epidemiologists have graduated in the past years. The main reason has been the low awareness from national public health HR development decision-makers, resulting in a low attraction and interest from public health officers (mainly due to lack of incentives).

Recently, the country added a second layer to the FETP through implementation of a three-month Public Health Empowerment Programme (PHEP), supported by EMPHNET, and that has provided field epidemiology training to 75 local level surveillance officers in priority areas in the country. The country has plans to add an intermediate level training in September 2019, to meet the needs of other public health officers from various health-related disciplines (such as veterinarians, dentists, pharmacists and graduates of the health technology colleges) working in the public health programmes at the central and governorate levels with the support of the Defence Threat Reduction Agency (DTRA) and EMPHNET, while sustaining the existing advanced and PHEP layers.

As a result, the country has important shortages in terms of HR capacities relevant to IHR implementation, in particular at provincial and district levels. Available data indicates that in total the country rate for physicians, midwives and nurses is 3.1 per 1000 population, and that only 14% of the available physicians in the country are working in primary health care centres. The same data indicates important shortages in some disciplines that are crucial for IHR implementation, such as occupational health and field epidemiology (52 graduations so far from the national FETP programme, in addition to a few others from the Iraq Board and the Arab Board, representing a rate of less than 2 per million populations, which is five times lower than the recommended rate of 1 per 200,000 population) and.

The situation in terms of animal health is similar to that in public health. There are in total around 11 000 veterinarians in the country, around 16.8% of them working in the public sector (e.g. 1600 in MoA and 252 in MoH). However, there is very limited epidemiological capacity in animal health as well as in some of the mid-level animal health staff (e.g. technicians), affecting in particular the provincial and district levels and the field activities. For example, the National Institute of Animal Health previously trained mid-level animal health technicians has been closed for four years. Tasks previously performed by technicians, such as routine/survey-related data collection have since been shifted to veterinary staff.

Indicators and scores

D.4.1 An up-to-date multisectoral workforce strategy is in place – Score 2

There are HR development strategies in both human and animal health, with information available on human resource allocation and gaps. However, the strategies are not aligned and have not taken IHR implementation requirements in consideration. They do not, for example, include some crucial careers for IHR implementation (such as epidemiology, occupational health, vets and other animal health professions).

Strengths and best practices

- MoH directorate of planning and resources development has a multi-year strategy (2018–2022) for human resources.
- The strategy has a general classification for HR and includes a performance appraisal system.
- MoH has established annual indicators in terms of HR requirements, based on available staff and recruitment capacities as well as on production capacities (through a coordination committee comprising MoH and MoHER).
- The situation is very similar when it comes to animal health.

Areas that need strengthening and challenges

- Available HR development strategies in both human and animal sectors have not considered some of the careers that are highly important for IHR implementation requirements (such as epidemiology, occupational health, vets and other animal health professions).
- Weak coordination between the various sectors involved in IHR implementation in terms of developing, implementing, monitoring and sustaining an adequate intersectoral work force to implement IHR at all country administrative levels.
- No incentives have been considered to attract human and animal health professionals to public health careers relevant to IHR implementation.

- HR database accuracy and update status, as well as real-time information (use of technology and international standards).

D.4.2 Human resources are available to effectively implement IHR – Score 2

The country has sufficient multisectoral HR capacities at national level to deal with epidemic preparedness and control, which is not the case when it comes to subnational country administrative levels.

Strengths and best practices

- Both human and animal health sectors have well-trained human resources to deal with epidemic preparedness and response, as well as with other IHR capacities including chemical/biological/radiological/nuclear (CBRN).
- There are plans within MoH to enhance HR to more closely meet IHR requirements across the various human health career development and the country administrative levels, through a more evidence-based and balanced career development processes and a better distribution of available resources.

Areas that need strengthening and challenges

- Revision of country HR development indicators to consider IHR capacities across all involved disciplines and country administrative levels.
- Identification across all sectors and all administrative levels of available IHR-relevant HR to determine gaps and revise HR development strategies in all IHR-related sectors.
- Establish a mechanism to monitor implementation of the above-mentioned strategies across IHR-related sectors.
- Identify urgent governorate and district needs across all sectors and consider redistributing available capacities to meet those priorities, while waiting for more staff to be trained and recruited to better balance IHR requirements at the various country administrative levels.
- Periodic mapping of HR to ensure a better distribution between and within various country administrative levels.

D.4.3. In-service trainings are available – Score 3

There are various opportunities made available to public health professionals for in-service training, across human and animal health, with an annual planning process, also supported by partners. However, there has not been enough consideration of some important IHR key capacities, such as attracting sufficient public health staff as well as facilitation and regulating access to meet priorities.

Strengths and best practices

- Availability of in-service action plans in both human and animal health sectors.
- Availability of in-service opportunities – through a mix of regular and well-planned training courses, as well as ad-hoc capacity building workshops – provided by both available institutions in the country, with intensive support from several partners.

Areas that need strengthening and challenges

- Better use of available in-service training opportunities (in and outside the country) to fit IHR HR requirement across all sectors.
- No supportive mechanisms in place to secure adequate attracting of PH staff towards IHR key domains and careers.
- Better consideration of district and provincial priority needs in offering and supporting access to relevant in-service training opportunities.
- Budgeting of all in-service training plans, and prioritizing use of national resources for a better sustainability.
- National Animal Health Institute was closed four years, which resulted in an important disruption in producing mid-level animal health professionals.

D.4.4 FETP or other applied epidemiology training programme in place – Score 4

The country has a nine-year old FETP programme, supported by the Regional Field Epidemiology Training Network (EMPHNET) and implemented in close collaboration with the faculty of Medicine in Baghdad. The programme has developed a two-tiered approach: a two-year advanced course and a three-month basic course, especially tailored to country local priorities, called 'Public Health Empowerment Programme' (PHEP). The country has plans to launch an intermediate tier in September 2019 to help develop adequate HR from other health disciplines to work in the public health sector.

Strengths and best practices

- Available FETP programme, as a part of the Regional FETP Network, coordinated and supported by EMPHNET.
- Good coaching capacities and up-to-date curricula, in close coordination with Baghdad Faculty of Medicine.
- Two-tier programme approach.
- The national FETP programme produced 52 advanced epidemiologists to date, and contributed to the training of 75 local level surveillance officers in priority areas of the country.
- Plan to add an intermediate level in Sept 2019 to help better meet provincial level HR needs.

Areas that need strengthening and challenges

- Low attraction for public health professionals, mainly because of lack of equity in the national careers and development strategies in the country (mainly due to lack of incentives).
- The advanced FETP programme thus far restricted to physicians with no consideration to other human health disciplines such as laboratory, veterinary or environmental health professionals.

Recommendations for priority actions

- Develop an intersectoral mechanism to coordinate the exercise of developing, implementing, monitoring and sustaining an adequate intersectoral work force to implement IHR at all country administrative levels, through:
  - an evidence-based identification of needs;
  - revision of MoH and MoA HR development strategies and the development and implementation of a phased approach to fulfil the required number of high-quality human and animal health capacities to implement at various levels;
  - revision/development of relevant HR development plans in other IHR-related sectors.
- Establish a sustainable incentive mechanism to attract and sustain a critical number of good quality experts in IHR capacities at the various country administrative levels.
- Develop adequate budgeted action plans in all IHR-relevant sectors for in-service training to sustain HR capacities, building on available opportunities.
- Accelerate, diversify and expand the country EMPHNET-supported FETP programme to laboratory, animal health (vets and animal health technicians) and environmental health in order to better respond to the various administrative levels' priorities more expediently.

RESPOND

EMERGENCY PREPAREDNESS

INTRODUCTION

Emergency preparedness is defined as "the knowledge and capacities and organizational systems developed by governments, response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from the impacts of likely, imminent, emerging or current emergencies." A state of preparedness is the combination of planning, allocation of resources, training, exercising, and organizing to build, sustain, and improve operational capabilities at national, intermediate and local or primary response level, based on strategic risk assessments. A strategic risk assessment identifies, analyses and evaluates the range of risks in a country and enables risks to be assigned a level of priority. Strategic risk assessments include analyses of potential hazards, exposures and vulnerabilities, identification and mapping of available resources, and analyses of capacities (routine and surge) at the national, intermediate and local or primary levels to manage the risks of outbreaks and other emergencies. Emergency preparedness applies to any hazard that may cause an emergency, including relevant biological, chemical, radiological and nuclear hazards, natural hazards, other technological hazards and societal hazards.

Target

(1) Existence of national strategic multi-hazard emergency risk assessments, risk profiles and resource mapping.

(2) Existence of multi-hazard emergency response plans.

(3) Evidence, from after action and other reviews, of effective and efficient multisectoral emergency response operations for outbreaks and other public health emergencies.

LEVEL OF CAPABILITIES

National disaster management is legislated through the Emergency Use Law (1961 – provision for responding to disasters), Civil defence Law (1978 – that delegates responsibilities for response to emergency situations), Social Care Law (1980 – for assistance and support to victims of a disaster), Public Health Law (1981 – that outlines the functions and roles to be performed in the event of an epidemic), the Constitution of Iraq (2003 – for certain disaster-related responsibilities to the federal government), Financial Management Law (2004- finance for a contingency reserve fund to respond to disasters), Province Law (2008 – that provides a disaster administrative framework for governorates) and the Environmental Protection Act (2009 – for the formulation of the National Plan for disaster Risk Reduction). The National Committee for Disaster Risk Reduction is developing a National Disaster Risk Reduction Law (DRR Law 2013).

Iraq has been exposed to exceptional challenges and damage to infrastructure and its health system over the past couple of decades and has conducted a few risk assessments across the various sectors, but has not conducted a comprehensive multi-hazard risk assessment with the associated resources mapping across the whole country. Effective planning continues to be constrained by insecurity in some parts of the country.

There is a national disaster management framework at the level of the Prime Minister's Office covering all hazards and comprising a wide range of natural hazards (i.e. epidemics, drought, flood, sandstorm, desertification, marshland degradation, fertile land soil salination and earthquakes) and human-induced hazards (i.e. fire, explosion, water/land contamination, environmental pollution, oil and chemical spills, unexploded ordinances, depleted uranium, sabotage and terrorism).

The National Disaster Committee, chaired by the Prime Minister's Office, oversees the operational arrangements of national disaster management. This includes the National Operations Centre (NOC)/ Medical Operations Centre that oversees the initial response through the Crisis Action Cells (CAC) that has the authority for national level disaster management and coordination with all line ministries. The Governorate Emergency Cells (GEC) are responsible for regional level disaster management.

The National Plan for Disaster Risk Reduction (outline risk mitigation, preparedness and response planning) and the National Strategy for Disaster Risk Reduction (outline the functions and duties of government authorities in risk assessment and management) are plans that give effect to the DDR law (2013) that is currently still in draft form. Specific disaster response plans that cover natural disaster, fire, explosion, security oil spills and other relevant plans have been developed by responsible national authorities.

Under the supervision of the Director of the MOC, SOPs for government departments, committees, teams, working groups and centres that will operate under the plan are circulated in preparation of various events, including up to twenty mass gathering events.

The national response plan that exists at cabinet level defines reporting and information exchange. All relevant sectors have a focal point with a defined process to work with focal points in all other relevant sectors to share information, scientific data and recommendations with policy-makers and national leaders

The government is committed to ensuring preparedness of all emergency-related entities for prompt and effective response using the best evidence and available technology. Iraq has articulated their strategic directions in their National Health Policy 2014–2023. The strategic directions include provisions to strengthen core capacities required under the International Health Regulations (2005) for improving public health preparedness for response to acute emerging health security threats and other natural, human-made and technological hazards.

The MoH/MoE leads the work in developing effective emergency medical services, with the necessary infrastructure and systems. They also have responsibility for developing and sustaining emergency-specific guidelines and training all relevant workforces and institutions on the health impact of emergency situations and natural disasters, aiming to enhance preparedness for effective responses.

Understanding disaster risk is essential for sustainable development and Iraq is working towards the principles of the Sendai Framework for Disaster Risk Reduction to analyse risk with a view to "prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political, and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience".

Indicators and scores

R.1.1 Strategic emergency risk assessments conducted and emergency resources identified and mapped – Score 1

Strengths and best practices

- There is a focal person in all ministries to coordinate responses. Focal points convene on an ad hoc basis, according to requests from the emergency coordination cell within the Prime Minister's Office.
- A health sector cluster response plan was developed in 2014 and has been used in several incidents. The plan is updated based on lessons learned after each event. It includes other stakeholders and the community.
- There are contingency plans for selected hazards such as outbreaks, conflicts and mass casualties, etc.
- Some facilities have emergency business continuity plans.
- There is a comprehensive plan for mass gatherings.
- There are preparedness plans for selected priority hazards such as cholera, influenza and floods.
- Roles and responsibilities of several government levels within the health sector are defined in the response plans.

Areas that need strengthening and challenges

- There are differences in mapping responses to emergencies from one area to another.
- No resources mapping has been carried out for expertise, HR, funding, facilities or equipment.

R.1.2 National multisectoral multi-hazard emergency preparedness measures, including emergency response plans, are developed, implemented and tested – Score 2

Strengths and best practices

- US$ 40 million emergency fund made available for the Minister of Health to release during an emergency, although funds are subject to availability.

Areas that need strengthening and challenges

- Emergency budget line is not inclusive of all expenses during an emergency.
- Budget lines are not sufficiently flexible to cover various response activities based on the type of event.

Recommendations for priority actions

- Accelerate ongoing work related to Sendai Framework for Disaster Risk Reduction by conducting national multi-hazard strategic risk assessment to prioritize public health threats, from all sources and identify resource requirements for response activities.
- Map resource requirements for public health and identify critical information requirements (correlated to nationally notifiable diseases) for the national Public Health Emergency Operations Centre (PHEOC), within the Medical Operation Centre, to monitor on a daily basis.
- Conduct a needs assessment for training needs (including material, equipment and infrastructure).
- Continue to engage the interministerial, intersectoral operations-level working group, including development partners, in reviewing the national public health response plan so it reflects a whole-of government approach to responding to priority public health threats.

EMERGENCY RESPONSE OPERATIONS

INTRODUCTION

A Public Health Emergency Operations Centre (PHEOC) is a central location for coordinating operational information and resources for strategic management of public health emergencies and emergency exercises. PHEOCs provide communication and information tools and services, and a management system during a response to an emergency or emergency exercise. They also provide other essential functions to support decision-making and implementation, coordination and collaboration.

Target

Countries will have a coordination mechanism, incident management systems, exercise management programmes and Public Health Emergency Operation Centre (PHEOC) functioning according to minimum common standards; maintaining trained, functioning, multisectoral rapid response teams, and trained PHEOC staff capable of activating a coordinated emergency response within 120 minutes of the identification of an emergency.

LEVEL OF CAPABILITIES

Iraq has several legislations issued to mitigate the suffering of people during public health events and emergencies such as the Emergency Use Law (1961), Civil Defence Law (1978), Public Health Law (1981) and Social Care Law (1980). Additional laws that have been enacted after 2003 include: the Immigration Law, which deals with the issues of internally displaced people; the Governorate Law, which regulates the response between the governorate and central authority in case of disaster; and the Law of Budget Management, which coordinates the allocation of financial resources to disaster-affected areas. To some extent, the response operations follow a reactive pattern to public health outbreaks and disasters.

Sub nationally, across the 18 Governorates in Iraq, each has a Governorate Emergency Cell (GEC) responsible for the initial response to any public health event or disaster. Surge capacity can be provided from the central government authority. In cases of national or widespread impact from an event, a higher coordination committee can be formed under the Prime Minister's Office to manage the province(s) affected.

At the national level Iraq has formally established its National Medical Operations Centre (NMOC) that serves as the national PHEOC, and is creating a health emergency management programme within the MoH. The NMOC has a dedicated space for operations within the MoH and is currently upgrading their infrastructure and equipment. The MoH has pursued the development of a number of documents that outline the policies and guidelines for public health emergency management in Iraq.

The NMOC also serves as a training centre to train both MoH and staff from basic first aid to more specialized training. A variety of exercises has been conducted over the past few years, largely CBRN functional exercises.

These have included: Basra mass casualty functional exercise; chemical incident exercise; and a gas leak exercise in Baghdad, during which the national chemical response team and ambulance team practised the partial evacuation of 5000 people, including transporting affected people to a hospital.

Indicators and scores

R.2.1 Emergency response coordination – Score 4

Strengths and best practices

- The national response plan at cabinet level defines reporting and information exchange.
- There is focal person identified in all relevant sectors to share information.
- There is a national point of contact available for 24/7 coverage of emergency operations.
- An Emergency Medical Team (EMT) is available under the PHEOC director, as well as an incident management system (IMS) that is replicated at the subnational level.
- There is regional training centre within the EOC for EOC and emergency services.
- The EOC uses standardized forms and templates for data/information management, reporting and briefing

Areas that need strengthening and challenges

- The response plan is activated based on the events and not pre-defined.
- The plan does not include levels of activation.
- There is no formal roster in place, although there are informal rosters within some governorates.
- PHEOC plans and SOPs are available at national and subnational levels, however, it does not fully represent the IMS especially in terms of financing and logistics.
- Decision procedures are structured but not documented.

R.2.2 Emergency Operations Centre capacities, procedures and plans – Score 3

Strengths and best practices

- The National Operations Centre (NOC) at cabinet level includes all relevant sectors.
- The MoH has an emergency cell linking it with the cabinet level.
- There is physical PHEOC, three rooms (with main operation room) with 25 trained permanent staff.
- There are reliable power sources with a redundancy system in place for communication.

Areas that need strengthening and challenges

- There is no formal training in public health risk communication for the national and health sector emergency cells.
- Meetings are ad hoc and during emergencies
- There is no formal dissemination for reports with other sectors.

R.2.3 Emergency exercise management programme – Score 3

Strengths and best practices

- A variety of exercises have been conducted over the past few years, with the results documented.

Areas that need strengthening and challenges

- No regular exercises programme that brings together the various sectors

Recommendations for priority actions

- Establish a national poison registry.
- In view of the ongoing evaluation commissioned by H.E. Minister of Health and Environment, consider establishing a unique national emergency call number.
- Review and update standard terms of reference and operating principles while upgrading the PHEOC and consider joining EOC-NET.
- Establish routine after-outbreak or after-action reviews related to all public health events, and document lessons learned with outcomes reflected in updated response plans.

LINKING PUBLIC HEALTH AND SECURITY AUTHORITIES

INTRODUCTION

Public health emergencies pose special challenges for law enforcement, whether the threat is human-made or naturally occurring. In a public health emergency, law enforcement will need to quickly coordinate its response with public health and medical officials.

Target

Country conducts a rapid, multisectoral response for any event of suspected or confirmed deliberate origin, including the capacity to link public health and law enforcement, and to provide timely international assistance.

LEVEL OF CAPABILITIES

Iraq is facing a range of diverse emergency and disaster situations, especially in the past few decades. Authorities have made significant steps to work around these conflicts. A NBCEC was established linking a number of different ministries in order to coordinate plans and interventions with continuous collaboration and information sharing between the relevant sectors. This committee had conducted a national training in Baghdad, and had supported the response to explosions and chemical events (chlorine attacks).

Each ministry has its own teams that are trained and equipped to deal with emergency conflicts and disasters with support and coordination to other reams in place. Each sector has its own SOPs in place with agreements at the ministerial level to form a joint response to different emergencies and public health outbreaks.

Public health law delegates that the Minister of Health should take any necessary action, including to approach other relevant ministries to respond to certain emergencies as needed. The Minister of Health delegates a focal point at the governorate level to be responsible for prompt action in emergency situations and is to be done in collaboration with the relevant partners including MoI. MoH multisectoral committees are established for each hazardous disease at the governorate level, which is led by the local council. Regular meetings are conducted with proactive planning for potential hazards, such as cholera. The PHEOC plays a pivotal role in coordinating the response to emergencies or disasters at the central level. A security emergency cell is formed at the governorate level and is committed to take action as required by the different ministries in response to any emergency, and also comprises part of the local committee.

The Animal Health Law (regulation 16) states that in case of an outbreak, a high-level multisectoral committee with all relevant partners is formed to respond. There is also a central technical committee for each disease responsible for disease prevention. The Veterinary Institute gains the support of the MoI for animal quarantine in any given area during emergency situations. For example, During CHF outbreak, the MoI was approached by the committee on zoonotic diseases to activate the necessary response measures. It was done through official administrative process (official letters), but no official SOPs are present to facilitate prompt action and sparing administrative communications. Also, during the avian influenza outbreak, measures were taken to ban poultry from entering prior to the sample investigation, entry is subject to laboratory results and is controlled by MoI in collaboration with MoH.

Food safety committee includes focal persons from MoI, and a multisectoral team is dedicated to take action and respond to any breaches in food security. Even goods transportation is followed up until reaching the destination storage sites.

During disease outbreaks among high risk populations, sample transportation is done with the assistance of MoI, reflecting the high level of cooperation.

The MoI role is not limited only to interventions; legislation and policy development is in line with the other ministries' regulations to promote coherence. The MoI role is not confined only to cases, but also includes case contacts.

Indicators and scores

R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) linked during a suspect or confirmed biological, chemical or radiological event – Score 3

Strengths and best practices

- The health and security sectors collaborate to respond to emergencies through a set of control and response measures, as well as through strong collaboration for responding to public health events with neighbouring countries.
- An infectious diseases general plan is present at the central level, and local plans are developed at governorate level.
- The national laws and plans do define the role and responsibilities of each sector. The national preparedness plan enlists the roles and responsibilities of each sector including the security sectors. In each committee that exists, it is evident that the security sector is well represented and has clear, defined roles.
- The country has an allocated budget that can be dispersed to respond to public health events and emergencies.

Areas that need strengthening and challenges

- Simulation exercises to test collaboration between the public health and security sectors.
- The numerous and different security sectors between KR-I and the federal government leads to the complexity of approval processes granted at different levels, which causes delays for clearances and implementation.
- Interventions including quarantine highlight contradictions between the higher court law and public health law, and this was reflected in the recent law update.
- The system is not proactive, but rather retroactive by responding to emergencies upon occurrence. Also, the sharing of information between the public health and security sectors is not systematic or timely.
- Fund mobilization towards emergency response upon occurrence is not an authorization of the management but requires much higher approvals, this poses a delay to shifting funds rapidly and timely emergency responses.
- Animal movement across the country is not random, health certificates must be issued and checked by various security checkpoints for easy transportation. However, security staff at checkpoints are not acquainted with these forms and joint capacity-building is needed at this level to avoid breeches.
- Joint training between the different sectors.
- SOPs on the risk assessment and response to public health events.

Recommendations for priority actions

- Plan and conduct joint training programmes between public health and security sectors, especially at the governorate levels.
- Document collaboration between public health and security sectors in responding to public health threats.

MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

INTRODUCTION

Medical countermeasures are vital to national security and protect nations from potentially catastrophic infectious disease threats. Investments in medical countermeasures create opportunities to improve overall public health. In addition, it is important to have trained personnel who can be deployed in case of a public health emergency for response. Regional (international) collaboration will assist countries in overcoming the legal, logistic and regulatory challenges to deployment of public health and medical personnel from one country to another. Case management procedures should be available to all staff, and implemented across the system during health emergencies due to IHR-related hazards.

Target

National framework for transferring (sending and receiving) medical countermeasures, and public health and medical personnel from international partners during public health emergencies and procedures for case management of events due to IHR-related hazards.

LEVEL OF CAPABILITIES

Iraq has a number of pharmaceutical manufacturers that produce medications and medical supplies. However, none of them has the capacity to produce vaccines or drugs that can be used to respond to public health emergencies. As a result, these must be purchased from external manufacturers. KIMADIA, in the MoH, has the legal mandate and authority to procure medical countermeasures. A system is in place for KIMADIA to purchase medical countermeasures through contracts with domestic and international companies. A stock of 20% is dedicated to emergencies and is part of all procurements. As reported, the process for the procurement is lengthy and causes delay in meeting the routine services. Several public health events and emergencies occurred in the country that necessitated the procurement of additional medical countermeasures. As reported, KIMADIA has a fast track system in place to expedite the procurement process, this may have not been followed, as delay in the procurement of medical countermeasures to respond to different public health emergencies was reported.

The country has several rapid response teams to investigate and respond to public health emergencies but these teams are not multidisciplinary and do not exist at all levels of the country. Emergency Medical Teams do not exist throughout the country. Discussion is ongoing with WHO to establish such teams and build tiered capacities to serve the country and potentially be part of international teams. The country receives several public health personnel through various international organizations and UN agencies and also directly through the government to support the risk assessment, evaluation, planning and response to public health emergencies. Obtaining visas takes time and there is no system to expedite issuing visas for the rapid deployment of personnel. Also, medical teams from international organizations and countries have been deployed to provide the needed support. These teams can legally practice medicine in the country. System or SOPs for the licensing and accreditation of these teams do not exist.

The country has identified priority epidemic-prone diseases. Case management guidelines are in place for these diseases. However, there is no generic guidelines that can be used to manage cases infected with unknown infectious hazards. Also, guidelines for the management of case contaminated with chemical and radiation events do not exist. A referral system is in place supported by ambulance services, but is mostly on call, particularly at points of entry. In areas under conflict, the referral system functions but with severe challenges.

Indicators and scores

R.4.1 System in place for activating and coordinating medical countermeasures during a public health emergency – Score 3

Strengths and best practices

- Plans that identifies the country need for medical countermeasures for routine and emergency uses are in place.
- Legal and regulatory systems are in place for sending and receiving medical countermeasures during public health emergencies.
- Medical countermeasures were received to respond to different public health emergencies occurring in the country.

Areas that need strengthening and challenges

- Establish a system that follows an expedited regulatory process for the sending and receiving of medical countermeasures to respond to public health emergencies that do not necessarily follow the routine system, in order to avoid delays in receiving medical countermeasures needed to respond to public health events and emergencies.
- Logistics system for receiving and distribution of medical countermeasures with trained personnel.
- Electronic inventory system to monitor the shelf-life of medical countermeasures, rationalize their use and rapidly replenish according to needs.
- Establish formal procurement agreements with countries that outline criteria and procedures for sending and receiving medical countermeasures for human and animal use.
- Establish formal procurement agreements with external companies and international organizations that outline criteria and procedures for sending and receiving medical countermeasures for human and animal use.

R.4.2 System in place for activating and coordinating health personnel during a public health emergency – Score 1

Strengths and best practices

- The country receives public health personnel to support the response to public health emergencies through various international organizations and UN agencies serving in the country. The normal process for obtaining visas has to be followed for the deployment of such personnel.

Areas that need strengthening and challenges

- Plans for the development and strengthening of Emergency Medical Teams for national response.
- Plans that outline a system for sending and receiving health personnel during public health emergencies.
- Plan that outlines surge staffing for responding to public health emergencies, and SOPs for their deployment.
- System that expedites the deployment of public health personnel to support the response to public health emergencies.
- System that facilitates and standardizes the licensing and practice of medical personnel deployed from different countries to Iraq.
- Participate in a regional and international partnership, such as GOARN, to expose national public health teams to different experiences and gain experience from the deployment of GOARN teams to the country.
- Establish formal agreements with countries that outline criteria and procedures for sending and receiving health personnel.

R.4.3 Case management procedures implemented for IHR relevant hazards – Score 2

Strengths and best practices

- Case management guidelines are available for priority epidemic-prone diseases.
- Availability of patient referral and transportation mechanism.
- Availability of staff trained in case management of priority epidemic-prone diseases.

Areas that need strengthening and challenges

- SOPs (according to national or international guidelines) for the management and transport of potentially infectious patients at the local level and points of entry.
- Trained staff in case management of public health emergencies related to chemical, radiation and unknown infectious hazards.
- Resources for the management of public health emergencies
- Patient referral and transportation mechanism in areas under conflict.

Recommendations for priority actions

- Ensure fast-track approval procedures are in place for sending and receiving medical countermeasures with allocated emergency funding.
- Develop protocol/guidance/procedures for active participation in Global Outbreak Alert and Response network (GOARN) and development of Emergency Medical Teams (EMTs).
- Develop and disseminate policies and protocols for sending and receiving personnel to other organizations/agencies, in country and internationally, to respond to public health events.
- Develop and provide training on case management guidelines for cases contaminated with chemicals and/or radiation.

RISK COMMUNICATION

INTRODUCTION

Risk communication should be a multi-level and multi-faceted process that aims at helping stakeholders define risks, identify hazards, assess vulnerabilities and promote community resilience, thereby promoting the capacity to cope with an unfolding public health emergency. An essential part of risk communication is the dissemination of information to the public about health risks and events, such as disease outbreaks. For any communication about risk caused by a specific event to be effective, the social, religious, cultural, political and economic aspects associated with the event should be taken into account, including the voice of the affected population

Target

State Parties use multi-level and multi-faceted risk communication capacity. Real-time exchange of information, advice and opinions between experts and officials or people who face a threat or hazard (health or economic or social wellbeing) to their survival, so that informed decisions can be made to mitigate the effects of the threat or hazard and protective and preventive action can be taken. This includes a mix of communication and engagement strategies, such as media and social media communications, mass awareness campaigns, health promotion, social mobilization, stakeholder engagement and community engagement.

LEVEL OF CAPABILITIES

Besides emerging from several decades of conflicts and withstanding long periods of insecurity, Iraq has also been prone to public health emergencies such as earthquakes, floods and infectious disease epidemics. Over recent years, the country has witnessed a handful of natural disasters and outbreaks including viral haemorrhagic fever (VHF) in July 2018, a gastroenteritis outbreak in Basra in August 2018, a fish crisis in Babylon in November 2018, a food poisoning outbreak in Khazer camp for internally displaced people in June 2018, a cholera outbreak in various locations in 2015, flash flooding in Mosul in November 2018, an earthquake in Suleimaniah in November 2018. These health emergencies have led to devastating effects, bringing to the fore the need to harness national risk communication interventions in the areas of preparedness, response and mitigation.

Risk communication and health promotion are tightly interlinked, and confusion often prevails regarding the two concepts when addressed by national health authorities. There are no strategic documents, guidelines, SOPs directly related to risk communication other than a draft national risk communication concept note. Most of the national disease-specific preparedness and response plans (e.g. immunization, maternal, neonatal and child health) do refer to the importance of risk communication and community engagement. However, there is little integration of these two core areas during implementation. Nevertheless, existing plans represent a good foundation for the development of a multisectoral all-hazards national risk communication strategy integrating media and social media communication, social mobilization and community engagement.

A governmental media cell within the Department of Media and Governmental Communication has been created under the general secretariat of the Council of Ministers to lead and coordinate communications during emergencies. A spokesperson is appointed in each ministry but roles and responsibilities are still not well defined in case of emergency responses. A budget is allocated for communication initiatives but not specifically dedicated to risk communication.

Health communication is managed by the Department of Media and Health Awareness through an active network of public health and community health workers at the national and provincial levels. The awareness and health promotion unit within this department is responsible for developing messages during emergencies and identifying optimal outreach approaches and communication channels. Coordination with health care facilities during health emergencies is led by this unit with the involvement of the local primary health care committee and ad-hoc cooperation from civil society and local communities. Monitoring and evaluation activities are conducted through supervisory visits, health awareness campaigns and surveys, although are not formally documented and integrated in new initiatives. Although health awareness trainings have been conducted on a variety of subjects, there is a need expressed by all concerned parties for developing the capacity and training all staff involved in risk communication.

Coordination, standardization and uniform implementation of communication interventions at all levels are inadequate. During past outbreaks, although many partners and stakeholders actively supported the national response interventions, there is no mapping of national communication resources and capacities to coordinate implementation and minimize duplication of effort and resources.

The country is very active in the development of information, education and communications material around a wide range of health topics. To make good use of best practices and lessons learned, this wealth of information needs to be consolidated under a national repository that is accessible to all partners involved in risk communication.

In relation to communication with partners and vulnerable populations during emergencies, there have been incidents (e.g. Basra outbreak) in which communication was not properly handled leading to conflicting advice and loss of trust in the official communication channels. Furthermore, coordination and clearance of messaging are not well established between stakeholders outside the government, such as nongovernmental organizations.

The media sector in Iraq is actively involved in covering and reporting on health events with social media and blogging significantly gaining ground. Security events, along with news related to the activities of government officials, are prioritized. The MoH has its own health radio station which broadcasts within Baghdad, as well as a health magazine and a regularly updated official website.

Indicators and scores

R.5.1 Risk communication systems for unusual/unexpected events and emergencies – Score 2

Strengths and best practices

- Recognition of risk communication as a core component of emergency preparedness and response.
- Strategic momentum given the concurrence of the JEE and National Action Plan for Health Security with the rehabilitation of the health sector under the leadership of a seasoned minister.
- Good communication expertise within WHO Country Office team.

Areas that need strengthening and challenges

- Absence of a clear mandate and ToRs during emergency for the Department of Media and Health Awareness at the MoH.
- Absence of a national multisectoral emergency risk communication strategy and action plan, hence lack of SOPs in case of emergencies.
- Lack of dedicated and trained core team in risk communication.
- Major gaps in capacity and coordination of risk communication resources (human, financial, and technical) during emergencies.

R.5.2 Internal and partner coordination for emergency risk communication – Score 2

Strengths and best practices

- National recognition of the importance of internal and partner coordination for emergency risk communication.
- Ad hoc agreement between MoH and some partners for endorsement and dissemination of risk communication messages.

Areas that need strengthening and challenges

- Strengthening multisectoral coordination and collaboration at all levels of government entities in the area of risk communication.
- Formalization of coordination and collaboration mechanisms and protocols between government and stakeholders involved in risk communications.

R.5.3 Public communication for emergencies – Score 1

Strengths and best practices

- Management of communication during emergencies by the government media cell under the general secretariat of the Council of Ministers, with each ministry having an official spokesperson.
- Official social media quite active during emergencies, although lack of a social media strategy.
- Some media surveys have been conducted in the community to assess impact and reach of current health communication efforts.
- Established mechanism for organization of press conferences and media events.

Areas that need strengthening and challenges

- Limited understanding of risk communication concepts and its application on disease epidemics. Often confused with health promotion.
- Absence of clear lines of communication among various ministry spokespeople.
- Absence of operational research to inform approaches for behaviour change during emergency.
- Communication is mainly conducted in Arabic and needs to include other languages (e.g. Kurdish).
- Capacity development and training on risk communication of all key sectors involved in emergency preparedness and response.
- Training for media personnel about informed reporting and responsible coverage in the context of health emergencies.

R.5.4 Communication engagement with affected communities – Score 2

Strengths and best practices

- Active network of public health staff and community workers to support communication interventions during emergencies.

Areas that need strengthening and challenges

- Absence of clear lines of communication and feedback (2-way) between affected communities and health authorities during emergencies.
- No baseline data for analysis of existing knowledge behaviour/attitude of affected communities regarding health hazards in the country.
- Absence of systematic assessment and feedback from affected populations to inform content and approaches of communication interventions.

R.5.5 Addressing perceptions, risky behaviours and misinformation – Score 2

Strengths and best practices

- General mobilization during emergencies to monitor and address rumours.
- Role of the division of community initiatives within MoH.

Areas that need strengthening and challenges

- Absence of a systematic mechanism for continuous and routine media monitoring.
- Limited allocation of resources to establish two-way communication channels to respond to rumours and misinformation.
- Ad hoc rumour tracking and response system currently in place.

Recommendations for priority actions

- Develop a multisectoral and multi-hazard risk communication strategy and action plan integrated with national plans for public health emergency.
- Establish a multisectoral and multi-disciplinary technical advisory board to guide evidence-based development and implementation of risk communication.
- Review and upgrade the structure and functions of the risk communication unit at MoH to better fulfil its mandate across all IHR-bound sectors.
- Formalize the existing risk communication coordination mechanism among relevant ministry entities and stakeholders.
- Establish a network and build the risk communication capacity of existing communication staff at national and provincial levels.
- Develop and formalize a system for rumour and misinformation tracking and response.

IHR-RELATED HAZARDS AND POINTS OF ENTRY

POINTS OF ENTRY

INTRODUCTION

All core capacities and potential hazards apply to 'points of entry' and thus enable the effective application of health measures to prevent international spread of diseases. States Parties are required to maintain core capacities at designated international airports and ports (and where justified for public health reasons, a State Party may designate ground crossings), which will implement specific public health measures required to manage a variety of public health risks.

Target

States Parties designate and maintain core capacities at international airports and ports (and where justified for public health reasons, a State Party may designate ground crossings) that implement specific public health measures required to manage a variety of public health risks.

LEVEL OF CAPABILITIES

Iraq has 26 points of entry (PoE) (five airports, six ports and 15 ground crossings) that carry international traffic. Some PoE are not functional in some areas due to the security situation.

Three of the 26 PoE are designated to implement IHR capacities: Baghdad international airport, Zurbatai ground cross and Khor El Zubair port. The selection was based the existing capacities, the volume and frequency of population and goods movement, the potential risk exit in the areas where these PoE are located, and the type of services provided at these PoE.

IHR assessment of the designated PoEs was previously conducted on a regular basis by the IHR NFP and IHR multisectoral committee in order to monitor the progress in IHR capacities. Also, training of staff used to be done regularly by the MoH, which is the competent authority for these designated PoE. However, the latest assessment was conducted more than two years ago. As such, assessment of PoEs is urgently needed, particularly in light of the challenges faced by the country and the insecurities that might have changed the status of IHR implementation at these designated points of entry. Furthermore, assessment will be needed of all PoEs in order to review the decision of designating specific.

The JEE team was not able to conduct a field visit to validate the information reported about the IHR capacities at PoE through the self-assessment and through the technical presentation delivered by the concerned team during the external evaluation phase.

As reported, several stakeholders operate at the various POEs. This includes: Ministry of Finance, MoI, Ministry of Defence, Ministry of Transportation, MoH, MoA, Ministry of Tourism, MoT, National Security Service and National Intelligence Service. A fair level of coordination between these stakeholders exists but is variable.

Routine services are provided at the three designated PoEs. Staff and equipment are available to provide the required services. Such services include: Medical services, available for the initial assessment and care of ill passengers and staff; diagnostic facilities (not physically located at the PoE but access to them inside the country is granted); ambulance services are either physically available or available on call for the transport of ill passengers to medical facilities; regular water supplies and food samples (from eating establishments and catering facilities) collection and testing. Interview rooms for suspected cases of infectious diseases are also available at the designated PoE. MoH shares the Epidemiological weekly report with PoEs and follow up is ongoing with the PoE focal points. Animal and agriculture surveillance are functional at PoEs. More than 22 sectors from different ministries are present at PoEs, and are part of the animal and agriculture surveillance.

In some PoEs, a medical checkpoint is established to follow up on HIV status (laboratory tests) of travellers remaining in country for more than 10 days. Fees are charged in case the travellers were lost to follow up (defaulters).

Inspection programmes for goods and animals are in place. For goods importation, three samples are taken: for MoH, for the inspection department, and for quality control. The imported goods are transported and stored in private storage sites of importers and reserved until the tests are revealed (around two weeks, accelerated according to the expiry date of goods). Random sampling is taken after goods are distributed to the market. For animal importation animals should be quarantined 21 days at country of origin, no quarantine services are present at Iraq's PoEs except at Baghdad international airport, which is not a major PoE for animal importation. Veterinary clinics are present at PoEs. The veterinarians at POEs receive a regularly updated list of countries with banned animal and animal product importation. In instances where a disease occurs in the country of origin after goods have been imported, administrative letters are usually sent to alert all PoEs in Iraq. Samples are also collected and tested by MoH for animal food products. However, physical investigation is done by veterinary services for living animals.

The designated PoEs have a public health contingency plan for preparedness and response to public health emergencies, which is an integral part of the provincial public health emergency preparedness and response plan.

Trained personnel are available at the designate PoEs but are not sufficient. Training programmes for PoE staff to implement IHR (2005) are present, but again are limited and do not cover all essential aspects.

In times of religious tourism, the PoEs are strengthened with personnel to increase health service delivery. A central higher committee is formed during peaks of religious tourism to ensure smooth service delivery to tourists/travellers. Additional medical checkpoints are also established at PoEs and on routes to the holy places to follow up on all issues related to health service delivery including food safety practices.

Vaccination services are also provided at PoEs.

Indicators and scores

PoE.1 Routine capacities established at points of entry – Score 3

The designated points of entry have developed have access to appropriate medical services including diagnostic facilities for the prompt assessment and care of sick travellers and access to appropriate medical services, such as equipment and personnel for the transport of sick travellers to an appropriate medical facility. These capacities are available at the three designated PoEs. The level of these capacities is expected to be less if the points of entry are designated using the risk assessment approach.

Strengths and best practices

- Access to hospitals to assess and treat ill passengers and access quarantine places for animals.
- Access to laboratory capacity to test for different pathogens and contaminants.
- Access to equipment and personnel for the transport of sick travellers to an appropriate medical facility.
- Inspection programmes to ensure safe environment at PoE facilities.

Areas that need strengthening and challenges

- Human resource capacity for the detection, reporting and response to public health events through training activities.
- Laboratory services are distant from PoEs. There is a system of specimen referral but delays are evident in light of the distances involved.
- Storage and quarantine sites at PoEs, which are currently available inside the country but not at PoEs.
- The country is not part of the 'single window' system for the information-sharing about imported products and the results of their testing.
- Surveillance and control of disease vectors/reservoirs in and near PoEs.
- Trained personnel for the inspection of conveyances.

PoE.2 Effective public health response at points of entry – Score 3

Public health emergency contingency plans at designated points of entry are integrated into the national emergency response plan and ad hoc measures related to travellers at PoEs (such as referral system, transport) for the safe transfer of sick travellers to appropriate medical facilities, are in place. These capacities are available at the three (of 26) designated PoEs. The level of these capacities is expected to be less if the points of entry are designated using the risk assessment approach.

Strengths and best practices

- Public health contingency plans at designated PoEs. The plan is integrated to the provincial contingency plan.
- Safe referral and transfer of sick travellers to appropriate medical facilities.

Areas that need strengthening and challenges

- SOPs for the detection, reporting and response to different public health events and emergencies.
- Capacity to apply public health measures that may be recommended by the WHO (e.g. such as exit/entry screening, isolation, quarantine, contact tracing) to prepare and respond to public health events of national and international concern.
- Memoranda of understanding, SOPs, trained staff, equipment and regular exchange of information for safe referral and transfer of sick travellers to appropriate medical facilities between points of entry, health authorities and facilities for all designated PoEs.
- Capacity to apply measures to de-insect, de-rat, disinfect, decontaminate or otherwise treat baggage, cargo, containers, conveyances, goods or postal parcels, when needed.
- Effective response to public health events at PoEs.

Recommendations for priority actions

- Using the risk assessment approach, review and update the list of designated PoEs. Develop a plan for IHR implementation for designated PoEs.
- Conduct cost-effectiveness analysis for goods storage sites (private versus governmental) to recommend reactivation of public storage sites.
- Ensure MoH is part of the single window system for trade facilitation.
- Establish/integrate vector surveillance and control at PoEs.
- Develop a training plan on IHR related requirements for staff at PoEs.
- In the long term, develop a plan to renovate infrastructure.

CHEMICAL EVENTS

INTRODUCTION

Timely detection and effective response of potential chemical risks and/or events require collaboration with other sectors responsible for chemical safety, industries, transportation and safe disposal. This would entail that State Parties need to have surveillance and response capacity to manage chemical risk or events and effective communication and collaboration among the sectors responsible for safety.

Target

States Parties with surveillance and response capacity for chemical risks or events. This requires effective communication and collaboration among the sectors responsible for chemical safety, industries, transportation and safe disposal

LEVEL OF CAPABILITIES

Capacities' for detecting and managing chemical events are lacking in Iraq. Similar to other governmental functions, lack of financial and human resources is a major gap that is currently hindering the work of all related institutions. While efforts should continue to make essential financial and human resources available, actions by all concerned stakeholders should be focused on filling other gaps that require minimal financial resources, such as human resources development, updating policies, legislations and SOPs, networking and coordination between the different stakeholders through national public health emergency plans.

Iraq has been facing emergencies due to chemical incidences over the past few decades, and particularly there have been many recent incidents that made the country relatively vigilant, and prepared for responding to chemical events in the country. Accordingly, several chemical, biological and radio-nuclear (CBRN) teams were established. The capacities built during the recent events improved chemical incident detection and response in Iraq. Unfortunately, the capacity of the health sector to clinically manage intoxications is still weak. Available resources are not adequate to keep up with the growing risk of chemical incidents, and the system has to be improved with necessary policy changes, strategies and initiatives, as well as required funding, technological and networking inputs.

Iraq has signed/ratified the following chemical-related international treaties:

- The Chemical Weapons Convention (ratified in 2009).
- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (ratified in 2011).
- The Minamta Convention on Mercury (signed in 2013).
- The Stockholm Convention on Persistent Organic Pollutants (ratified in 2016).
- The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals in International Trade (ratified in 2017).

Being party to these treaties makes significant chemical safety resources available to Iraq. Unfortunately, these resources are not being fully utilized due to poor coordination between the focal points of these treaties and other related stakeholders.

Iraq's participation in other international networks such as the Chemicals and Health Network and the Chemicals Health Risk Assessment Network is still weak. These networks will help in implementing the WHO Global Chemicals Roadmap to enhance health sector engagement in the strategic approach to international chemicals management (SAICM) towards the 2020 goal and beyond.

MoH/MoE are responsible for surveillance, detection and monitoring of any chemical events and chemical safety management programmes. There has been an established poison control centre in the MoH since 1998 for management of toxicity and poisonous cases in Iraq. The centre also provides information about any toxic materials. Recently an extension of this centre was established in Thi Qar Governorate. Unfortunately, services of both centres are not available 24/7.

There is a national chemical response plan in Iraq involving several stakeholders including: CBRN teams as first responders; MoH/MoE departments of chemical monitoring and assessment of polluted sites detecting, surveillance, monitoring, chemical safety, implementation of international conventions related to chemical management; poison centres; MoT laboratories for detecting any chemical hazards in goods and imported foodstuffs; and Ministry of Science and Technology for detecting and management of chemical events and remediation of polluted sites. The responses of the health sector need to be integrated into this plan.

Indicators and scores

CE.1 Mechanisms established and functioning for detecting and responding to chemical events or emergencies – Score 2

Capacity for detecting and responding to major chemical events is lacking and scattered between different stakeholders in Iraq. Guidelines, manuals and SoPs on surveillance, assessment and management of chemical events, intoxication and poisoning are available but fragmented with different stakeholders. The capacity of the poison centres is limited and not available 24/7. Surveillance of toxicity and human poisonings needs to be further strengthened. The current indicator and event-based surveillance systems do not capture chemical events and poisonings adequately.

Strengths and best practices

- During the past couple of years, several chemical events occurred in Iraq which were handled by a national committee for chemical, biological, radiation and nuclear hazards (CBRN) and response teams.
- The MoH Medical Operation Centre operates a promising injury surveillance system that captures some poisonings with toxic chemicals. This system can be modified to capture all human poisoning with chemicals.
- During an alert generated by the existing surveillance system, the CBRN team will conduct necessary assessments and report to the crisis cell in the cabinet of ministries, and guide on response procedures.

Areas that need strengthening and challenges

- Lack of human and financial resources is a major challenge facing Iraq's capacity to detect and respond to chemical events.
- Updating guidelines and SOPs on the surveillance, assessment and management of chemical events, intoxication and poisoning.
- Need for procedures for risk assessment in chemicals surveillance/monitoring, to trigger/mount a response of suitable composition and magnitude.
- Weak central surveillance and monitoring system. There are no chemical reference laboratories. Poor technical readiness in various other chemical laboratories.
- There is no poisoning centre functioning 27/7 that is equipped with reliable laboratory and treatment facilities. Efforts should be concentrated on identifying the most hazardous chemicals in the country and build the poison centre to detect, inform, and manage these chemicals.
- Designation and equipping health care facilities to be responsible for clinical management of people exposed to toxic chemicals.

CE.2 Enabling environment in place for management of chemical events – Score 2

A national policy, action plans and legislation, albeit fragmented, for surveillance, alert and response to chemical events exist. There are several chemical legislations but they are not sufficiently enforced. Although ad hoc responses to chemical events in petroleum establishments were practiced in the past 10 years, there is no comprehensive strategic plan for chemical safety or a national chemicals management profile.

Strengths and best practices

Most of the international agreements and conventions on chemical safety (i.e. Stockholm, Basel, Rotterdam, Minamata, and the Chemical Weapons Convention) are ratified by Iraq, offering substantial international resources to the various Iraqi stakeholders

- Stockholm Convention on Persistent Organic Pollutants (2005).
- Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction (2004).
- Rotterdam Convention on Certain Hazardous Chemicals in International Trade (2002)
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (2001).
- Minamata Convention on Mercury (2017)

Areas that need strengthening and challenges

- There is no updated chemical profile for Iraq.
- Existing chemical residues of previous incidences.
- Existing and expanding oil, petroleum and chemical industries in the country without standard chemical safety measures.
- Policies and procedures to ensure permanent control over all activities related to chemical safety management need to be synchronized between all the related stakeholders.
- Multisectorial/interdisciplinary coordination mechanisms with regard to chemical safety need to be strengthened.
- Flow of information on chemicals surveillance/monitoring between all relevant stakeholders needs to be regulated and improved.
- There is no comprehensive plan for the disposal of chemical waste.
- Lack of the availability of systematic assessment of chemical safety, with the absence of relevant systems and plans.
- There are no real assessments of basic public health related to the topic of chemical safety.

Recommendations for priority actions

- Identification of the most hazardous chemicals in Iraq through evidence based multisectoral health risk assessments. These chemicals should represent the backbone of the national poisoning surveillance and clinical management systems.
- In close coordination with CBRN teams, designating specific hospital(s) for clinical management of victims of chemical events. This will require training and supply of essential equipment, as well as antidotes and other medicines.
- Strengthen the capacity of the poison consultation centre for providing information and advisory services 24/7 to all parts of Iraq. This requires networking with other poison centres at national and regional levels, improving the technical capacity of existing surveillance, laboratory and linkages with response teams.
- Improving the coordination between the different sectors responsible for management of chemical events in line with the multi-hazard national public health emergency preparedness and response plan to meet IHR core capacity requirements.
- Strengthening the capacities for chemical event detection, reporting and response.
- Updating the chemical waste management mechanisms and related SOPs.

RADIATION EMERGENCIES

INTRODUCTION

To counter radiological and nuclear emergencies, timely detection and an effective response towards potential radiological and nuclear hazards/events/emergencies are required in collaboration with sectors responsible for radiation emergency management.

Target

States Parties with surveillance and response capacity for radiological and nuclear hazards/ events/ emergencies. This requires effective communication and collaboration among the sectors responsible for radiological and nuclear emergency management.

LEVEL OF CAPABILITIES

Iraq's capacity to detect and respond to radiation and radio-nuclear events is established. SOPs, guidelines and resources of the health sector need to be strengthened for clinical management of radiation victims. A radiation emergency response plan exists with clear roles of related sectors, but the roles of the health sector need to be streamlined and clarified.

Capacities for detecting and managing radiation emergencies are developed. Similar to other governmental functions, lack of financial and human resources is a major gap that is currently hindering the work of all institutions. While efforts should continue to make needed financial and human resources available, actions by all concerned stakeholders should be focused on filling other gaps that require minimal financial resources such as human resources development, updating policies, legislations and SOPs, networking and coordination between the different stakeholders through national public health radiation emergency plans.

Effective national and global response arrangements and capabilities are essential to minimize the impacts from nuclear and radiological incidents and emergencies. The International Atomic Energy Agency (IAEA) maintains the international Emergency Preparedness and Response (EPR) framework, which is based on the international legal instruments. Iraq's capacity and cooperation on adopting this framework is increasing and most of the international conventions are ratified and processes for their implementation are in progress. Several stakeholders are involved in managing issues related to radiation emergencies such as the Ministries of Health, Science and Technology, Defense, Interior and Industry, as well as others such as petroleum sectors, universities and research centres. Unfortunately, these capacities are fragmented. Coordination and flow of information among all related sectors are weak.

Indicators and scores

RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies – Score 3

Iraq has not faced any significant radio-nuclear emergencies during the past 15 years. However, more preparedness and response initiatives have been launched in the country due to the radio-nuclear hazards potentially expected from regional conflicts. The capacities built during the recent years by the IAEA improved the radio-nuclear contamination detection and decontamination process in Iraq, and the system has to be improved with necessary policy changes, strategies, and initiatives with necessary funding, technological and networking inputs.

Strengths and best practices

- Technical guidelines and SOPs have been developed, evaluated and updated for the management of radiation emergencies.
- Iraq has already ratified the international convention on assistance in the case of a nuclear accident or radiological emergency, which opens the door for major support and capacity building opportunities.
- There is an established Radiation Protection Centre (RPC) in the MoH/MoE that has a surveillance system that includes radio-nuclear contamination detection and disposal of radio-nuclear contaminants.
- Iraq developed a national plan of action for responding to radiation hazards.
- There is a data base of radio-nuclear incidents with regular surveillance and update process.
- During an alert generated by the surveillance system, RPC will conduct the necessary assessment and report to the Ministry of Science and Technology for action.
- Radiation hazard sites in Iraq are mapped.

Areas that need strengthening and challenges

- Lack of human and financial resources.
- Capacities of laboratory services for MoH/MoE and the Ministry of Science and Technology are limited and need further strengthening.
- Poor coordination between RPC and other relevant sectors.
- Security and safety of the staff working for radio-nuclear event detection and response.

RE.2 Enabling environment in place for management of radiation emergencies – Score 3

There is a national strategic plan for radiation safety, and response plan for radiation emergencies with clear roles and responsibilities for all related sectors. Unfortunately, the role of the health sector in clinical management of people exposed to radiation needs to be further elaborated.

Strengths and best practices

- Iraq ratified Early Notification and Assistance in Case of Nuclear Emergency (1986) conventions.
- Implementing SOPs recommended by the IAEA.
- Implementing recommendations of IAEA following regular monitoring and evaluation by IAEA.
- There are plans for national and international transport of radioactive material, samples and waste management including those from hospitals and medical services.

Areas that need strengthening and challenges

- Unclear role of the health sector during radiation emergencies.
- Unstable political status of the country and related conflicts that may trigger radio-nuclear emergencies in the country.
- Radio-nuclear risks due to neighbouring countries.

Recommendations for priority actions

- Update the national plan of action for responding to radiation hazards by streamlining and clarifying the role of the health sector in clinical management, surveillance and risk communication.
- In close coordination with CBRN teams, designating specific hospital(s) for clinical management of victims of radiation and radio-nuclear emergencies. This will require training and supply of needed equipment, antidotes and other medicines.
- Improving the coordination between health, environment, industry, science and technology, CBRN and other related sectors responsible for management of radiation and radio-nuclear events in line with the multi-hazard national public health emergency preparedness and response plan to meet IHR core capacity requirements.
- Improving the technical capacity of existing surveillance, laboratory and response teams, and networking with neighbouring countries for radiation and radio-nuclear event detection, reporting and response.
- Updating the radioactive waste management mechanisms and SOPs.

APPENDIX 1: JEE BACKGROUND

Mission place and dates

Baghdad, Iraq; 12-17 March 2019

Mission team members:

- Dalia Samhouri, Manager, Country Health Emergency Preparedness and IHR, WHO Health Emergencies Program, Regional Office for the Eastern Mediterranean, Cairo, Egypt (team lead).
- Rajesh Sreedharan, Team Lead, Country Health Emergency Preparedness and IHR, WHO Health Emergencies Programme, Geneva, Switzerland (team co-lead).
- Mazen Malkawi, Regional Advisor, Center for Environmental Health Activities, WHO Regional Office for the Eastern Mediterranean, Amman, Jordan.
- Frank Konings, Regional Advisor, Public Health Laboratories, WHO Regional Office for the eastern Mediterranean, Cairo, Egypt.
- Bassem Zayed, Technical Officer, Department of communicable disease and Control, Regional Office for the Eastern Mediterranean, Cairo, Egypt.
- Asma Oulebsir, Veterinary Epidemiologist, Food and Agriculture Organization, Rome, Italy.
- Ezzeddine Mohsni, Global Health Security Advisor, Eastern Mediterranean Public Health Network, Amman, Jordan.
- Genevieve Howse, Public Health Lawyer, Howse Fleming Legal, Australia.
- Peggy Hannah, risk communication expert, Biuret, Lebanon.

Objective

To assess (host country's) capacities and capabilities relevant to the 19 technical areas of the JEE tool for providing baseline data to support (host country's) efforts to reform and improve their public health security.

The JEE process

The JEE process is a peer-to-peer review. The entire external evaluation, including discussions around the priority actions, the strengths, the areas that need strengthening, best practices, challenges and the scores are collaborative, with JEE team members and host country experts seeking full agreement on all aspects of the final report findings and recommendations.

Should there be significant and irreconcilable disagreement between the external team members and the host country experts, or among the external experts, or among the host country experts, the JEE team lead will decide the outcome; this will be noted in the final report along with the justification for each party's position.

Limitations and assumptions

- Prior to the visit, several communications took place with assessment team members and experts in Iraq to review the agenda, responsibilities, and logistics. A national training was conducted on 14–15 January 2019 to provide national stakeholders with the information and resources necessary to participate successfully in the JEE process; and to provide guidance on self-reporting requirements and responsibilities. Background documents were collected and shared with the JEE team along with the complete JEE tool for review.
- One-day orientation was provided to the JEE external experts on the JEE process and tool, objectives and expected outcomes, and to discuss and finalize the agenda of the mission. Meetings with the relevant stakeholders and field visits were conducted to validate the collected information and to reach a consensus on the scores and priority actions.
- A debriefing meeting was held with senior officials and with national technical teams involved in the evaluation to present the outcomes of the JEE, best practices and priority actions.
- The national team showed a high level of openness and transparency in the discussion and sharing documentation. However, the evaluation was limited to one week, which limited the amount and depth of information that could be managed.
- It is assumed that the results of this evaluation will be publicly available.
- The evaluation is not just an audit. Information provided by Iraq will not be independently verified but will be discussed and the evaluation rating mutually agreed to by the host country and the evaluation team. This is a peer-to-peer review.

Key host country participants and institutions

Led by His Excellency, Dr Alaa Alwan, Minister of Health and Environment.

Co-Led by the Director General of Public Health Directorate in the Iraqi Ministry of Health, Dr Riyadh Abdul-Ameer Hussein.

Full list of participants

- A'aed Thidan, Ministry of Health.
- Abdul Abbas Nasir, Ministry of Health.
- Abbas Mahmoud, Ministry of Health.
- Ahmed Hassan, Ministry of Health.
- Ahmed Hammed, Ministry of Finance.
- Asaad Mahdi, Ministry of Health.
- Amir Mousa, Ministry of Agriculture.
- Ahmed Yassin, Ministry of Health.
- Adnan Khistawi, Ministry of Health.
- Ali Abdul-Sahib, Ministry of Health.
- Ammar Salim, Ministry of Health.
- Ali Abdul-Maoujod, The Sunni Endowment.
- Ahmed Khadum, Ministry of Health.
- Abdul -hussein Mohammed, Ministry of Health.
- Ammar Hamid, Ministry of Health.
- Ali Nea'ma, Ministry of Health.
- Ammar Abdullah, Ministry of Health.

- Bayan Hassan, Ministry of Health.
- Bashar Abdul-Lateef, Ministry of Health.
- Bashar Raouf, Ministry of Health.
- Badr Mouhan, Ministry of Health.
- Baqir Hussein, Ministry of Health.
- Dhefaf Jabar, Ministry of Health.
- Dhyaa Ghanum, Ministry of Health.
- Emad Shakir, Ministry of Health.
- Furat Qassim, Ministry of Defence.
- Faris Allami, Ministry of Higher Education.
- Ferhad Majeed, Ministry of Health.
- Hadeer Na'aem, Ministry of Health.
- Haydar Thahir, Ministry of Health.
- Hassan Anwar, Ministry of Health.
- Hussein Mahdi, Ministry of Health.
- Hast Ali, Ministry of Health.
- Hussein Qassim, Ministry of Health.
- Israa Tariq, Ministry of Health.
- Israa Helmi, Ministry of Health.
- Ibraheem Sharhan, Border Ports Authority.
- Jawad Abdul-wahid, Ministry of Health.
- Jawad Shakir, Ministry of Health.
- Karim Abdul Khadum, Ministry of Higher Education.
- Khalil Latif, Ministry of Agriculture.
- Khalid Hamoud, Ministry of Health.
- Khaldon Abdul-Kareem, Ministry of Health.
- Kareem Mohammed, Ministry of Health.
- Mohammed Hasim, Ministry of Health.
- Majida Badir, Ministry of Agriculture.
- Mayada Jawad, Ministry of Agriculture.
- Majida Mahmoud, Ministry of Science and Technology.
- Majida Mahmoud Fathi, Ministry of Health.
- Mahir Jawad, Ministry of Health.
- Mohammed Hadi, Ministry of Health.
- Mohammed Sabah, Ministry of Health.
- Mahdi Hassan, Ministry of Health.
- Maysoon Rabea'a, Ministry of Health.
- Mays Falah, Ministry of Health.
- Mohammed Ghafil, Ministry of Health.
- Mahir Rashed, Ministry of Health.
- Mahmoud Jawad, Ministry of Health.

- Mohammed Jabur, Ministry of Health.
- Nadia Aboud, Ministry of Planning.
- Nazik Lahmoud, Ministry of Health.
- Noujouh Khadum, Ministry of Health.
- Nidhal Adnan, Ministry of Health.
- Nawrouz othman, Ministry of Health.
- Ouf Abdulrahman, Ministry of Health.
- Qais Abdul Rahman, Ministry of Agriculture.
- Qassim Abid, Ministry of Health.
- Rawya Mahmoud, Ministry of Commerce.
- Rana Abdul Mahdi, Ministry of Health.
- Rassim Mohammed, Ministry of Health.
- Raad Jaloub, Ministry of Health.
- Ramadan Mahmoud, Ministry of Health.
- Rana Fakhri, Ministry of Health.
- Safaa aldin Abdul rahman, Ministry of Health.
- Salma Abdul fattah, Ministry of Health.
- Shakir Ferayh, Ministry of Agriculture.
- Sajida ahmed, Ministry of Health.
- Saad-din Hussein, Ministry of Health.
- Samir Abdul-sattar, Ministry of Health.
- Saif Al-badir, Ministry of Health.
- Suha Younes, Ministry of Health.
- Saifdin Mohidin, Ministry of Health.
- Serwan Mohammed, Ministry of Health.
- Sundus Abid, Ministry of Health.
- Sa'aed Abdul Ridha, Ministry of Health.
- Wahab Maki, Ministry of Agriculture.
- Yousra Hafidh, Ministry of Health.
- Yasir Adnan, Ministry of Commerce.
- Zainab Abdulhusein, Ministry of Health.

Supporting documentation provided by host country

National legislation, policy and financing

- Iraq Constitution (2005).
- Public Health Law No 89 (1981).
- Chemical Carcinogens Regulation number 2 (1984).
- Chemical Safety Regulation Number 4 (1989).
- Animal Health Law No. 32 (2013).
- Emergency Use Law (1961).

- Civil Defense Law (1978).
- Social Care Law (1980).
- Draft Disaster Risk Reduction Law (2013).
- Iraqi Law on Prevention of Ionizing Radiation, No. 99 (1980).
- Financial Management Law (2004).
- Province Law (2008).
- Environment Protection Act (2009).
- UNDP, Iraq: Country Case Study Report, How Law and Regulation Supports Disaster Risk Response. June 2014, Page 16 (See https://www.undp.org/content/dam/undp/library/crisis%20prevention/UNDP+CPR_DRRLaw_Iraq.pdf accessed 15 March 2019).

IHR coordination, communication and advocacy

- Representation and ToRs of the IHR Multisectoral Committee.
- National action plan for implementation of IHR.

Antimicrobial resistance

N/A

Zoonotic diseases

- List of the agreed priority zoonotic disease.
- Surveillance plan for the zoonotic disease from the CDC/zoonosis section.
- Zoonotic disease surveillance forms.

Food safety

- Food System No. 29 of 1982 amended.
- Health Control Guide.
- MOH/WHO draft recommendations.

Biosafety and biosecurity

- Action plan BRM 2018–2018 (31 October 2019).
- CPHL policy and action plan 2018–2019.
- Laboratory reports 2018.

Immunization

- Country Health Profile 2018.
- Power point presentation by the National EPI Manager.
- 2018 National EPI action plan program SOPs.
- WHO Vaccine Preventable Diseases Monitoring System, 2018 global summary.
- WHO EMRO Measles & Rubella Monthly Bulletin (Week 52, 2018).
- WHO EMRO Polio Fax Bulletin No 1065 for week 09 2019.
- Iraq vaccine supply chain: an Inventory and Gap Analysis, MoH Iraq, UNICEF and EMPHNET, Feb 2018

National laboratory system.

- Presentation and documentation of the JEE self-assessment.
- LQMS Action plan for CPHL (2018–2019).
- Mission report Dr Sulaiman Al Busaidi, WHO consultant; Assessment mission to Central Public Health Laboratory (CPHL), 9–13 July 2017, Baghdad, Iraq.

Surveillance

- List of notifiable diseases.
- Communicable disease notification form.
- Weekly communicable disease report.

Reporting

- Designation and Terms of Reference of the IHR National Focal Point.
- Designation and Terms of reference of the OIE Focal Point.
- Public Health Law.
- Action plan for implementation of IHR 2005 in Iraq.

Human Resources

- Sample of field epidemiology training curriculum used in the country.
- Public health workforce/human resource plan/strategy 2018–2022.
- Data from human resource information systems.
- Lists of in-service training available in the country.
- Lists of national training institutes/professional bodies/schools of public health/nursing/midwifery/veterinary/medical colleges/universities that provide in-service training courses.
- Number of graduates/trainees per year.

Emergency Preparedness

- Health support plan for mass gathering.
- Preparedness plan for earthquakes.
- Preparedness plan for religious events.
- Preparedness plan for elections.
- Preparedness plan for Eid.
- Preparedness Plan for civil disobedience.
- Operational plan of the national committee for crisis and disaster management of the Ministry of Health.
- Coordination plan with agencies and NGOs.
- Plans for medical services.
- National plan for response to radio-nuclear and radiation emergency.

Emergency Response

N/A

Linking public health and security authorities

N/A

Medical countermeasures and personnel deployment

N/A

Risk Communication

- Samples of press releases and media communications.
- Evaluation of health communication initiatives.
- Concept note risk communication.
- Terms of references for media and health awareness department.
- Terms of references for health awareness unit.
- List of official decrees and nominations related to public communications and health promotion.
- Copies of disease specific national action plans: cholera, influenza, haemorrhagic fever.
- Samples of information education communication materials.

Points of entry

- Advisory Body resolutions 138, 202 and 204.
- Public Health Act No. 89 of 1981.
- Instructions No. 2 of 2001 for the withdrawal of samples for laboratory tests.
- Food system No. 29 of 1982.
- Standard Specification (1847) second update/validity of food items.
- Health Control Guide 2012.
- Medical support plan for flood preparedness and response.
- Plan for the treatment of water scarcity.
- Follow-up and centralized supervision of health monitoring divisions and food control centres at border. crossings for imported models.
- Codex Alimentarius Commission.
- Annual report of the Ministry of Health.

Chemical events

- Strategy of environment of Iraq (2013–2017) that includes a chemical management section.
- Regulation no. 4 year 1989 safety in storage and uses chemical.
- Section6 environmental law 27 at 2009 (chemical management and dangerous wastes).
- Injury Surveillance Reports, 2012–2105.

Radiation:

- National Strategy and plan of action for responding to radio-nuclear events (in Arabic).
- Annual reports about radiation hazards in Iraq (Confidential).

World Health Organization

JOINT EXTERNAL EVALUATION
OF IHR CORE CAPACITIES
of the

REPUBLIC OF IRAQ

Mission report:
12-17 March 2019

WHO/WHE/CPI/2019.61

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WHO, WORLD BANK & German Government reports on Iraq

WHO Noncommunicable Diseases progress Monitor 2020

Iraq

37 203 000	55%	103 800	21%
Total population	Percentage of deaths from NCDs	Total number of NCD deaths	Probability of premature mortality from NCDs

1 National NCD targets and indicators	●
2 Mortality data	◐
3 Risk factor surveys	◐
4 National integrated NCD policy/strategy/action plan	●
5 Tobacco demand-reduction measures:	
A increased excise taxes and prices	○
B smoke-free policies	◐
C large graphic health warnings/plain packaging	◐
D bans on advertising, promotion and sponsorship	◐
E mass media campaigns	●
6 Harmful use of alcohol reduction measures:	
A restrictions on physical availability	◐
B advertising bans or comprehensive restrictions	NR
C increased excise taxes	◐
7 Unhealthy diet reduction measures:	
A salt/sodium policies	◐
B saturated fatty acids and trans-fats policies	DK
C marketing to children restrictions	○
D marketing of breast-milk substitutes restrictions	◐
8 Public education and awareness campaign on physical activity	●
9 Guidelines for management of cancer, CVD, diabetes and CRD	◐
10 Drug therapy/counselling to prevent heart attacks and strokes	◐

● fully achieved ◐ partially achieved ○ not achieved
NR No Response **DK** Don't know

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WHO, WORLD BANK & German Government reports on Iraq

World Bank- Economy Profile of Iraq- Doing Business 2020 Indicators

Economy Profile

Iraq

Doing Business 2020

Comparing Business Regulation in **190** Economies

WORLD BANK GROUP

Economy Profile of Iraq

Doing Business 2020 Indicators
(in order of appearance in the document)

Starting a business	Procedures, time, cost and paid-in minimum capital to start a limited liability company
Dealing with construction permits	Procedures, time and cost to complete all formalities to build a warehouse and the quality control and safety mechanisms in the construction permitting system
Getting electricity	Procedures, time and cost to get connected to the electrical grid, and the reliability of the electricity supply and the transparency of tariffs
Registering property	Procedures, time and cost to transfer a property and the quality of the land administration system
Getting credit	Movable collateral laws and credit information systems
Protecting minority investors	Minority shareholders' rights in related-party transactions and in corporate governance
Paying taxes	Payments, time, total tax and contribution rate for a firm to comply with all tax regulations as well as postfiling processes
Trading across borders	Time and cost to export the product of comparative advantage and import auto parts
Enforcing contracts	Time and cost to resolve a commercial dispute and the quality of judicial processes
Resolving insolvency	Time, cost, outcome and recovery rate for a commercial insolvency and the strength of the legal framework for insolvency
Employing workers	Flexibility in employment regulation and redundancy cost

About Doing Business

The *Doing Business* project provides objective measures of business regulations and their enforcement across 190 economies and selected cities at the subnational and regional level.

The *Doing Business* project, launched in 2002, looks at domestic small and medium-size companies and measures the regulations applying to them through their life cycle.

Doing Business captures several important dimensions of the regulatory environment as it applies to local firms. It provides quantitative indicators on regulation for starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency. *Doing Business* also measures features of employing workers. Although *Doing Business* does not present rankings of economies on the employing workers indicators or include the topic in the aggregate ease of doing business score or ranking on the ease of doing business, it does present the data for these indicators.

By gathering and analyzing comprehensive quantitative data to compare business regulation environments across economies and over time, *Doing Business* encourages economies to compete towards more efficient regulation; offers measurable benchmarks for reform; and serves as a resource for academics, journalists, private sector researchers and others interested in the business climate of each economy.

In addition, *Doing Business* offers detailed subnational studies, which exhaustively cover business regulation and reform in different cities and regions within a nation. These studies provide data on the ease of doing business, rank each location, and recommend reforms to improve performance in each of the indicator areas. Selected cities can compare their business regulations with other cities in the economy or region and with the 190 economies that *Doing Business* has ranked.

The first *Doing Business* study, published in 2003, covered 5 indicator sets and 133 economies. This year's study covers 11 indicator sets and 190 economies. Most indicator sets refer to a case scenario in the largest business city of each economy, except for 11 economies that have a population of more than 100 million as of 2013 (Bangladesh, Brazil, China, India, Indonesia, Japan, Mexico, Nigeria, Pakistan, the Russian Federation and the United States) where *Doing Business* also collected data for the second largest business city. The data for these 11 economies are a population-weighted average for the 2 largest business cities. The project has benefited from feedback from governments, academics, practitioners and reviewers. The initial goal remains: to provide an objective basis for understanding and improving the regulatory environment for business around the world.

To learn more about *Doing Business* please visit doingbusiness.org

Ease of Doing Business in

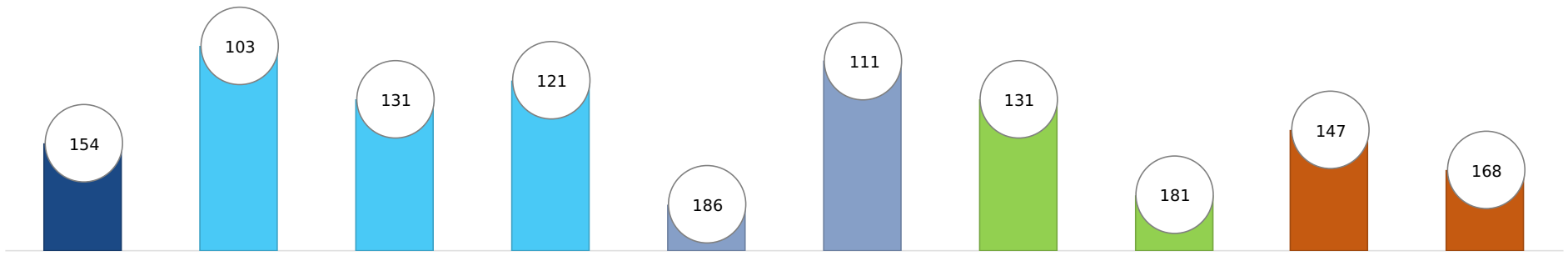
Iraq

Region	Middle East & North Africa
Income Category	Upper middle income
Population	38,433,600
City Covered	Baghdad

DB RANK: 172

DB SCORE: 44.7

Rankings on Doing Business topics - Iraq



Starting a Business | Dealing with Construction Permits | Getting Electricity | Registering Property | Getting Credit | Protecting Minority Investors | Paying Taxes | Trading across Borders | Enforcing Contracts | Resolving Insolvency

Topic Scores

Starting a Business (rank)	154
Score of starting a business (0-100)	77.3
Procedures (number)	8.5
Time (days)	26.5
Cost (number)	34.2
Paid-in min. capital (% of income per capita)	14.6

Dealing with Construction Permits (rank)	103
Score of dealing with construction permits (0-100)	67.7
Procedures (number)	11
Time (days)	167
Cost (% of warehouse value)	0.3
Building quality control index (0-15)	5.5

Getting Electricity (rank)	131
Score of getting electricity (0-100)	61.9
Procedures (number)	5
Time (days)	51
Cost (% of income per capita)	384.7
Reliability of supply and transparency of tariff index (0-8)	0

Registering Property (rank)	121
Score of registering property (0-100)	57.3
Procedures (number)	5
Time (days)	51
Cost (% of property value)	7.3
Quality of the land administration index (0-30)	10.5

Getting Credit (rank)	186
Score of getting credit (0-100)	0.0
Strength of legal rights index (0-12)	0
Depth of credit information index (0-8)	0
Credit registry coverage (% of adults)	1.3
Credit bureau coverage (% of adults)	0.0

Protecting Minority Investors (rank)	111
Score of protecting minority investors (0-100)	46.0
Extent of disclosure index (0-10)	4.0
Extent of director liability index (0-10)	5.0
Ease of shareholder suits index (0-10)	5.0
Extent of shareholder rights index (0-6)	5.0
Extent of ownership and control index (0-7)	3.0
Extent of corporate transparency index (0-7)	1.0

Paying Taxes (rank)	131
Score of paying taxes (0-100)	63.5
Payments (number per year)	15
Time (hours per year)	312
Total tax and contribution rate (% of profit)	30.8
Postfiling index (0-100)	21.4

Trading across Borders (rank)	181
Score of trading across borders (0-100)	25.3
Time to export	
Documentary compliance (hours)	504
Border compliance (hours)	85
Cost to export	
Documentary compliance (USD)	1,800
Border compliance (USD)	1,118
Time to export	
Documentary compliance (hours)	176
Border compliance (hours)	131
Cost to export	
Documentary compliance (USD)	500
Border compliance (USD)	644

Enforcing Contracts (rank)	147
Score of enforcing contracts (0-100)	48.0
Time (days)	520
Cost (% of claim value)	28.1
Quality of judicial processes index (0-18)	1.5

Resolving Insolvency (rank)	168
Score of resolving insolvency (0-100)	0.0
Recovery rate (cents on the dollar)	No Practice
Time (years)	No Practice
Cost (% of estate)	No Practice
Outcome (0 as piecemeal sale and 1 as going concern)	0
Strength of insolvency framework index (0-16)	No Practice

Starting a Business

This topic measures the number of procedures, time, cost and paid-in minimum capital requirement for a small- to medium-sized limited liability company to start up and formally operate in each economy's largest business city.

To make the data comparable across 190 economies, *Doing Business* uses a standardized business that is 100% domestically owned, has start-up capital equivalent to 10 times the income per capita, engages in general industrial or commercial activities and employs between 10 and 50 people one month after the commencement of operations, all of whom are domestic nationals. Starting a Business considers two types of local limited liability companies that are identical in all aspects, except that one company is owned by 5 married women and the other by 5 married men. The ranking of economies on the ease of starting a business is determined by sorting their scores for starting a business. These scores are the simple average of the scores for each of the component indicators.

The most recent round of data collection for the project was completed in May 2019. See the methodology for more information.

What the indicators measure

Procedures to legally start and formally operate a company (number)

- Preregistration (for example, name verification or reservation, notarization)
- Registration in the economy's largest business city
- Postregistration (for example, social security registration, company seal)
- Obtaining approval from spouse to start a business or to leave the home to register the company
- Obtaining any gender specific document for company registration and operation or national identification card

Time required to complete each procedure (calendar days)

- Does not include time spent gathering information
- Each procedure starts on a separate day (2 procedures cannot start on the same day)
- Procedures fully completed online are recorded as ½ day
- Procedure is considered completed once final document is received
- No prior contact with officials

Cost required to complete each procedure (% of income per capita)

- Official costs only, no bribes
- No professional fees unless services required by law or commonly used in practice

Paid-in minimum capital (% of income per capita)

- Funds deposited in a bank or with third party before registration or up to 3 months after incorporation

Case study assumptions

To make the data comparable across economies, several assumptions about the business and the procedures are used. It is assumed that any required information is readily available and that the entrepreneur will pay no bribes.

The business:

-Is a limited liability company (or its legal equivalent). If there is more than one type of limited liability company in the economy, the limited liability form most common among domestic firms is chosen. Information on the most common form is obtained from incorporation lawyers or the statistical office.
-Operates in the economy's largest business city. For 11 economies the data are also collected for the second largest business city.
-Performs general industrial or commercial activities such as the production or sale to the public of goods or services. The business does not perform foreign trade activities and does not handle products subject to a special tax regime, for example, liquor or tobacco. It is not using heavily polluting production processes.
-Does not qualify for investment incentives or any special benefits.
-Is 100% domestically owned.
-Has five business owners, none of whom is a legal entity. One business owner holds 30% of the company shares, two owners have 20% of shares each, and two owners have 15% of shares each.
-Is managed by one local director.
-Has between 10 and 50 employees one month after the commencement of operations, all of them domestic nationals.
-Has start-up capital of 10 times income per capita.
-Has an estimated turnover of at least 100 times income per capita.
-Leases the commercial plant or offices and is not a proprietor of real estate.
-Has an annual lease for the office space equivalent to one income per capita.
-Is in an office space of approximately 929 square meters (10,000 square feet).
-Has a company deed that is 10 pages long.

The owners:

-Have reached the legal age of majority and are capable of making decisions as an adult. If there is no legal age of majority, they are assumed to be 30 years old.
-Are in good health and have no criminal record.
-Are married, the marriage is monogamous and registered with the authorities.
-Where the answer differs according to the legal system applicable to the woman or man in question (as may be the case in economies where there is legal plurality), the answer used will be the one that applies to the majority of the population.

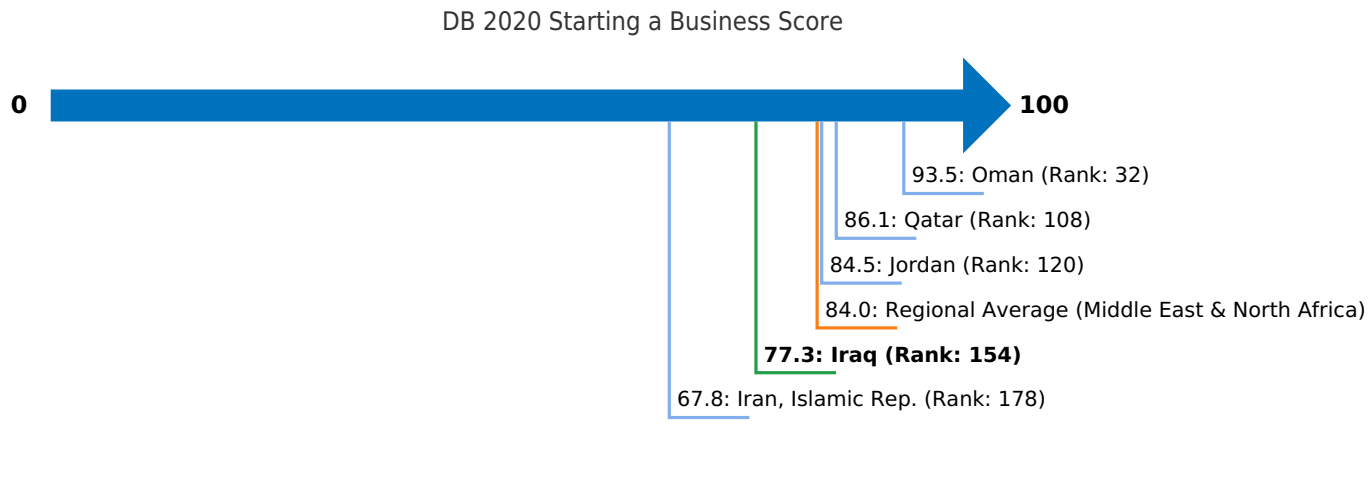
Starting a Business - Iraq

Standardized Company	
Legal form	Private Limited Liability Company
Paid-in minimum capital requirement	IQD 1,000,000
City Covered	Baghdad

Indicator	Iraq	Middle East & North Africa	OECD high income	Best Regulatory Performance
Procedure – Men (number)	8	6.5	4.9	1 (2 Economies)
Time – Men (days)	26	19.7	9.2	0.5 (New Zealand)
Cost – Men (% of income per capita)	34.2	16.7	3.0	0.0 (2 Economies)
Procedure – Women (number)	9	7.1	4.9	1 (2 Economies)
Time – Women (days)	27	20.3	9.2	0.5 (New Zealand)
Cost – Women (% of income per capita)	34.2	16.7	3.0	0.0 (2 Economies)
Paid-in min. capital (% of income per capita)	14.6	8.9	7.6	0.0 (120 Economies)

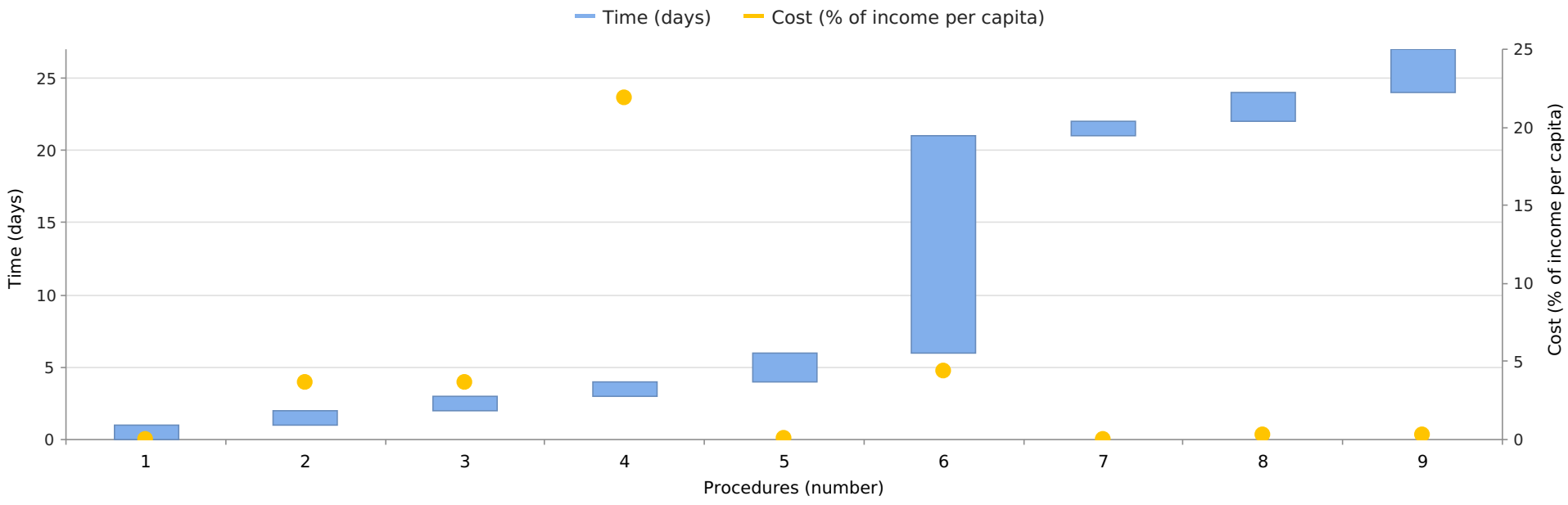
Figure – Starting a Business in Iraq – Score

Figure – Starting a Business in Iraq and comparator economies – Ranking and Score



Note: The ranking of economies on the ease of starting a business is determined by sorting their scores for starting a business. These scores are the simple average of the scores for each of the component indicators.

Figure – Starting a Business in Iraq – Procedure, Time and Cost



*This symbol is shown beside procedure numbers that take place simultaneously with the previous procedure.

Note: Online procedures account for 0.5 days in the total time calculation. For economies that have a different procedure list for men and women, the graph shows the time for women. For more information on methodology, see the *Doing Business* website (http://doingbusiness.org/en/methodology). For details on the procedures reflected here, see the summary below.

Details - Starting a Business in Iraq - Procedure, Time and Cost

No.	Procedures	Time to Complete	Associated Costs
♀ 1	**APPLIES TO WOMEN ONLY: Obtain husband's approval to leave home** *Agency* : Domicile According to Personal Status Law No. 188 of 1959, Article 25: 1- There is no alimony for the wife in the following cases: A- If she left her husband's household without permission and for no legitimate reason B- If she was imprisoned for a crime or debt; C- If she refrained from travelling with her husband for an illegitimate reason.	1 day	no charge
2	**Reserve a unique company name at the Baghdad Chamber of Commerce** *Agency* : Baghdad Chamber of Commerce Lawyers require that the client provides them with 10 different names.The company name should be an Arabic name. A special department at the Chamber of Commerce, Trade Names, starts by searching the suggested name through their system to see if the name is already taken or reserved by another company. Once a name is agreed upon and available, the name is reserved upon payment of a nominal fee.	1 day	IQD 250,000
3	**Reserve a unique company name at the Federation of Chambers of Commerce** *Agency* : Federation of Chambers of Commerce If the chosen company name is available at the Baghdad Chamber of Commerce, the applicant receives a letter confirming that the name is available. Then, the applicant needs to go to the Federal Chamber of Commerce with that letter in order to do another name search at the federal level. It is not possible to do the search at the Federal Chamber of Commerce without having the letter from the Baghdad Chamber of Commerce. If the name is available Lawyers require that the client provides them with 10 different names.	1 day	IQD 250,000
4	**Hire a lawyer to draft articles of association** *Agency* : Lawyer Because lawyers are required to draft the articles of association, they are often also in charge of completing the registration process. The cost varies with the law firm. The lawyers drafting and signing the articles of association are usually licensed by the Company Registrar as a Company Registrar Agents.	1 day	about IQD 1,500,000
5	**Deposit the initial capital at a commercial bank and Obtain proof thereof** *Agency* : Bank The company deposits the initial capital and obtains a confirmation receipt, which must be filed with the company registration application submitted to the Companies Registrar. The capital will be blocked in the bank account under the name of the company. It can be withdrawn immediately upon the issuance of the certificate of registration by the Registrar. The fee varies depending on the bank of choice. It ranges from IQD 5,000 is paid if the bank is a public bank, up to IQD 25,000 for some private banks.	2 days	IQD 5,000 - IQD 25,000
6	**Apply for registration at the Companies Registry** *Agency* : Companies Registry Fees are paid directly to the Companies Registrar. The fee schedule adopted by the Companies Registrar at the Ministry combines different fees (Registrar fees of approximately IQD 50,000; stamp duty of 2/1000 of the company capital; filing fees; certain checking process, etc.). The Companies Registrar circulates the registration certificate to Al Rashed Bank, Al Rafidian Bank, Social Security Agency, Ministry of Trade, Ministry of Planning, the Central Bank, the tax authority, and other relevant agencies (including labor and so forth). The Companies Registry issues the Tax Identification Number (TIN) with the certificate of incorporation. The following documents and information must be presented to the Registrar: - Chambers of Commerce Union letter (to ensure the consistency of the company or trade name with other registrations) - Certified letter of capital deposit from the bank - Iraqi identify cards, and Proof of Iraqi certified citizenship - Ration card revocation (food distribution form) by the Ministry of Trade (although not legally required, asked for in practice) - Lease or ownership agreement - Phone number(s), email address(es), and P.O. box number(s) of the company's founder(s) –Power of attorney –Articles of Association Applicants can submit their registration application online on the company registration portal tasjeel.mot.gov.iq. Upon confirmation of acceptance of the application, applicants visit the Registry office to provide hard copies of the necessary documentation and for identity check.	15 days	IQD 250,000 - 350,000

7	**Obtain the registration certificate** *Agency* : Companies Registry The Companies Registrar issues the certification of registration and publishes the company formation announcement in an internal Bulletin. On the date of issuance of the certificate of registration, the company acquires its legal personality. A registration circular will be sent to all the concerned entities.	1 day	included in procedure 4
8	**Make a company seal** *Agency* : Seal maker Seal makers often ask for a copy of the certificate of registration in order to make a company seal which will reflect the exact name of the company as written on the registration certificate.	2 days	IQD 20,000
9	**Register employees for social security** *Agency* : Social Security Office The cost for social security registration depends on the number of employees. The employer will deduct 5% from the employee's salary and add to it an amount equal to 12% of the employee's salary, resulting in a total contribution of 17% to the Social Security Authority.	3 days	IQD 20,000

♀Applies to women only.
⇉Takes place simultaneously with previous procedure.

Dealing with Construction Permits

This topic tracks the procedures, time and cost to build a warehouse—including obtaining necessary the licenses and permits, submitting all required notifications, requesting and receiving all necessary inspections and obtaining utility connections. In addition, the Dealing with Construction Permits indicator measures the building quality control index, evaluating the quality of building regulations, the strength of quality control and safety mechanisms, liability and insurance regimes, and professional certification requirements. The most recent round of data collection was completed in May 2019. See the methodology for more information

What the indicators measure

Procedures to legally build a warehouse (number)

- Submitting all relevant documents and obtaining all necessary clearances, licenses, permits and certificates
- Submitting all required notifications and receiving all necessary inspections
- Obtaining utility connections for water and sewerage
- Registering and selling the warehouse after its completion

Time required to complete each procedure (calendar days)

- Does not include time spent gathering information
- Each procedure starts on a separate day—though procedures that can be fully completed online are an exception to this rule
- Procedure is considered completed once final document is received
- No prior contact with officials

Cost required to complete each procedure (% of income per capita)

- Official costs only, no bribes

Building quality control index (0-15)

- Quality of building regulations (0-2)
- Quality control before construction (0-1)
- Quality control during construction (0-3)
- Quality control after construction (0-3)
- Liability and insurance regimes (0-2)
- Professional certifications (0-4)

Case study assumptions

To make the data comparable across economies, several assumptions about the construction company, the warehouse project and the utility connections are used.

The construction company (BuildCo):

- Is a limited liability company (or its legal equivalent) and operates in the economy's largest business city. For 11 economies the data are also collected for the second largest business city.
- Is 100% domestically and privately owned; has five owners, none of whom is a legal entity. Has a licensed architect and a licensed engineer, both registered with the local association of architects or engineers. BuildCo is not assumed to have any other employees who are technical or licensed experts, such as geological or topographical experts.
- Owns the land on which the warehouse will be built and will sell the warehouse upon its completion.

The warehouse:

- Will be used for general storage activities, such as storage of books or stationery.
- Will have two stories, both above ground, with a total constructed area of approximately 1,300.6 square meters (14,000 square feet). Each floor will be 3 meters (9 feet, 10 inches) high and will be located on a land plot of approximately 929 square meters (10,000 square feet) that is 100% owned by BuildCo, and the warehouse is valued at 50 times income per capita.
- Will have complete architectural and technical plans prepared by a licensed architect. If preparation of the plans requires such steps as obtaining further documentation or getting prior approvals from external agencies, these are counted as procedures.
- Will take 30 weeks to construct (excluding all delays due to administrative and regulatory requirements).

The water and sewerage connections:

- Will be 150 meters (492 feet) from the existing water source and sewer tap. If there is no water delivery infrastructure in the economy, a borehole will be dug. If there is no sewerage infrastructure, a septic tank in the smallest size available will be installed or built.
- Will have an average water use of 662 liters (175 gallons) a day and an average wastewater flow of 568 liters (150 gallons) a day. Will have a peak water use of 1,325 liters (350 gallons) a day and a peak wastewater flow of 1,136 liters (300 gallons) a day.
- Will have a constant level of water demand and wastewater flow throughout the year; will be 1 inch in diameter for the water connection and 4 inches in diameter for the sewerage connection.

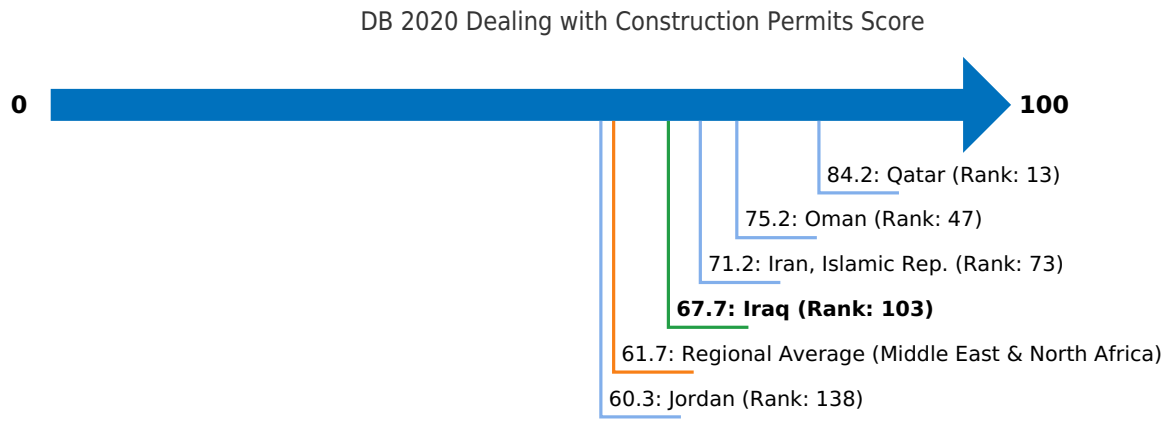
Dealing with Construction Permits - Iraq

Standardized Warehouse	
Estimated value of warehouse	IQD 342,817,926.90
City Covered	Baghdad

Indicator	Iraq	Middle East & North Africa	OECD high income	Best Regulatory Performance
Procedures (number)	11	15.7	12.7	None in 2018/19
Time (days)	167	123.6	152.3	None in 2018/19
Cost (% of warehouse value)	0.3	4.4	1.5	None in 2018/19
Building quality control index (0-15)	5.5	12.5	11.6	15.0 (6 Economies)

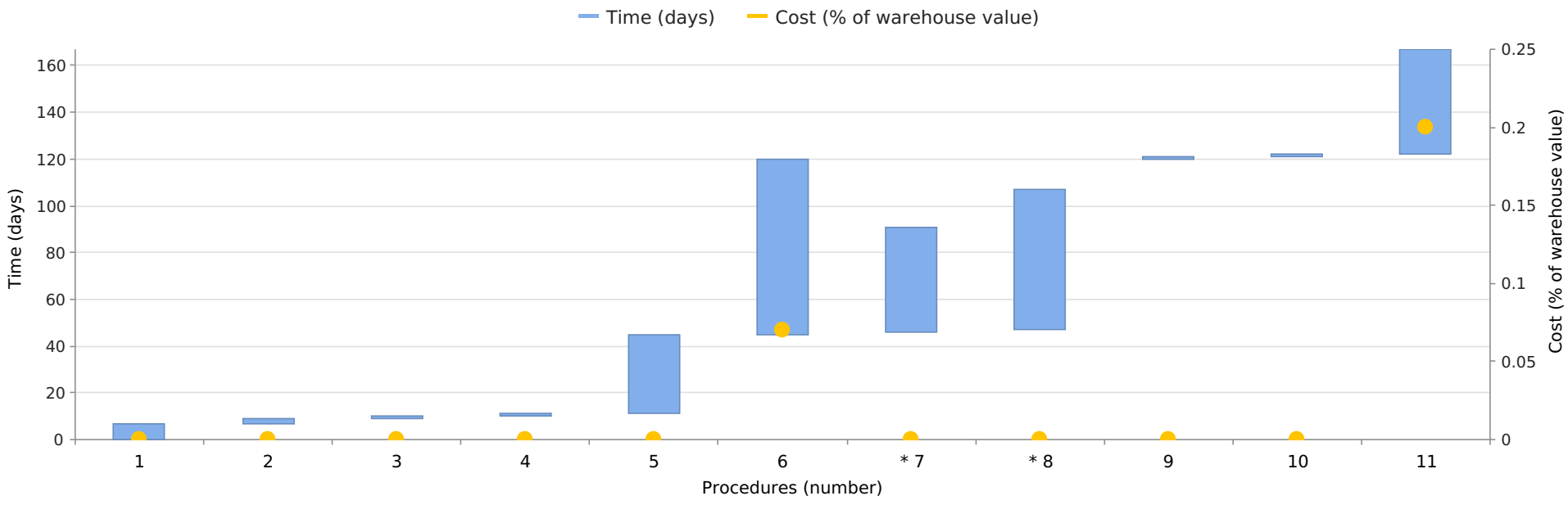
Figure – Dealing with Construction Permits in Iraq – Score

Figure – Dealing with Construction Permits in Iraq and comparator economies – Ranking and Score



Note: The ranking of economies on the ease of dealing with construction permits is determined by sorting their scores for dealing with construction permits. These scores are the simple average of the scores for each of the component indicators.

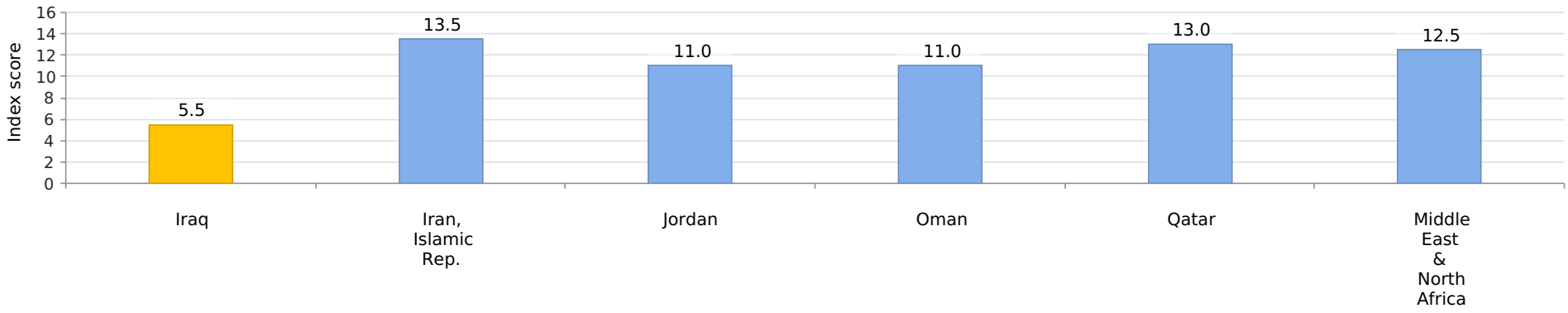
Figure – Dealing with Construction Permits in Iraq – Procedure, Time and Cost



*This symbol is shown beside procedure numbers that take place simultaneously with the previous procedure.

Note: Online procedures account for 0.5 days in the total time calculation. For economies that have a different procedure list for men and women, the graph shows the time for women. For more information on methodology, see the *Doing Business* website (http://doingbusiness.org/en/methodology). For details on the procedures reflected here, see the summary below.

Figure – Dealing with Construction Permits in Iraq and comparator economies – Measure of Quality



Details – Dealing with Construction Permits in Iraq – Procedure, Time and Cost

No.	Procedures	Time to Complete	Associated Costs
1	**Obtain ownership certificate and site map** *Agency* : Real Estate Registration Directorate According to the Building Code, BuildCo must request an ownership certificate and a site map delineating the boundaries from the Real Estate Directorate. Both documents must be no more than 1 year old.	7 days	IQD 5,000
2	**Obtain property tax clearance from the Tax Agency** *Agency* : Tax Agency BuildCo presents the ownership certificate to request a tax clearance which is required for the building permit. In addition, the property may also be subject to inspection.	2 days	no charge
3	**Request planning permission and location clearance** *Agency* : Baghdad Mayoralty BuildCo must submit the preliminary drawings, including the ownership certificate, the site map and the property tax clearance, to request the planning permission and location clearance.	1 day	no charge
4	**Receive site inspection from Baghdad Mayoralty** *Agency* : Baghdad Mayoralty The Mayoralty will conduct a site inspection to ensure that the boundaries match what is on the site map. Although this is a requirement, it does not always happen in practice.	1 day	no charge
5	**Obtain planning permission and location clearance** *Agency* : Baghdad Mayoralty	34 days	USD 7
6	**Obtain building permit** *Agency* : Municipality The following documents must be submitted: a. Ownership title that is no more than 1 year old b. Location map that is no more than 1 year old c. Tax clearance certificate from the Tax Division of the Real Estate Registry indicating that all taxes have been paid on the land d. Engineering drawings Fees for the building permit are as follows: 1- Building fees: IQD 20 / sq. m 2- Removal of building debris fees after completion of construction (refundable): IQD 50 / sq. m. 3- Cost of materials supplied for paving the pedestrian sidewalk: IQD 500 / m (assumed to be 30 m - see details in procedure 1) 4- Additional fees: IQD 200,000 5- Numbering fee: IQD 6,000 6- Administrative fees: IQD 500 7- Inspection fees: IQD 3,000 8- Stamp fees: IQD 100 Total building permit fee: (20*1,300.6) + (500*30) + 200,000 + 6,000 + 500 + 3,000 + 100 = IQD 250,612	75 days	IQD 250,612
⇄ 7	**Obtain project clearance from Water and Sewage Directorate** *Agency* : Water and Sewage Directorate BuildCo must obtain clearance from the Water and Sewage Directorate	45 days	no charge
⇄ 8	**Obtain project clearance from Civil Defense** *Agency* : Civil Defense BuildCo must obtain clearance from Civil Defense	60 days	no charge
9	**Receive random inspection by Municipality** *Agency* : Municipality Inspectors from the Municipality will inspect the construction site randomly without a formal request from BuildCo. Construction work is not interrupted.	1 day	no charge

10	**Receive final inspection from Municipality** *Agency* : Municipality Once construction is completed, the Municipality will conduct a final inspection.	1 day	no charge
11	**Obtain water and sewage connection** *Agency* : Water Directorate	45 days	USD 500

⇉Takes place simultaneously with previous procedure.

Details - Dealing with Construction Permits in Iraq - Measure of Quality

	Answer	Score
Building quality control index (0-15)		**5.5**
Quality of building regulations index (0-2)		**1.0**
How accessible are building laws and regulations in your economy? (0-1)	Available online; Free of charge.	1.0
Which requirements for obtaining a building permit are clearly specified in the building regulations or on any accessible website, brochure or pamphlet? (0-1)	List of required documents; Fees to be paid.	0.0
Quality control before construction index (0-1)		**1.0**
Which third-party entities are required by law to verify that the building plans are in compliance with existing building regulations? (0-1)	Licensed architect.	1.0
Quality control during construction index (0-3)		**0.0**
What types of inspections (if any) are required by law to be carried out during construction? (0-2)	Unscheduled inspections.	0.0
Do legally mandated inspections occur in practice during construction? (0-1)	Mandatory inspections are not always done in practice during construction; Mandatory inspections are done most of the time during construction.	0.0
Quality control after construction index (0-3)		**2.0**
Is there a final inspection required by law to verify that the building was built in accordance with the approved plans and regulations? (0-2)	Yes, final inspection is done by government agency.	2.0
Do legally mandated final inspections occur in practice? (0-1)	Final inspection does not always occur in practice; Final inspection occurs most of the time.	0.0
Liability and insurance regimes index (0-2)		**0.5**
Which parties (if any) are held liable by law for structural flaws or problems in the building once it is in use (Latent Defect Liability or Decennial Liability)? (0-1)	Architect or engineer.	0.5
Which parties (if any) are required by law to obtain an insurance policy to cover possible structural flaws or problems in the building once it is in use (Latent Defect Liability Insurance or Decennial Insurance)? (0-1)	No party is required by law to obtain insurance .	0.0
Professional certifications index (0-4)		**1.0**
What are the qualification requirements for the professional responsible for verifying that the architectural plans or drawings are in compliance with existing building regulations? (0-2)	University degree in architecture or engineering.	0.0
What are the qualification requirements for the professional who supervises the construction on the ground? (0-2)	University degree in engineering, construction or construction management; Being a registered architect or engineer.	1.0

Getting Electricity

This topic measures the procedures, time and cost required for a business to obtain a permanent electricity connection for a newly constructed warehouse. Additionally, the reliability of supply and transparency of tariffs index measures reliability of supply, transparency of tariffs and the price of electricity. The most recent round of data collection for the project was completed in May 2019. See the methodology for more information.

What the indicators measure

Procedures to obtain an electricity connection (number)

- Submitting all relevant documents and obtaining all necessary clearances and permits
- Completing all required notifications and receiving all necessary inspections
- Obtaining external installation works and possibly purchasing material for these works
- Concluding any necessary supply contract and obtaining final supply

Time required to complete each procedure (calendar days)

- Is at least 1 calendar day
- Each procedure starts on a separate day
- Does not include time spent gathering information
- Reflects the time spent in practice, with little follow-up and no prior contact with officials

Cost required to complete each procedure (% of income per capita)

- Official costs only, no bribes
- Value added tax excluded

The reliability of supply and transparency of tariffs index (0-8)

- Duration and frequency of power outages (0–3)
- Tools to monitor power outages (0–1)
- Tools to restore power supply (0–1)
- Regulatory monitoring of utilities' performance (0–1)
- Financial deterrents limiting outages (0–1)
- Transparency and accessibility of tariffs (0–1)

Price of electricity (cents per kilowatt-hour)*

- Price based on monthly bill for commercial warehouse in case study

*Note: *Doing Business* measures the price of electricity, but it is not included in the ease of doing business score nor in the ranking on the ease of getting electricity.

Case study assumptions

To make the data comparable across economies, several assumptions about the warehouse, the electricity connection and the monthly consumption are used.

The warehouse:

- Is owned by a local entrepreneur and is used for storage of goods.
- Is located in the economy's largest business city. For 11 economies the data are also collected for the second largest business city.
- Is located in an area where similar warehouses are typically located and is in an area with no physical constraints. For example, the property is not near a railway.
- Is a new construction and is being connected to electricity for the first time.
- Has two stories with a total surface area of approximately 1,300.6 square meters (14,000 square feet). The plot of land on which it is built is 929 square meters (10,000 square feet).

The electricity connection:

- Is a permanent one with a three-phase, four-wire Y connection with a subscribed capacity of 140-kilo-volt-ampere (kVA) with a power factor of 1, when 1 kVA = 1 kilowatt (kW).
- Has a length of 150 meters. The connection is to either the low- or medium-voltage distribution network and is either overhead or underground, whichever is more common in the area where the warehouse is located and requires works that involve the crossing of a 10-meter road (such as by excavation or overhead lines) but are all carried out on public land. There is no crossing of other owners' private property because the warehouse has access to a road.
- Does not require work to install the internal wiring of the warehouse. This has already been completed up to and including the customer's service panel or switchboard and the meter base.

The monthly consumption:

- It is assumed that the warehouse operates 30 days a month from 9:00 a.m. to 5:00 p.m. (8 hours a day), with equipment utilized at 80% of capacity on average and that there are no electricity cuts (assumed for simplicity reasons) and the monthly energy consumption is 26,880 kilowatt-hours (kWh); hourly consumption is 112 kWh.
- If multiple electricity suppliers exist, the warehouse is served by the cheapest supplier.
- Tariffs effective in January of the current year are used for calculation of the price of electricity for the warehouse. Although January has 31 days, for calculation purposes only 30 days are used.

Getting Electricity - Iraq

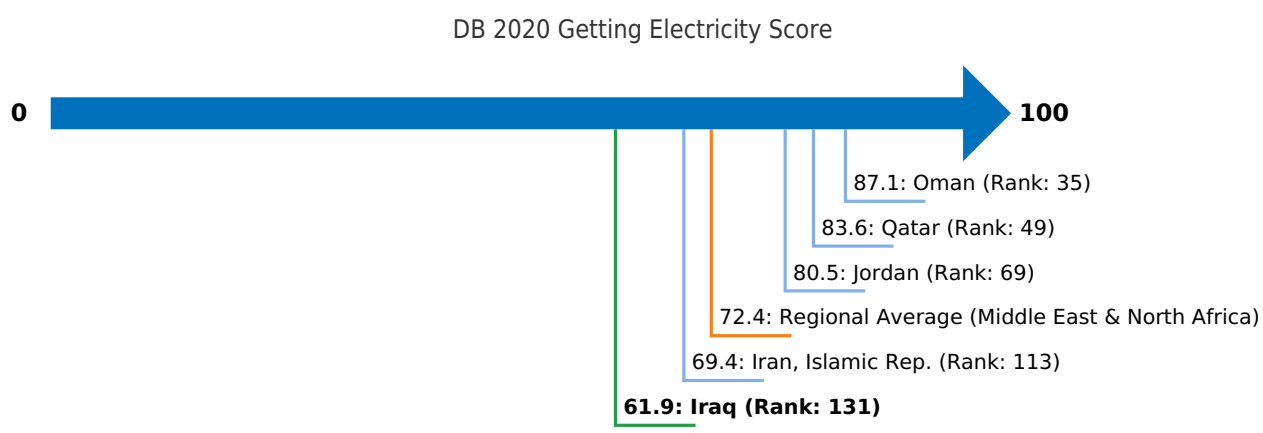
Standardized Connection

Name of utility	Ministry of Electricity
Price of electricity (US cents per kWh)	8.5
City Covered	Baghdad

Indicator	Iraq	Middle East & North Africa	OECD high income	Best Regulatory Performance
Procedures (number)	5	4.4	4.4	3 (28 Economies)
Time (days)	51	63.5	74.8	18 (3 Economies)
Cost (% of income per capita)	384.7	419.6	61.0	0.0 (3 Economies)
Reliability of supply and transparency of tariff index (0-8)	0	4.4	7.4	8 (26 Economies)

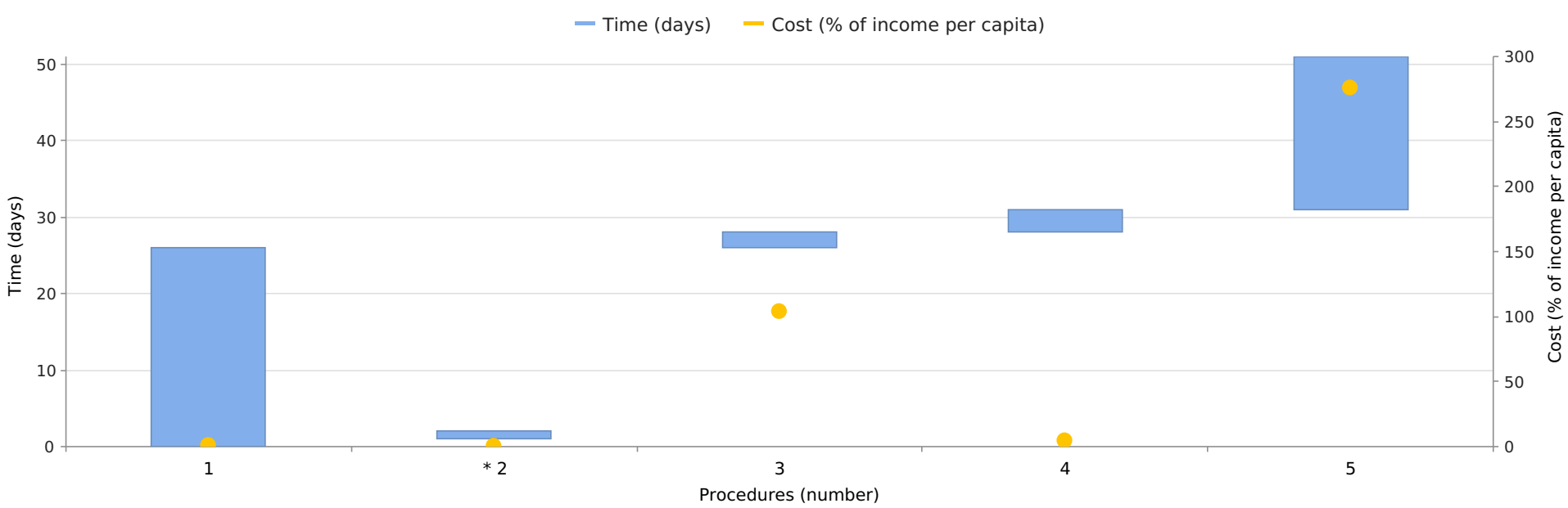
Figure – Getting Electricity in Iraq – Score

Figure – Getting Electricity in Iraq and comparator economies – Ranking and Score



Note: The ranking of economies on the ease of getting electricity is determined by sorting their scores for getting electricity. These scores are the simple average of the scores for all the component indicators except the price of electricity.

Figure – Getting Electricity in Iraq – Procedure, Time and Cost

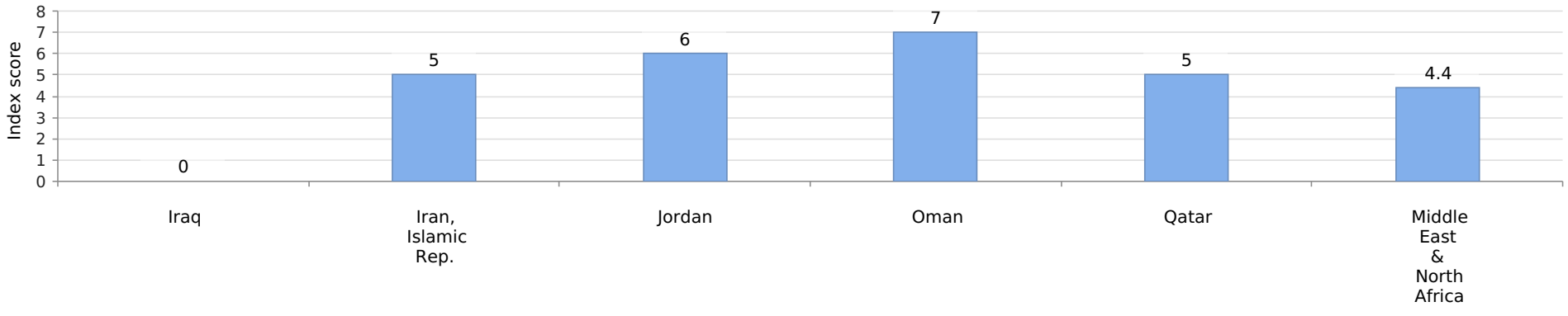


*This symbol is shown beside procedure numbers that take place simultaneously with the previous procedure.

Note: Online procedures account for 0.5 days in the total time calculation. For economies that have a different procedure list for men and women, the graph shows the time for women. For more information on methodology, see the *Doing Business* website (http://doingbusiness.org/en/methodology). For details on the procedures

reflected here, see the summary below.

Figure – Getting Electricity in Iraq and comparator economies – Measure of Quality



Details – Getting Electricity in Iraq – Procedure, Time and Cost

No.	Procedures	Time to Complete	Associated Costs
1	**Submit application to Ministry of Electricity and await estimate** *Agency* : Ministry of Electricity The client submits a petition to the local distribution office (covering the area where the warehouse is located) to request supply of electricity. The petition will then be reviewed by the office manager, after which the planning department will decide on the way to feed the warehouse with supply (directly to the LV network or through installing a distribution transformer). That same department will issue a report deciding on the availability of capacity to accommodate the customer's demand. In this case, a distribution transformer would be needed.	26 calendar days	IQD 50,000
⇉ 2	**Receive site inspection by Ministry of Electricity** *Agency* : Ministry of Electricity The office manager will request the technical department to inspect the site. The inspection is conducted for the following reasons: a. To check whether the wiring (the interface to the public network) is done properly and ready to be connected to the distribution network. b. To identify the nearest connection point to the 11 kV feeder. c. To determine the material required to carry out the connection works. The inspection is followed by a report addressed to the manager.	1 calendar day	IQD 10,000
3	**Purchase of distribution transformer by the customer** *Agency* : Store	2 calendar days	IQD 7,112,000
4	**Test the purchased transformer at the Ministry of Electricity** *Agency* : Ministry of Electricity	3 calendar days	IQD 300,000
5	**Obtain external works and final connection from Ministry of Electricity** *Agency* : Ministry of Electricity The manager reviews the inspection report and notes from the local office on the availability of material, then asks the commercial department to determine the cost of material and services. The client needs to pay all the fees in advance. The manager checks the entire petition (paper copy) has been filled out. If the form is complete and according to the regulations in place, the manager will request implementation. The technical team will take all necessary actions to bring the materials to the site and carry out the works: install the poles (distance of 25 meters between every 2 poles), the overhead wires, a 250-kVA transformer and its accessories, and connect the warehouse to the distribution network. In theory, both the MV and the LV networks can be overhead or underground in Baghdad. In the area assumed however, the most likely case is to have overhead connection. Because the works are carried out by the utility, the client is not requested to obtain any special permit. In the case of an underground connection, the Ministry of Electricity will need to obtain an excavation permit. In the case of an overhead connection, no such permit is even required.	20 calendar days	IQD 18,902,100

⇉Takes place simultaneously with previous procedure.

Details - Getting Electricity in Iraq - Measure of Quality

	Answer
Reliability of supply and transparency of tariff index (0-8)	0
Total duration and frequency of outages per customer a year (0-3)	0
System average interruption duration index (SAIDI)	..
System average interruption frequency index (SAIFI)	..
What is the minimum outage time (in minutes) that the utility considers for the calculation of SAIDI/SAIFI	30.0
Mechanisms for monitoring outages (0-1)	1
Does the distribution utility use automated tools to monitor outages?	Yes
Mechanisms for restoring service (0-1)	1
Does the distribution utility use automated tools to restore service?	Yes
Regulatory monitoring (0-1)	0
Does a regulator—that is, an entity separate from the utility—monitor the utility's performance on reliability of supply?	No
Financial deterrents aimed at limiting outages (0-1)	0
Does the utility either pay compensation to customers or face fines by the regulator (or both) if outages exceed a certain cap?	No
Communication of tariffs and tariff changes (0-1)	0
Are effective tariffs available online?	No
Link to the website, if available online	n.a
Are customers notified of a change in tariff ahead of the billing cycle?	Yes

Note:

If the duration and frequency of outages is 100 or less, the economy is eligible to score on the Reliability of supply and transparency of tariff index.

If the duration and frequency of outages is not available, or is over 100, the economy is not eligible to score on the index.

If the minimum outage time considered for SAIDI/SAIFI is over 5 minutes, the economy is not eligible to score on the index.

Registering Property

This topic examines the steps, time and cost involved in registering property, assuming a standardized case of an entrepreneur who wants to purchase land and a building that is already registered and free of title dispute. In addition, the topic also measures the quality of the land administration system in each economy. The quality of land administration index has five dimensions: reliability of infrastructure, transparency of information, geographic coverage, land dispute resolution, and equal access to property rights. The most recent round of data collection for the project was completed in May 2019. See the methodology for more information.

What the indicators measure

Procedures to legally transfer title on immovable property (number)

- Preregistration procedures (for example, checking for liens, notarizing sales agreement, paying property transfer taxes)
- Registration procedures in the economy's largest business city.
- Postregistration procedures (for example, filling title with municipality)

Time required to complete each procedure (calendar days)

- Does not include time spent gathering information
- Each procedure starts on a separate day - though procedures that can be fully completed online are an exception to this rule
- Procedure is considered completed once final document is received
- No prior contact with officials

Cost required to complete each procedure (% of property value)

- Official costs only (such as administrative fees, duties and taxes).
- Value Added Tax, Capital Gains Tax and illicit payments are excluded

Quality of land administration index (0-30)

- Reliability of infrastructure index (0-8)
- Transparency of information index (0–6)
- Geographic coverage index (0–8)
- Land dispute resolution index (0–8)
- Equal access to property rights index (-2–0)

Case study assumptions

To make the data comparable across economies, several assumptions about the parties to the transaction, the property and the procedures are used.

The parties (buyer and seller):

- Are limited liability companies (or the legal equivalent).
- Are located in the periurban (that is, on the outskirts of the city but still within its official limits) area of the economy’s largest business city. For 11 economies the data are also collected for the second largest business city.
- Are 100% domestically and privately owned.
- Perform general commercial activities.

The property (fully owned by the seller):

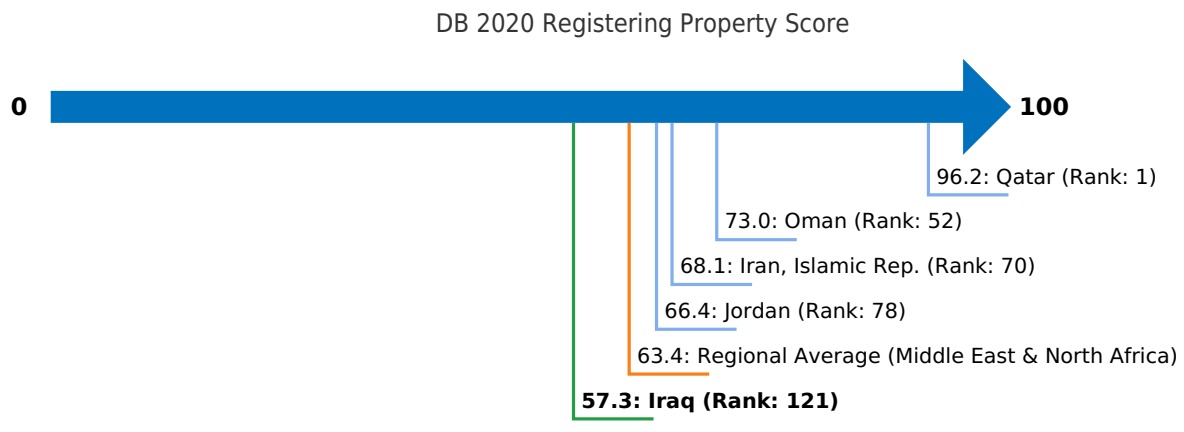
- Has a value of 50 times income per capita, which equals the sale price.
- Is fully owned by the seller.
- Has no mortgages attached and has been under the same ownership for the past 10 years.
- Is registered in the land registry or cadastre, or both, and is free of title disputes.
- Is located in a periurban commercial zone (that is, on the outskirts of the city but still within its official limits), and no rezoning is required.
- Consists of land and a building. The land area is 557.4 square meters (6,000 square feet). A two-story warehouse of 929 square meters (10,000 square feet) is located on the land. The warehouse is 10 years old, is in good condition, has no heating system and complies with all safety standards, building codes and legal requirements. The property, consisting of land and building, will be transferred in its entirety.
- Will not be subject to renovations or additional construction following the purchase.
- Has no trees, natural water sources, natural reserves or historical monuments of any kind.
- Will not be used for special purposes, and no special permits, such as for residential use, industrial plants, waste storage or certain types of agricultural activities, are required.
- Has no occupants, and no other party holds a legal interest in it.

Registering Property - Iraq

Indicator	Iraq	Middle East & North Africa	OECD high income	Best Regulatory Performance
Procedures (number)	5	5.4	4.7	1 (5 Economies)
Time (days)	51	26.6	23.6	1 (2 Economies)
Cost (% of property value)	7.3	5.6	4.2	0.0 (Saudi Arabia)
Quality of the land administration index (0-30)	10.5	14.6	23.2	None in 2018/19

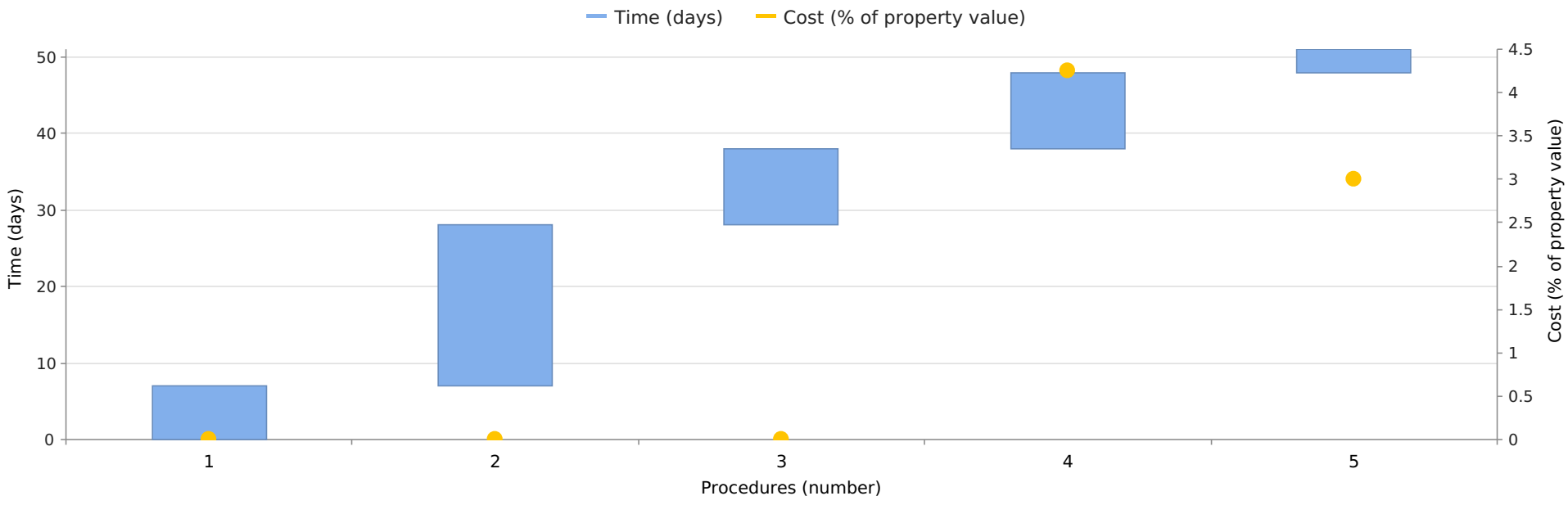
Figure – Registering Property in Iraq – Score

Figure – Registering Property in Iraq and comparator economies – Ranking and Score



Note: The ranking of economies on the ease of registering property is determined by sorting their scores for registering property. These scores are the simple average of the scores for each of the component indicators.

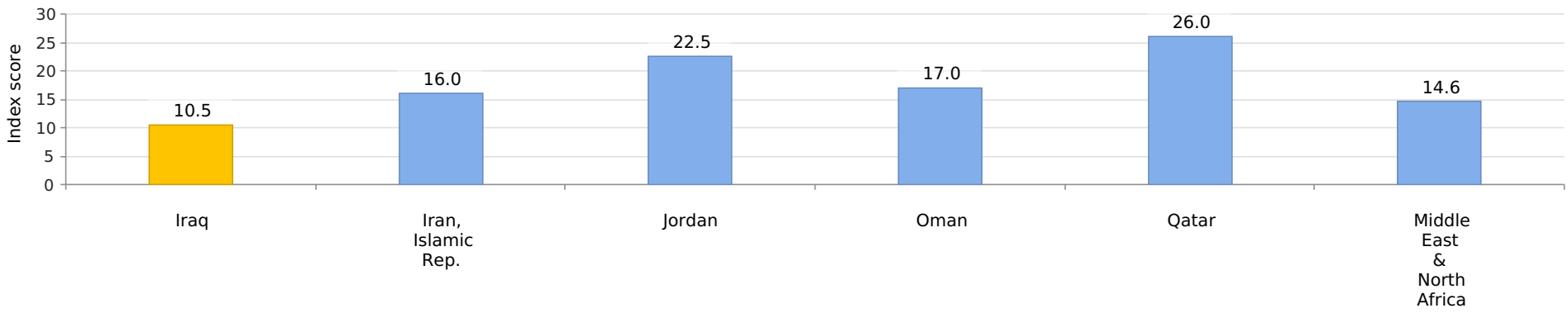
Figure – Registering Property in Iraq – Procedure, Time and Cost



*This symbol is shown beside procedure numbers that take place simultaneously with the previous procedure.

Note: Online procedures account for 0.5 days in the total time calculation. For economies that have a different procedure list for men and women, the graph shows the time for women. For more information on methodology, see the *Doing Business* website (http://doingbusiness.org/en/methodology). For details on the procedures reflected here, see the summary below.

Figure – Registering Property in Iraq and comparator economies – Measure of Quality



Details – Registering Property in Iraq – Procedure, Time and Cost

No.	Procedures	Time to Complete	Associated Costs
1	**Obtain a new form for the property title and a cadastral map at the Real Property Registry** *Agency* : Real Property Registry A new title elucidation (statement of data relevant to the property under registration) is drafted. This is free of charge. A competent team is formed to estimate the value of the property. This does not involve an inspection of the property. The team consists of the following persons: - The Director General of the Real Property Registry of his representative - The representative of the State Commission of Income Tax - The applicant for survey or his representative. - A request is submitted to the registry manager to obtain new title elucidation - The seller and the buyer must be present in person or their legal representative together. - Checking the seller record in the computer Database to identify if he was former official in the previous regime and if the property was inalienable. - Checking on computer whether there is any mortgage, encumbrances or not, then fix the information on the new deed title draft. - checking the IDs issuance for both the seller & buyer. (Proof of identity is obtained by sending a letter sent to the nationality authority - jinsiya). - Ration card, Baghdad resident card, Iraqi Nationality Certificate, Jiseea, Land Deed. The cadastral map of the property should be in the file and send sent to the zone municipality. Note: sometimes the old file & documents of the property are missing from the archive and checking requires more time.	7 days	IQD 5,000; (IQD 5,000 (copying Map and Deed))
2	**Obtain an approval determining the type of the real property and zoning restrictions** *Agency* : Municipality An approval to the transfer should be obtained from the Municipality Office, determining the type of the real property and the way to occupy it (zoning restrictions). It is quite easy to obtain this approval because it will not alter the way to use the property but only confirm that the way to occupy the property will be as per the purpose being set by the Municipality. The Municipality will check for any inconsistency on the property, if there are any required charges have to be paid. An investigation team from the Municipality will visit the property to confirm its status and if there were any changes done since its last investigation and in correlation with the old property map. Investigators are governmental employees only. Arrangement of the investigation team and fulfillment of the visit take 2-3 days. The new investigation report will be attached to the new cadastral certificate. The Municipality will check all services charges owe by the property owner in order to be paid prior to the approval that the property is free from any outstanding charges, such as Electricity, Drinking water, waste water and road asphalting. Unless the Seller have the receipt that the asphalting charges were paid, even it was done more than 10 years ago, he will have to pay about 2000 ID / meter length of asphalted road in front of the property, in addition of time delay. After completion all requirements, Municipality will send the New Cadastral Certificate (NCC)by mail to the Cadastre. The overall time elapsed from receipt of the NCC by the municipality by mail - property investigation - pay all due charges until reception by the Cadastre by mail as well, the average time is 21 days. A committee to visit the property for inspection to check if there is any changes or additions with reference to the original construction map, this will determine the amount of fines to be paid. - inspection fees 4000 IQD. - numeration fees 6000 IQD. - paving fees = the front of the property m2× 2455 IQD / m2. - All outstanding fines should be paid	21 days	IQD 10,000

3	**Assessment of the property value by the Real Estate registry** *Agency* : Real Estate Registry Upon receipt of the New Cadastral Certificate from the Municipality, a competent team (Real Estate Office committee) is formed by the cadastre (Real Property Registry Office) consisting of the following persons to estimate the current value of the property. There is fixed day for property evaluation of each area covered by the same property registry office. (i) Representative of the real property registry office. (ii) Representative of the Province Main real property registry office. (iii) Representative of the state commission of income tax. The evaluation team have regulations for the evaluation range of each land location depending on the degree of civilization, how close to the city center, type and level of the property building, how old it is, the type of roofing and finishing with endeavor of evaluation with the minimum price / meter square or higher. From the time the New Cadastral Certificate is received by the Real Estate Registry and the time the inspection appointment is confirmed, it will take approximately 3 days. The team will collect several cadastral certificates for several buyers, and leave to inspect them all at one time, so the time will depend on the availability of other buyers. The inspection will take place, and the team will provide a report that will be used for the evaluation of the property. However, if the buyer objects to the estimate, then there is another inspection and a final report will be re-issued. All documents will then be sent to the Tax Authority once the report is final. This report will be used as a base by the Tax Authority to estimate the amount of taxes to be paid. Transmission of documents to the Tax Authority is done by mail. Note: The buyer will provide transportation for the evaluation team and will be charged an amount between 10000-15000 Dinars. This is an unofficial cost. There is possibility to request a certificate showing that the property is free of mortgage and encumbrances from the Registry Office by a governmental authority only.	10 days	no charge
4	**Assessment of the property value by Tax Authorities** *Agency* : Income Tax Authority The Seller or his representative must follow up on the receipt and measures in the Tax Commission Office. First, the Tax commission will check whether the property is occupied or not and compares this with information they have in their files. Then both the Seller and the Buyer must obtain several tax clearances from other Tax Authorities offices. All documents are sent to the Tax Authority by mail. The time needed is 2 days on average for this step. The Tax Authority might or might not object to the evaluation of the Property Registry Office. If they decide to evaluate the property with higher price, the seller cannot object, and the tax calculation will depend on the new evaluation, whichever is higher. The seller pays the Income Tax (Real Estate Ownership Transfer tax) for the property evaluation according to the following fee schedule (this amount is apportioned among partners if the land is owned jointly); Income Tax paid (Real Estate Ownership Transfer tax) according to the following cumulative property values (in IQD): - tax exempted first 0 to 50 million dinars; - 3% (on next 50 to 100 million dinars); - 4% (on next 100 to 150 million dinars); - 5% (on next 150 to 200 million dinars); and - 6% (200 million dinars and over). Payment is made to the Property Registry Office (Real Estate Office) by a certified check from a named Bank (Governmental). The final Tax Cadastral Certificate will be sent to the Property Registry Office by mail.	10 days	IQD 14,569,075.61; (Income Tax is paid according to the following cumulative property values (in IQD): - tax exempted 0 to 50 million dinars; - 3% (50 to 100 million dinars); - 4% (100 to 150 million dinars); - 5% (150 to 200 million dinars); and - 6% (200 million dinars and over).)
5	**Apply for registration at the Real Property Registry** *Agency* : Real Property Registry The buyer applies for registration and a new title at the Real Property Registry. Afterwards, the transaction process will be recorded in the official registers and the buyer will then be granted a new title of property on the same day. The same section which opened the new cadastral document will calculate the amount of property transfer fees which is equal to % 3 of the property evaluation, Payment is made by certified check from either Named Governmental Bank or Named Private Bank. Payment can also be made in cash at the Property Registry Office. Once payment is received, the Property Registry Office will issue a new Property Deed in the name of the Buyer, then the process is considered final. The Property Registry Office will later send the new ownership details to the Main property registration office. The registration fee, equal to 3% of the value of the property, is paid by means of an endorsed check to the account of the Real Property Registry before applying for registration.	3 days	IQD 10,284,537.81; (3% of property value (Registration fee))

⇉Takes place simultaneously with previous procedure.

Details - Registering Property in Iraq - Measure of Quality

	Answer	Score
Quality of the land administration index (0-30)		**10.5**
Reliability of infrastructure index (0-8)		**1.0**
Type of land registration system in the economy:	Dual system (Title & Deed)	
What is the institution in charge of immovable property registration?	Real Estate Registration Department	
In what format are past and newly issued land records kept at the immovable property registry of the largest business city of the economy —in a paper format or in a computerized format (scanned or fully digital)?	Paper	0.0
Is there a comprehensive and functional electronic database for checking for encumbrances (liens, mortgages, restrictions and the like)?	No	0.0
Institution in charge of the plans showing legal boundaries in the largest business city:	Real Estate Registration Department	
In what format are past and newly issued cadastral plans kept at the mapping agency of the largest business city of the economy—in a paper format or in a computerized format (scanned or fully digital)?	Paper	0.0
Is there an electronic database for recording boundaries, checking plans and providing cadastral information (geographic information system)?	No	0.0
Is the information recorded by the immovable property registration agency and the cadastral or mapping agency kept in a single database, in different but linked databases or in separate databases?	Different databases but linked	1.0
Do the immovable property registration agency and cadastral or mapping agency use the same identification number for properties?	No	0.0
Transparency of information index (0-6)		**0.5**
Who is able to obtain information on land ownership at the agency in charge of immovable property registration in the largest business city?	Only intermediaries and interested parties	0.0
Is the list of documents that are required to complete any type of property transaction made publicly available–and if so, how?	Yes, in person	0.0
Link for online access:		
Is the applicable fee schedule for any type of property transaction at the agency in charge of immovable property registration in the largest business city made publicly available–and if so, how?	Yes, on public boards	0.5
Link for online access:		
Does the agency in charge of immovable property registration agency formally commit to deliver a legally binding document that proves property ownership within a specific timeframe –and if so, how does it communicate the service standard?	No	0.0
Link for online access:		
Is there a specific and independent mechanism for filing complaints about a problem that occurred at the agency in charge of immovable property registration?	No	0.0
Contact information:		
Are there publicly available official statistics tracking the number of transactions at the immovable property registration agency?	No	0.0
Number of property transfers in the largest business city in 2018:		
Who is able to consult maps of land plots in the largest business city?	Only intermediaries and interested parties	0.0
Is the applicable fee schedule for accessing maps of land plots made publicly available—and if so, how?	Yes, in person	0.0
Link for online access:		
Does the cadastral/mapping agency formally specifies the timeframe to deliver an updated cadastral plan—and if so, how does it communicate the service standard?	No	0.0

Link for online access:		
Is there a specific and independent mechanism for filing complaints about a problem that occurred at the cadastral or mapping agency?	No	0.0
Contact information:		
Geographic coverage index (0-8)		**4.0**
Are all privately held land plots in the largest business city formally registered at the immovable property registry?	Yes	2.0
Are all privately held land plots in the economy formally registered at the immovable property registry?	No	0.0
Are all privately held land plots in the largest business city mapped?	Yes	2.0
Are all privately held land plots in the economy mapped?	No	0.0
Land dispute resolution index (0-8)		**5.0**
Does the law require that all property sale transactions be registered at the immovable property registry to make them opposable to third parties?	Yes	1.5
Legal basis:	Real Property Registration Law No.43 of 1971	
Is the system of immovable property registration subject to a state or private guarantee?	Yes	0.5
Type of guarantee:	State guarantee	
Legal basis:	Real Property Registration Law No.43 of 1971	
Is there a is a specific, out-of-court compensation mechanism to cover for losses incurred by parties who engaged in good faith in a property transaction based on erroneous information certified by the immovable property registry?	No	0.0
Legal basis:		
Does the legal system require a control of legality of the documents necessary for a property transaction (e.g., checking the compliance of contracts with requirements of the law)?	Yes	0.5
If yes, who is responsible for checking the legality of the documents?	Registrar;	
Does the legal system require verification of the identity of the parties to a property transaction?	Yes	0.5
If yes, who is responsible for verifying the identity of the parties?	Registrar;	
Is there a national database to verify the accuracy of government issued identity documents?	No	0.0
What is the Court of first instance in charge of a case involving a standard land dispute between two local businesses over tenure rights for a property worth 50 times gross national income (GNI) per capita and located in the largest business city?	Civil court	
How long does it take on average to obtain a decision from the first-instance court for such a case (without appeal)?	Between 1 and 2 years	2.0
Are there publicly available statistics on the number of land disputes at the economy level in the first instance court?	No	0.0
Number of land disputes in the economy in 2018:		
Equal access to property rights index (-2-0)		**0.0**
Do unmarried men and unmarried women have equal ownership rights to property?	Yes	
Do married men and married women have equal ownership rights to property?	Yes	0.0

Getting Credit

This topic explores two sets of issues—the strength of credit reporting systems and the effectiveness of collateral and bankruptcy laws in facilitating lending. The most recent round of data collection for the project was completed in May 2019. See the methodology for more information.

What the indicators measure

Strength of legal rights index (0–12)

- Rights of borrowers and lenders through collateral laws (0-10)
- Protection of secured creditors' rights through bankruptcy laws (0-2)

Depth of credit information index (0–8)

- Scope and accessibility of credit information distributed by credit bureaus and credit registries (0-8)

Credit bureau coverage (% of adults)

- Number of individuals and firms listed in largest credit bureau as a percentage of adult population

Credit registry coverage (% of adults)

- Number of individuals and firms listed in credit registry as a percentage of adult population

Case study assumptions

Doing Business assesses the sharing of credit information and the legal rights of borrowers and lenders with respect to secured transactions through 2 sets of indicators. The depth of credit information index measures rules and practices affecting the coverage, scope and accessibility of credit information available through a credit registry or a credit bureau. The strength of legal rights index measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. For each economy it is first determined whether a unitary secured transactions system exists. Then two case scenarios, case A and case B, are used to determine how a nonpossessory security interest is created, publicized and enforced according to the law. Special emphasis is given to how the collateral registry operates (if registration of security interests is possible). The case scenarios involve a secured borrower, company ABC, and a secured lender, BizBank.

In some economies the legal framework for secured transactions will allow only case A or case B (not both) to apply. Both cases examine the same set of legal provisions relating to the use of movable collateral.

Several assumptions about the secured borrower (ABC) and lender (BizBank) are used:

- ABC is a domestic limited liability company (or its legal equivalent).
- ABC has up to 50 employees.
- ABC has its headquarters and only base of operations in the economy's largest business city. For 11 economies the data are also collected for the second largest business city.
- Both ABC and BizBank are 100% domestically owned.

The case scenarios also involve assumptions. In case A, as collateral for the loan, ABC grants BizBank a nonpossessory security interest in one category of movable assets, for example, its machinery or its inventory. ABC wants to keep both possession and ownership of the collateral. In economies where the law does not allow nonpossessory security interests in movable property, ABC and BizBank use a fiduciary transfer-of-title arrangement (or a similar substitute for nonpossessory security interests).

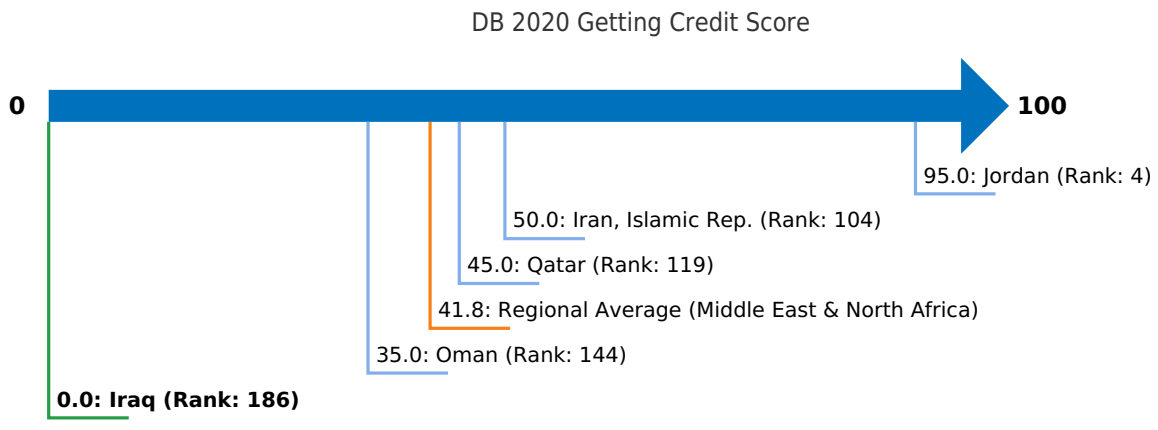
In case B, ABC grants BizBank a business charge, enterprise charge, floating charge or any charge that gives BizBank a security interest over ABC's combined movable assets (or as much of ABC's movable assets as possible). ABC keeps ownership and possession of the assets.

Getting Credit - Iraq

Indicator	Iraq	Middle East & North Africa	OECD high income	Best Regulatory Performance
Strength of legal rights index (0-12)	0	3.1	6.1	12 (5 Economies)
Depth of credit information index (0-8)	0	5.3	6.8	8 (53 Economies)
Credit registry coverage (% of adults)	1.3	15.8	24.4	100.0 (2 Economies)
Credit bureau coverage (% of adults)	0.0	16.3	66.7	100.0 (14 Economies)

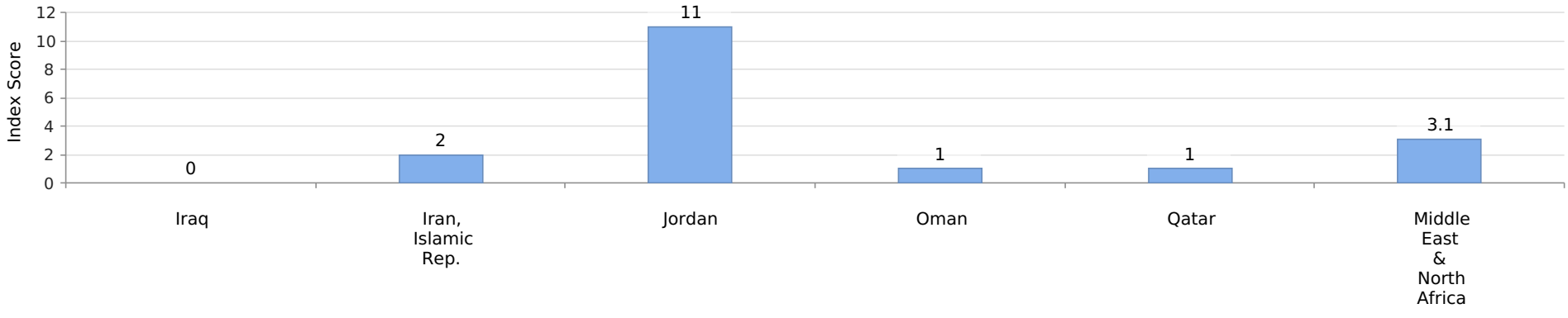
Figure – Getting Credit in Iraq – Score

Figure – Getting Credit in Iraq and comparator economies – Ranking and Score



Note: The ranking of economies on the ease of getting credit is determined by sorting their scores for getting credit. These scores are the sum of the scores for the strength of legal rights index and the depth of credit information index.

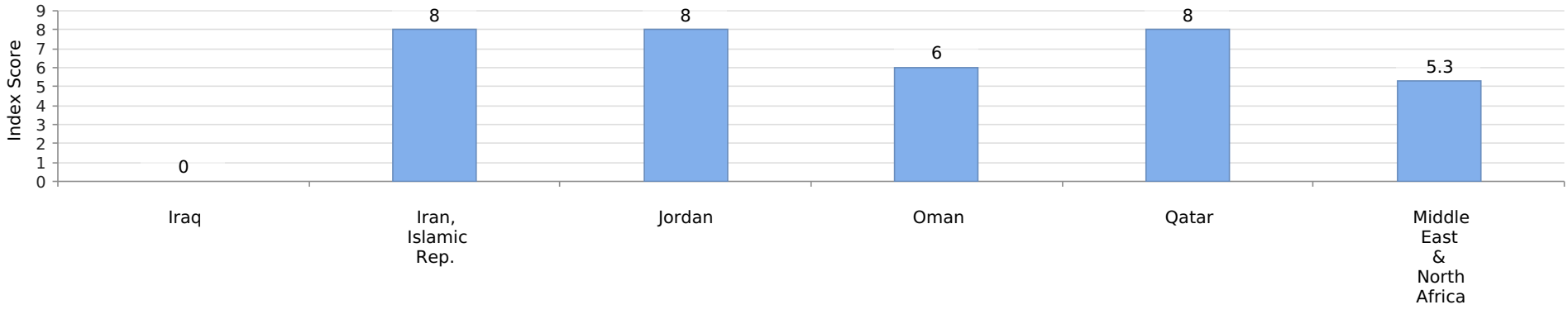
Figure – Legal Rights in Iraq and comparator economies



Details – Legal Rights in Iraq

Strength of legal rights index (0-12)	**0**
Does an integrated or unified legal framework for secured transactions that extends to the creation, publicity and enforcement of functional equivalents to security interests in movable assets exist in the economy?	No
Does the law allow businesses to grant a non possessory security right in a single category of movable assets, without requiring a specific description of collateral?	No
Does the law allow businesses to grant a non possessory security right in substantially all of its assets, without requiring a specific description of collateral?	No
May a security right extend to future or after-acquired assets, and does it extend automatically to the products, proceeds and replacements of the original assets?	No
Is a general description of debts and obligations permitted in collateral agreements; can all types of debts and obligations be secured between parties; and can the collateral agreement include a maximum amount for which the assets are encumbered?	No
Is a collateral registry in operation for both incorporated and non-incorporated entities, that is unified geographically and by asset type, with an electronic database indexed by debtor's name?	No
Does a notice-based collateral registry exist in which all functional equivalents can be registered?	No
Does a modern collateral registry exist in which registrations, amendments, cancellations and searches can be performed online by any interested third party?	No
Are secured creditors paid first (i.e. before tax claims and employee claims) when a debtor defaults outside an insolvency procedure?	No
Are secured creditors paid first (i.e. before tax claims and employee claims) when a business is liquidated?	No
Are secured creditors subject to an automatic stay on enforcement when a debtor enters a court-supervised reorganization procedure? Does the law protect secured creditors' rights by providing clear grounds for relief from the stay and sets a time limit for it?	No
Does the law allow parties to agree on out of court enforcement at the time a security interest is created? Does the law allow the secured creditor to sell the collateral through public auction or private tender, as well as, for the secured creditor to keep the asset in satisfaction of the debt?	No

Figure – Credit Information in Iraq and comparator economies



Details - Credit Information in Iraq

Depth of credit information index (0-8)	Credit bureau	Credit registry	Score
Are data on both firms and individuals distributed?	No	No	0
Are both positive and negative credit data distributed?	No	No	0
Are data from retailers or utility companies - in addition to data from banks and financial institutions - distributed?	No	No	0
Are at least 2 years of historical data distributed? (Credit bureaus and registries that distribute more than 10 years of negative data or erase data on defaults as soon as they are repaid obtain a score of 0 for this component.)	No	No	0
Are data on loan amounts below 1% of income per capita distributed?	No	No	0
By law, do borrowers have the right to access their data in the credit bureau or credit registry?	No	No	0
Can banks and financial institutions access borrowers' credit information online (for example, through an online platform, a system-to-system connection or both)?	No	No	0
Are bureau or registry credit scores offered as a value-added service to help banks and financial institutions assess the creditworthiness of borrowers?	No	No	0

Note: An economy receives a score of 1 if there is a "yes" to either bureau or registry. If the credit bureau or registry is not operational or covers less than 5% of the adult population, the total score on the depth of credit information index is 0.

Coverage	Credit bureau	Credit registry
Number of individuals	0	281,923
Number of firms	0	8,605
Total	0	290,528
Percentage of adult population	**0.0**	**1.3**

Protecting Minority Investors

This topic measures the strength of minority shareholder protections against misuse of corporate assets by directors for their personal gain as well as shareholder rights, governance safeguards and corporate transparency requirements that reduce the risk of abuse. The most recent round of data collection for the project was completed in May 2019. See the methodology for more information.

What the indicators measure

- **Extent of disclosure index (0–10)**: Disclosure, review, and approval requirements for related-party transactions
- **Extent of director liability index (0–10)**: Ability of minority shareholders to sue and hold interested directors liable for prejudicial related-party transactions; Available legal remedies (damages, disgorgement of profits, disqualification from managerial position(s) for one year or more, rescission of the transaction)
- **Ease of shareholder suits index (0–10)**: Access to internal corporate documents; Evidence obtainable during trial and allocation of legal expenses
- **Extent of conflict of interest regulation index (0-30):** Sum of the extent of disclosure, extent of director liability and ease of shareholder suits indices
- **Extent of shareholder rights index (0-6)**: Shareholders' rights and role in major corporate decisions
- **Extent of ownership and control index (0-7)**: Governance safeguards protecting shareholders from undue board control and entrenchment
- **Extent of corporate transparency index (0-7)**: Corporate transparency on ownership stakes, compensation, audits and financial prospects
- **Extent of shareholder governance index (0–20)**: Sum of the extent of shareholders rights, extent of ownership and control and extent of corporate transparency indices
- **Strength of minority investor protection index (0–50)**: Sum of the extent of conflict of interest regulation and extent of shareholder governance indices

Case study assumptions

To make the data comparable across economies, a case study uses several assumptions about the business and the transaction.

The business (Buyer):
- Is a publicly traded corporation listed on the economy's most important stock exchange.
- Has a board of directors and a chief executive officer (CEO) who may legally act on behalf of Buyer where permitted, even if this is not specifically required by law.
- Has a supervisory board in economies with a two-tier board system on which Mr. James appointed 60% of the shareholder-elected members.
- Has not adopted bylaws or articles of association that go beyond the minimum requirements. Does not follow codes, principles, recommendations or guidelines that are not mandatory.
- Is a manufacturing company with its own distribution network.

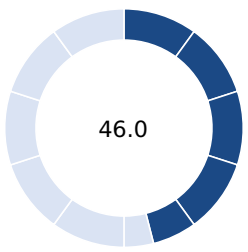
The transaction involves the following details:
- Mr. James owns 60% of Buyer, sits on Buyer's board of directors and elected two directors to Buyer's five-member board.
- Mr. James also owns 90% of Seller, a company that operates a chain of retail hardware stores. Seller recently closed a large number of its stores.
- Mr. James proposes that Buyer purchase Seller's unused fleet of trucks to expand Buyer's distribution of its food products, a proposal to which Buyer agrees. The price is equal to 10% of Buyer's assets and is higher than the market value.
- The proposed transaction is part of the company's principal activity and is not outside the authority of the company.
- Buyer enters into the transaction. All required approvals are obtained, and all required disclosures made—that is, the transaction was not entered into fraudulently.
- The transaction causes damages to Buyer. Shareholders sue Mr. James and the executives and directors that approved the transaction.

Protecting Minority Investors - Iraq

Stock exchange information	
Stock exchange	Iraq Stock Exchange
Stock exchange URL	http://www.isx-iq.net
Listed firms with equity securities	10
City Covered	Baghdad

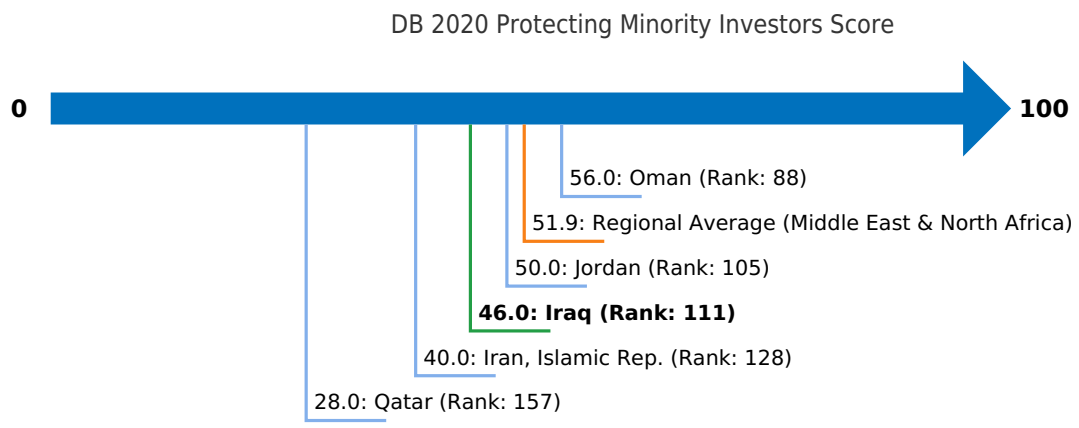
Indicator	Iraq	Middle East & North Africa	OECD high income	Best Regulatory Performance
Extent of disclosure index (0-10)	4.0	6.4	6.5	10 (13 Economies)
Extent of director liability index (0-10)	5.0	4.8	5.3	10 (3 Economies)
Ease of shareholder suits index (0-10)	5.0	4.7	7.3	10 (Djibouti)
Extent of shareholder rights index (0-6)	5.0	3.2	4.7	6 (19 Economies)
Extent of ownership and control index (0-7)	3.0	3.6	4.5	7 (9 Economies)
Extent of corporate transparency index (0-7)	1.0	3.5	5.7	7 (13 Economies)

Figure – Protecting Minority in Iraq – Score



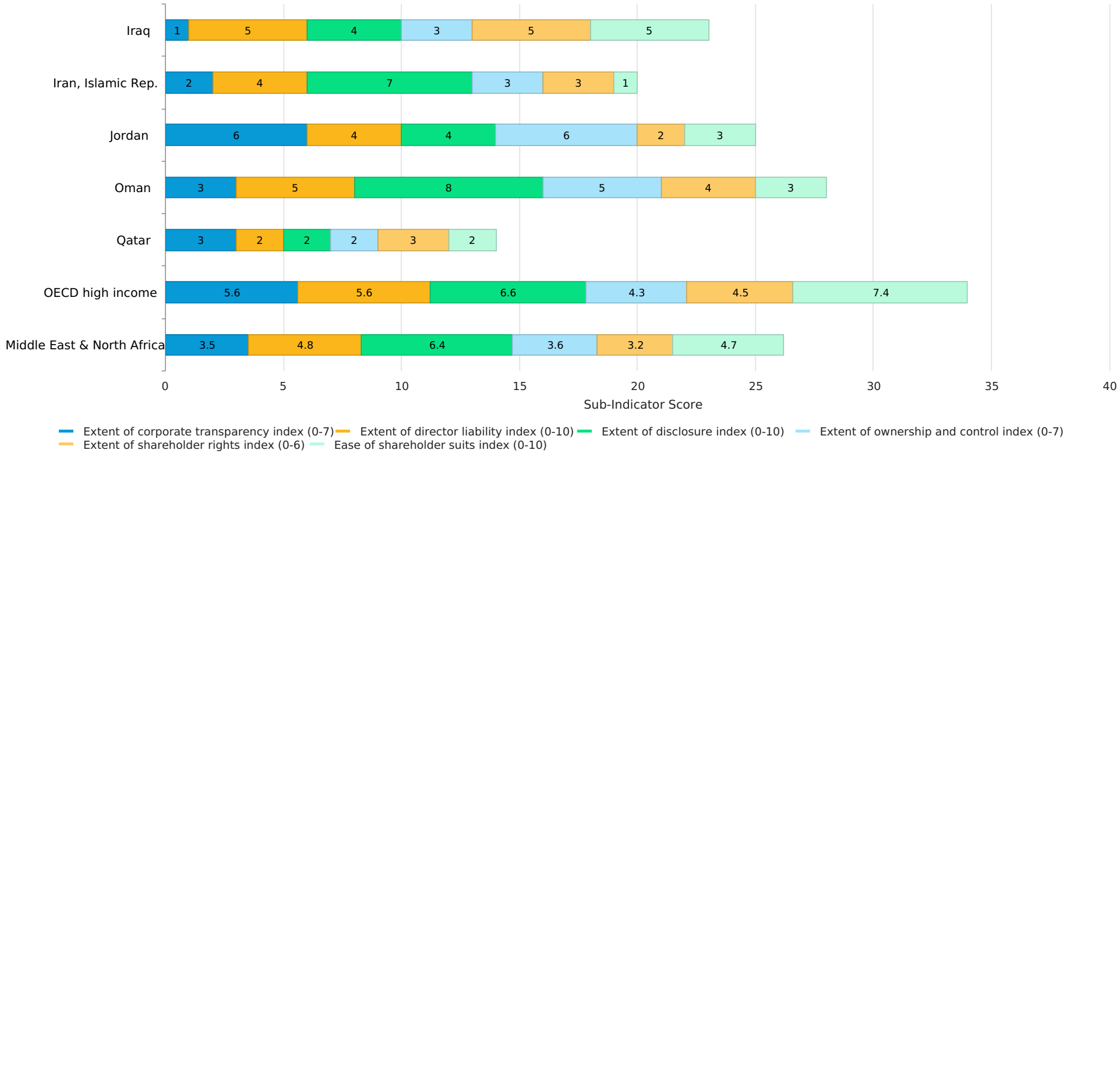
Score - Protecting Minority Investors

Figure – Protecting Minority Investors in Iraq and comparator economies – Ranking and Score



Note: The ranking of economies on the strength of minority investor protections is determined by sorting their scores for protecting minority investors. These scores are the simple average of the scores for the extent of conflict of interest regulation index and the extent of shareholder governance index.

Figure – Protecting Minority Investors in Iraq and comparator economies – Measure of Quality



Details – Protecting Minority Investors in Iraq – Measure of Quality

	Answer	Score
Extent of conflict of interest regulation index (0-30)		
Extent of disclosure index (0-10)		**4.0**
Whose decision is sufficient to approve the Buyer-Seller transaction? (0-3)	Shareholders or board of directors including interested parties	1.0
Must an external body review the terms of the transaction before it takes place? (0-1)	No	0.0
Must Mr. James disclose his conflict of interest to the board of directors? (0-2)	Full disclosure of all material facts	2.0
Must Buyer disclose the transaction in periodic filings (e.g. annual reports)? (0-2)	Disclosure on the transaction only	1.0
Must Buyer immediately disclose the transaction to the public? (0-2)	No disclosure obligation	0.0
Extent of director liability index (0-10)		**5.0**
Can shareholders representing 10% of Buyer's share capital sue for the damage the transaction caused to Buyer? (0-1)	Yes	1.0
Can shareholders hold Mr. James liable for the damage the transaction caused to Buyer? (0-2)	Liable if negligent	1.0
Can shareholders hold the other directors liable for the damage the transaction caused to Buyer? (0-2)	Liable if negligent	1.0
Must Mr. James pay damages for the harm caused to Buyer upon a successful claim by shareholders? (0-1)	No	0.0
Must Mr. James repay profits made from the transaction upon a successful claim by shareholders? (0-1)	No	0.0
Is Mr. James disqualified upon a successful claim by shareholders? (0-1)	No	0.0
Can a court void the transaction upon a successful claim by shareholders? (0-2)	Voidable if unfair or prejudicial	2.0
Ease of shareholder suits index (0-10)		**5.0**
Before suing, can shareholders representing 10% of Buyer's share capital inspect the transaction documents? (0-1)	Yes	1.0
Can the plaintiff obtain any documents from the defendant and witnesses at trial? (0-3)	Any relevant document	3.0
Can the plaintiff request categories of documents from the defendant without identifying specific ones? (0-1)	No	0.0
Can the plaintiff directly question the defendant and witnesses at trial? (0-2)	No	0.0
Is the level of proof required for civil suits lower than that of criminal cases? (0-1)	No	0.0
Can shareholder plaintiffs recover their legal expenses from the company? (0-2)	Yes if successful	1.0
Extent of shareholder governance index (0-20)		
Extent of shareholder rights index (0-6)		**5.0**
Does the sale of 51% of Buyer's assets require shareholder approval?	Yes	1.0
Can shareholders representing 10% of Buyer's share capital call for a meeting of shareholders?	Yes	1.0
Must Buyer obtain its shareholders’ approval every time it issues new shares?	Yes	1.0
Do shareholders automatically receive preemption rights every time Buyer issues new shares?	Yes	1.0
Do shareholders elect and dismiss the external auditor?	No	0.0
Are changes to the rights of a class of shares only possible if the holders of the affected shares approve?	Yes	1.0
Extent of ownership and control index (0-7)		**3.0**
Is it forbidden to appoint the same individual as CEO and chairperson of the board of directors?	Yes	1.0

Must the board of directors include independent and nonexecutive board members?	No	0.0
Can shareholders remove members of the board of directors without cause before the end of their term?	Yes	1.0
Must the board of directors include a separate audit committee exclusively comprising board members?	Yes	1.0
Must a potential acquirer make a tender offer to all shareholders upon acquiring 50% of Buyer?	No	0.0
Must Buyer pay declared dividends within a maximum period set by law?	No	0.0
Is a subsidiary prohibited from acquiring shares issued by its parent company?	No	0.0
Extent of corporate transparency index (0-7)		**1.0**
Must Buyer disclose direct and indirect beneficial ownership stakes representing 5%?	No	0.0
Must Buyer disclose information about board members' primary employment and directorships in other companies?	No	0.0
Must Buyer disclose the compensation of individual managers?	No	0.0
Must a detailed notice of general meeting be sent 21 days before the meeting?	No	0.0
Can shareholders representing 5% of Buyer's share capital put items on the general meeting agenda?	No	0.0
Must Buyer's annual financial statements be audited by an external auditor?	Yes	1.0
Must Buyer disclose its audit reports to the public?	No	0.0

Paying Taxes

This topic records the taxes and mandatory contributions that a medium-size company must pay or withhold in a given year, as well as the administrative burden of paying taxes and contributions and complying with postfiling procedures (VAT refund and tax audit). The most recent round of data collection for the project was completed in May 2019 covering for the Paying Taxes indicator calendar year 2018 (January 1, 2018 – December 31, 2018). See the methodology for more information.

What the indicators measure

Tax payments for a manufacturing company in 2018 (number per year adjusted for electronic and joint filing and payment)

- Total number of taxes and contributions paid or withheld, including consumption taxes (value added tax, sales tax or goods and service tax)
- Method and frequency of filing and payment

Time required to comply with 3 major taxes (hours per year)

- Collecting information, computing tax payable
- Preparing separate tax accounting books, if required
- Completing tax return, filing with agencies
- Arranging payment or withholding

Total tax and contribution rate (% of commercial profits)

- Profit or corporate income tax
- Social contributions, labor taxes paid by employer
- Property and property transfer taxes
- Dividend, capital gains, financial transactions taxes
- Waste collection, vehicle, road and other taxes

Postfiling Index

- Time to comply with VAT refund (hours)
- Time to obtain VAT refund (weeks)
- Time to comply with a corporate income tax correction (hours)
- Time to complete a corporate income tax correction (weeks)

Case study assumptions

Using a case scenario, *Doing Business* records taxes and mandatory contributions a medium size company must pay in a year, and measures the administrative burden of paying taxes, contributions and dealing with postfiling processes. Information is also compiled on frequency of filing and payments, time taken to comply with tax laws, time taken to comply with the requirements of postfiling processes and time waiting.

To make data comparable across economies, several assumptions are used:
- TaxpayerCo is a medium-size business that started operations on January 1, 2017. It produces ceramic flowerpots and sells them at retail. All taxes and contributions recorded are paid in the second year of operation (calendar year 2018). Taxes and mandatory contributions are measured at all levels of government.

The VAT refund process:
- In June 2018, TaxpayerCo. makes a large capital purchase: the value of the machine is 65 times income per capita of the economy. Sales are equally spread per month (1,050 times income per capita divided by 12) and cost of goods sold are equally expensed per month (875 times income per capita divided by 12). The machinery seller is registered for VAT and excess input VAT incurred in June will be fully recovered after four consecutive months if the VAT rate is the same for inputs, sales and the machine and the tax reporting period is every month. Input VAT will exceed Output VAT in June 2018.

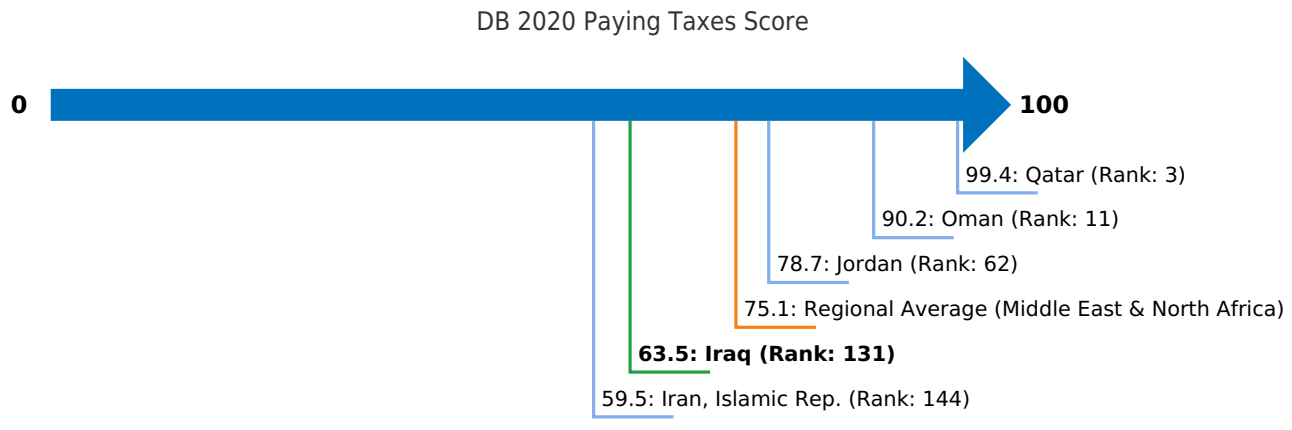
The corporate income tax audit process:
- An error in calculation of income tax liability (for example, use of incorrect tax depreciation rates, or incorrectly treating an expense as tax deductible) leads to an incorrect income tax return and a corporate income tax underpayment. TaxpayerCo. discovered the error and voluntarily notified the tax authority. The value of the underpaid income tax liability is 5% of the corporate income tax liability due. TaxpayerCo. submits corrected information after the deadline for submitting the annual tax return, but within the tax assessment period.

Paying Taxes - Iraq

Indicator	Iraq	Middle East & North Africa	OECD high income	Best Regulatory Performance
Payments (number per year)	15	16.5	10.3	3 (2 Economies)
Time (hours per year)	312	202.6	158.8	49 (3 Economies)
Total tax and contribution rate (% of profit)	30.8	32.5	39.9	26.1 (33 Economies)
Postfiling index (0-100)	21.4	53.3	86.7	None in 2018/19

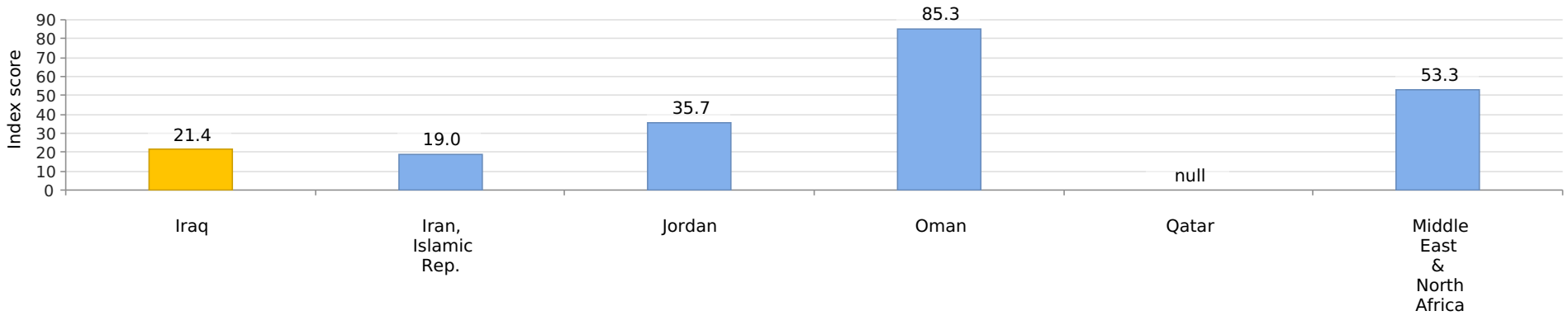
Figure – Paying Taxes in Iraq – Score

Figure – Paying Taxes in Iraq and comparator economies – Ranking and Score



Note: The ranking of economies on the ease of paying taxes is determined by sorting their scores for paying taxes. These scores are the simple average of the scores for each of the component indicators, with a threshold and a nonlinear transformation applied to one of the component indicators, the total tax and contribution rate. The threshold is defined as the total tax and contribution rate at the 15th percentile of the overall distribution for all years included in the analysis up to and including Doing Business 2015, which is 26.1%. All economies with a total tax and contribution rate below this threshold receive the same score as the economy at the threshold.

Figure – Paying Taxes in Iraq and comparator economies – Measure of Quality



Details - Paying Taxes in Iraq

Tax or mandatory contribution	Payments (number)	Notes on Payments	Time (hours)	Statutory tax rate	Tax base	Total tax and contribution rate (% of profit)	Notes on TTCR
Corporate income tax	1.0		24.0	15%	taxable profit	14.98	
Employer paid - Social security contributions	12.0		288.0	12%	gross salaries	13.54	
Real Estate Ownership Transfer tax	1.0			0% - 6%	property value	2.31	
Stamp duty on contracts	1.0				varies	0.00	small amount
Employee paid - Social security contributions	0.0	jointly		5%	gross salaries	0.00	not included
Totals	15		312			30.8	

Details - Paying Taxes in Iraq - Tax by Type

Taxes by type	Answer
Profit tax (% of profit)	15.0
Labor tax and contributions (% of profit)	13.5
Other taxes (% of profit)	2.3

Details - Paying Taxes in Iraq - Measure of Quality

	Answer	Score
Postfiling index (0-100)		**21.4**
VAT refunds		
Does VAT exist?	No	
Does a VAT refund process exist per the case study?	N/A	
Restrictions on VAT refund process	Not Applicable	
Percentage of cases exposed to a VAT audit (%)	Not applicable	
Is there a mandatory carry forward period?	Not Applicable	
Time to comply with VAT refund (hours)	No VAT	No VAT
Time to obtain VAT refund (weeks)	No VAT	No VAT
Corporate income tax audits		
Does corporate income tax exist?	Yes	
Percentage of cases exposed to a corporate income tax audit (%)	75% - 100%	
Time to comply with a corporate income tax correction (hours)	83.0	0.0
Time to complete a corporate income tax correction (weeks)	18.3	42.9

Notes: Names of taxes have been standardized. For instance income tax, profit tax, tax on company's income are all named corporate income tax in this table.
The hours for VAT include all the VAT and sales taxes applicable.
The hours for Social Security include all the hours for labor taxes and mandatory contributions in general.
The postfiling index is the average of the scores on time to comply with VAT refund, time to obtain a VAT refund, time to comply with a corporate income tax correction and time to complete a corporate income tax correction.
N/A = Not applicable.

Trading across Borders

Doing Business records the time and cost associated with the logistical process of exporting and importing goods. *Doing Business* measures the time and cost (excluding tariffs) associated with three sets of procedures—documentary compliance, border compliance and domestic transport—within the overall process of exporting or importing a shipment of goods. The most recent round of data collection for the project was completed in May 2019. See the methodology for more information.

What the indicators measure

Documentary compliance

- Obtaining, preparing and submitting documents during transport, clearance, inspections and port or border handling in origin economy
- Obtaining, preparing and submitting documents required by destination economy and any transit economies
- Covers all documents required by law and in practice, including electronic submissions of information

Border compliance

- Customs clearance and inspections
- Inspections by other agencies (if applied to more than 20% of shipments)
- Handling and inspections that take place at the economy's port or border

Domestic transport

- Loading or unloading of the shipment at the warehouse or port/border
- Transport between warehouse and port/border
- Traffic delays and road police checks while shipment is en route

Case study assumptions

To make the data comparable across economies, a few assumptions are made about the traded goods and the transactions:

Time: Time is measured in hours, and 1 day is 24 hours (for example, 22 days are recorded as 22×24=528 hours). If customs clearance takes 7.5 hours, the data are recorded as is. Alternatively, suppose documents are submitted to a customs agency at 8:00a.m., are processed overnight and can be picked up at 8:00a.m. the next day. The time for customs clearance would be recorded as 24 hours because the actual procedure took 24 hours.

Cost: Insurance cost and informal payments for which no receipt is issued are excluded from the costs recorded. Costs are reported in U.S. dollars. Contributors are asked to convert local currency into U.S. dollars based on the exchange rate prevailing on the day they answer the questionnaire. Contributors are private sector experts in international trade logistics and are informed about exchange rates.

Assumptions of the case study:

- For all 190 economies covered by *Doing Business*, it is assumed a shipment is in a warehouse in the largest business city of the exporting economy and travels to a warehouse in the largest business city of the importing economy.
- It is assumed each economy imports 15 metric tons of containerized auto parts (HS 8708) from its natural import partner—the economy from which it imports the largest value (price times quantity) of auto parts. It is assumed each economy exports the product of its comparative advantage (defined by the largest export value) to its natural export partner—the economy that is the largest purchaser of this product. Shipment value is assumed to be $50,000.
- The mode of transport is the one most widely used for the chosen export or import product and the trading partner, as is the seaport or land border crossing.
- All electronic information submissions requested by any government agency in connection with the shipment are considered to be documents obtained, prepared and submitted during the export or import process.
- A port or border is a place (seaport or land border crossing) where merchandise can enter or leave an economy.
- Relevant government agencies include customs, port authorities, road police, border guards, standardization agencies, ministries or departments of agriculture or industry, national security agencies and any other government authorities.

Trading across Borders - Iraq

Indicator	Iraq	Middle East & North Africa	OECD high income	Best Regulatory Performance
Time to export: Border compliance (hours)	85	52.5	12.7	1 (19 Economies)
Cost to export: Border compliance (USD)	1118	441.8	136.8	0 (19 Economies)
Time to export: Documentary compliance (hours)	504	66.4	2.3	1 (26 Economies)
Cost to export: Documentary compliance (USD)	1800	240.7	33.4	0 (20 Economies)
Time to import: Border compliance (hours)	131	94.2	8.5	1 (25 Economies)
Cost to import: Border compliance (USD)	644	512.5	98.1	0 (28 Economies)
Time to import: Documentary compliance (hours)	176	72.5	3.4	1 (30 Economies)
Cost to import: Documentary compliance (USD)	500	262.6	23.5	0 (30 Economies)

Figure – Trading across Borders in Iraq – Score

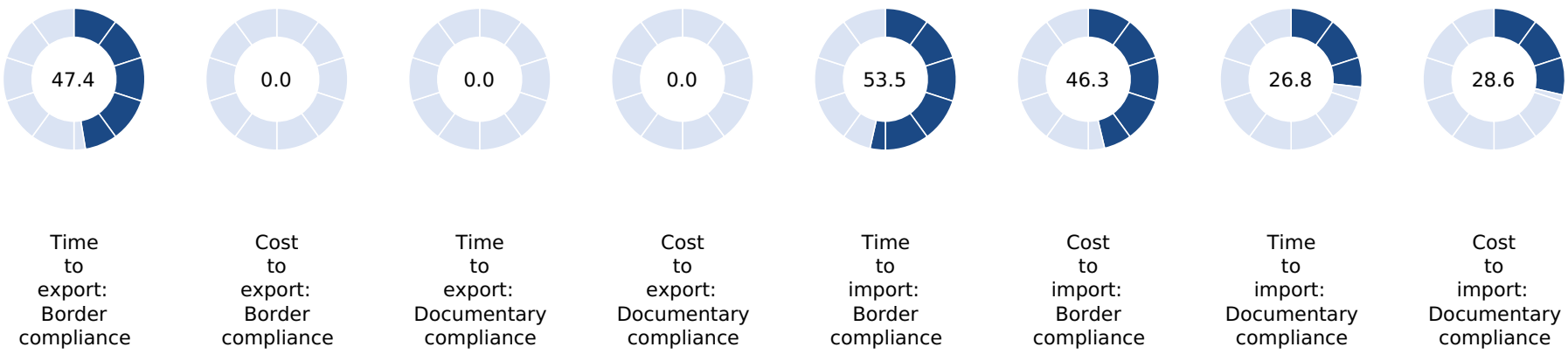
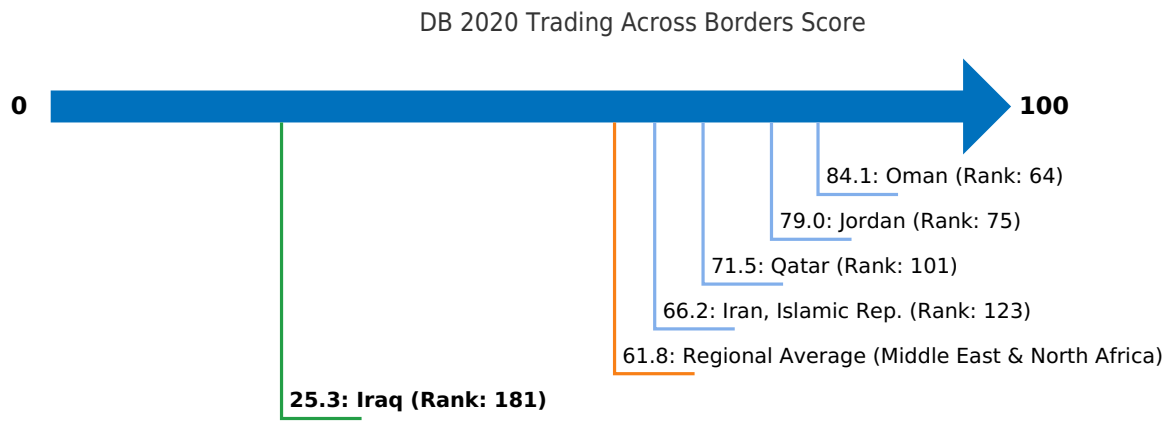
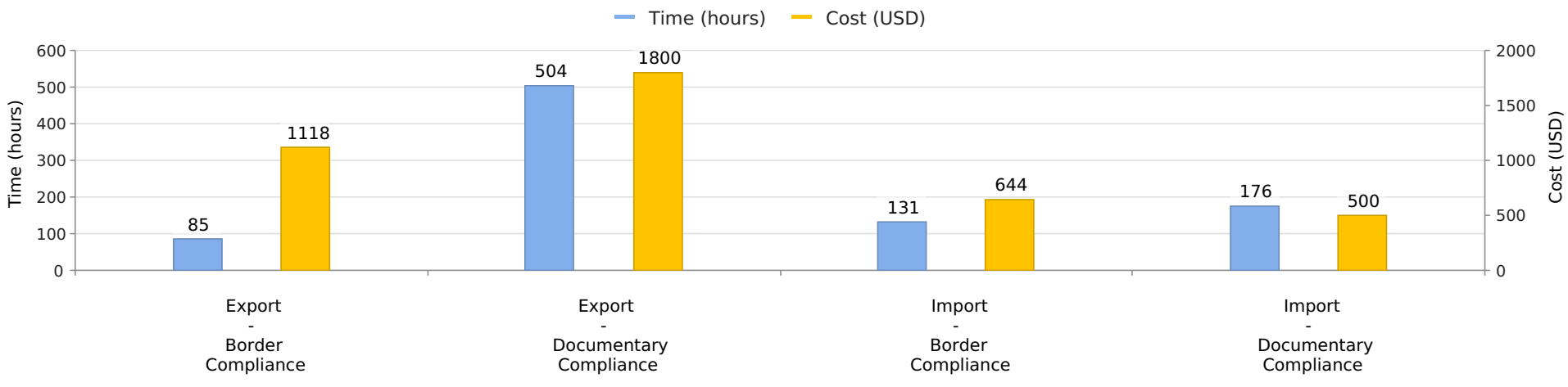


Figure – Trading across Borders in Iraq and comparator economies – Ranking and Score



Note: The ranking of economies on the ease of trading across borders is determined by sorting their scores for trading across borders. These scores are the simple average of the scores for the time and cost for documentary compliance and border compliance to export and import.

Figure – Trading across Borders in Iraq – Time and Cost



Details – Trading across Borders in Iraq

Characteristics	Export	Import
Product	HS 08 : Edible fruit and nuts; peel of citrus fruit or melons	HS 8708: Parts and accessories of motor vehicles
Trade partner	India	Turkey
Border	Umm Qasr port	Turkey-Iraq border crossing
Distance (km)	577	530
Domestic transport time (hours)	24	72
Domestic transport cost (USD)	1379	2000

Details – Trading across Borders in Iraq – Components of Border Compliance

	Time to Complete (hours)	Associated Costs (USD)
Export: Clearance and inspections required by customs authorities	34.3	827.9
Export: Clearance and inspections required by agencies other than customs	16.0	100.0
Export: Port or border handling	68.6	190.0
Import: Clearance and inspections required by customs authorities	58.7	244.4
Import: Clearance and inspections required by agencies other than customs	72.0	400.0
Import: Port or border handling	58.7	0.0

Details - Trading across Borders in Iraq - Trade Documents

Export	Import
Commercial invoice	Commercial invoice
Export license	Bill of lading
Export permit	Import declaration
Packing list	Valid Import License Issued from the Kurdish Ministry of Trade and Investment
Bill of lading	Certificate of Conformity
Certificate of origin	Certificate of origin attested by the Embassy of Iraq
Inspection report	
Terminal handling receipt	
Delivery order	
SOLAS certificate	
Helath certificate	

Enforcing Contracts

The enforcing contracts indicator measures the time and cost for resolving a commercial dispute through a local first-instance court, and the quality of judicial processes index, evaluating whether each economy has adopted a series of good practices that promote quality and efficiency in the court system. The most recent round of data collection was completed in May 2019. See the methodology for more information.

What the indicators measure

Time required to enforce a contract through the courts (calendar days)

- Time to file and serve the case
- Time for trial and to obtain the judgment
- Time to enforce the judgment

Cost required to enforce a contract through the courts (% of claim value)

- Average attorney fees
- Court costs
- Enforcement costs

Quality of judicial processes index (0-18)

- Court structure and proceedings (-1-5)
- Case management (0-6)
- Court automation (0-4)
- Alternative dispute resolution (0-3)

Case study assumptions

The dispute in the case study involves the breach of a sales contract between two domestic businesses. The case study assumes that the court hears an expert on the quality of the goods in dispute. This distinguishes the case from simple debt enforcement.

To make the data on the time and comparable across economies, several assumptions about the case are used:
- The dispute concerns a lawful transaction between two businesses (Seller and Buyer), both located in the economy's largest business city. For 11 economies the data are also collected for the second largest business city.
- The Buyer orders custom-made furniture, then fails to pay alleging that the goods are not of adequate quality.
- The value of the dispute is 200% of the income per capita or the equivalent in local currency of USD 5,000, whichever is greater.
- The Seller sues the Buyer before the court with jurisdiction over commercial cases worth 200% of income per capita or $5,000 whichever is greater.
- The Seller requests the pretrial attachment of the defendant's movable assets to secure the claim.
- The claim is disputed on the merits because of Buyer's allegation that the quality of the goods was not adequate.
- The judge decides in favor of the seller; there is no appeal.
- The Seller enforces the judgment through a public sale of the Buyer's movable assets.

Enforcing Contracts - Iraq

Standardized Case	
Claim value	IQD 12,075,217
Court name	Baghdad First Instance Court
City Covered	Baghdad

Indicator	Iraq	Middle East & North Africa	OECD high income	Best Regulatory Performance
Time (days)	520	622.0	589.6	120 (Singapore)
Cost (% of claim value)	28.1	24.7	21.5	0.1 (Bhutan)
Quality of judicial processes index (0-18)	1.5	6.6	11.7	None in 2018/19

Figure – Enforcing Contracts in Iraq – Score

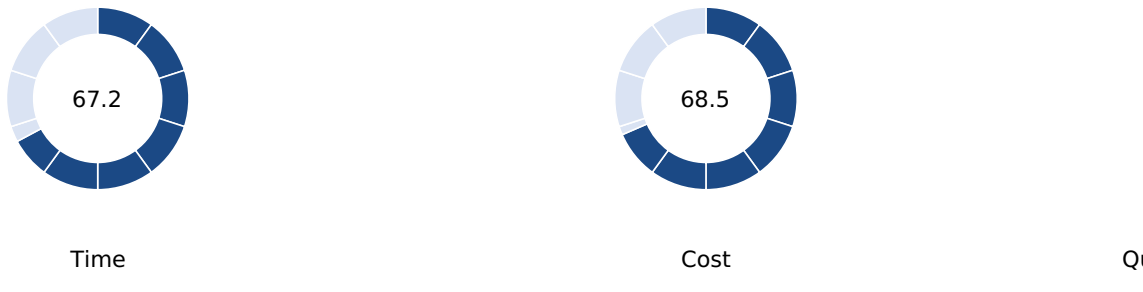
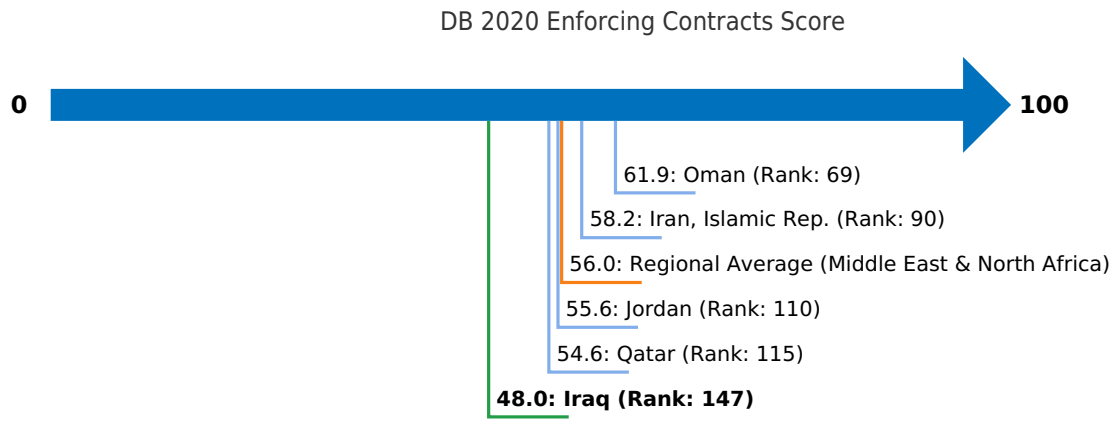


Figure – Enforcing Contracts in Iraq and comparator economies – Ranking and Score



Note: The ranking of economies on the ease of enforcing contracts is determined by sorting their scores for enforcing contracts. These scores are the simple average of the scores for each of the component indicators.

Figure – Enforcing Contracts in Iraq – Time and Cost

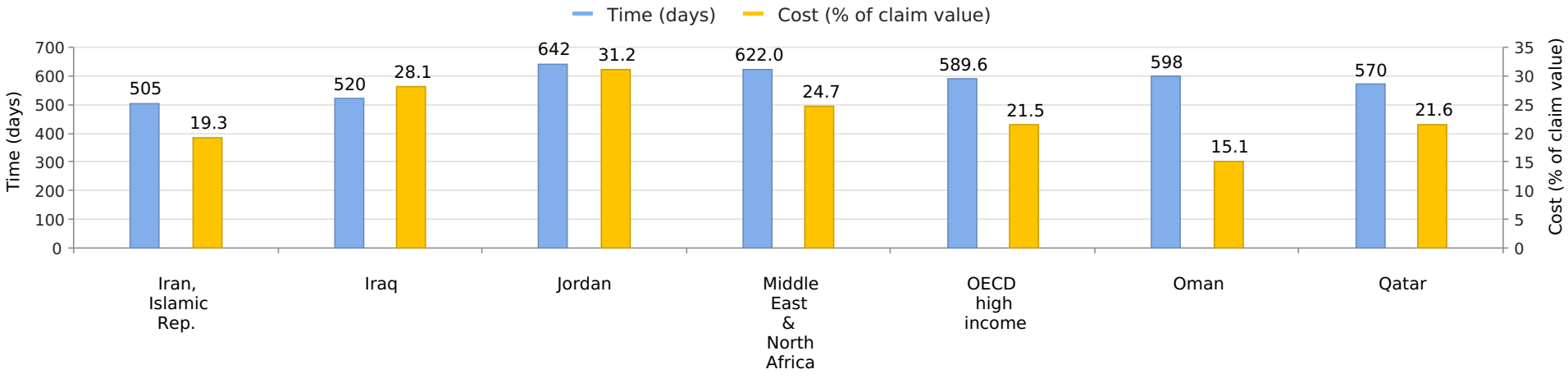
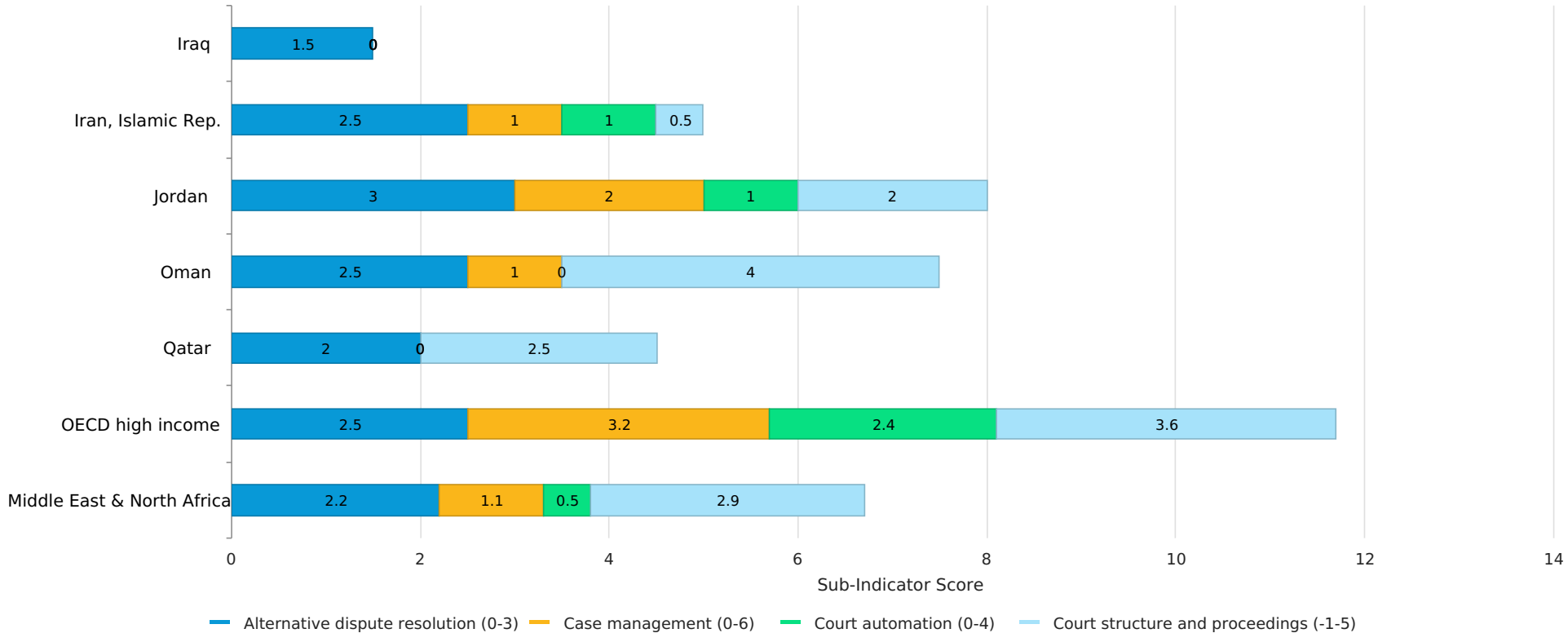


Figure – Enforcing Contracts in Iraq and comparator economies – Measure of Quality



Details – Enforcing Contracts in Iraq

	Indicator
Time (days)	**520**
Filing and service	60
Trial and judgment	360
Enforcement of judgment	100
Cost (% of claim value)	**28.1**
Attorney fees	22.5
Court fees	2.3
Enforcement fees	3.3
Quality of judicial processes index (0-18)	**1.5**
Court structure and proceedings (-1-5)	0.0
Case management (0-6)	0.0
Court automation (0-4)	0.0
Alternative dispute resolution (0-3)	1.5

Details – Enforcing Contracts in Iraq – Measure of Quality

	Answer	Score
Quality of judicial processes index (0-18)		**1.5**
Court structure and proceedings (-1-5)		**0.0**
1. Is there a court or division of a court dedicated solely to hearing commercial cases?	No	0.0
2. Small claims court		0.0
2.a. Is there a small claims court or a fast-track procedure for small claims?	No	
2.b. If yes, is self-representation allowed?	n.a.	
3. Is pretrial attachment available?	Yes	1.0
4. Are new cases assigned randomly to judges?	No	0.0
5. Does a woman's testimony carry the same evidentiary weight in court as a man's?	No	-1.0
Case management (0-6)		**0.0**
1. Time standards		0.0
1.a. Are there laws setting overall time standards for key court events in a civil case?	Yes	
1.b. If yes, are the time standards set for at least three court events?	No	
1.c. Are these time standards respected in more than 50% of cases?	No	
2. Adjournments		0.0
2.a. Does the law regulate the maximum number of adjournments that can be granted?	No	
2.b. Are adjournments limited to unforeseen and exceptional circumstances?	No	
2.c. If rules on adjournments exist, are they respected in more than 50% of cases?	n.a.	
3. Can two of the following four reports be generated about the competent court: (i) time to disposition report; (ii) clearance rate report; (iii) age of pending cases report; and (iv) single case progress report?	No	0.0
4. Is a pretrial conference among the case management techniques used before the competent court?	No	0.0
5. Are there any electronic case management tools in place within the competent court for use by judges?	No	0.0
6. Are there any electronic case management tools in place within the competent court for use by lawyers?	No	0.0
Court automation (0-4)		**0.0**
1. Can the initial complaint be filed electronically through a dedicated platform within the competent court?	No	0.0
2. Is it possible to carry out service of process electronically for claims filed before the competent court?	No	0.0
3. Can court fees be paid electronically within the competent court?	No	0.0
4. Publication of judgments		0.0
4.a Are judgments rendered in commercial cases at all levels made available to the general public through publication in official gazettes, in newspapers or on the internet or court website?	No	
4.b. Are judgments rendered in commercial cases at the appellate and supreme court level made available to the general public through publication in official gazettes, in newspapers or on the internet or court website?	No	
Alternative dispute resolution (0-3)		**1.5**
1. Arbitration		1.5
1.a. Is domestic commercial arbitration governed by a consolidated law or consolidated chapter or section of the applicable code of civil procedure encompassing substantially all its aspects?	Yes	
1.b. Are there any commercial disputes—aside from those that deal with public order or public policy—that cannot be submitted to arbitration?	No	
1.c. Are valid arbitration clauses or agreements usually enforced by the courts?	Yes	

2. Mediation/Conciliation		0.0
2.a. Is voluntary mediation or conciliation available?	No	
2.b. Are mediation, conciliation or both governed by a consolidated law or consolidated chapter or section of the applicable code of civil procedure encompassing substantially all their aspects (for example, definition, aim and scope of application, desig	n.a.	
2.c. Are there financial incentives for parties to attempt mediation or conciliation (i.e., if mediation or conciliation is successful, a refund of court filing fees, income tax credits or the like)?	n.a.	

Resolving Insolvency

Doing Business studies the time, cost and outcome of insolvency proceedings involving domestic legal entities. These variables are used to calculate the recovery rate, which is recorded as cents on the dollar recovered by secured creditors through reorganization, liquidation or debt enforcement (foreclosure or receivership) proceedings. To determine the present value of the amount recovered by creditors, *Doing Business* uses the lending rates from the International Monetary Fund, supplemented with data from central banks and the Economist Intelligence Unit. The most recent round of data collection was completed in May 2019. See the methodology for more information.

What the indicators measure

Time required to recover debt (years)

- Measured in calendar years
- Appeals and requests for extension are included

Cost required to recover debt (% of debtor's estate)

- Measured as percentage of estate value
- Court fees
- Fees of insolvency administrators
- Lawyers' fees
- Assessors' and auctioneers' fees
- Other related fees

Outcome

- Whether business continues operating as a going concern or business assets are sold piecemeal

Recovery rate for creditors

- Measures the cents on the dollar recovered by secured creditors
- Outcome for the business (survival or not) determines the maximum value that can be recovered
- Official costs of the insolvency proceedings are deducted
- Depreciation of furniture is taken into account
- Present value of debt recovered

Strength of insolvency framework index (0- 16)

- Sum of the scores of four component indices:
- Commencement of proceedings index (0-3)
- Management of debtor's assets index (0-6)
- Reorganization proceedings index (0-3)
- Creditor participation index (0-4)

Case study assumptions

To make the data on the time, cost and outcome comparable across economies, several assumptions about the business and the case are used:

- A hotel located in the largest city (or cities) has 201 employees and 50 suppliers. The hotel experiences financial difficulties.
- The value of the hotel is 100% of the income per capita or the equivalent in local currency of USD 200,000, whichever is greater.
- The hotel has a loan from a domestic bank, secured by a mortgage over the hotel's real estate. The hotel cannot pay back the loan, but makes enough money to operate otherwise.

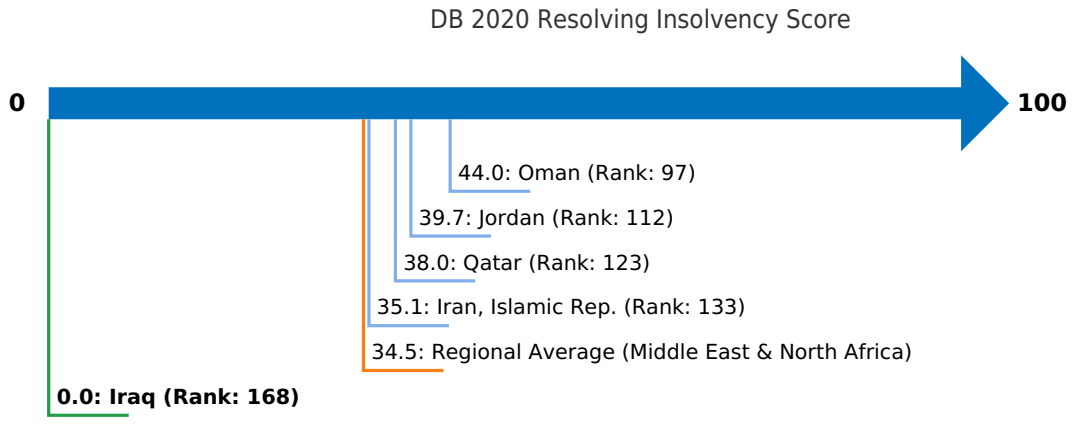
In addition, *Doing Business* evaluates the quality of legal framework applicable to judicial liquidation and reorganization proceedings and the extent to which best insolvency practices have been implemented in each economy covered.

Resolving Insolvency - Iraq

Indicator	Iraq	Middle East & North Africa	OECD high income	Best Regulatory Performance
Recovery rate (cents on the dollar)	No Practice	27.3	70.2	92.9 (Norway)
Time (years)	No Practice	2.7	1.7	0.4 (Ireland)
Cost (% of estate)	No Practice	14.0	9.3	1.0 (Norway)
Outcome (0 as piecemeal sale and 1 as going concern)	0	..	..	..
Strength of insolvency framework index (0-16)	No Practice	6.3	11.9	None in 2018/19

Figure – Resolving Insolvency in Iraq – Score

Figure – Resolving Insolvency in Iraq and comparator economies – Ranking and Score



Note: The ranking of economies on the ease of resolving insolvency is determined by sorting their scores for resolving insolvency. These scores are the simple average of the scores for the recovery rate and the strength of insolvency framework index.

Figure – Resolving Insolvency in Iraq – Time and Cost

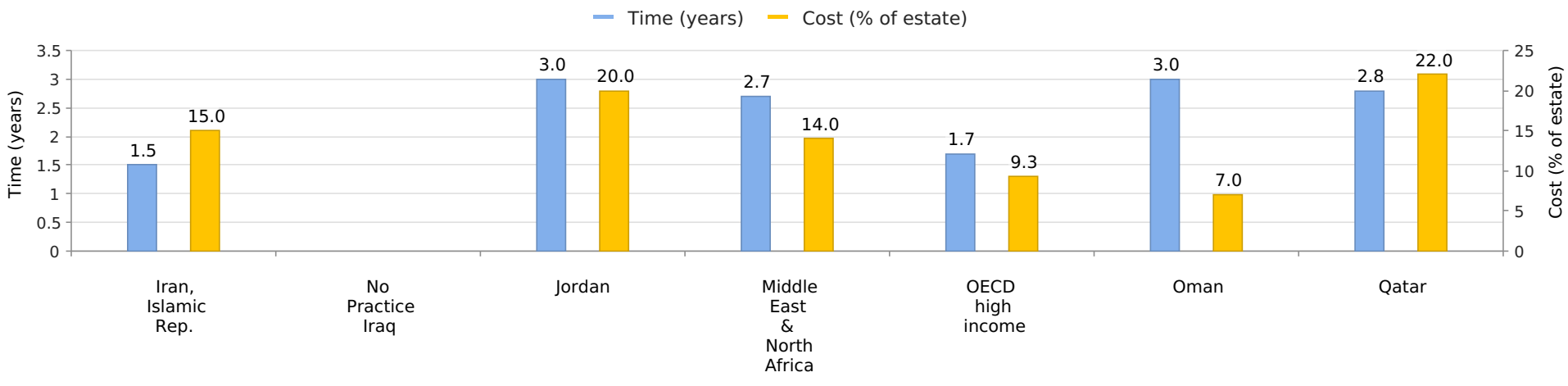
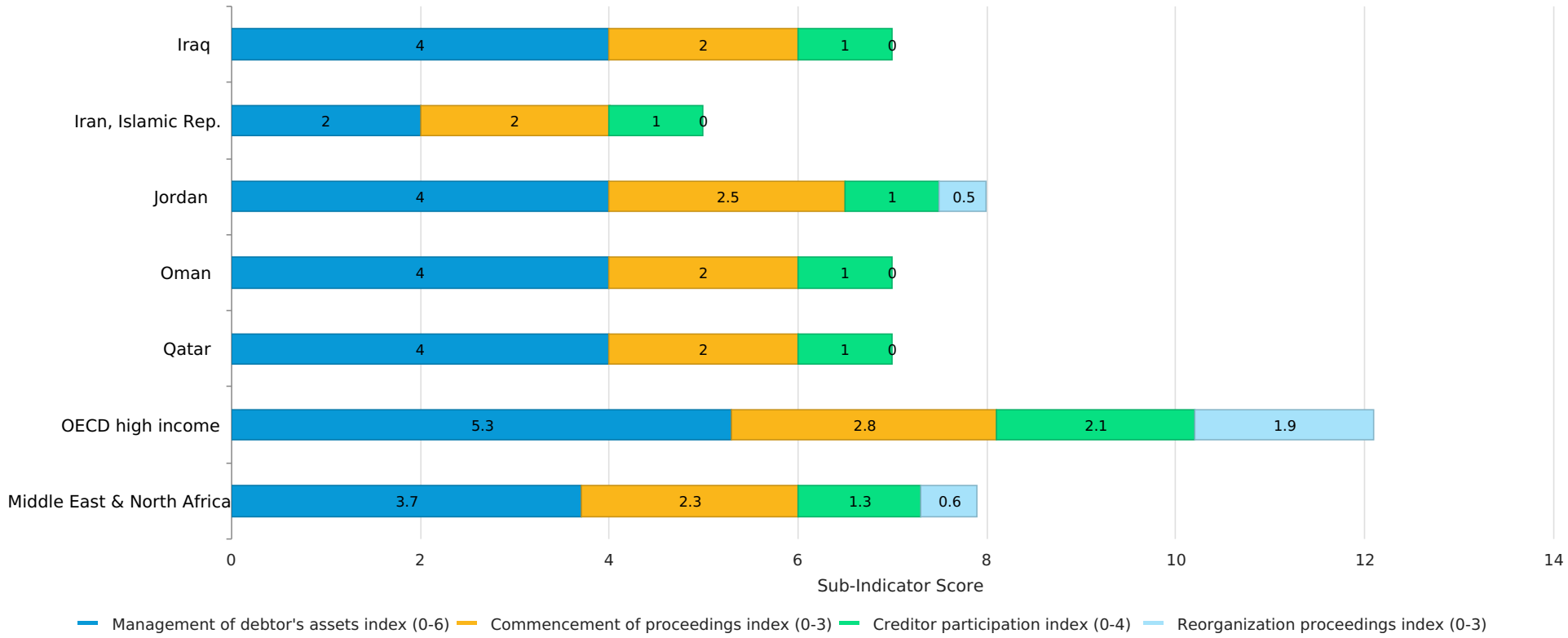
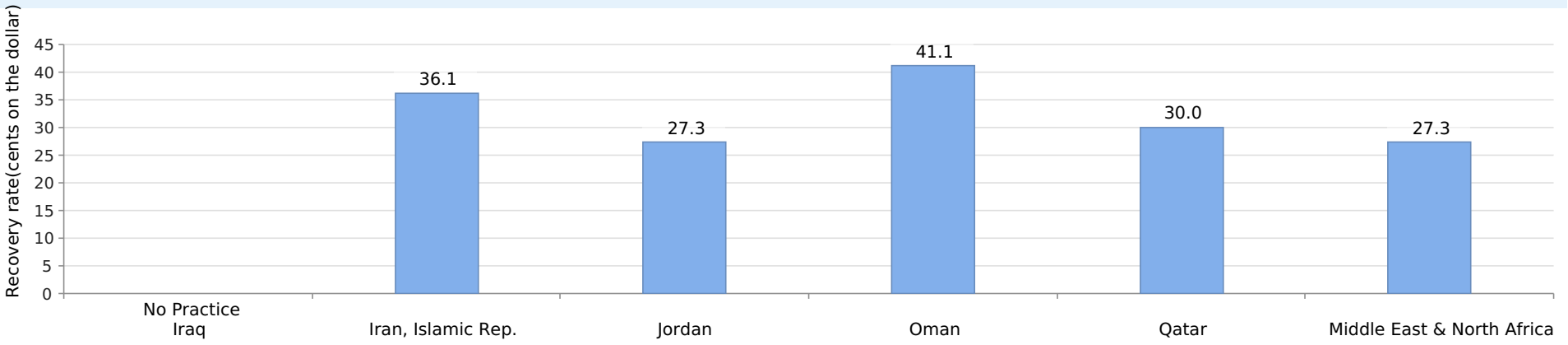


Figure – Resolving Insolvency in Iraq and comparator economies – Measure of Quality



Note: Even if the economy's legal framework includes provisions related to insolvency proceedings (liquidation or reorganization), the economy receives 0 points for the strength of insolvency framework index, if time, cost and outcome indicators are recorded as "no practice."

Figure – Resolving Insolvency in Iraq and comparator economies – Recovery Rate



Details - Resolving Insolvency in Iraq

Indicator	Answer	Score
Proceeding	No Practice	According to the research conducted by the team, there were no foreclosure, liquidation, or reorganization proceedings filed in the country in the last 12 months. Due to this circumstance, it is not possible to assess the time, the cost, or the outcome associated with the insolvency scenario described in the case study.
Outcome	piecemeal sale	According to the research conducted by the team, there were no foreclosure, liquidation, or reorganization proceedings filed in the country in the last 12 months. Due to this circumstance, it is not possible to assess the time, the cost, or the outcome associated with the insolvency scenario described int he case study.
Time (in years)	No Practice	According to the research conducted by the team, there were no foreclosure, liquidation, or reorganization proceedings filed in the country in the last 12 months. Due to this circumstance, it is not possible to assess the time, the cost, or the outcome associated with the insolvency scenario described int he case study.
Cost (% of estate)	No Practice	According to the research conducted by the team, there were no foreclosure, liquidation, or reorganization proceedings filed in the country in the last 12 months. Due to this circumstance, it is not possible to assess the time, the cost, or the outcome associated with the insolvency scenario described int he case study.
Recovery rate (cents on the dollar)		No Practice

Details – Resolving Insolvency in Iraq – Measure of Quality

	Answer	Score
Strength of insolvency framework index (0-16)		**No Practice**
Commencement of proceedings index (0-3)		**2.0**
What procedures are available to a DEBTOR when commencing insolvency proceedings?	(b) Debtor may file for liquidation only	0.5
Does the insolvency framework allow a CREDITOR to file for insolvency of the debtor?	(b) Yes, but a creditor may file for liquidation only	0.5
What basis for commencement of the insolvency proceedings is allowed under the insolvency framework? (a) Debtor is generally unable to pay its debts as they mature (b) The value of debtor's liabilities exceeds the value of its assets	(a) Debtor is generally unable to pay its debts as they mature	1.0
Management of debtor's assets index (0-6)		**4.0**
Does the insolvency framework allow the continuation of contracts supplying essential goods and services to the debtor?	Yes	1.0
Does the insolvency framework allow the rejection by the debtor of overly burdensome contracts?	Yes	1.0
Does the insolvency framework allow avoidance of preferential transactions?	Yes	1.0
Does the insolvency framework allow avoidance of undervalued transactions?	Yes	1.0
Does the insolvency framework provide for the possibility of the debtor obtaining credit after commencement of insolvency proceedings?	No	0.0
Does the insolvency framework assign priority to post-commencement credit?	(c) No priority is assigned to post-commencement creditors	0.0
Reorganization proceedings index (0-3)		**0.0**
Which creditors vote on the proposed reorganization plan?	N/A	0.0
Does the insolvency framework require that dissenting creditors in reorganization receive at least as much as what they would obtain in a liquidation?	No	0.0
Are the creditors divided into classes for the purposes of voting on the reorganization plan, does each class vote separately and are creditors in the same class treated equally?	No	0.0
Creditor participation index (0-4)		**1.0**
Does the insolvency framework require approval by the creditors for selection or appointment of the insolvency representative?	No	0.0
Does the insolvency framework require approval by the creditors for sale of substantial assets of the debtor?	No	0.0
Does the insolvency framework provide that a creditor has the right to request information from the insolvency representative?	No	0.0
Does the insolvency framework provide that a creditor has the right to object to decisions accepting or rejecting creditors' claims?	Yes	1.0

Note: Even if the economy's legal framework includes provisions related to insolvency proceedings (liquidation or reorganization), the economy receives 0 points for the strength of insolvency framework index, if time, cost and outcome indicators are recorded as "no practice."

Employing Workers

Doing Business presents detailed data for the employing workers indicators on the *Doing Business* website (http://www.doingbusiness.org). The study does not present rankings of economies on these indicators or include the topic in the aggregate ease of doing business score or ranking on the ease of doing business.

The most recent round of data collection was completed in May 2019. See the methodology for more information.

What the indicators measure

Hiring
(i) whether fixed-term contracts are prohibited for permanent tasks; (ii) maximum cumulative duration of fixed-term contracts; (iii) length of the maximum probationary period; (iv) minimum wage;(v) ratio of minimum wage to the average value added per worker.

Working hours
(i) maximum number of working days allowed per week; (ii) premiums for work: at night, on a weekly rest day and overtime; (iii) whether there are restrictions on work at night, work on a weekly rest day and for overtime work; (iv) length of paid annual leave.

Redundancy rules
(i) whether redundancy can be basis for terminating workers; (ii) whether employer needs to notify and/or get approval from third party to terminate 1 redundant worker and a group of 9 redundant workers; (iii) whether the law requires employer to reassign or retrain a worker before making worker redundant; (iv) whether priority rules apply for redundancies and reemployment.

Redundancy cost
(i) notice period for redundancy dismissal; (ii) severance payments, and (iii) penalties due when terminating a redundant worker. Data on the availability of unemployment protection for a worker with one year of employment is also collected.

Case study assumptions

To make the data comparable across economies, several assumptions about the worker and the business are used.

The worker:
- Is a cashier in a supermarket or grocery store, age 19, with one year of work experience.
- Is a full-time employee.
- Is not a member of the labor union, unless membership is mandatory.

The business:
- Is a limited liability company (or the equivalent in the economy).
- Operates a supermarket or grocery store in the economy's largest business city. For 11 economies the data are also collected for the second largest business city.
- Has 60 employees.
- Is subject to collective bargaining agreements if such agreements cover more than 50% of the food retail sector and they apply even to firms that are not party to them.
- Abides by every law and regulation but does not grant workers more benefits than those mandated by law, regulation or (if applicable) collective bargaining agreements.

Employing Workers - Iraq

Details – Employing Workers in Iraq

	Answer
Hiring	
Fixed-term contracts prohibited for permanent tasks?	Yes
Maximum length of a single fixed-term contract (months)	12.0
Maximum length of fixed-term contracts, including renewals (months)	12.0
Minimum wage applicable to the worker assumed in the case study (US$/month)	256.8
Ratio of minimum wage to value added per worker	0.3
Maximum length of probationary period (months)	3.0
Working hours	
Standard workday	8.0
Maximum number of working days per week	6.0
Premium for night work (% of hourly pay)	0.0
Premium for work on weekly rest day (% of hourly pay)	50.0
Premium for overtime work (% of hourly pay)	50.0
Restrictions on night work?	Yes
Restrictions on weekly holiday?	No
Restrictions on overtime work?	No
Paid annual leave for a worker with 1 year of tenure (working days)	21.0
Paid annual leave for a worker with 5 years of tenure (working days)	23.0
Paid annual leave for a worker with 10 years of tenure (working days)	25.0
Paid annual leave (average for workers with 1, 5 and 10 years of tenure, in working days)	23.0
Redundancy rules	
Dismissal due to redundancy allowed by law?	Yes
Third-party notification if one worker is dismissed?	Yes
Third-party approval if one worker is dismissed?	Yes
Third-party notification if nine workers are dismissed?	Yes
Third-party approval if nine workers are dismissed?	Yes
Retraining or reassignment obligation before redundancy?	No
Priority rules for redundancies?	No
Priority rules for reemployment?	No
Redundancy cost	
Notice period for redundancy dismissal for a worker with 1 year of tenure (weeks of salary)	0.0
Notice period for redundancy dismissal for a worker with 5 years of tenure (weeks of salary)	0.0
Notice period for redundancy dismissal for a worker with 10 years of tenure (weeks of salary)	0.0
Notice period for redundancy dismissal (average for workers with 1, 5 and 10 years of tenure, in weeks of salary)	0.0
Severance pay for redundancy dismissal for a worker with 1 year of tenure (weeks of salary)	2.0
Severance pay for redundancy dismissal for a worker with 5 years of tenure (weeks of salary)	10.0

Severance pay for redundancy dismissal for a worker with 10 years of tenure (weeks of salary)	20.0
Severance pay for redundancy dismissal (average for workers with 1, 5 and 10 years of tenure, in weeks of salary)	10.7
Unemployment protection after one year of employment?	No

Business Reforms in Iraq

From May 2, 2018 to May 1, 2019, 115 economies implemented 294 business regulatory reforms across the 10 areas measured by Doing Business. Reforms inspired by *Doing Business* have been implemented by economies in all regions. The following are reforms implemented since *Doing Business* 2008.

✓ =*Doing Business* reform making it easier to do business. ✕ = Change making it more difficult to do business.

DB2018

✓ **Starting a Business:** Iraq made starting a business easier by combining multiple registration procedures and reducing the time to register a company.

✓ **Getting Credit:** Iraq improved access to credit information by launching a new credit registry.

DB2017

✓ **Dealing with Construction Permits:** Iraq made dealing with construction permits easier by allowing the simultaneous processing of utility clearances and building permit applications.

✓ **Getting Electricity:** The Ministry of Electricity made getting electricity faster by enforcing tighter deadlines on electricity connections.

DB2012

✕ **Starting a Business:** In Iraq starting a business became more expensive because of an increase in the cost to obtain a name reservation certificate and in the cost for lawyers to draft articles of association.

Doing Business 2020 is the 17th in a series of annual studies investigating the regulations that enhance business activity and those that constrain it. It provides quantitative indicators covering 12 areas of the business environment in 190 economies. The goal of the *Doing Business* series is to provide objective data for use by governments in designing sound business regulatory policies and to encourage research on the important dimensions of the regulatory environment for firms.

www.doingbusiness.org

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ISBN 978-1-4648-1440-2

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WHO, WORLD BANK & German Government reports on Iraq

Population of Iraq 2021

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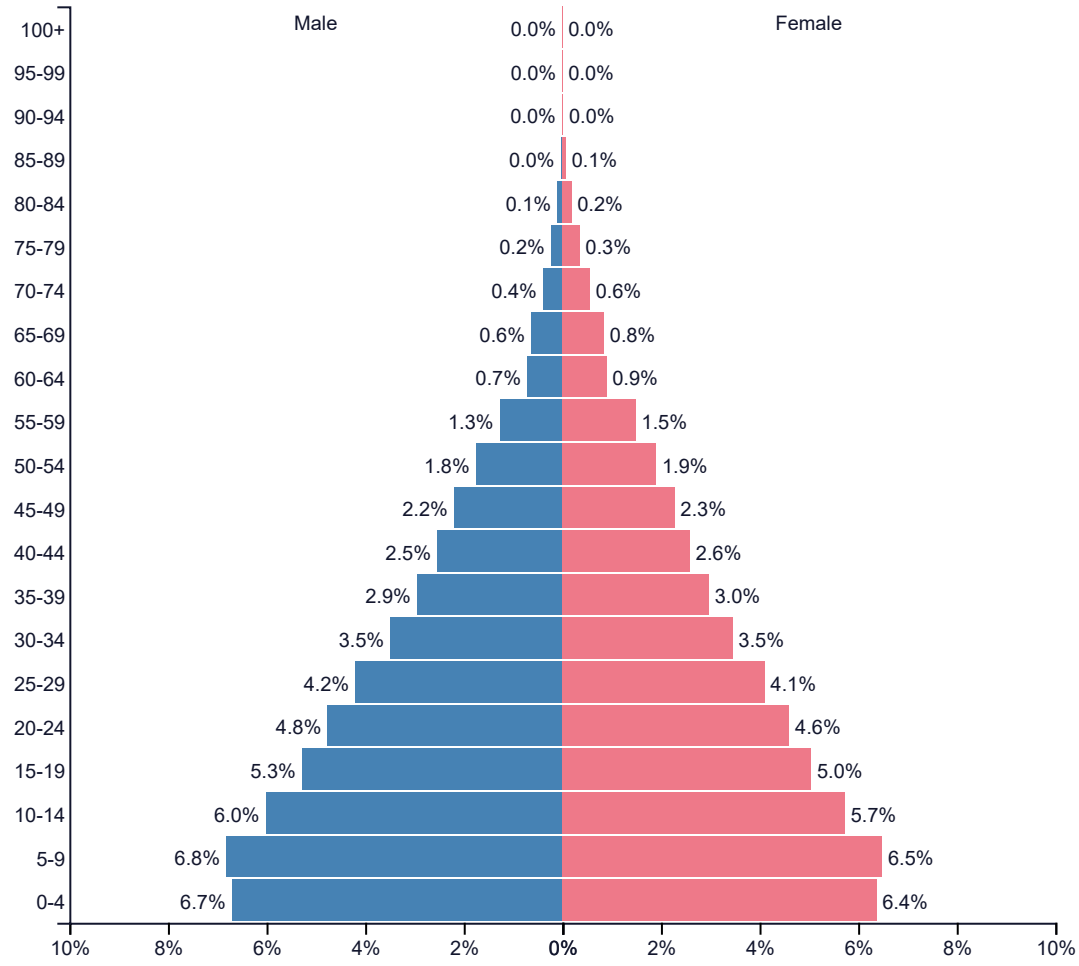
Iraq ▼
2021

Population: 43,533,592



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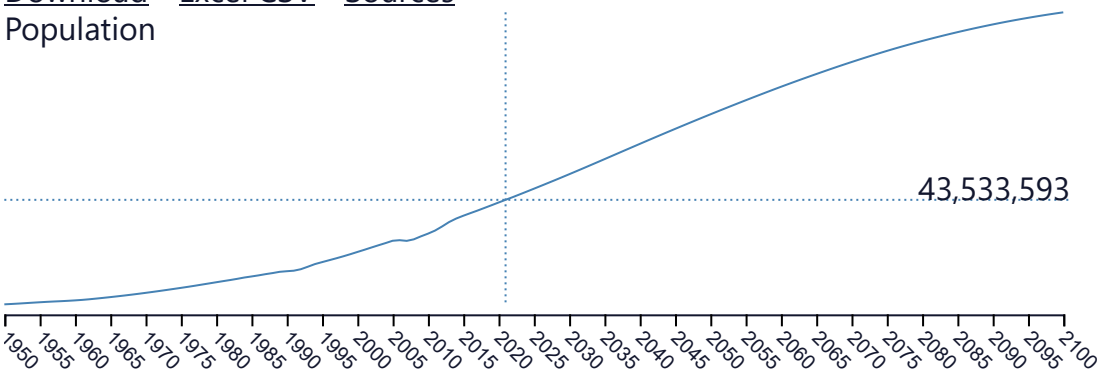
Population



YEAR -5 -1 2021 +1 +5

COUNTRY A B C D E F G H I J K L M N O P Q R S T U V W Y Z

Iceland
India
Indonesia
Iran (Islamic Republic of)
Iraq
Ireland
Israel
Italy

See also the number of migrants for this country.

Population density for this country

New: Updated with 2022 numbers (Previous version)

Check our other visualizations

Comparison of carbon emissions per country

List of countries ordered by their population size

Origin of the migrants stocks per country

Population density per country

Population Projections

Population Growth Map per Year

Other indicators visualized on maps:

(In English only, for now)

- AIDS estimated deaths (UNAIDS estimates)
- Adolescent fertility rate (births per 1,000 women ages 15-19)
- Age at first marriage, female
- Age at first marriage, male
- Age dependency ratio (% of working-age population)
- Antiretroviral therapy coverage (% of people living with HIV)
- Antiretroviral therapy coverage for PMTCT (% of pregnant women living with HIV)
- Birth rate, crude (per 1,000 people)
- Births attended by skilled health staff (% of total)
- Children (0-14) living with HIV

- Children with fever receiving antimalarial drugs (% of children under age 5 with fever)
- Completeness of birth registration (%)
- Completeness of death registration with cause-of-death information (%)
- Diabetes prevalence (% of population ages 20 to 79)
- Diarrhea treatment (% of children under 5 receiving oral rehydration and continued feeding)
- Fertility rate, total (births per woman)
- GNI per capita, Atlas method (current US$)
- Health expenditure per capita (current US$)
- Health expenditure per capita, PPP
- Health expenditure, private (% of GDP)
- Health expenditure, public (% of GDP)
- Health expenditure, total (% of GDP)
- Hospital beds (per 1,000 people)
- Immunization, BCG (% of one-year-old children) - Turberculosis
- Immunization, DPT (% of children ages 12-23 months) - Diphtheria, pertussis (whooping cough), and Tetanus
- Immunization, HepB3 (% of one-year-old children) - Hepatitis B
- Immunization, Hib3 (% of children ages 12-23 months) - Meningitis, Pneumonia, and Epiglottitis
- Immunization, Polio (% of one-year-old children)
- Immunization, measles (% of children ages 12-23 months)
- Incidence of HIV (% of uninfected population ages 15-49)
- Incidence of malaria (per 1,000 population at risk)
- Incidence of tuberculosis (per 100,000 people)
- Labor force, female (% of total labor force)
- Labor force, total
- Life expectancy at birth, female (years)
- Life expectancy at birth, male (years)
- Life expectancy at birth, total (years)
- Literacy rate, adult female (% of females ages 15 and above)
- Literacy rate, adult total (% of people ages 15 and above)
- Literacy rate, youth male (% of males ages 15-24)
- Malaria cases reported
- Mortality rate, under-5 (per 1,000)
- People practicing open defecation, urban (% of urban population)
- Physicians (per 1,000 people)
- Population ages 65 and above (% of total)
- Population growth (annual %)
- Population, male (% of total)
- Postnatal care coverage (% mothers)
- Prevalence of HIV, female (% ages 15-24)
- Prevalence of HIV, male (% ages 15-24)
- Prevalence of HIV, total (% of population ages 15-49)
- Prevalence of overweight (% of children under 5)
- Prevalence of overweight, female (% of female adults)
- Prevalence of overweight, male (% of male adults)
- Prevalence of syphilis (% of women attending antenatal care)
- Public spending on education, total (% of GDP)

- Risk of impoverishing expenditure for surgical care (% of people at risk)
- Rural population growth (annual %)
- School enrollment, secondary (% gross)
- School enrollment, secondary, male (% net)
- Sex ratio at birth (male births per female births)
- Smoking prevalence, females (% of adults)
- Smoking prevalence, males (% of adults)
- Suicide mortality rate (per 100,000 population)
- Tuberculosis death rate (per 100,000 people)
- Unemployment, total (% of total labor force)
- Urban population growth (annual %)

Sources - What is a population pyramid? - Keywords: demography, population pyramid, age pyramid, aging, retirement, Iraq, 2021.

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WHO, WORLD BANK & German Government reports on Iraq

WHO Iraq Annual Report 2021

World Health Organization
Iraq

IRAQ ANNUAL REPORT 2021

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Iraq

WHO Library Cataloguing in Publication Data

Names: World Health Organization. Regional Office for the Eastern Mediterranean

Title: World Health Organization Iraq annual report 2021 / World Health Organization. Regional Office for the Eastern Mediterranean

Description: Cairo: World Health Organization. Regional Office for the Eastern Mediterranean, 2022

Identifier: ISBN 978-92-9021-018-4 (pbk.) | ISBN 978-92-9021-019-1 (online)

Subjects: Health Status | COVID-19 - prevention & control | Betacoronavirus | Disease Outbreaks | Delivery of Health Care | Equipment and Supplies - supply & distribution | Immunization Programs | Noncommunicable Diseases – prevention & control | Iraq | Annual Report

Classification: NLM WA 300

Contents

Acronyms

ACT	Access to COVID-19 Tools
DFATD	Canada's Department of Foreign Affairs, Trade and Development
ECHO	The European Civil Protection and Humanitarian Aid Operations
EMTs	Emergency medical tams
EUL	Emergency use listing
EWARN	Early Warning Alert and Response Network
GBV	Gender-based violence
ICU	Intensive care unit
IDPs	Internally displaced persons
IEC	Information, Education and Communication
IMCI	Integrated management of childhood illnesses
IHR	International Health Regulations
IPC	Infection prevention and control
MHPSS	Mental health and psychosocial support
MMCs	Mobile medical clinics
NCD	Noncommunicable diseases
NEDtP	The Network of Institutions for Evidence and Data to Policy
OCHA	Office for Coordination of Humanitarian Affairs
PHCMI	Primary health care measurement and improvement
PHC	Primary health care
POE	Points of entry
PPE	Personal protective equipment
RCCE	Risk communications and community engagement
RMNCAH	Reproductive Maternal Neonatal, Child and Adolescent Health
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
WHO	World Health Organization

Foreword

Dr Ahmed Zouiten
WHO Representative in Iraq

In 2021, COVID-19 continued to be a significant challenge for countries worldwide, including Iraq. However, a robust partnership between the Ministry of Health and the World Health Organization (WHO) was instrumental in preparing for and responding to the pandemic at the central level and in the Kurdistan region.

WHO and Ministry of Health collaboration focused on increasing diagnostic capacities and building the capacity of hospitals and health centres to prepare for and respond to moderate and severe cases of COVID-19 in Iraq. This involved establishing around 4000 intensive care units (ICUs) distributed in all Iraqi governorates and training thousands of doctors, nurses and paramedics on the management of COVID-19 complications.

As soon as the vaccines became available worldwide, WHO and the Ministry of Health launched mass vaccination campaigns, successfully reaching 20.8% of Iraq's total population with at least one dose. While we could not stop the transmission of the virus during the last year, we were able to minimize the impact of the pandemic on the health and well-being of Iraqis, including mortality, which remained low at 1.08%. We shared the same goal of working to protect Iraqis and save lives through accessible and sustainable quality health care services across the country.

While WHO has focused its efforts in recent decades on preparedness and responding to the humanitarian situation and displacement in the northern provinces, we decided together with the the Ministry of Health to shift our focus to building resilience in the health system.

We targeted populations affected by humanitarian concerns while working on an overall health system development strategy aimed at supporting Iraq to achieve universal health coverage and health for all.

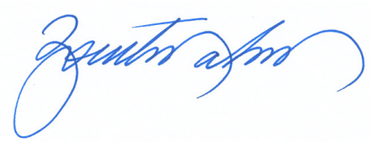
Many investments have already been made to strengthen health systems in Iraq, starting with updates to health governance and prioritizing Health in All Policies while updating the public health laws.

A health information system has been identified as the most pressing need, as it has the potential to yield valuable information that will drive policy-making toward better progress in the health sector.

"Since I assumed my function in Iraq in February 2021, I have had the opportunity to visit different hospitals and health centres and meet with health officials and workers responding to COVID-19 and other diseases. I was truly impressed by the dedication of health professionals working tirelessly behind the scenes risking their lives to save others."

I want to express my deepest gratitude to all of our donors and partners for their generous support and valuable contributions, which allowed WHO to invest in strengthening the health system and providing essential primary, referral and preventive health care services in Iraq.

In 2022, we must again unite our efforts and voices to support the the Ministry of Health and health providers at this critical stage of the pandemic. Let's all commit to health resolutions and not compromise anyone's safety and well-being.



Milestones in 2021

Nov. 2021

12 million

people were targeted during the vaccination campaign luanched to scale up immunity against COVID-19

Dec. 2021

3 million

doses of the Pfizer COVID-19 vaccine arrived in Iraq, bringing the total vaccines procured for the country through the COVAX Facility to over six million doses

Aug. 2021

500 000

doses of Pfizer vaccines arrived in Iraq through the COVAX Facility and with support from the United States

May 2021

The second shipment of

499 200

doses of the AstraZeneca vaccine arrived through the COVAX Facility

Feb. 2021

US$ 1 million

WHO supports COVID-19 response in Kurdistan with allocation of medical supplies and materials

March 2021

The first shipment of

336 000

doses of AstraZeneca vaccine arrived in Baghdad through the COVAX Facility

2021 at a glance

10 345 750

doses of **COVID-19 vaccine** from COVAX Facility received in Iraq in 2021

8 556 881

people – 20.8% of the population – received the first dose of the **COVID-19 vaccine**

2 017 093

consultations for common diseases provided

836 504

children under the age of five were vaccinated against **polio** in Iraq in 2021

810 070

children aged 9-59 months vaccinated against **measles** in crisis-affected areas

35 845

children under the age of five screened for **malnutrition** in crisis-affected areas

30 596

physical and functional **rehabilitation** sessions provided

16 559

cold and emergency cases referred to **secondary health facilities**

3261

newborn babies benefited from **newborn home services**

71 929

mental health and psychosocial support individual sessions provided

COVID-19 response

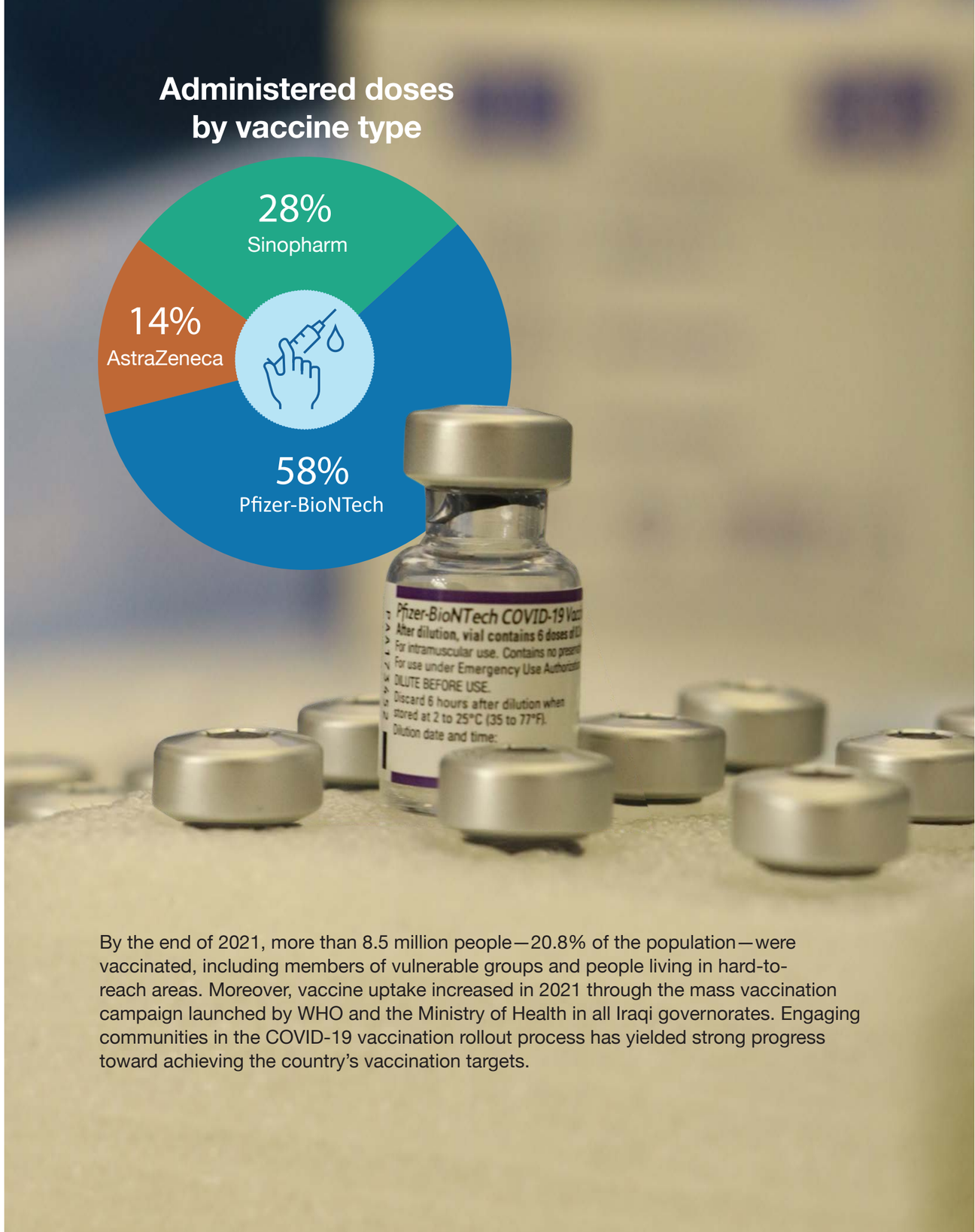
Since the start of the pandemic, the WHO's Iraq country team has been closely working with the Ministry of Health, as well as various health departments and health partners to support outbreak preparedness, establish coordination mechanisms and conduct infectious-disease outbreak response activities.

In 2021, the WHO team continued to provide technical and resource support to the Iraq public health system to support emergency health interventions against COVID-19. In addition, the WHO country office and regional teams also coordinated their efforts within the key areas related to IPC, case management, capacity-building and risk communications.

With the rollout of COVID-19 vaccinations in Iraq in March of 2021, the Government sought multi-tiered support to reach the national vaccination coverage target of 40% of the total population by the end of 2021.

In 2021, WHO repurposed its team to guide and support the Government's preparedness and response to the COVID-19 pandemic, including launching the vaccination services alongside the national health authorities, in collaboration with key partners like UNICEF, the World Bank and other health actors.

In November 2021, WHO and the Ministry of Health launched a national COVID-19 mass vaccination campaign covering all of Iraq, including the Kurdistan region, to target over 12 million people with children aged 12 years and above. The campaign lasted until the end of December 2021, aiming to reach a 40% vaccination coverage rate.



By the end of 2021, more than 8.5 million people—20.8% of the population—were vaccinated, including members of vulnerable groups and people living in hard-to-reach areas. Moreover, vaccine uptake increased in 2021 through the mass vaccination campaign launched by WHO and the Ministry of Health in all Iraqi governorates. Engaging communities in the COVID-19 vaccination rollout process has yielded strong progress toward achieving the country's vaccination targets.

In response to COVID-19, more than four million pieces of medical devices and medical furniture were delivered in 2021 to support 50 health facilities across Iraq with a total cost of US$ 4 300 982.

4 037 023
pieces of medical devices and medical furniture delivered in 2021

- **3 800 176** pieces of personal protection equipment (PPE)
- **236 781** pieces of COVID-19 diagonostic kits
- **1963** electro mechanical medical devices
- **475** pieces of medical furniture
- **155** laboratory equipment and supplies
- **20** in vitro diagnostic devices
- **One** anaesthetic and respiratory device
- **3612** reusable and single-use devices

Strategic preparedness

The overall goal of WHO's strategic preparedness and response plan is to stop the transmission of COVID-19 within Iraq and halt the spread to other countries. In 2021, WHO provided the necessary technical and logistical support to promote public awareness and enhance trust in the vaccines among the targeted populations, including internally displaced persons (IDPs), refugees and host communities.

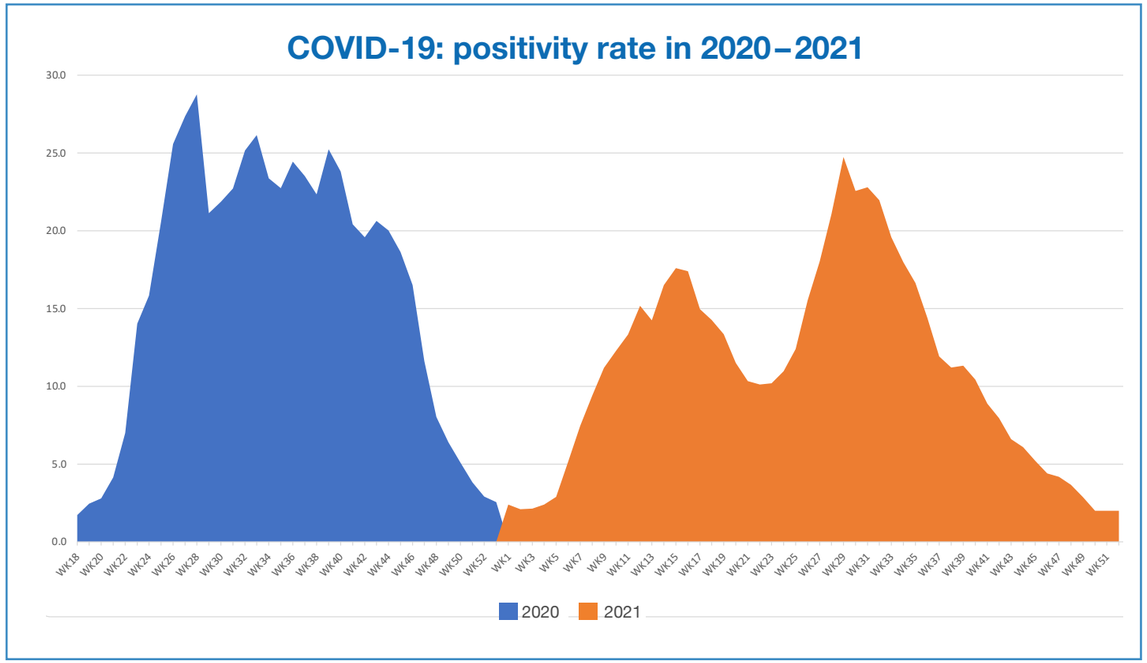
WHO developed the strategic preparedness and response plan in collaboration with the Ministry of Health, outlining public health measures to minimize the impact and control the spread of the virus. The plan supported the Ministry of Health and directorates of health in preparing for and responding to COVID-19.

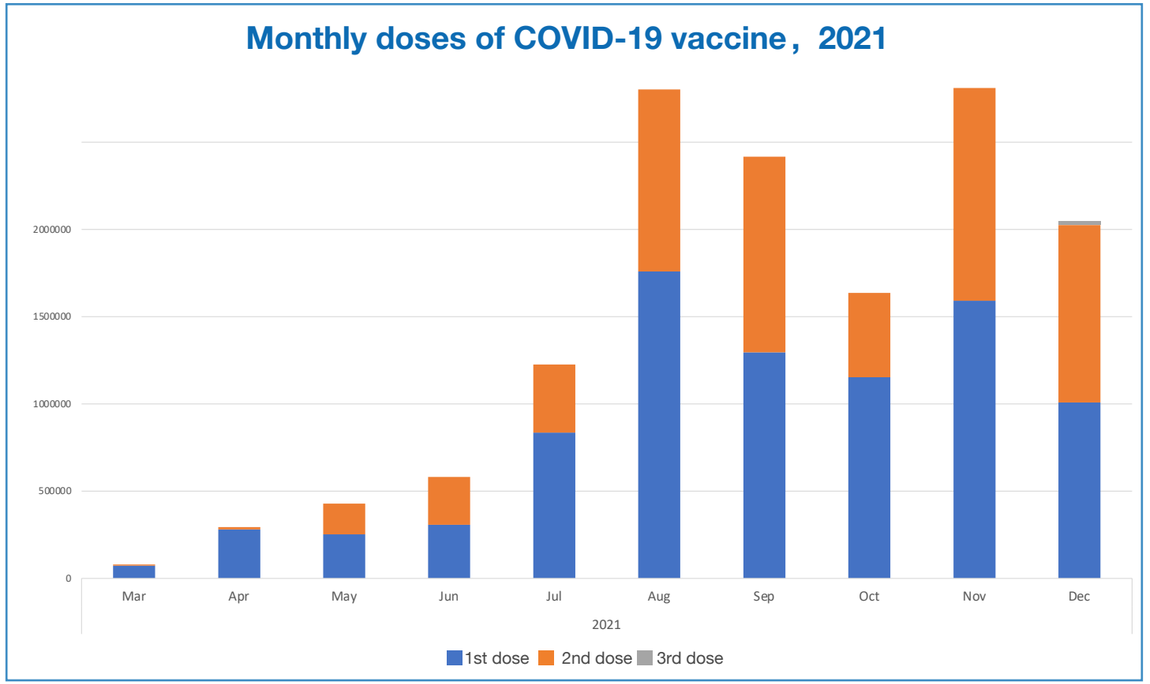
Further, WHO mobilized rapid response teams to respond to the surge in cases and provided technical guidelines, tools and supplies for surveillance and laboratory verification. It also provided training and developed educational materials for implementing risk communication and community awareness campaigns targeting schools, marketplaces, mosques and other public places. WHO also supported the establishment of vaccination teams at 102 sites across Iraq to reduce the burden on routine vaccination teams.

To further enhance COVID-19 preparedness and response in Iraq, WHO provided support to improve communicable disease surveillance and enhance health care workers' capacity in laboratory investigations and infection prevention control (IPC), including points of entry, case management, risk communication and community engagement activities. This enabled Iraq to provide daily event-based reporting on COVID-19 indicators and scale up its laboratory capacities to perform approximately 50 000 tests daily.

With WHO support, Iraq started working on the District Health Information Software (DHIS2) to improve the collection, processing, analysis and use of health information, which will contribute to achieving better health outcomes in Iraq.

More than four million pieces of medical devices and medical furniture were delivered in 2021





Active surveillance

In 2021, WHO continued to support surveillance efforts through contact tracing and community surveillance initiatives, with the aim of isolating, testing and treating every case and tracing every contact. These initiatives led to improved COVID-19 detection, verification and response.

WHO supported the Ministry of Health and directorates of health to strengthen surveillance in all areas, including selected hospitals, points of entry and IDP camps, providing standard case definitions, electronic reporting formats, updated guidelines, protocols and training.

EWARN system

WHO supported the prevention and control of communicable disease outbreaks in high-risk locations by detecting common communicable disease outbreaks and responding in a timely manner. In 2021, WHO received Early Warning, Alert and Response Network (EWARN) updates from an average of 130 reporting sites (including mobile medical clinics (MMCs), primary health care (PHC) centres, camps and hospitals).

A total of 791 alerts were reported, of which 227 were confirmed. Most of the alerts were due to suspected COVID-19 cases. All the alerts (100%) were investigated and referred to the appropriate quarantine, isolation and treatment facilities within 48 hours. However, only a few of them were confirmed with laboratory findings, and others were quarantined or isolated based on the history of contact or clinical symptoms.

Safety surveillance for COVID-19 vaccines

WHO launched the Safety Surveillance Manual for COVID-19 vaccines, which supports countries in establishing safety signal detection for emergency use listing (EUL) vaccines.

By engaging all relevant stakeholders, WHO supported the Ministry of Health in establishing this system and forming a committee to plan the required strategies, allocate the required financial resources, recruit the necessary expertise and provide the guidance and tools.

This involved conducting training and workshops, targeting 235 focal points based on the Ministry of Health's plan to deploy vaccines in 67 teaching hospitals and 573 PHC centres across Iraq.

Provision of medical devices and supplies

Throughout 2021, WHO worked with the Ministry of Health to deliver essential medicines and supplies. To ensure that health facilities were equipped to handle COVID-19 patients, WHO facilitated the provision of 4 207 770 medical devices and medical furniture items costing US$ 5.3 million to support 87 health facilities across Iraq.

Various types of medical equipment were also procured and distributed to support PHC facilities in conflict-affected governorates. This included electromechanical medical devices, reusable devices, laboratory equipment and supplies, medical furniture and assistive products. The distributed supplies are expected to improve the standard of comprehensive PHC and referral services for IDPs, refugees, returnees and hosting communities.

WHO also worked collaboratively with all partners on the timely procurement and delivery of COVID-19 vaccines. More doses of WHO-approved vaccines arrived over the course of the year, including over six million doses procured for Iraq through the WHO-supported COVAX Facility.

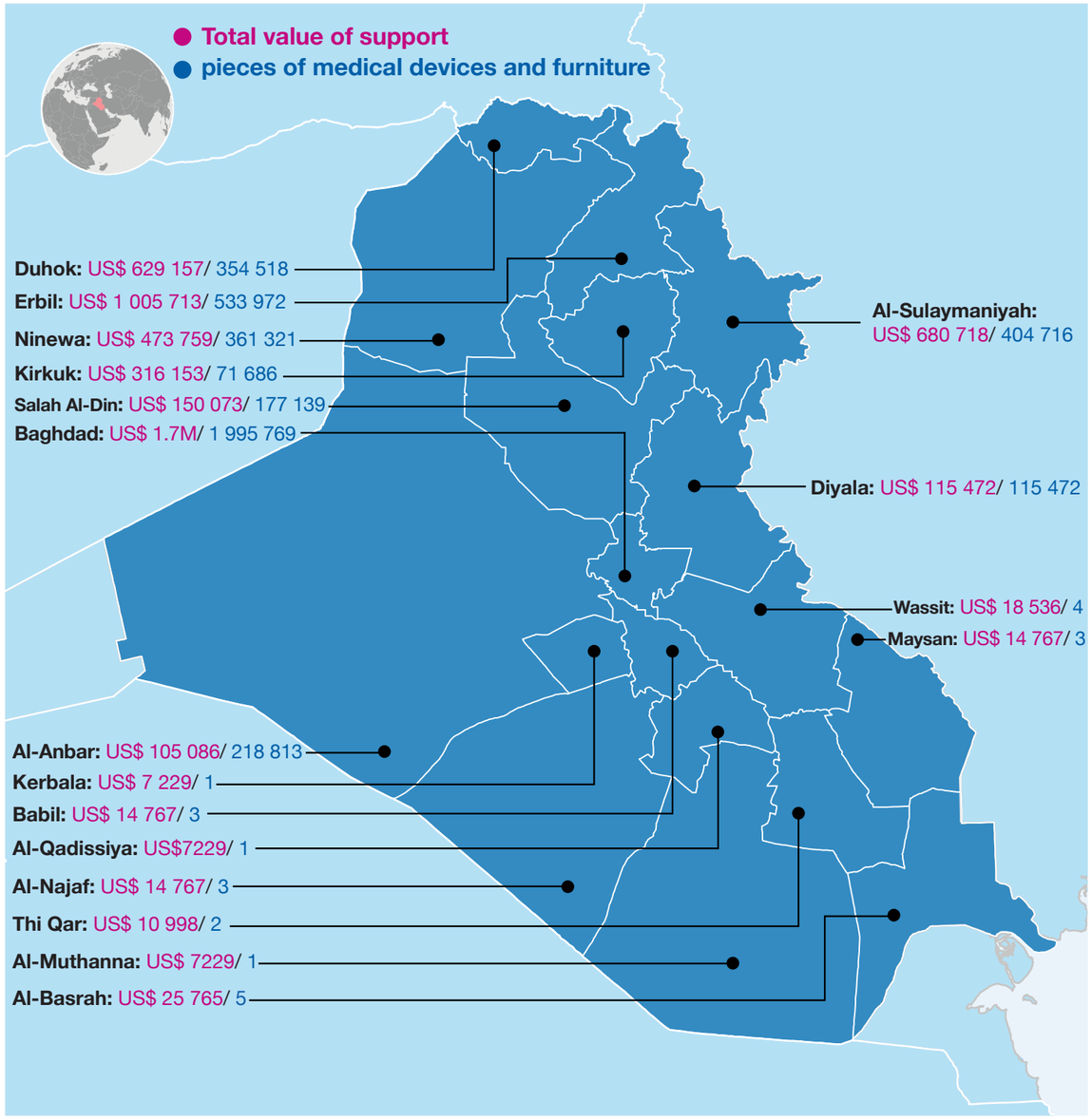
In addition to the medical devices and supplies, WHO also distributed approximately 350 tons of pharmaceuticals, WHO kits and supplies in 2021, with a total cost of US$ 2 049 145.

WHO distributed approximately 350 tons of pharmaceuticals, WHO kits and supplies in 2021

87 health facilities supported

4.2 million pieces of medical devices and medical furniture provided

5.3 million dollars allocated to support 87 health facilities



Health Cluster

As the health sector lead, WHO collaborated with the central Ministry of Health and the Ministry of Health of the Kurdistan region to provide technical support and coordinate efforts through incident management support teams.

The Iraq Health Cluster COVID-19 Task Force was operational during most of 2021 to help coordinate partners' responses to COVID-19. The forum also enabled two-way communication between the Ministry of Health in Iraq and partners/stakeholders to ensure that people in need received timely and quality services. The Task Force held monthly meetings, with participation by the federal and Kurdistan region ministries of health and relevant partner agencies, including United Nations agencies, local and international NGOs.

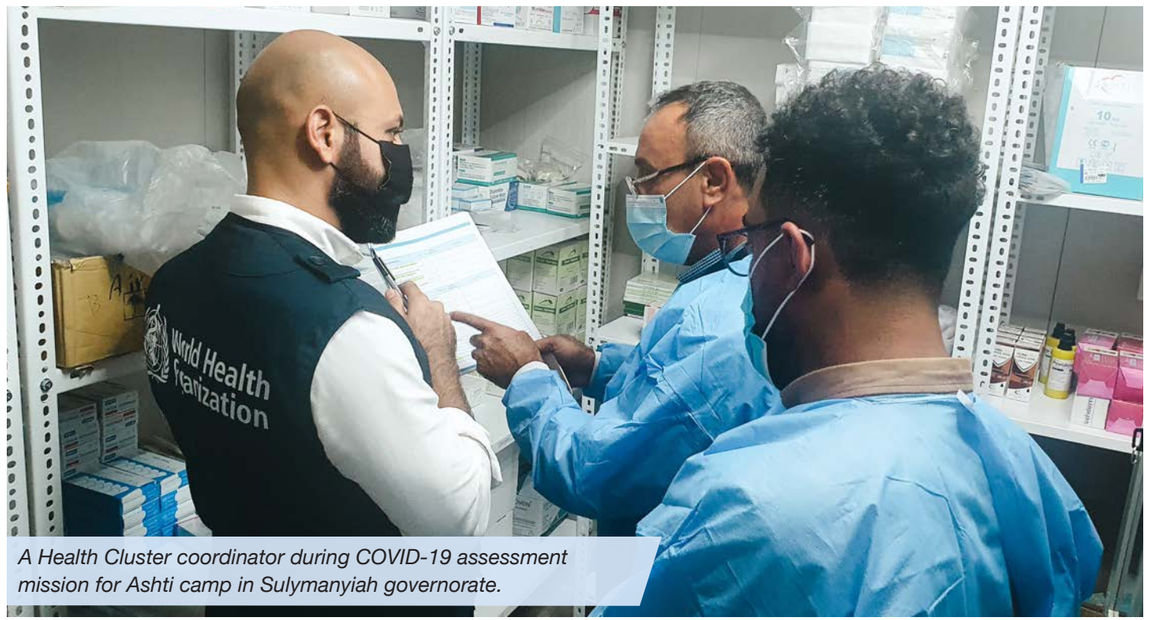
To ensure that the mapping of all COVID-19 activities, including supporting the establishment of COVID-19 hospitals, procuring and distributing of medicines, supplies and personal protective equipment (PPE), would be easily accessible on one platform, the Task Force upgraded the monthly static infographics, which were developed in 2020, into an interactive online dashboard in 2021. In addition, the Task Force developed a COVID-19 health facilities assessment template, which was disseminated to partners and is being used by them, as well as the Health Cluster team to monitor the quality and IPC standards of the services.

Coordination activities

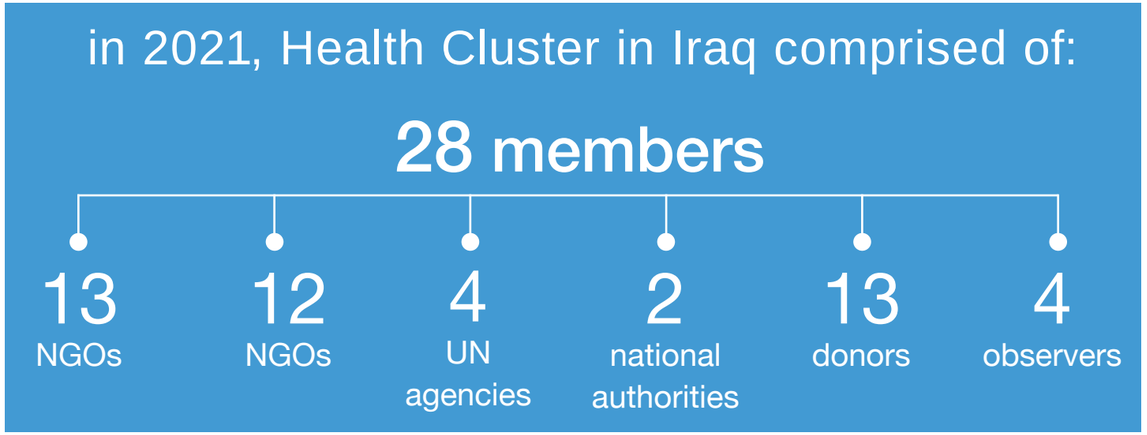
The Health Cluster team has a presence at the national level and in seven governorates sub-nationally, including Anbar, Duhok, Erbil, Kirkuk, Ninawah, Salah Al-Din and Sulaymaniyah

A national cluster co-coordinator was also hosted by the Doctors of the World organization – a human rights organization for most of the year – but with the position was discontinued at the end of December 2021 due to a lack of funding.

In 2021, three active working groups were reporting to the Health Cluster: mental health and psychosocial services (MHPSS) led by WHO, nutrition led by UNICEF and reproductive health led by the United Nations Population Fund (UNFPA). While the MHPSS and Nutrition working groups held regular monthly meetings, the reproductive health working group could not do so due to downsizing staff in UNFPA.



A Health Cluster coordinator during COVID-19 assessment mission for Ashti camp in Sulymanyiah governorate.



At the national level, the Health Cluster also participated in Inter-Cluster Coordination Group meetings on a fortnightly basis, while this occurs monthly at the sub-national level.

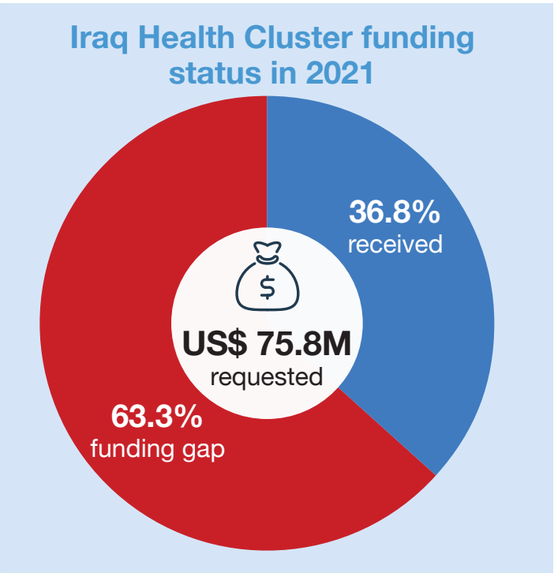
In addition, the Cluster supported the Iraq Humanitarian Fund (IHF) in monitoring the progress of partner implementation through online and, when feasible, face-to-face monitoring missions while conducting independent monitoring of COVID-19 services and measures implemented by partners in their supported facilities.

In November 2021, the Health Cluster team provided the partners with training on reporting to the Response Monitoring Module (RMM) and Activity Plan Module for the humanitarian response plan 2022. This was done to train newcomers and make any final adjustments to the activities and indicators of the HRP 2022, based on partner feedback.

During 2021, the Health Cluster consisted of 48 members, including 13 international nongovernmental organization, 12 national nongovernmental organization, four United Nations agencies, two national authorities, 13 donors and four observers.

Based on reports to the Financial Tracking Service, the Iraq Health Cluster received US$ 27.9 million of a requested US$ 75.8 million (i.e. 36.8%); however, this is not accurately depicted, as several partners do not report to the FTS through their headquarters.

Despite several setbacks, including movement restrictions and curfews due to COVID-19, security and access constraints on the intra- and inter-governorate movement of staff and supplies and humanitarian funding shortages compelling partners to phase out of many locations, nearly 710 000 IDPs in and out of camps and returnees were reached with a package of essential primary health care services by the end of 2021.



Health systems

The priorities for health system development in Iraq are based on the framework for action on advancing universal health coverage (UHC).

The WHO Iraq health systems' overall objective in 2021 was to plan, prioritize and channel all possible WHO technical and financial support to strengthen the health system and develop and implement evidence-based health policies that could effectively contribute to universal health coverage, GPW13 and SDGs in Iraq.

In practice, WHO continued to strengthen the health system response to COVID-19 while maintaining essential health services for local communities. In 2021, the Access to COVID-19 Tools (ACT) accelerator project was implemented in three selected districts in Iraq (Hawija of Kirkuk, Al-Sheekhan of Ninawa and Abu Al Khasib of the Al-Basra governorate).

Building capacities

In 2021, WHO Iraq provided capacity-building for 490 health workers and health experts in terms of a chemical safety road map, guidelines on hypertension and diabetes, primary health care measurement and improvement, WASH capacity building, the System for Health Accounts 2011 (SHA 2011) and the Health Accounts Production Tool (HAPT) to strengthen the health financing dimension of universal health coverage, calculation of excess mortality during the pandemic and integration of NCD services into primary health care services.

PHC measurement and improvement

To support Iraq in fulfilling its commitments to the Astana Declaration and moving into action, WHO provided technical support and assistance to implement the regional PHC Measurement and Improvement Initiative (PHCMI).

The initiative aimed at building national capacity for assessment-based PHC improvement, including the established family practice approach.

In collaboration with the Ministry of Health, WHO conducted a capacity-building workshop for selected focal points on the implementation of the PHCMI project in Iraq. The workshop provided in-depth training on the implementation of the progression model of the PHCMI initiative focal points who participated in data collection to complete the PHC assessment phase in Iraq.

To improve health system support in Iraq, the health systems team pursued the following major undertakings in 2021:

- imPACT reviews to assess Iraq's cancer control capacities and needs and identify priority interventions to effectively respond to its cancer burden.
- Completing the progression model assessment phase of the primary health care measurement and improvement (PHCMI).
- Supporting Iraq's participation in the Network of Institutions for Evidence and Data to Policy (NEDtP) in the Eastern Mediterranean Region.
- Supporting the development of the COVID-19 dashboard and providing online training and 25 tablets to focal points all over Iraq with continuous internet since March 2020.
- Capacity building and supporting the participation of the Ministry of Health, media, and local NGOs in tobacco tactics.
- Supporting the integration of noncommunicable diseases (NCD) services into primary health care services.
- Building capabilities related to calculating excess mortality during the pandemic.
- Supporting the implementation of the WHO ACT-Accelerator Health Systems Connector project in Ninawa, Kirkuk and Basra.
- Supporting the implementation of the WHO HEARTS guidelines and building national guidelines for the treatment of hypertension and diabetes.
- Supporting the development and implementation of a national project to strengthen the country's early childhood cancer prevention programme.

Expanded Programme on Immunization

In 2021, WHO continued to support the national Expanded Programme on Immunization (EPI) by enhancing vaccination coverage rate and building the capacity of EPI staff at national and subnational levels.

Despite the disruptive impact of the COVID-19 pandemic on public health services, including routine and non-routine immunization services, WHO managed to maintain the provision of immunization services to achieve the Immunization Agenda 2030 (IA 2030) targets.

The Ministry of Health, in partnership with WHO and UNICEF, revitalized routine immunization services. In 2021, the targeted indicators showed a decline in the coverage rate due to the COVID-19 pandemic implications.

Iraq has successfully closed the last polio outbreak and remained polio-free since 2014. However, Iraq remains vulnerable and at risk of wild poliovirus importation. Iraq is also well-known for having mass population movements during religious gatherings and receiving visitors from other countries, including polio-endemic Afghanistan and Pakistan and other countries in the Region experiencing circulating vaccine-derived poliovirus outbreaks.

In addition, the ongoing COVID-19 pandemic has overstretched the capacity of health systems and affected the delivery of essential health services. Iraq is no exception to these setbacks. As a result, routine immunization has been disrupted, and vaccination coverage declined in 2020.

More than 8 million children under the age of five were vaccinated against polio in Iraq in 2021

The role of EPI in COVID-19 vaccination

In 2021, the EPI in Iraq was actively engaged with the COVID-19 vaccination process. WHO, along with the Ministry of Health, worked on maintaining and improving vaccine cold chain capacity to ensure the availability of the vaccines and enable the country's readiness for additional vaccine allocations. In this regard, WHO worked on:

- providing training for vaccinators, IT specialists and cold chain supervisors;
- developing Vaccine Readiness Assessment Tool (VIRAT /VRAFv3) supported by WHO, UNICEF and the World Bank;
- supplying the COVID-19 vaccination outlets with logistical and technological items required for reporting (registration, reporting and updating);
- providing technical guidelines for the EPI and the National Immunization Technical Advisory Group (NITAG);
- supporting capacity-building activities and the mass vaccination campaign;
- vaccinating high-risk groups, including health care workers, IDPs, refugees and older people;
- procuring 75 ultra cold chain freezers for COVID-19 vaccines;
- introducing the national deployment and vaccination plan to ensure an effective roll-out of COVID-19 vaccines;
- engaging the Ministry of Health in the COVAX Facility and capacity building of vaccinators;
- establishing a digital platform and dashboard to provide a detailed analysis of COVID-19 vaccination status;
- adopting and utilizing a supportive supervision checklist of COVID-19 vaccines based on the WHO global guidelines and checklists.

In 2021, WHO worked with the COVAX Facility and partners to secure COVID-19 vaccine doses for the Iraqi people

Primary health care centres

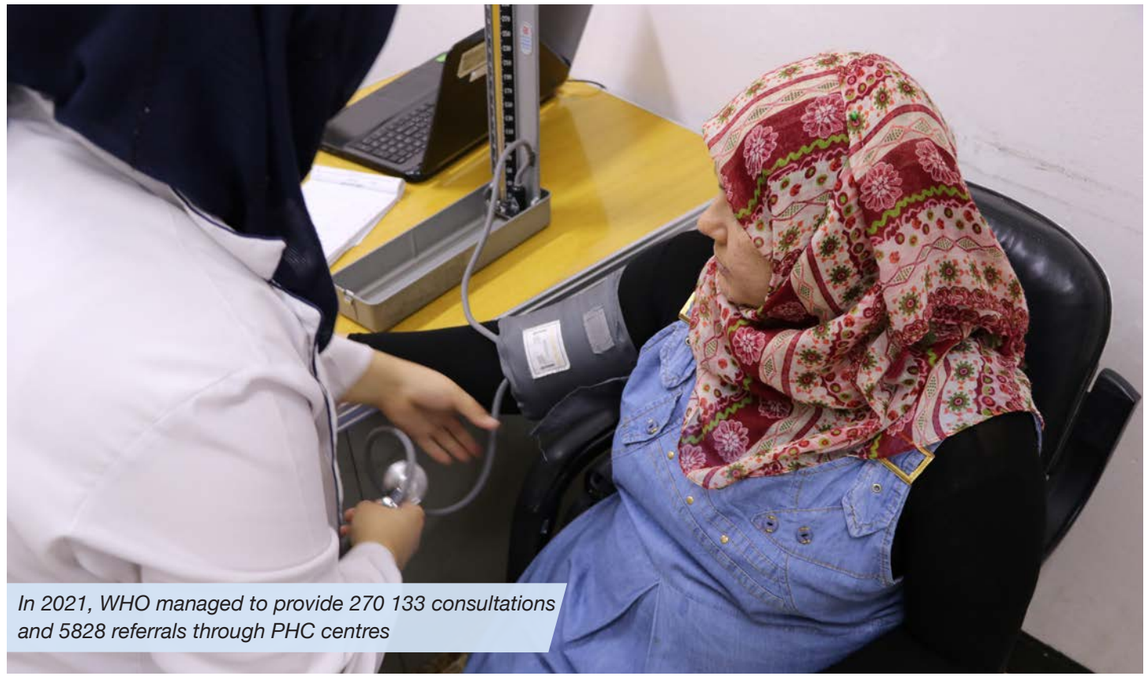
In 2021, WHO supported primary health care centres in different governorates, including Al-Anbar governorate (Bezebiz, Amriate Al-Fallujah IDP camp, Hay Al-Bakir, Hay Al-Bakir Delivery Room and Al-Rumana emergency unit); Duhok governorate (Shariya, Mam Rash, Kabarto 1, Kabarto 2, Dawoodia, Rwanga, and Bersivy 1); Ninawa governorate (Sinjar Mountain, Al-Sinoni, Al-Qawsiyat, Tal Marak Emergency Unit, Tal Marak delivery room); Erbil governorate (Hassan Sham U2 camp); and Sulaymaniyah governorate (Ashiti IDP camp).

In 2021, WHO managed to provide 270 133 consultations and 5828 referrals through PHC centres. WHO also supported mental health and psychological support (MHPSS) services, including 10 521 MHPSS consultations.

mobile medical clinics

In addition, WHO operationalized mobile medical clinics (MMCs) in various locations not supported by partners by covering the operational costs of these clinics. This enabled the provision of primary health services in places where PHC centres have been destroyed or are not functioning. A total of 20 mobile clinics were operational, benefiting IDPs, returnees and hosting communities in Anbar and Ninawa governorates. The support provided by the MMCs included psychological counselling, psychiatric screening and physical disability screening and referral to health facilities. In 2021, WHO provided 194 526 consultations using through MMCs.

WHO supported health facilities providing PHC and related services in different IDP camps with essential medicines and supplies. The medicines and medical supplies were delivered to partners based on their request. The supported partners in 2021 included DARY, HEEVI, DAMA and VIYAN and INTERSOS.



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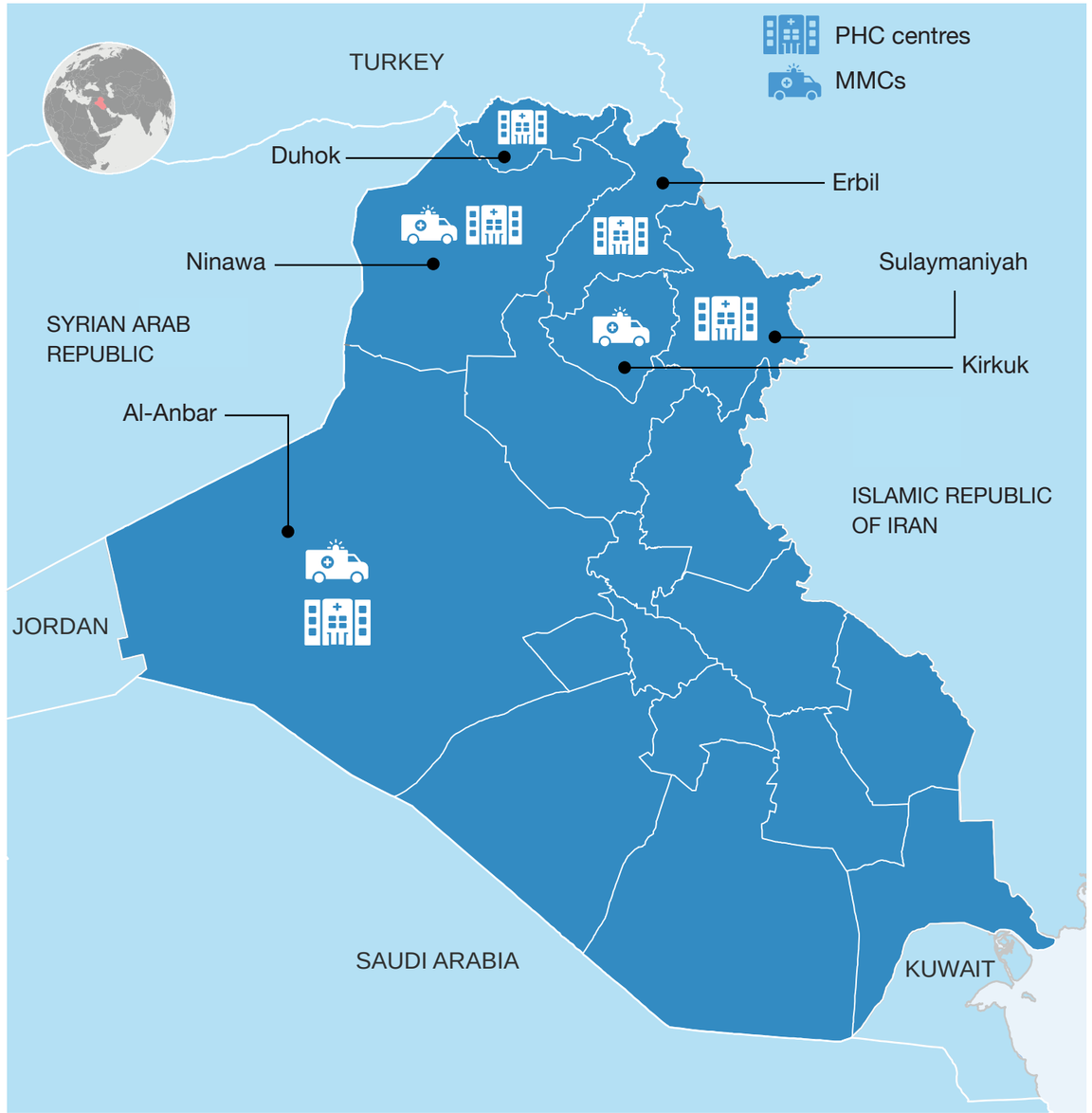
5828 referrals provided through PHC centres

270 133 medical consultations provided by PHC centres

194 526 consultations provided by MMCs

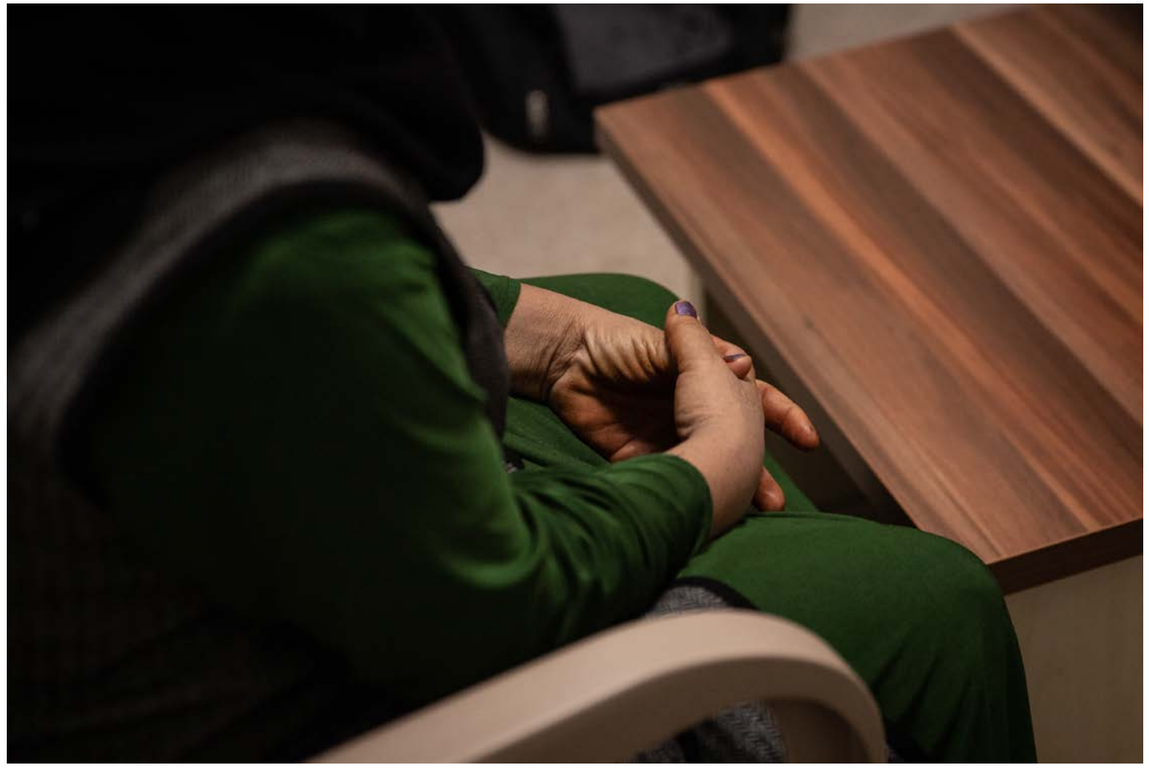


Mental health and psychosocial support

Millions of Iraqis have been affected by the unstable conditions in their country in recent decades. Conflict and violence in the area have taken their toll on the Iraqi people on many social and economic levels, including both their physical and mental health.

In 2021, WHO continued its efforts and collaboration with stakeholders to decentralize mental health services, integrate mental health into PHC, and ensure that international quality standards and human rights are met.

In collaboration with the Ministry of Health and other relevant governmental and non-governmental stakeholders, WHO Iraq prepared the first draft of the National Mental Health Strategy of Iraq. The draft strategy included an overall vision, mission, values and guiding principles, goals, and action areas. It also includes output indicators and a budget.



Mental health and psychosocial support (MHPSS)

WHO Iraq is positioned as the leading agency and chair of the National MHPSS Technical Working Group is open to governmental bodies, United Nations agencies, and local and international nongovernmental organization.

The Technical Working Group tasks include:

- facilitating effective, coordinated, and focused inter-agency response to MHPSS needs at the national and governorate levels,
- ensuring stakeholders' and partners' adherence to international guidelines and principles, including Inter-Agency Standing Committee (IASC) standards,
- coordinating MHPSS assessments, research, and information-sharing,
- enhancing referral pathways, and
- improving collaboration between NGOs and Directorates of Health working on MHPSS services.

MHPSS and returnees from Syria

In early 2021, the Government of Iraq informed the UN of its intention to repatriate some 500 families, with the Jad'ah 1 camp in Ninewa serving as a transition point prior to their eventual return to their area of origin or integration elsewhere in Iraq. On 25 May, 94 Iraqi households arrived from the Al-Hol camp in northeast Syria to the Jad'ah 1 Camp; WHO provided continuous leadership, guidance, and technical support in MHPSS. Effective collaborations were established with other agencies, stakeholders, and entities, including the International Organization for Migration (IOM) and the WHO collaborating centre at Douglas Institute, McGill University.

WHO-UNDP partnership on MHPSS

WHO and the United Nations Development Programme (UNDP) have explored synergies and established partnerships in MHPSS in close collaboration with the Iraqi Ministry of Health and the National Security Council. The overall objective of these partnerships is to strengthen the MHPSS response for IDPs and returnees, and ultimately ensure the safe and dignified return and reintegration of Iraqis displaced by the conflict with the Islamic State of Iraq and the Levant (ISIL).

On 14–16 November 2021, WHO and Ministry of Health delivered a training session to participants from the Office of the National Security Advisor (ONSA). The workshop focused mainly on the context of mental health in Iraq, understanding psychological first aid, mental health in the face of crises, understanding adversity and stress, and effective communication skills.

MHPSS Minimum Service Package

Iraq was identified as one of the five countries to pilot the MHPSS Minimum Service Package (MHPSS MSP) initiative, which WHO and UNICEF jointly lead. WHO has provided the necessary coordination for developing the initial survey at the country level.

WHO quality rights

The WHO Quality Rights Initiative was piloted for the first time in Iraq in 2021. WHO Iraq led the pilot phase in collaboration with the Ministry of Health.

On 23 February 2021, WHO Iraq conducted training on the WHO quality rights for eight officials from the Ministry of Health in Baghdad. This training focused on selected standards and criteria in the WHO Quality Rights Toolkit.

The initiative was piloted in two health facilities in Baghdad: Ibn Rushd Hospital and Al-Yarmouk Hospital. A report was made available with concrete recommendations to improve the quality of care and human rights.

Capacity building and integration of mental health in PHC

Continuous support and training are provided by WHO Iraq in several governorates for the integration of mental health in PHC through the implementation of the WHO Mental Health Gap Action Programme (mhGAP). Psychotropic medications have also been made available at the PHC level.

Gender-based violence

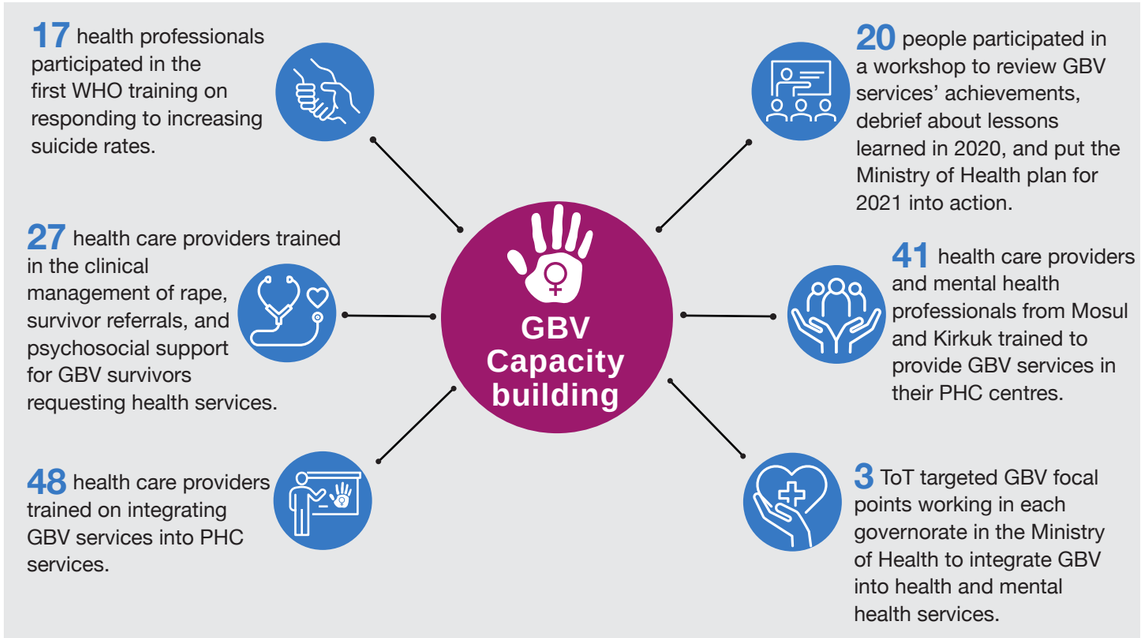
Iraq already had a high level of domestic violence; the humanitarian crisis has compounded pre-existing gender inequalities and increased the violence perpetrated against women and girls. This has resulted in a dramatic increase in the exposure of women and girls to GBV, particularly conflict-related sexual violence. The new COVID-19 crises also placed an additional, massive burden on the whole health system in Iraq, and increased the reported cases of GBV in health facilities there.

WHO is working on integrating GBV services into health and mental health programmes and community activities in Iraq to ensure the availability of culturally appropriate evidence- and community-based GBV services, psychosocial services, referral, and other GBV health services in all PHC units in the country.

The goal is to maintain the availability of sustainable, accessible, and non-stigmatizing services to all survivors of GBV all over the country.

Adaptation of GBV guidance in the Iraqi context

In partnership with the Ministry of Health, WHO adapted the WHO Clinical Handbook for Health Care Workers for women subjected to domestic and sexual violence in Iraq. This handbook will serve as a stepping stone for transforming the health sector to provide a comprehensive response to survivors of GBV. The adaptation process involved consultation with stakeholders—health care providers, social workers, and civil society organizations—legal reviewing of the Iraqi context and making the handbook available in Arabic and Kurdish.



In cooperation with some national and international partners, including Dary and Cordaiad, WHO conducted five focus group discussions to assess the availability of services and the capacity of health care providers and services to address women's needs, including survivors of violence.

In total, 75 women between 18 and 60 years old participated in these discussions. In general, these focus groups highlighted the following:

The COVID-19 pandemic has had a significant negative effect on Iraqi families. Since early 2020, rates of GBV in families, including physical violence and unplanned and unwanted pregnancies, have increased. Many families are suffering from the pandemic's mental effects, as well as its economic complications, and many girls have stopped their studies. Reaching out to GBV services was not easy even at the beginning of the crisis, and it is still not the biggest priority for health facilities.

Around 38% of the women who participated in the focus group discussions were vaccinated against COVID-19. They referred to getting permission from the head of the family to receive the vaccine as the main challenge preventing them being vaccinated, as well as misunderstandings about the relationship of vaccines to fertility, pregnancy and lactation, concerns about going outside of their homes, and the distant locations of vaccination units.

Focus group discussion conducted in cooperation with DARY organisation in AAF camp, Anbar governorate.

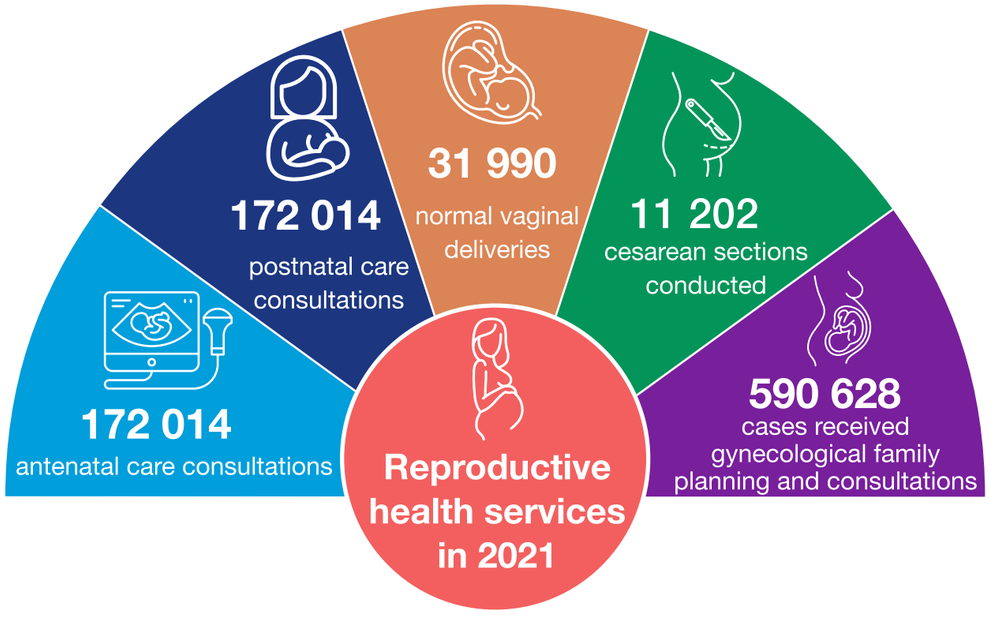
Maternal and child health

In 2021, WHO supported the Iraqi Ministry of Health in the provision of quality reproductive, maternal, newborn, child, and adolescent health (RMNCAH) services by building the capacity of health care providers and having a pool of trainers familiar with the updated WHO guidelines for family planning, provision of adolescent-friendly health services, Integrated Management of Childhood Illnesses (IMCI), infant and young child feeding counselling, management of severe acute malnutrition of children under five years of age, and growth monitoring of these children.

Priorities in 2022

WHO plans to continue working with the Ministry of Health to enhance RMNCAH interventions across Iraq. The plan includes:

- engaging in policy dialogue and advocacy with policy-makers and relevant stakeholders to prioritise RMNCAH at the country level;
- providing technical support for developing policies, strategies, and action plans;
- building the capacities of health professionals using the WHO updated recommendations for services (family planning; antenatal, postnatal, and emergency obstetric and newborn care; essential newborn care; ICMI; and adolescent and school health);
- enhancing the quality of care using the WHO tools for assessment and improvement;
- strengthening systems for surveillance of and responding to maternal and perinatal deaths;
- providing technical support to maintain services during and beyond the COVID-19 pandemic; and
- supporting the Ministry of Health in developing training materials and updating curricula.



Referral hospitals

In 2021, WHO continued the gains made in previous years by strengthening three referral hospitals to improve 24/7 lifesaving emergency referrals and curative health services in Erbil (East Emergency Hospital), Duhok (Akre Paediatric and Maternity Hospital), and Sulaymaniyah (Burn and Reconstructive Hospital).

In Erbil, WHO has continued to support the East Emergency Hospital and enhance the hospital's capacity through renovating and rehabilitating other departments.

As for Duhok, Akre Paediatric and Maternity Hospital is being renovated, with a particular focus on the paediatric and neonatology departments. This includes renovation of the paediatric department with 20 beds, as well as the setting up of a paediatric triage system and an intensive care unit (ICU) equipped with medical gas outlets in line with international standards, the necessary supplies of essential medical equipment, medical furniture and consumables.

The Plastic Burn and Paediatric Unit of the Burn and Reconstructive Hospital in Sulaymaniyah was also renovated and equipped. This has improved the capacity of the hospital to provide surgical interventions for a variety of surgical cases while maintaining the highest standards.

WHO Representative in Iraq Dr Ahmed Zouiten visits Sulaymaniyah Burn, Plastic and Reconstructive Surgery Hospital

Risk communications and community engagement

In response to COVID-19, WHO and the Ministry of Health reached more than 8 000 000 people to disseminate various risk communication materials and bulk messaging. Multiple approaches were used to reach different community groups. Social media channels, including Instagram, Facebook, Twitter, YouTube and Instagram, were used to reach communities. More than 12 videos with celebrities and community influencers were produced to disseminate COVID-19 health and vaccine awareness messages. The videos were broadcast on multiple WHO and Ministry of Health social media channels and received more than 4,000,000 views. All of the videos were promoted through Facebook and Instagram.

The SMS mechanism was used to send COVID-19 and vaccine health facts to millions of individuals, focussing on refugees, IDPs and those who did not receive Ministry of Health vaccine appointment messages. The messages were sent to nine governorates (Maysan, Ninawa, Erbil, Duhok, Sulaymaniyah, Muthana, Babil, Wasit and Dewaniya) with the highest hesitancy and lowest vaccination rates.

Twenty visual health promotional materials were produced to communicate health messages about COVID-19 and vaccines. The messages were tailored based on hesitancy surveys conducted in Iraq to better understand the reasons for hesitancy among Iraqis. The visual materials were distributed in Arabic, Kurdish and English.

Engaging with the influencers

The hesitancy survey, which was conducted in 2021, showed that faith/tribal leaders and educators were the most influential members of their communities. As such, major risk communications and community engagement (RCCE) workshops were conducted with 130 faith/tribal leaders and educators from 12 governorates to communicate the importance of the vaccinations and adherence to prevention measures. Vaccination teams were also sent to mosques to give the vaccine to worshippers offering Friday prayers.

WHO trained and engaged with around 300 faith leaders from different religious affiliations in 2021

Two-way communication strategy

The implementation of RCCE promoted a two-way communication strategy between the population at high risk of COVID-19 and the responding agencies, including the government, local and international nongovernmental organizations, United Nations and other actors working to contain the outbreak of the diseases by proactively asking, listening to and understanding individuals' knowledge and perception gaps and tailoring the communication messaging accordingly. WHO Iraq worked actively with community leaders and partners to stimulate the COVID-19 response in the country.

300
faith leaders from different religious affiliations reached

75
health care workers trained on RCCE

50
media people trained on spreading health messages

13 000
mosques used to spread health messages

Governorate health system support

Kirkuk and Erbil governorates

WHO is co-chairing health cluster responses in Kirkuk and Erbil governorates jointly with the respective directorates of health by coordinating, monitoring, and following up on the activities of 20 health partners, and facilitating the sharing of information among them.

WHO took the lead in ensuring that all health activities performed by these humanitarian partners in 2021 were in line with the HRP strategies and WHO Iraq's COVID-19 strategic preparedness and response plan.

As a health sector leader for the Regional Refugee and Resilience Plan (3RP) jointly with the United Nations Office of the High Commission for Refugees (UNHCR), WHO drafted and planned the 2021 Health sector response plan for the 3RP to help humanitarian and development partners to respond to the health needs of 256 000 refugees in Iraq. The response focused on: improving access to public health care services for refugees and host communities; strengthening health institutions, including the service delivery capacity, coordination, transparency, and accountability of health partners; and strengthening reproductive health services in camps and impacted areas.

WHO and the UNHCR identified 11 prioritized health activities to be used as benchmarks for finalizing reporting indicators of partners' activities on the 3RP 2021 Activityinfo platform.

WHO supported four refugee camps in Erbil with essential medicines, medical supplies and equipment worth US$ 99 918.

In line with the COVID-19 camp preparedness and response plan, and in collaboration with humanitarian health partners, specifically, Barzani Charity Foundation, WHO set up two isolation units to receive and manage COVID-19 patients from three of the IDP camps in Erbil: one in the Khabat district (20-bed capacity) to receive cases from the Khazir, Hassan Sham U2, and Hassan Sham U3 camps, and another (50-bed capacity) for the Hassan Sham U3 camp.

WHO, along with the UNHCR, United Nations Children's Fund (UNICEF), and the Barzani Charity Foundation, facilitated and monitored the vaccination of IDPs and refugees in six IDP camps and four refugee camps in Erbil governorate. Out of 35 262 targeted individuals, 15 385 COVID-19 vaccine doses were administered in 2021.

WHO launched the COVID-19 Community Prevention and Vaccination Awareness Campaign in Erbil and Kirkuk by printing and distributing 32 000 IEC materials and training 117 health workers, media personnel, and community and religious leaders.

WHO provided capacity-building for 364 health workers in COVID-19 vaccination management and deployment to ensure the safe vaccination of individuals in Kirkuk and Erbil.

Also, WHO supplied Erbil with PPE and COVID-19 laboratory kits and supplies worth USD 502 105, and supplied Kirkuk with the same items worth USD 86 466.

In terms of emergency response and support, WHO ensured that 4500 IDPs in Hassan Sham U2 camp had access to quality essential health services through its implementing partner Heevie. More than 25 000 consultations and cases were managed in 2021.

WHO supported the running of four MMCs in the area of returnees in Kirkuk to provide primary health services through DAMA NGO, enabling providing 84 052 consultations.

WHO helped prevent infectious diseases and reduce their spread in Hawija, which hosts 350 000 returnees, by ensuring proper management of medical waste in 38 health care facilities, collecting and safely disposing of 10 586 kg of medical waste.

WHO delivers a medical shipment to the Directorate of Health in Erbil governorate to respond to health needs of the population

Sulaymaniyah governorate

Sulaymaniyah was one of the governorates hardest-hit by the COVID-19 pandemic since the initial stages of the global outbreak of the disease. The governorate continued reporting high figures in terms of community transmission and positivity rates throughout 2021 and was positioned in the red epi zone.

In response, WHO identified Sulaymaniyah governorate for an intensive 4-day COVID-19 prevention, vaccination and RCCE activities. This targeted multiple key players in community awareness and prevention, including health workers, vaccinators, clerics, tribal figures, nongovernmental organizations, community activists and media outlet managers.

Mass vaccination campaign

As part of the national COVID-19 mass vaccination campaign across Iraq in November–December 2021, Sulaimaniyah conducted a campaign via six mega centres, administering 59 290 vaccine doses in the governorate, including 6526 doses administrated in the IDP camps.

Sulaimaniyah was the first governorate in Iraq, administering 59 280 COVID-19 vaccine doses out of the total 430 000 doses administered in Iraq during the campaign.

The vaccines administered in Sulaimaniyah during the MVC constituted 37% of the total administered in the governorate in all health facilities during the campaign. The logistics cost of WHO was lowest in Sulaimaniyah, with an average of 2419 Iraqi dollars per administered dose compared to the other governorates.

PHC in Ashti Camp

WHO and the Heevie Organization continued in 2021 to run a health facility in Ashti IDP camp in Sulaymaniyah governorate, which hosts about 8795 IDPs.

Throughout 2021, WHO provided many health facilities with medicines and medical supplies, including equipment for COVID-19 hospitals, PPE, and laboratory equipment, with a cost of US$ 238 150.

WHO and the Heevie Organization continued in 2021 to run a health facility in Ashti IDP camp in Sulaymaniyah, which hosts about 8795 IDPs

Ninawa governorate

In Ninawa, a mass vaccination campaign was also conducted during November and December 2021. Ten vaccination sites outside public health facilities were identified by the directorate of health of Ninawa. Each site had two vaccination teams and one support team. Each vaccination team included six staff, while the support team had nine. The vaccination teams targeted people over age 12 years, successfully vaccinating 31 563 persons with different doses of the vaccine.

Essential PHC services

In Ninawa, WHO supported four PHC centres: one in a camp, one in an unofficial settlement, and two in returnee areas. In 2021, these PHC centres provided PHC, maternal and child health services, vaccination, nutrition, and referral services, and were equipped with at least one ambulance at each site. WHO also supported the operation of 12 mobile medical clinics working in different locations to serve returnees and host communities in hard-to-reach areas.

WHO supported the delivery of secondary health services in three locations in Ninawa. More than 722 156 consultations were delivered through these health facilities in 2021. Of these consultations, implementing partners delivered 96 778 consultations for reproductive health, 8510 for MHPSS, and 17 008 for physical rehabilitation.

WHO also supported medical waste management services in Ninawa during 2021. This included operating three units that collected waste from 101 public health facilities. The total amount of waste collected during 2021 was 46 367 kg.

In Ninawa, during 2021, WHO supported five training workshops to build the capacities of 63 staff in the DoH of Ninawa in critical care, MHPSS, IPC, supply chains, management of burns, and International Classification of Diseases (ICD 10) and death certification.

In 2021, WHO continued to support four PHC centres in Ninawa: one in a camp, one in an unofficial settlement, and two in returnee areas

Duhok governorate

WHO continued supporting PHC services in IDP camps by running 10 PHC centres in 10 IDP camps with implementing partners Heevie and DAMA national nongovernmental organizations.

In 2021, these centres provided 33 738 reproductive health consultations and 8729 MHPSS consultations. Also, 97 146 laboratory tests were performed, while 6595 patients were referred to receive medical and surgical interventions or radiological and laboratory investigations.

WHO also ran and managed the Physical Rehabilitation Centre in Sumel district of Duhok province, which provided 9655 people with physiotherapy services in 2021.

The WHO team supported Duhok Directorate of Health in conducting a COVID-19 MVC in Duhok and Zakho districts. A total of 29 976 COVID-19 vaccine doses were administered to an equal number of individuals, increasing the COVID-19 coverage in the Duhok governorate by 12.8%.

9655 people provided with physiotherapy services

110 health providers, media people and religious leaders trained in RCCE

17 health care providers trained in mental health and GBV

110 health providers, media people and faith leaders trained in RCCE

60 health care workers trained in surveillance

Six doctors and nurses trained in ICU/critical care

WHO team during a visit to WHO-supported Heevie Teaching Hospital in Duhok Governorate

WHO priorities in 2022

In 2022, WHO Iraq will continue to provide quality essential health care services to people in need of humanitarian assistance (internally displaced persons, people in secondary displacement locations, and highly vulnerable host communities) to reduce avoidable morbidity and mortality.

Provide uninterrupted PHC services to IDPs, people in secondary displacement locations, and to host communities.

- Expand the availability of comprehensive PHC services by operationalizing PHC centres and mobile medical clinics, and selected referral health facilities.
- Support five governorates with standard medical waste treatment activities.
- Continue to fill gaps in medicines, medical supplies, kits, and medical equipment to ensure the provision of essential health services in the target governorates.

Detect and respond in a timely manner to common communicable disease outbreaks.

- Provide refresher training to 200 staff on EWARN reporting, use of EWARN, and outbreak preparedness and response to the common communicable diseases in Iraq, including vaccine-preventable and waterborne diseases, such as cholera.
- Support three governorates with water quality monitoring by addressing resource gaps.

Strengthen quality of care and the health information management system.

- Target eight conflict-affected governorates for a health resource availability mapping study to enable the timely identification of needs and gaps, support evidence-based decision-making and coordination, aid efficient planning and implementation, and offer detailed response monitoring advocacy and resource mobilization.

Improve the COVID-19 pandemic response by supporting the health authorities' plans and capacities to stop the transmission of COVID-19 among IDPs and vulnerable people.

- Support case management and ensure continuity of essential health services.
- Support public health laboratories with capacity building activities for specimen collection, management, transportation, and confirmation of COVID-19.
- Provide training in IPC practices and strategies to selected health professionals from all governorates.
- Conduct awareness-raising activities to inform local communities about how to protect their health and that of others.
- Support the mental health and well-being of communities affected by the pandemic, including support for GBV activities.
- Conduct regular monitoring visits and document lessons learned to inform future preparedness and response activities.

COVID-19 response

WHO's COVID-19 response priorities aim to stop the transmission of COVID-19 in Iraq and halt its spread to other countries. Specific strategic objectives are to:

- limit human-to-human transmission, including reducing secondary infections among close contacts and health care workers; preventing transmission amplification events; and preventing further spread from Iraq;
- detect, verify, isolate, and care for patients early, including providing optimized care for infected patients;
- communicate critical risk and event information to all communities and to counter misinformation.

The response supports various interventions to strengthen the health authorities' plans and capacities to stop the transmission of COVID-19 among IDPs and vulnerable people.

Financial overview

In 2021, WHO Iraq received a total contribution of US$ 31.1 million from its donors, of which US$ 12.2 million was used for the COVID-19 response. The remaining funds were mainly used to sustain the provision of humanitarian health services to the most vulnerable. Contributions were received from donors such as USAID's Bureau for Humanitarian Assistance, Germany, United States Agency for International Development (USAID), the United States Bureau of Population, Refugees, and Migration, the European Civil Protection and Humanitarian Aid Operations (ECHO), and Canada's Department of Foreign Affairs, Trade and Development.

Funding source name	Amount US$
USAID's Bureau for Humanitarian Assistance	10 500 000
Germany	7 210 683
United States Agency for International Development (USAID)	6 707 325
US Bureau of Population, Refugees, and Migration	3 000 000
European Civil Protection and Humanitarian Aid Operations (ECHO)	2 860 249
Department of Foreign Affairs, Trade and Development, Canada	849 653
Total contribution received in 2021	**31 127 910**

WHO would like to extend its sincerest thanks to all donors and partners for their generous, valued support to the WHO country office in Iraq since the start of COVID-19 pandemic.

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Foreign Affairs, Trade and Development Canada

OCHA Office for the Coordination of Humanitarian Affairs

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Moving forward

As Iraq moves away from the headlines, donor priorities are changing, and support from humanitarian actors is decreasing. Many traditional donors are losing interest and shifting their focus to stabilization and early recovery efforts. Thus, humanitarian funding for Iraq is becoming more challenging to secure and will likely decrease in the coming years.

In 2022, this led WHO to work on a strategic prioritisation of its interventions, as the lack of funding is forcing us to scale down some of our operations. While reaching out to potential development donors, WHO will continue to engage with and advocate its traditional donors. While development and reconstruction are necessary for Iraq's future, immediate needs must still be met.

The Iraqi Government has cooperated with humanitarian partners in supporting service delivery, and WHO has particularly effective coordination with the Ministry of Health and directorates of health.

As the country is gradually transitioning from an emergency response to a longer-term development strategy, the WHO's focus in the next few years will be on strengthening the health system's resilience and preparedness to meet the global WHO goal of giving everyone, everywhere, an equal chance to live a healthy life.

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Iraq

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WHO, WORLD BANK & German Government reports on Iraq

WHO Noncommunicable diseases

World Health Organization

Noncommunicable diseases

16 September 2022

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Key facts

- Noncommunicable diseases (NCDs) kill 41 million people each year, equivalent to 74% of all deaths globally.
- Each year, 17 million people die from a NCD before age 70; 86% of these premature deaths occur in low- and middle-income countries.
- Of all NCD deaths, 77% are in low- and middle-income countries.
- Cardiovascular diseases account for most NCD deaths, or 17.9 million people annually, followed by cancers (9.3 million), chronic respiratory diseases (4.1 million), and diabetes (2.0 million including kidney disease deaths caused by diabetes).
- These four groups of diseases account for over 80% of all premature NCD deaths.
- Tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets all increase the risk of dying from an NCD.
- Detection, screening and treatment of NCDs, as well as palliative care, are key components of the response to NCDs.

Overview

Noncommunicable diseases (NCDs), also known as chronic diseases, tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behavioural factors.

The main types of NCD are cardiovascular diseases (such as heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma) and diabetes.

NCDs disproportionately affect people in low- and middle-income countries, where more than three quarters of global NCD deaths (31.4 million) occur.

People at risk

People of all age groups, regions and countries are affected by NCDs. These conditions are often associated with older age groups, but evidence shows that 17 million NCD deaths occur before the age of 70 years. Of these premature deaths, 86% are estimated to occur in low- and middle-income countries. Children, adults and the elderly are all vulnerable to the risk factors contributing to NCDs, whether from unhealthy diets, physical inactivity, exposure to tobacco smoke or the harmful use of alcohol.

These diseases are driven by forces that include rapid unplanned urbanization, globalization of unhealthy lifestyles and population ageing. Unhealthy diets and a lack of physical activity may show up in people as raised blood pressure, increased blood glucose, elevated blood lipids and obesity. These are called metabolic risk factors and can lead to cardiovascular disease, the leading NCD in terms of premature deaths.

Risk factors

Modifiable behavioural risk factors

Modifiable behaviours, such as tobacco use, physical inactivity, unhealthy diet and the harmful use of alcohol, all increase the risk of NCDs.

- **Tobacco accounts for over 8 million deaths every year (including from the effects of exposure to second-hand smoke)** *(1)*.
- **1.8 million annual deaths have been attributed to excess salt/sodium intake** *(1)*.
- **More than half of the 3 million annual deaths attributable to alcohol use are from NCDs, including cancer.**
- **830 000 deaths annually can be attributed to insufficient physical activity** *(1)*.

Metabolic risk factors

Metabolic risk factors contribute to four key metabolic changes that increase the risk of NCDs:

- raised blood pressure;
- overweight/obesity;
- hyperglycemia (high blood glucose levels); and
- hyperlipidemia (high levels of fat in the blood).

In terms of attributable deaths, the leading metabolic risk factor globally is elevated blood pressure (to which 19% of global deaths are attributed) *(1),* followed by raised blood glucose and overweight and obesity.

Socioeconomic impact

NCDs threaten progress towards the 2030 Agenda for Sustainable Development, which includes a target of reducing the probability of death from any of the four main NCDs between ages 30 and 70 years by one third by 2030.

Poverty is closely linked with NCDs. The rapid rise in NCDs is predicted to impede poverty reduction initiatives in low-income countries, particularly by increasing household costs associated with health care. Vulnerable and socially disadvantaged people get sicker and die sooner than people of higher social positions, especially because they are at greater risk of being exposed to harmful products, such as tobacco, or unhealthy dietary practices, and have limited access to health services.

In low-resource settings, health-care costs for NCDs quickly drain household resources. The exorbitant costs of NCDs, including treatment, which is often lengthy and expensive, combined with loss of income, force millions of people into poverty annually and stifle development.

Prevention and control

An important way to control NCDs is to focus on reducing the risk factors associated with these diseases. Low-cost solutions exist for governments and other stakeholders to reduce the common modifiable risk factors. Monitoring progress and trends of NCDs and their risk is important for guiding policy and priorities.

To lessen the impact of NCDs on individuals and society, a comprehensive approach is needed requiring all sectors, including health, finance, transport, education, agriculture, planning and others, to collaborate to reduce the risks associated with NCDs, and to promote interventions to prevent and

control them.

Investing in better management of NCDs is critical. Management of NCDs includes detecting, screening and treating these diseases, and providing access to palliative care for people in need. High impact essential NCD interventions can be delivered through a primary health care approach to strengthen early detection and timely treatment. Evidence shows such interventions are excellent economic investments because, if provided early to patients, they can reduce the need for more expensive treatment. Countries with inadequate health care coverage are unlikely to provide universal access to essential NCD interventions. NCD management interventions are essential for achieving the SDG target on NCDs.

WHO response

The 2030 Agenda for Sustainable Development recognizes NCDs as a major challenge for sustainable development. As part of the Agenda, heads of state and government committed to develop ambitious national responses, by 2030, to reduce by one third premature mortality from NCDs through prevention and treatment (SDG target 3.4). WHO plays a key leadership role in the coordination and promotion of the global fight against NCDs and the achievement of the Sustainable Development Goals target 3.4.

In 2019, the World Health Assembly extended the WHO Global action plan for the prevention and control of NCDs 2013–2020 to 2030 and called for the development of an Implementation Roadmap 2023 to 2030 to accelerate progress on preventing and controlling NCDs. The Roadmap supports actions to achieve a set of nine global targets with the greatest impact towards prevention and management of NCDs.

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(1) Global Burden of Disease Collaborative Network, Global Burden of Disease Study 2019 (GBD 2019) Results (2020, Institute for Health Metrics and Evaluation – IHME) https://vizhub.healthdata.org/gbd-results/

Publications

- Global Action Plan for the Prevention and Control of NCDs 2013–2020
- WHO Global status report on noncommunicable diseases 2014

Related links

- WHO's work on noncommunicable diseases
- More about noncommunicable diseases
- Data on noncommunicable diseases
- Framework for Developing Dialysis Programs in Low-resource Settings

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WHO World Health Statistics- Iraq 2022

Eastern Mediterranean Region

Building capacity to calculate excess mortality during the COVID-19 pandemic

All-cause mortality registration systems are important to determine the actual toll a pandemic such as COVID-19 is taking on individuals and communities. WHO has been working with countries of the Eastern Mediterranean Region since 2012 to improve their mortality registration systems. A total of 16 countries in the region currently report annual mortality data by cause of death to WHO. However, the COVID-19 pandemic has highlighted the urgent need for more frequent data to monitor sudden changes in mortality. To that end, WHO has strengthened country capacities to report weekly mortality data by all causes (natural and non-natural) and COVID-19 deaths on an online platform.

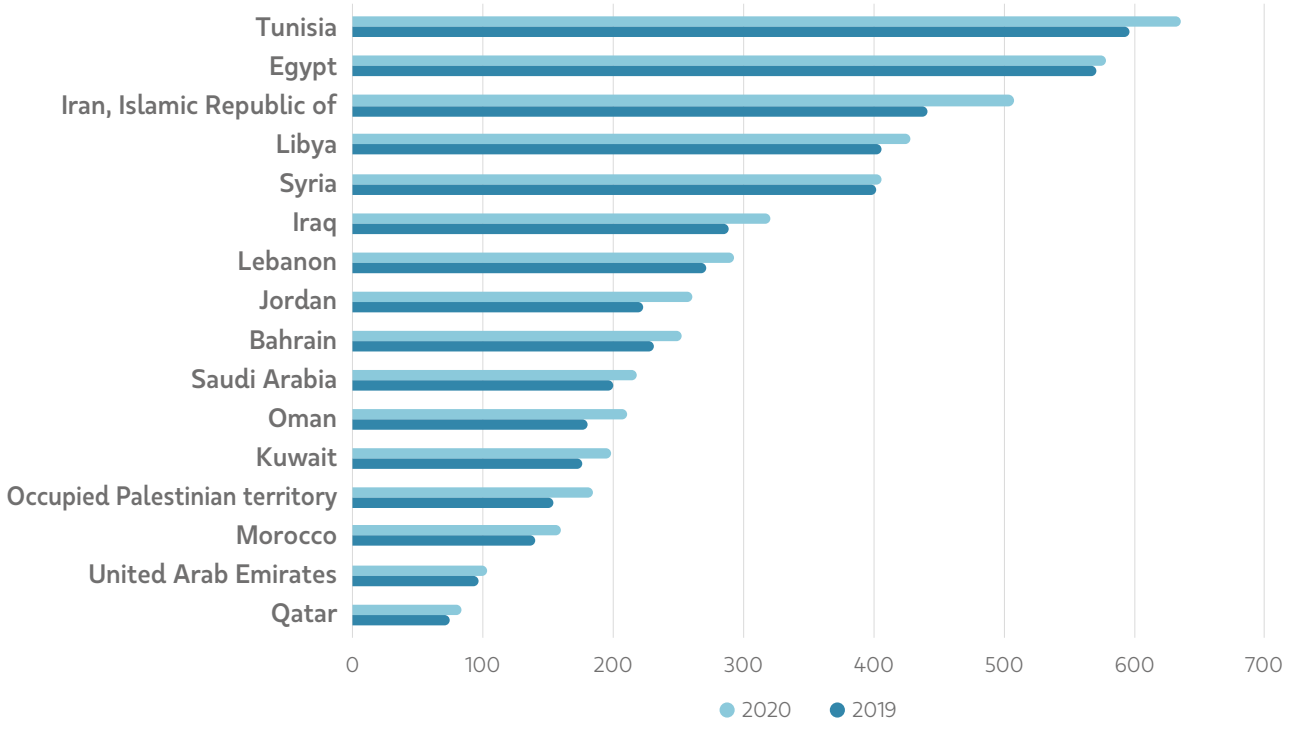
Focal persons from information health units and mortality and cause-of-death registration programmes were familiarized with the online platform through regular virtual meetings. Technical support to countries focused on the process of compiling, reviewing and validating total numbers of deaths and COVID-19 deaths in order to generate reliable data for calculating age- and sex-specific mortality indicators. The validation process was two-fold: continuous communication with death registration programme focal persons at national level, and regular WHO Regional Office feedback to maintain instant reporting of quality accepted and complete data. This approach made it possible to set weekly benchmarks and assess excess mortality in 2020 compared to previous years *(8)*, with countries able to use the data for planning and decision-making.

Several meetings with mortality data focal points were held to introduce innovations related to the implementation of mortality surveillance systems and collection of data by age and sex. This led to the establishment of rapid mortality surveillance in Jordan and the Syrian Arab Republic. Capacity-building workshops were also organized to train country teams responsible for health information systems on the use of excess mortality calculator and interpretation of results *(9)*.

Countries with strong digital integrated health information platforms (for example, Oman) were able to develop weekly mortality curves by age and sex, as well as identify excess mortality in 2020. Lebanon also made significant improvements in its death registration system. Despite its limited infrastructure, Lebanon used available mortality data by all causes of death to validate COVID-19 deaths and assess the true impact of the COVID-19 pandemic. Iraq and Tunisia also reported on monthly total deaths and were able to determine excess deaths in 2020 in comparison to 2019.

Seven countries in the Eastern Mediterranean Region have reported total deaths during the pandemic period, data that have contributed to estimations of COVID-19 excess mortality at the regional and global levels. Countries with a high coverage of death registration and efficient registration systems showed little difference between estimated and reported total deaths in 2020 (Fig. A1.4). Reporting on mortality data by causes of death using the standardized reporting of the International Classification of Diseases (10th revision) was key to enable countries to identify the impact of COVID-19 to cause deaths within their top 10 leading causes of death. Mortality data for Lebanon, Oman, Qatar, Tunisia and the United Arab Emirates were publicly available by causes of death, which was helpful for identifying the top 10 leading causes of death in 2020, including COVID-19 direct deaths, and for estimating excess deaths associated with COVID-19 mortality during that year.

Fig. A1.4. Reported crude deaths rates (per 100 000 population), adjusted for COVID-19 deaths, Eastern Mediterranean Region, 2019 and 2020



Source: WHO, 2022.

Summary of SDG 3 indicators for which country-level values are reported as comparable estimates[a]

Member State	3.1.1 Maternal mortality ratio[b] 2017	3.2.1 Under-five mortality rate[c] 2020	3.2.2 Neonatal mortality rate[c] 2020	3.3.1 New HIV infections[d] 2020	3.3.2 Tuberculosis incidence[e] 2020	3.3.3 Malaria incidence[f] 2020	3.3.4 Hepatitis B prevalence[g] 2020	3.4.1 Probability of dying from the four major NCDs[h] 2019	3.4.2 Suicide mortality rate[e] 2019	3.5.2 Alcohol consumption[i] 2019	3.6.1 Road traffic mortality rate[e] 2019	3.8.1 UHC service coverage index 2019	3.9.1 Air pollution mortality rate[j] 2016	3.9.2 WASH mortality rate[e] 2016	3.9.3 Unintentional poisoning mortality rate[e] 2019	3.a.1 Tobacco use prevalence[k] 2020	3.b.1 DTP3 immunization[l] 2020	3.b.1 MCV2 immunization[m] 2020	3.b.1 PCV3 immunization[l] 2020	3.b.1 HPV vaccine[n] 2020
Afghanistan	638	58	35	0.04	193	8.4	0.39	35.3	4.1	<0.1	15.9	37	211.1	13.9	1.0	23.3	70	43	68	
Bahrain	14	7	3		13		0.03	16.1	8.9	1.1	5.2	71	40.1	<0.1	0.3	14.9	98	99	99	
Djibouti	248	56	30	0.13	224	97.6	0.26	22.0	9.6	0.4	23.5	48	159.0	31.3	2.5		70	60	70	
Egypt	37	19	10	0.03	11		0.20	28.0	3.0	0.1	10.1	70	108.9	2.0	0.2	24.3	94	94		
Iran (Islamic Republic of)	16	13	8	0.03	13	0.0	0.05	14.8	5.2	1.0	21.5	77	50.9	1.0	1.0	13.6	99	98		
Iraq	79	25	14		27		0.29	23.5	3.6	0.4	27.3	55	75.1	3.0	0.2	18.5	74	93	0	
Jordan	46	15	9	0.01	5		0.56	15.3	1.6	0.5	17.0	60	51.2	0.6	0.5	34.8	77	90		
Kuwait	12	9	5		19		0.03	11.9	2.9	0.0	15.4	70	103.8	<0.1	0.4	17.9				
Lebanon	29	7	4	0.03	13		0.07	19.9	2.8	1.5	16.4	72	51.4	0.8	0.6	38.2	71	64	74	
Libya	72	11	6	0.05	59		0.43	18.6	4.5	<0.1	21.3	60	71.9	0.6	0.8		73	72	73	
Morocco	70	19	12	0.02	98		0.16	24.1	7.2	0.5	17.0	73	49.1	1.9	0.7	14.5				
Oman	19	11	5		7		0.13	21.5	4.9	0.9	10.6	69	53.9	<0.1	0.9	8.0	99	99	99	
Pakistan	140	65	40	0.12	259	2.5	0.91	29.4	8.9	0.3	13.0	45	173.6	19.6	1.6	20.2	77	74	80	
Qatar	9	6	4	0.07	34		0.05	10.7	5.8	1.5	7.3	74	47.4	<0.1	0.3	11.8	82	90	70	
Saudi Arabia	17	7	3	0.05	8	<0.1	0.00	20.9	6.0	0.0	35.9	73	83.7	0.1	0.8	14.3	95	96	95	
Somalia	829	115	37	0.02	259	52.2	6.32	30.4	7.9	0.0	27.4	27	212.8	86.6	4.9		42			
Sudan	295	57	27	0.09	63	73.4	1.66	22.8	3.8		26.8	44	184.9	17.3	1.7		90	68	90	
Syrian Arab Republic	31	22	11	0.01	19		0.69	22.1	2.0	0.2	14.9	56	75.2	3.7	0.6		49	53		
Tunisia	43	17	12	0.03	36		0.12	15.7	3.3	2.0	16.5	70	56.1	1.0	0.7	24.6	92	92	82	
United Arab Emirates	3	7	4	0.13	1		0.02	18.5	6.4	3.8	8.9	78	54.7	<0.1	0.4		90	92	84	29
Yemen	164	60	28	0.04	49	40.6	1.76	27.6	5.8	<0.1	29.4	44	194.2	10.2	1.8	20.3	72	46	72	

[a] Comparable estimates refer to country values of the same reference year, which may be adjusted or modelled to allow comparisons between countries and are produced for countries with underlying primary data and, in some cases, for those without. Refer to Annex 2 for the full set of SDG 3 indicators. Shading from blue to orange represents low to high for mortality, incidence and prevalence indicators; and from high to low for immunization coverage and service index indicators. Each indicator is graphed on an individual scale.

[b] per 100 000 live births
[c] per 1000 live births
[d] per 1000 uninfected population
[e] per 100 000 population
[f] per 1000 population at risk
[g] among children under 5 years (%)
[h] between ages 30-69 (%)
[i] litres of pure alcohol per capita ≥15 years
[j] age-standardized, per 100 000 population
[k] age-standardized, among adults 18+ (%)
[l] among 1-year-olds (%)
[m] by the nationally recommended age (%)
[n] among 15 year-old girls (%)

										3.1
	Total population[a] (000s)			Life expectancy at birth[b] (years)			Healthy life expectancy at birth[b] (years)			Maternal mortality ratio[c] (per 100 000 live births)
Data type				Comparable estimates			Comparable estimates			Comparable estimates
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	
Member State	2020			2019			2019			2017
Dominica	-	-	72	-	-	-	-	-	-	-
Dominican Republic	5 418	5 430	10 848	69.8	76.2	72.8	62.1	66.1	64.0	95
Ecuador	8 824	8 819	17 643	76.4	80.5	78.4	67.7	69.3	68.5	59
Egypt	51 703	50 632	102 334	69.6	74.1	71.8	62.3	63.7	63.0	37
El Salvador	3 036	3 450	6 486	70.6	79.1	75.0	61.6	67.8	64.9	46
Equatorial Guinea	780	623	1 403	60.9	63.6	62.2	53.4	54.1	53.9	301
Eritrea	1 778	1 769	3 546	61.3	67.1	64.1	53.9	57.7	55.7	480
Estonia	628	698	1 327	74.7	82.6	78.9	66.4	71.7	69.2	9
Eswatini	570	590	1 160	53.4	63.2	57.7	47.1	53.8	50.1	437
Ethiopia	57 517	57 447	114 964	66.9	70.5	68.7	59.0	60.8	59.9	401
Fiji	454	442	896	65.9	70.3	68.0	58.5	60.7	59.6	34
Finland	2 732	2 808	5 541	79.2	84.0	81.6	69.9	72.0	71.0	3
France	31 589	33 684	65 274	79.8	85.1	82.5	71.1	73.1	72.1	8
Gabon	1 133	1 093	2 226	63.6	69.7	66.5	56.0	59.3	57.6	252
Gambia	1 199	1 218	2 417	63.4	67.7	65.5	56.4	57.7	57.0	597
Georgia	1 901	2 088	3 989	68.8	77.8	73.3	61.4	67.9	64.7	25
Germany	41 416	42 368	83 784	78.7	84.8	81.7	69.7	72.1	70.9	7
Ghana	15 750	15 323	31 073	63.7	69.2	66.3	56.5	59.6	58.0	308
Greece	5 116	5 307	10 423	78.6	83.6	81.1	69.9	71.9	70.9	3
Grenada	57	56	113	70.6	75.3	72.9	62.6	65.4	63.9	25
Guatemala	8 827	9 088	17 916	69.0	75.0	72.0	60.5	64.1	62.3	95
Guinea	6 353	6 780	13 133	59.5	62.3	61.0	52.9	53.7	53.3	576
Guinea-Bissau	963	1 005	1 968	57.4	63.0	60.2	51.1	54.1	52.6	667
Guyana	396	391	787	62.5	69.4	65.7	55.1	59.7	57.2	169
Haiti	5 626	5 776	11 403	63.3	64.8	64.1	55.9	55.8	55.8	480
Honduras	4 949	4 956	9 905	70.7	73.2	71.9	62.7	63.3	63.0	65
Hungary	4 598	5 062	9 660	73.1	79.6	76.4	65.0	69.3	67.2	12
Iceland	171	170	341	80.8	83.9	82.3	71.7	72.3	72.0	4
India	717 101	662 903	1380 004	69.5	72.2	70.8	60.3	60.4	60.3	145
Indonesia	137 718	135 806	273 524	69.4	73.3	71.3	61.9	63.8	62.8	177
Iran (Islamic Republic of)	42 408	41 585	83 993	75.7	79.1	77.3	66.0	66.5	66.3	16
Iraq	20 358	19 865	40 223	69.9	75.0	72.4	61.6	63.7	62.7	79
Ireland	2 451	2 486	4 938	80.2	83.5	81.8	70.7	71.4	71.1	5
Israel	4 308	4 347	8 656	80.8	84.4	82.6	72.0	72.7	72.4	3
Italy	29 438	31 024	60 462	80.9	84.9	83.0	71.2	72.6	71.9	2
Jamaica	1 470	1 492	2 961	74.4	77.7	76.0	65.9	67.3	66.6	80
Japan	61 753	64 723	126 476	81.5	86.9	84.3	72.6	75.5	74.1	5
Jordan	5 166	5 037	10 203	77.0	78.8	77.9	68.1	67.2	67.6	46
Kazakhstan	9 113	9 664	18 777	70.0	77.6	74.0	62.4	67.4	65.0	10
Kenya	26 719	27 053	53 771	63.7	68.4	66.1	56.4	58.9	57.7	342
Kiribati	59	61	119	56.1	62.8	59.4	50.5	54.9	52.6	92
Kuwait	2 614	1 656	4 271	79.3	83.9	81.0	69.5	71.1	70.1	12
Kyrgyzstan	3 227	3 297	6 524	70.7	77.3	74.2	63.6	67.7	65.8	60
Lao People's Democratic Republic	3 652	3 624	7 276	66.2	70.9	68.5	59.2	61.9	60.5	185
Latvia	869	1 017	1 886	70.6	79.8	75.4	62.9	69.3	66.2	19
Lebanon	3 436	3 390	6 825	74.0	79.2	76.4	65.1	67.0	66.0	29
Lesotho	1 057	1 085	2 142	47.7	54.2	50.7	42.3	46.4	44.2	544
Liberia	2 543	2 515	5 058	63.2	65.0	64.1	54.9	55.0	54.9	661
Libya	3 469	3 403	6 871	74.2	77.3	75.8	64.9	65.5	65.2	72
Lithuania	1 260	1 462	2 722	71.2	80.4	76.0	63.4	69.7	66.7	8
Luxembourg	317	309	626	80.6	84.2	82.4	71.1	72.0	71.6	5
Madagascar	13 815	13 876	27 691	64.1	66.6	65.3	56.9	57.7	57.3	335

3.1	3.2		3.3					
Proportion of births attended by skilled health personnel[d] (%)	Under-five mortality rate[e] (per 1000 live births)	Neonatal mortality rate[e] (per 1000 live births)	New HIV infections[f] (per 1000 uninfected population)	Tuberculosis incidence[g] (per 100 000 population)	Malaria incidence[h] (per 1000 population at risk)	Hepatitis B surface antigen (HBsAg) prevalence among children under 5 years[i] (%)	Reported number of people requiring interventions against NTDs[j]	
Primary data	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Primary data	
2012-2021	2020	2020	2020	2020	2020	2020	2020	**Member State**
100[ak]	35	30	-	47	-	0.20	399	**Dominica**
99[ak]	34	23	0.32	41	0.2	0.10	2 612 634	**Dominican Republic**
97	13	7	0.12	48	3.8	0.09	17 609	**Ecuador**
92	19	10	0.03	11	-	0.20	2 932 815	**Egypt**
100	13	6	0.13	55	-	0.02	1 416 732	**El Salvador**
-	78	29	-	280	240.8	6.07	429 326	**Equatorial Guinea**
-	39	18	0.07	81	44.8	1.02	296 052	**Eritrea**
100	2	<1	0.16	10	-	0.29	1	**Estonia**
88	47	20	5.28	319	0.7	0.83	406 184	**Eswatini**
50	49	27	0.12	132	54.1	1.59	75 731 040	**Ethiopia**
100[ak]	27	12	0.16	66	-	0.13	921 225	**Fiji**
100[ak]	2	1	-	4	-	0.81	3	**Finland**
98[al]	4	3	-	8	-	0.15	120	**France**
89[ak]	42	20	0.48	527	215.5	2.12	870 003	**Gabon**
84	49	26	0.93	157	87.3	1.60	168 211	**Gambia**
100[ak]	9	5	0.17	70	-	0.06	81	**Georgia**
96[al]	4	2	0.03	6	-	0.21	116	**Germany**
79	45	23	0.63	143	162.8	2.13	17 220 101	**Ghana**
100[ak]	4	2	0.09	5	-	0.14	41	**Greece**
100[ak]	16	11	-	3	-	0.12	253	**Grenada**
70[ak]	24	11	0.05	27	<0.1	0.03	5 052 069	**Guatemala**
55[ak]	96	30	0.42	179	319.5	6.07	8 180 533	**Guinea**
54	77	35	0.88	361	88.9	2.11	1 892 353	**Guinea-Bissau**
98[ak]	28	17	0.43	79	28.2	0.40	685 741	**Guyana**
42	60	25	0.45	168	3.7	1.04	4 363 545	**Haiti**
94[ak]	16	9	0.07	30	0.1	0.03	2 210 111	**Honduras**
100[ak]	4	2	-	5	-	0.90	1	**Hungary**
97[al]	2	<1	0.04	3	-	0.15	0	**Iceland**
89[ak]	33	20	0.04	188	3.2	0.16	751 758 629	**India**
95	23	12	0.10	301	2.9	1.30	86 492 939	**Indonesia**
99[ak]	13	8	0.03	13	0.0[am]	0.05	5	**Iran (Islamic Republic of)**
96	25	14	-	27	-	0.29	2 170 486	**Iraq**
100[al]	3	2	0.08	5	-	0.04	1	**Ireland**
-	4	2	-	2	-	0.05	88	**Israel**
100[al]	3	2	0.04	7	-	0.33	35	**Italy**
100	13	9	0.53	2	-	0.55	824	**Jamaica**
100[al]	2	<1	0.01	12	-	0.96	5	**Japan**
100	15	9	0.01	5	-	0.56	23	**Jordan**
100[al]	10	5	0.19	69	-	0.15	664	**Kazakhstan**
70	42	20	0.72	259	50.9	0.40	8 596 922	**Kenya**
92[ak]	50	21	-	425	-	1.57	124 250	**Kiribati**
100[al]	9	5	-	19	-	0.03	16	**Kuwait**
100	18	12	0.11	105	-	0.15	2 169 854	**Kyrgyzstan**
64	44	22	0.13	149	1.5	0.68	2 052 528	**Lao People's Democratic Republic**
100[al]	4	2	-	23	-	0.27	2	**Latvia**
-	7	4	0.03	13	-	0.07	0	**Lebanon**
87	90	44	4.91	650	-	1.22	387 421	**Lesotho**
84[ak]	78	31	0.29	314	358.0	4.66	3 180 960	**Liberia**
100[ak]	11	6	0.05	59	-	0.43	4 026	**Libya**
100[ak]	3	2	-	29	-	0.05	0	**Lithuania**
-	3	2	-	6	-	0.06	3	**Luxembourg**
46[ak]	50	20	0.22	238	133.5	2.13	21 390 404	**Madagascar**

	3.4		3.5	3.6	3.7		
	Probability of dying from any of CVD, cancer, diabetes, CRD between age 30 and exact age 70[k] (%)	Suicide mortality rate[k] (per 100 000 population)	Total alcohol per capita (≥ 15 years of age) consumption[l] (litres of pure alcohol)	Road traffic mortality rate[k] (per 100 000 population)	Proportion of women of reproductive age who have their need for family planning satisfied with modern methods[m] (%)	Adolescent birth rate[n] (per 1000 women aged 15–19 years)	Adolescent birth rate[n] (per 1000 women aged 10-14 years)
Data type	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Primary data	Primary data	Primary data
Member State	**2019**	**2019**	**2019**	**2019**	**2012-2020**	**2012-2020**	**2012-2020**
Dominican Republic	19.1	4.9	6.7	64.6	81.7	51.0	0.8
Ecuador	11.0	7.6	3.3	20.1	79.4[ao]	58.4	2.2
Egypt	28.0	3.0	0.1	10.1	80.0[ao]	46.9	0.5
El Salvador	10.7	6.0	4.1	20.9	80.0	51.8	2.0
Equatorial Guinea	22.1	7.9	6.9	27.2	-	-	-
Eritrea	26.8	10.9	2.1	37.9	-	-	-
Estonia	14.9	14.9	10.8	4.5	-	8.5	0.1
Eswatini	35.2	29.4	8.8	33.5	82.9	87.1	1.2
Ethiopia	17.1	5.4	2.2	28.2	63.6	73.5	0.5
Fiji	37.7	9.0	3.7	13.5	-	23.1	0.1
Finland	9.6	15.3	10.7	3.9	-	4.1	0.0
France	10.6	13.8	12.2	5.1	-	7.5	0.1
Gabon	21.3	8.4	8.1	23.9	44.0	91.0	-
Gambia	21.1	4.8	3.4	29.6	39.7[ao]	64.8	1.1
Georgia	24.9	9.2	9.5	12.4	50.5[ao]	27.3	0.0
Germany	12.1	12.3	12.8	3.8	-	6.9	0.1
Ghana	22.5	6.6	2.8	25.7	40.4	78.0	0.7
Greece	12.5	5.1	10.5	8.3	-	8.7	0.4
Grenada	23.3	0.7	9.0	8.0	-	35.9	1.1
Guatemala	16.5	5.9	1.6	22.9	66.1	63.3	1.7
Guinea	24.9	7.0	1.1	29.7	37.7	120.0	4.4
Guinea-Bissau	24.9	7.0	5.5	32.2	60.0[ao]	84.0	1.6
Guyana	29.2	40.3	5.3	22.3	51.5	64.9	1.3
Haiti	31.3	9.6	3.0	18.8	45.4	54.8	1.3
Honduras	18.7	2.1	3.9	16.1	76.0	97.1	2.5
Hungary	22.1	16.6	11.1	7.7	-	21.1	0.2
Iceland	8.7	11.9	9.2	2.0	-	4.4	0.0
India	21.9	12.7	5.6	15.6	72.8	12.2	0.2
Indonesia	24.8	2.4	0.2	11.3	77.0	36.0	0.3
Iran (Islamic Republic of)	14.8	5.2	1.0	21.5	-	27.6	0.5
Iraq	23.5	3.6	0.4	27.3	53.7[ao]	70.0	1.6
Ireland	9.7	9.6	12.7	3.1	-	5.7	0.0
Israel	8.8	5.3	4.4	3.9	-	8.3	0.0
Italy	9.0	6.7	8.0	5.3	-	3.7	0.0
Jamaica	16.9	2.4	4.2	15.1	-	51.7	0.0
Japan	8.3	15.3	10.1	3.6	-	2.8	0.0
Jordan	15.3	1.6	0.5	17.0	56.7[ao]	27.0	0.4
Kazakhstan	22.4	17.6	5.0	12.7	73.2[ao]	24.6	0.0
Kenya	21.0	6.1	2.1	28.3	74.4	81.1	0.7
Kiribati	50.8	28.3	2.3	1.9	53.1[ao]	50.6	1.8
Kuwait	11.9	2.9	0.0	15.4	-	6.2	0.0
Kyrgyzstan	20.3	7.4	4.9	12.7	64.6	34.0	0.0
Lao People's Democratic Republic	26.8	5.4	12.1	17.9	72.3	83.4	2.6
Latvia	21.6	20.1	13.2	8.1	-	10.8	0.0
Lebanon	19.9	2.8	1.5	16.4	-	11.7	-
Lesotho	42.7	72.4	5.1	31.9	82.8	90.8	0.1
Liberia	17.8	4.4	5.4	38.9	41.0[ao]	128.0	3.8
Libya	18.6	4.5	<0.1	21.3	24.0[ao]	10.9	-
Lithuania	19.3	26.1	12.8	8.1	-	10.1	0.1
Luxembourg	9.7	11.3	12.4	4.1	-	3.8	0.0
Madagascar	26.0	5.5	2.0	29.2	65.9	150.8	6.9
Malawi	22.6	5.4	4.1	33.4	73.9	101.8	2.8

3.8			3.9			
UHC: Service coverage index[o]	Population with household expenditures on health > 10% of total household expenditure or income[p] (%)	Population with household expenditures on health > 25% of total household expenditure or income[p] (%)	Age-standardized mortality rate attributed to household and ambient air pollution[q] (per 100 000 population)	Mortality rate attributed to exposure to unsafe WASH services[r] (per 100 000 population)	Mortality rate from unintentional poisoning[k] (per 100 000 population)	
Comparable estimates	Primary data	Primary data	Comparable estimates	Comparable estimates	Comparable estimates	
2019	2012-2020	2012-2020	2016	2016	2019	**Member State**
66	8.2	0.9	43.0	2.2	0.4	**Dominican Republic**
80	10.3	2.4	24.5	0.6	0.3	**Ecuador**
70	31.1	6.1	108.9	2.0	0.2	**Egypt**
76	1.7	0.3	41.9	2.0	0.2	**El Salvador**
43	-	-	177.7	22.3	1.6	**Equatorial Guinea**
50	-	-	173.7	45.6	3.3	**Eritrea**
78	-	-	25.0	<0.1	0.6	**Estonia**
58	5.0	1.3	137.0	27.9	3.3	**Eswatini**
38	2.1	0.3	144.4	43.7	3.3	**Ethiopia**
61	-	-	99.0	2.9	0.3	**Fiji**
83	6.7	0.7	7.2	<0.1	0.4	**Finland**
84	-	-	9.7	0.3	0.3	**France**
49	3.8	0.7	76.0	20.6	1.3	**Gabon**
48	0.2	<0.1	237.0	29.7	1.8	**Gambia**
65	31.2	9.7	101.8	0.2	0.6	**Georgia**
86	-	-	16.0	0.6	0.3	**Germany**
45	1.3	0.1	203.8	18.8	1.7	**Ghana**
78	16.9	1.6	27.6	<0.1	0.2	**Greece**
70	-	-	45.3	0.3	<0.1	**Grenada**
57	11.4	3.8	73.8	6.3	1.6	**Guatemala**
37	7.0	1.2	243.3	44.6	2.3	**Guinea**
37	-	-	214.7	35.3	2.3	**Guinea-Bissau**
74	-	-	107.8	3.6	<0.1	**Guyana**
47	11.5	4.0	184.3	23.8	1.4	**Haiti**
63	-	-	60.7	3.6	0.5	**Honduras**
73	-	-	38.8	0.2	0.5	**Hungary**
87	-	-	8.7	0.1	1.0	**Iceland**
61	17.3	6.5	184.3	18.6	0.3	**India**
59	4.5	0.9	112.4	7.1	0.3	**Indonesia**
77	15.3	3.5	50.9	1.0	1.0	**Iran (Islamic Republic of)**
55	3.7	0.9	75.1	3.0	0.2	**Iraq**
83	-	-	11.9	<0.1	0.3	**Ireland**
84	10.7	1.8	15.4	0.2	<0.1	**Israel**
83	-	-	15.0	0.1	0.3	**Italy**
70	-	-	25.4	0.6	<0.1	**Jamaica**
85	10.5	1.9	11.9	0.2	0.2	**Japan**
60	-	-	51.2	0.6	0.5	**Jordan**
76	2.5	0.1	62.7	0.4	1.9	**Kazakhstan**
56	5.0	1.3	78.1	51.2	2.4	**Kenya**
51	-	-	140.2	16.7	2.6	**Kiribati**
70	-	-	103.8	<0.1	0.4	**Kuwait**
70	3.5	0.7	110.7	0.8	0.9	**Kyrgyzstan**
50	-	-	188.5	11.3	0.6	**Lao People's Democratic Republic**
72	21.4	5.7	41.3	<0.1	1.2	**Latvia**
72	26.6	6.3	51.4	0.8	0.6	**Lebanon**
48	-	-	177.6	44.4	5.2	**Lesotho**
42	6.8	1.1	170.2	41.5	1.7	**Liberia**
60	-	-	71.9	0.6	0.8	**Libya**
70	-	-	34.0	<0.1	1.7	**Lithuania**
86	3.5	0.3	11.6	<0.1	0.2	**Luxembourg**
35	2.9	0.6	159.6	30.2	2.1	**Madagascar**
48	4.4	1.0	115.0	28.3	1.7	**Malawi**

	3.a	3.b					
	Age-standardized prevalence of tobacco use among persons 15 years and older[s] (%)	Diphtheria-tetanus-pertussis (DTP3) immunization coverage among 1-year-olds[t] (%)	Measles-containing-vaccine second-dose (MCV2) immunization coverage by the nationally recommended age[t] (%)	Pneumococcal conjugate 3rd dose (PCV3) immunization coverage among 1-year old[t] (%)	Human papillomavirus (HPV) immunization coverage estimates among 15 year-old girls[t] (%)	Total net official development assistance to medical research and basic health sectors per capita[u] (US$), by recipient country	Proportion of health facilities with a core set of relevant essential medicines available and affordable on a sustainable basis[v] (%)
Data type	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Primary data	Primary data
Member State	**2020**	**2020**	**2020**	**2020**	**2020**	**2020**	**2012-2019**
Djibouti	-	70	60	70	-	14.02	-
Dominica	-	97	90	-	69	13.42	-
Dominican Republic	10.6	82	55	69	7	0.84	-
Ecuador	11.3	70	70	76	36	0.67	50.0[ar]
Egypt	24.3	94	94	-	-	0.33	-
El Salvador	7.9[aq]	72	56	78	-	2.00	-
Equatorial Guinea	-	53	-	-	-	0.59	-
Eritrea	7.5	95	85	95	-	6.18	-
Estonia	29.7	91	87	-	55	-	-
Eswatini	9.2	83	70	83	-	3.24	-
Ethiopia	5.1	71	46	67	76	3.17	-
Fiji	23.1[aq]	99	94	99	89	13.73	-
Finland	21.6	91	93	89	-	-	-
France	33.4[aq]	-	-	-	33	-	-
Gabon	-	63	-	-	-	3.13	-
Gambia	11.1	-	-	-	-	15.37	-
Georgia	31.7	88	77	82	22	1.99	-
Germany	22.0[aq]	93	93	83	43	-	-
Ghana	3.5	94	79	95	-	4.09	12.5[ar]
Greece	33.5	99	83	96	-	-	-
Grenada	-	72	79	-	32	9.26	-
Guatemala	10.9	83	79	86	20	1.45	-
Guinea	-	47	-	-	-	5.40	12.5[ar]
Guinea-Bissau	9.0	74	-	74	-	15.44	-
Guyana	12.1	99	97	89	25	1.99	-
Haiti	7.7	51	41	51	-	6.25	-
Honduras	-	80	79	80	47	7.17	-
Hungary	31.8[aq]	99	99	99	-	-	-
Iceland	12.0[aq]	93	93	93	91	-	-
India	27.2	85	81	21	-	0.26	-
Indonesia	37.6	77	49	4	7	0.50	-
Iran (Islamic Republic of)	13.6	99	98	-	-	0.27	-
Iraq	18.5	74	93	0	-	1.98	-
Ireland	20.8[aq]	94	-	86	77	-	-
Israel	21.2[aq]	98	96	94	55	-	-
Italy	23.1[aq]	94	86	91	27	-	-
Jamaica	9.4[aq]	96	89	-	3	1.49	-
Japan	20.1[aq]	96	95	95	1	-	-
Jordan	34.8[aq]	77	90	-	-	11.29	-
Kazakhstan	23.2	88	91	89	-	0.39	-
Kenya	11.1	89	49	90	16	4.02	-
Kiribati	40.6[aq]	92	57	91	-	58.92	-
Kuwait	17.9	-	-	-	-	-	-
Kyrgyzstan	25.4	87	93	90	-	3.77	0.0[ar]
Lao People's Democratic Republic	31.8	79	47	77	-	8.61	25.3
Latvia	37.0	99	94	91	57	-	-
Lebanon	38.2	71	64	74	-	12.30	52.5
Lesotho	24.3	87	69	87	-	2.88	-
Liberia	8.2	65	30	65	18	10.02	-
Libya	-	73	72	73	-	4.77	-
Lithuania	32.0	91	91	83	68	-	-
Luxembourg	21.1[aq]	99	90	96	-	-	-

3.c				3.d			1.a	
Density of medical doctors[w] (per 10 000 population)	Density of nursing and midwifery personnel[w] (per 10 000 population)	Density of dentists[w] (per 10 000 population)	Density of pharmacists[w] (per 10 000 population)	Average of 13 International Health Regulations core capacity scores[x]	Proportion of bloodstream infections due methicillin-resistant Staphylococcus aureus[y] (%)	Proportion of bloodstream infection due to Escherichia coli resistant to 3rd-generation cephalosporin[y] (%)	Domestic general government health expenditure (GGHE-D) as percentage of general government expenditure (GGE)[z] (%)	
Primary data	Primary data	Primary data	Primary data	Primary data	Primary data	Primary data	Comparable estimates	
2012-2020	2012-2020	2012-2020	2012-2020	2021	2020	2020	2019	**Member State**
2.2	7.3	0.2	2.3	41	0	0	4.3	**Djibouti**
11.0	61.0	1.1	-	63	-	-	7.6	**Dominica**
14.5	14.6	2.3	1.2	65	-	-	16.3	**Dominican Republic**
22.2	25.1	3.0	0.4	66	-	-	13.3	**Ecuador**
7.5	19.3	2.0	4.6	86	100	90	4.7	**Egypt**
28.7	18.3	8.7	6.5	94	-	-	16.9	**El Salvador**
4.0	3.1	-	<0.1	34	-	-	3.9	**Equatorial Guinea**
0.8	14.4	0.5	1.3	41	-	-	2.4	**Eritrea**
34.7	66.1	9.8	7.2	-	-	-	12.9	**Estonia**
1.4	25.1	0.2	0.4	41	2	-	10.0	**Eswatini**
1.1	7.8	<0.1	0.5	72	60	67	4.8	**Ethiopia**
8.6	39.6	1.2	1.1	54	-	-	8.3	**Fiji**
46.4	223.1	10.8	19.2	85	1	7	13.8	**Finland**
32.7	117.8	6.5	10.6	86	12	10	15.1	**France**
6.5	21.1	0.2	1.1	33	-	-	9.6	**Gabon**
0.8	9.5	<0.1	<0.1	44	-	-	4.4	**Gambia**
51.1	55.5	6.2	0.9	63	20	44	9.4	**Georgia**
44.3	141.9	8.5	6.6	85	6	10	20.1	**Germany**
1.7	36.2	0.2	0.4	46	-	64	6.5	**Ghana**
63.1	37.3	12.9	10.9	71	41	25	7.9	**Greece**
14.4	62.8	2.0	6.8	-	-	-	9.4	**Grenada**
12.4	22.4	2.5	1.2	45	-	-	17.6	**Guatemala**
2.2	5.8	<0.1	0.2	47	-	-	6.2	**Guinea**
2.0	7.9	<0.1	<0.1	46	-	-	2.8	**Guinea-Bissau**
14.2	35.3	0.7	0.6	93	-	-	10.3	**Guyana**
2.3	4.0	0.2	0.3	54	-	-	5.4	**Haiti**
5.0	7.3	0.3	-	58	-	-	11.1	**Honduras**
60.6	69.2	7.4	8.4	68	-	-	9.4	**Hungary**
41.4	167.8	8.5	6.1	76	-	-	16.4	**Iceland**
7.4	17.5	1.6	8.7	84	65	87	3.4	**India**
6.2	39.5	1.2	0.9	64	36	76	8.7	**Indonesia**
15.8	20.8	4.5	2.9	86	44	69	21.4	**Iran (Islamic Republic of)**
9.7	23.9	3.5	4.1	46	86	95	6.0	**Iraq**
34.9	179.8	6.7	13.7	66	14	11	20.3	**Ireland**
36.3	119.9	11.7	9.9	-	-	-	12.1	**Israel**
39.5	62.7	8.4	12.1	72	37	29	13.2	**Italy**
5.3	9.4	0.9	0.2	88	-	-	13.3	**Jamaica**
24.8	119.5	8.0	18.9	98	36	21	24.2	**Japan**
26.6	33.5	7.8	10.4	52	58	65	12.8	**Jordan**
40.7	72.9	2.9	8.1	88	-	-	8.2	**Kazakhstan**
1.6	11.7	0.2	0.2	57	25	0	8.3	**Kenya**
2.0	38.3	0.7	0.3	64	-	-	7.4	**Kiribati**
23.4	46.8	6.7	4.9	83	100	100	8.9	**Kuwait**
22.1	56.0	1.9	0.4	41	-	-	7.1	**Kyrgyzstan**
3.5	11.9	0.8	2.3	38	50	51	4.7	**Lao People's Democratic Republic**
34.0	44.3	7.1	8.7	69	14	33	10.4	**Latvia**
22.1	16.7	10.2	12.9	66	35	56	13.4	**Lebanon**
4.7	32.6	0.2	1.9	37	-	-	8.8	**Lesotho**
0.5	19.5	<0.1	2.2	54	13	40	4.0	**Liberia**
20.9	65.3	8.8	6.0	45	83	62	-	**Libya**
50.8	100.8	14.0	12.7	82	10	16	13.2	**Lithuania**
30.1	121.7	9.8	7.0	60	3	11	10.9	**Luxembourg**

	2.2				5.2		6.1	6.2	
	Prevalence of stunting in children under 5[aa] (%)	Prevalence of wasting in children under 5[aa] (%)	Prevalence of overweight in children under 5[aa] (%)	Prevalence of anaemia in women of reproductive age (15–49 years)[ab] (%)	Proportion of ever-partnered women and girls aged 15–49 years subjected to physical and/or sexual violence by a current or former intimate partner in the previous 12 months[ac] (%)	Proportion of ever-partnered women and girls aged 15–49 years subjected to physical and/or sexual violence by a current or former intimate partner in their lifetime[ac] (%)	Proportion of population using safely-managed drinking-water services[ad] (%)	Proportion of population using safely-managed sanitation services[ad] (%)	Proportion of population using a hand-washing facility with soap and water[ad] (%)
Data type	Comparable estimates	Primary data	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates	Comparable estimates
Member State	**2020**	**2012-2020**	**2020**	**2019**	**2018**	**2018**	**2020**	**2020**	**2020**
Dominica	-	-	-	20.8	-	-	-	-	-
Dominican Republic	5.9	2.4	7.6	26.4	10	19	-	-	47
Ecuador	23.1	3.7	9.8	17.2	8	33	67	42	87
Egypt	22.3	9.5	17.8	28.3	15	30	-	67	90
El Salvador	11.2	2.1	6.6	10.6	6	21	-	-	-
Equatorial Guinea	19.7	-	9.3	44.5	29	46	-	-	-
Eritrea	49.1	-	2.1	37.0	-	-	-	-	-
Estonia	1.2	1.5	5.7	21.7	4	21	96	93	-
Eswatini	22.6	2.0	9.7	30.7	18	-	-	-	24
Ethiopia	35.3	7.2	2.6	23.9	27	37	13	7	8
Fiji	7.5	-	5.2	32.0	23	52	-	-	-
Finland	-	-	-	10.9	8	23	100	84	-
France	-	-	-	10.6	5	22	99	79	-
Gabon	14.4	3.4	7.4	52.4	22	41	-	-	-
Gambia	16.1	5.1	2.3	49.5	10	25	45	29	18
Georgia	5.7	0.6	7.6	27.5	3	10	66	34	92
Germany	1.6	0.3[av]	4.1	11.7	5	21	100	97	-
Ghana	14.2	6.8	2.9	35.4	10	24	41	13	42
Greece	2.2	-	13.9	15.1	5	18	100	92	-
Grenada	-	-	-	19.2	8	28	-	-	-
Guatemala	42.8	0.8	5.1	7.4	7	21	56	-	-
Guinea	29.4	9.2	5.7	48.0	21	37	-	-	20
Guinea-Bissau	28.0	6.4[aw]	3.4	48.1	-	-	24	12	18
Guyana	9.0	6.4	6.6	31.7	10	31	-	-	-
Haiti	20.4	3.7	3.7	47.7	12	23	-	-	22
Honduras	19.9	1.4	5.7	18.0	7	17	-	50	-
Hungary	-	-	-	19.7	6	19	93	88	-
Iceland	-	-	-	10.3	3	21	100	84	-
India	30.9	17.3	1.9	53.0	18	35	-	46	68
Indonesia	31.8	10.2	11.1	31.2	9	22	-	-	94
Iran (Islamic Republic of)	6.3	-	9.4[at]	24.1	18	31	94	-	-
Iraq	11.6	3.0	9.0	28.6	-	26	60	43	97
Ireland	-	-	-	12.1	3	16	97	83	-
Israel	-	-	-	12.9	6	-	99	95	-
Italy	-	-	-	13.6	4	16	96	96	-
Jamaica	8.5	3.3	6.8	19.9	7	24	-	-	-
Japan	5.5	-	2.4	19.0	4	20	99	81	-
Jordan	7.3	2.4	7.1	37.7	13	24	86	82	-
Kazakhstan	6.7	3.1	8.8	28.7	6	16	89	-	-
Kenya	19.4	4.2	4.5	28.7	23	38	-	-	27
Kiribati	14.9	3.5	2.4	32.6	25	53	15	27	56
Kuwait	6.0	2.5[av]	7.1	23.7	-	-	100	100	-
Kyrgyzstan	11.4	2.0	5.8	35.8	13	23	70	92	100
Lao People's Democratic Republic	30.2	9.0	3.0	39.5	8	19	18	61	56
Latvia	-	-	-	21.6	6	25	96	83	-
Lebanon	10.4	-	19.7	28.3	-	-	48	16	-
Lesotho	32.1	2.1	7.2	27.9	16	40	29	48	6
Liberia	28.0	3.4	4.7	42.6	27	43	-	-	-
Libya	43.5	10.2	25.4	29.9	-	-	-	22	-
Lithuania	-	-	-	19.9	5	22	95	94	-
Luxembourg	-	-	-	10.2	4	20	99	97	-

6.3.1	6.a	7.1	11.6	16.1	GPW13				
Proportion of safely treated domestic wastewater flows[ae] (%)	Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan[af] (constant 2020 US$ millions)	Proportion of population with primary reliance on clean fuels and technology[ag] (%)	Annual mean concentrations of fine particulate matter (PM2.5) in urban areas[ag] (µg/m³)	Mortality rate due to homicide[k] (per 100 000 population)	Number of cases of poliomyelitis caused by wild poliovirus (WPV)[ah]	Age-standardized prevalence of hypertension among adults aged 30-79 years[ai](%)	Prevalence of obesity among children and adolescents (5–19 years)[aj] (%)	Age-standardized prevalence of obesity among adults (18+ years)[aj] (%)	
Comparable estimate	Primary data	Comparable estimates	Comparable estimates	Comparable estimates	Primary data	Comparable estimates	Comparable estimates	Comparable estimates	
2020	2020	2020	2016	2019	2021	2019	2016	2016	**Member State**
-	0.62	89	21.6	-	-	47.7	15.0	27.9	**Dominica**
-	191.97	92	16.5	17.8	0	49.1	15.0	27.6	**Dominican Republic**
31	61.99	94	19.7	7.0	0	27.2	9.4	19.9	**Ecuador**
46	365.28	100	73.0	4.1	0	38.2	17.6	32.0	**Egypt**
13	278.09	92	29.3	85.0	0	32.7	11.7	24.6	**El Salvador**
-	<0.01	24	45.0	3.3	0	38.1	2.3	8.0	**Equatorial Guinea**
-	1.93	9	35.4	11.0	0	23.7	2.1	5.0	**Eritrea**
91	-	100[az]	6.7	2.1	0	40.2	6.3	21.2	**Estonia**
18	10.12	55	19.8	18.5	0	42.5	6.0	16.5	**Eswatini**
-	155.09	8	31.1	7.2	0	27.4	1.1	4.5	**Ethiopia**
-	2.61	51	11.1	2.2	0	38.6	11.5	30.2	**Fiji**
92	-	100[az]	6.5	1.2	0	35.9	9.1	22.2	**Finland**
93	-	100[az]	12.2	0.8	0	29.1	8.1	21.6	**France**
-	0.80	88	41.5	8.5	0	37.4	4.2	15.0	**Gabon**
11	1.83	2	58.4	8.3	0	37.6	2.8	10.3	**Gambia**
46	35.27	89	27.0	2.3	0	44.5	6.8	21.7	**Georgia**
99	-	100[az]	11.8	0.9	0	29.7	8.9	22.3	**Germany**
12	69.51	22	55.6	6.1	0	33.9	2.1	10.9	**Ghana**
93	-	100[az]	15.0	1.0	0	31.3	13.8	24.9	**Greece**
-	5.23	89	23.1	6.6	0	46.6	10.7	21.3	**Grenada**
-	8.59	50	30.9	25.1	0	32.2	9.9	21.2	**Guatemala**
-	10.66	2	53.8	8.8	0	40.9	1.7	7.7	**Guinea**
21	2.21	1	55.0	9.0	0	38.0	2.4	9.5	**Guinea-Bissau**
-	2.45	81	26.8	24.7	0	40.0	10.0	20.2	**Guyana**
-	30.18	4	19.5	20.7	0	42.9	10.9	22.7	**Haiti**
-	64.60	48	25.4	66.9	0	33.9	9.6	21.4	**Honduras**
90	-	100[az]	16.7	1.4	0	48.3	11.1	26.4	**Hungary**
73	-	100[az]	5.8	1.2	0	27.5	9.9	21.9	**Iceland**
27	305.48	68	78.2	3.8	0	31.1	2.0	3.9	**India**
-	185.28	84	20.7	4.3	0	40.3	6.1	6.9	**Indonesia**
22	1.09	96	33.7	3.1	0	26.2	9.8	25.8	**Iran (Islamic Republic of)**
37	69.87	99	56.4	14.4	0	48.1	14.4	30.4	**Iraq**
83	-	100[az]	8.5	0.8	0	32.3	9.8	25.3	**Ireland**
93	-	100[az]	18.6	1.2	0	29.1	11.9	26.1	**Israel**
95	-	100[az]	15.3	0.7	0	33.8	12.5	19.9	**Italy**
-	0.38	83	15.4	50.3	0	46.3	13.0	24.7	**Jamaica**
98	-	100[az]	13.7	0.2	0	31.4	3.3	4.3	**Japan**
82	366.71	100	32.8	2.7	0	37.7	12.9	35.5	**Jordan**
36	0.64	93	25.6	5.1	0	41.9	6.5	21.0	**Kazakhstan**
-	196.23	20	24.1	5.6	0	33.2	2.3	7.1	**Kenya**
31	5.01	10	11.6	4.8	0	42.3	23.0	46.0	**Kiribati**
85	-	100[az]	65.0	1.8	0	40.5	22.9	37.9	**Kuwait**
19	24.43	77	28.2	4.6	0	40.9	3.9	16.6	**Kyrgyzstan**
10	73.98	8	21.8	6.6	0	28.5	4.7	5.3	**Lao People's Democratic Republic**
93	-	100[az]	14.4	5.0	0	43.9	7.0	23.6	**Latvia**
-	120.77	-	30.7	4.2	0	38.1	13.9	32.0	**Lebanon**
-	9.94	40	25.8	43.5	0	40.1	5.0	16.6	**Lesotho**
-	24.50	<1	52.0	9.7	0	39.4	1.9	9.9	**Liberia**
17	<0.01	-	46.4	2.1	0	42.7	14.6	32.5	**Libya**
93	-	100[az]	11.7	4.8	0	48.0	6.8	26.3	**Lithuania**
96	-	100[az]	10.2	0.5	0	30.5	8.3	22.6	**Luxembourg**

Annex 3. Regional groupings

WHO African Region

Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, South Africa, South Sudan, Togo, Uganda, United Republic of Tanzania, Zambia, Zimbabwe.

WHO Region of the Americas

Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia (Plurinational State of), Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, United States of America, Uruguay, Venezuela (Bolivarian Republic of).

WHO South-East Asia Region

Bangladesh, Bhutan, Democratic People's Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste.

WHO European Region

Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Monaco, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Türkiye, Turkmenistan, Ukraine, United Kingdom of Great Britain and Northern Ireland, Uzbekistan.

WHO Eastern Mediterranean Region

Afghanistan, Bahrain, Djibouti, Egypt, Iran (Islamic Republic of), Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates, Yemen.

WHO Western Pacific Region

Australia, Brunei Darussalam, Cambodia, China, Cook Islands, Fiji, Japan, Kiribati, Lao People's Democratic Republic, Malaysia, Marshall Islands, Micronesia (Federated States of), Mongolia, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Solomon Islands, Tonga, Tuvalu, Vanuatu, Viet Nam

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WHO, WORLD BANK & German Government reports on Iraq

WHO-Iraq-SitRep_Week-32

Situation Report: Iraq

Week 32 (ending 14 August 2022)

World Health Organization

Key figures (As of 14 August 2022)

2.45M

confirmed cases of COVID-19 reported since February 2020

295

lab-confirmed cases of Crimean Congo Hemorrhagic Fever (CCHF) reported

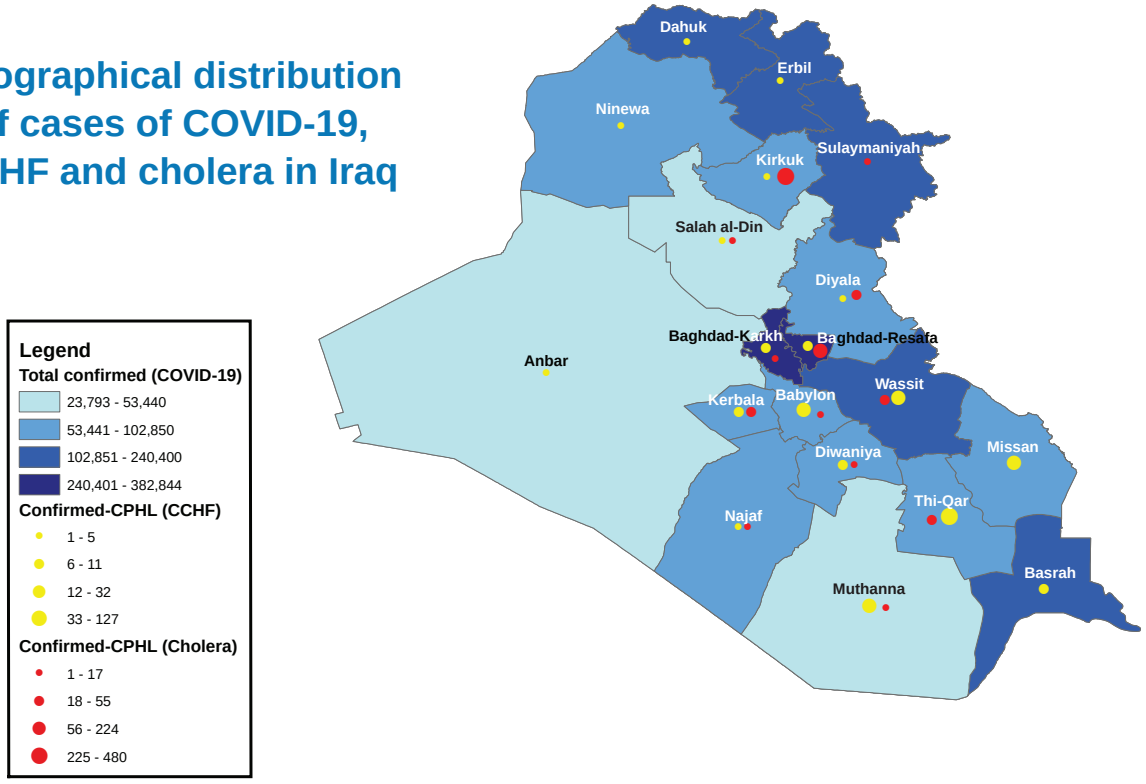
865

lab-confirmed cholera cases reported since 19 June 2022

Epidemiological situation update:

- As of 14 August 2022, Iraq reported 865 confirmed cases of **cholera**, with four associated deaths. The most affected governorates are Kirkuk (480 cases and three deaths), Baghdad-Rasafa (224 cases and one death) and Thi Qar (55 cases). Acute diarrhea cases in camps were also reported through the Early Warning, Alert and Response Network (EWARN).
- To date, 1112 suspected **Crimean-Congo Hemorrhagic Fever** cases were reported, of which 295 were confirmed by laboratory, with 86 related suspected deaths and 53 deaths among confirmed cases (representing 17.9% of the case fatality rate). All governorates reported confirmed cases, except for Sulaymaniyah.
- During the reporting period, 2767 new **COVID-19** cases were reported, representing a decrease of 57% compared to the previous week. 12 deaths were reported during the week, representing an increase of 9% compared to the previous week.

Geographical distribution of cases of COVID-19, CCHF and cholera in Iraq



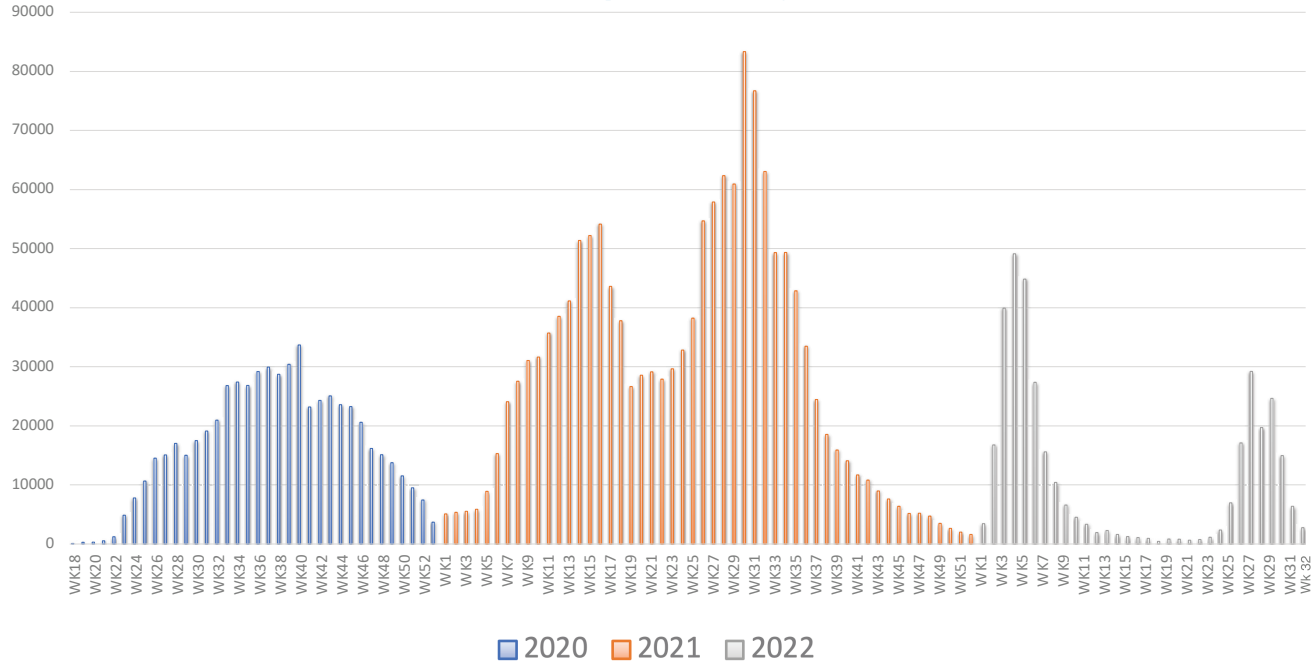
COVID-19 update:

- The level of community transmission all over the country has been moderate in week 32. The transmission level is determined based on three indicators: cases per 100,000 population, deaths per 1 million people, and the positivity rate.
- The COVID-19 positivity rate (PR) in week 32 stood at 9.2%, compared to 16.1% in week 31. The highest PR in week 32 was reported in Missan (23%), Dhi-Qar (22%) and Diyala (21%), while Muthanna and Kirkuk reported the lowest PR in week 32 (1% and 4% respectively).

Community Transmission in IRAQ 2022 by Weeks

Week No	Case per 100000	Death Per 1 M	Positivity Rate	Case per 100000	Death Per 1 M	Positivity Rate	Score 1	Score 2	Score 3	Total Score	Rank
1	8.4	1.0	4.5	Low	Low	Low	1	1	1	3	Low
2	40.7	1.0	13.5	Moderate	Low	Substantial	2	1	3	6	Moderate
3	96.9	1.0	23.4	Substantial	Low	High	3	1	4	8	Substantial
4	119.3	2.2	27.1	High	Low	High	4	1	4	9	Substantial
5	108.8	3.4	25.1	High	Low	High	4	1	4	9	Substantial
6	66.5	4.6	17.3	Substantial	Low	Substantial	3	1	3	7	Substantial
7	37.9	3.7	11.9	Moderate	Low	Substantial	2	1	3	6	Moderate
8	25.3	2.8	9.5	Moderate	Low	Moderate	2	1	2	5	Moderate
9	16.0	1.8	6.7	Moderate	Low	Moderate	2	1	2	5	Moderate
10	11.0	1.2	4.9	Moderate	Low	Low	2	1	1	4	Moderate
11	8.1	0.7	3.8	Low	Low	Low	1	1	1	3	Low
12	4.7	0.5	3.2	Low	Low	Low	1	1	1	3	Low
13	5.5	0.6	3.8	Low	Low	Low	1	1	1	3	Low
14	3.9	0.3	4.1	Low	Low	Low	1	1	1	3	Low
15	3.1	0.3	3.8	Low	Low	Low	1	1	1	3	Low
16	2.6	0.2	3.8	Low	Low	Low	1	1	1	3	Low
17	2.3	0.1	3.4	Low	Low	Low	1	1	1	3	Low
18	1.1	0.0	2.4	Low	Low	Low	1	1	1	3	Low
19	2.0	0.1	2.8	Low	Low	Low	1	1	1	3	Low
20	2.0	0.0	2.9	Low	Low	Low	1	1	1	3	Low
21	1.6	0.1	2.3	Low	Low	Low	1	1	1	3	Low
22	1.8	0.0	2.7	Low	Low	Low	1	1	1	3	Low
23	2.8	0.0	3.9	Low	Low	Low	1	1	1	3	Low
24	5.7	0.1	5.7	Low	Low	Moderate	1	1	2	4	Moderate
25	16.9	0.1	14.4	Moderate	Low	Substantial	2	1	3	6	Moderate
26	41.6	0.3	26.1	Moderate	Low	High	2	1	4	7	Substantial
27	70.9	0.3	34.2	Substantial	Low	High	3	1	4	8	Substantial
28	47.8	0.4	38.5	Moderate	Low	High	2	1	4	7	Substantial
29	59.8	0.5	32.7	Substantial	Low	High	3	1	4	8	Substantial
30	36.3	0.6	24.8	Moderate	Low	High	2	1	4	7	Substantial
31	15.5	0.3	15.5	Moderate	Low	Substantial	2	1	3	6	Moderate
32	7.4	0.3	8.9	Low	Low	Moderate	1	1	2	4	Moderate

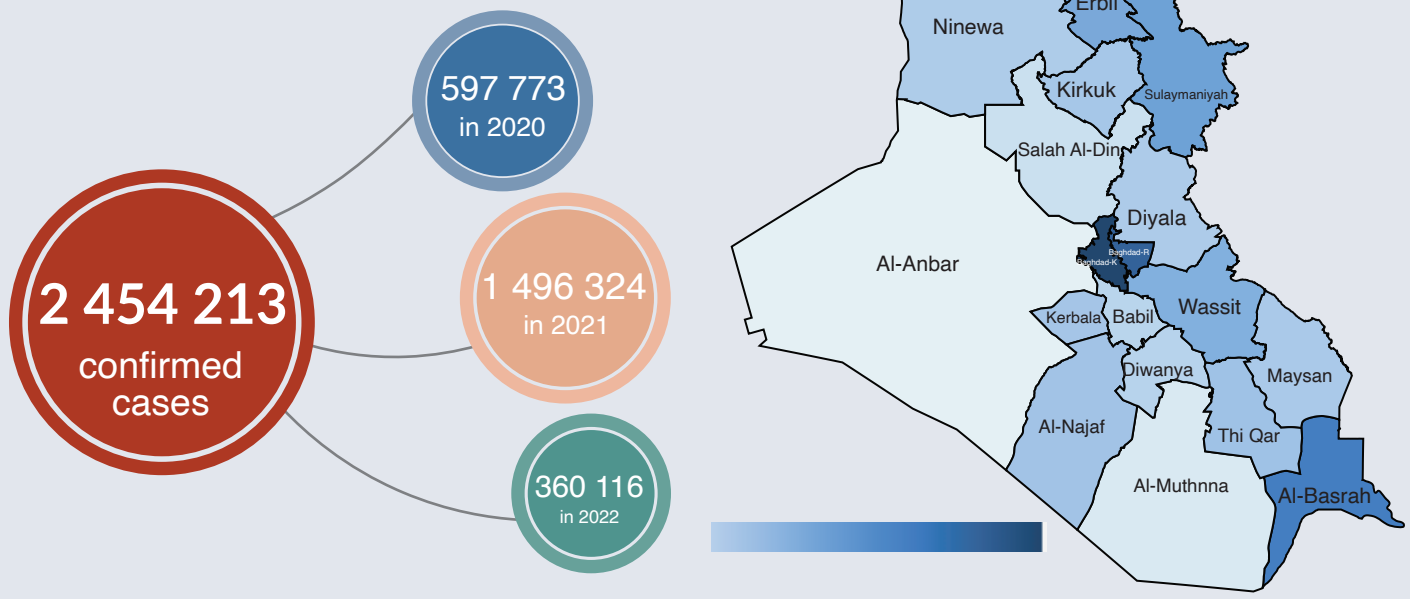
COVID-19 Epi-Curve by Weeks



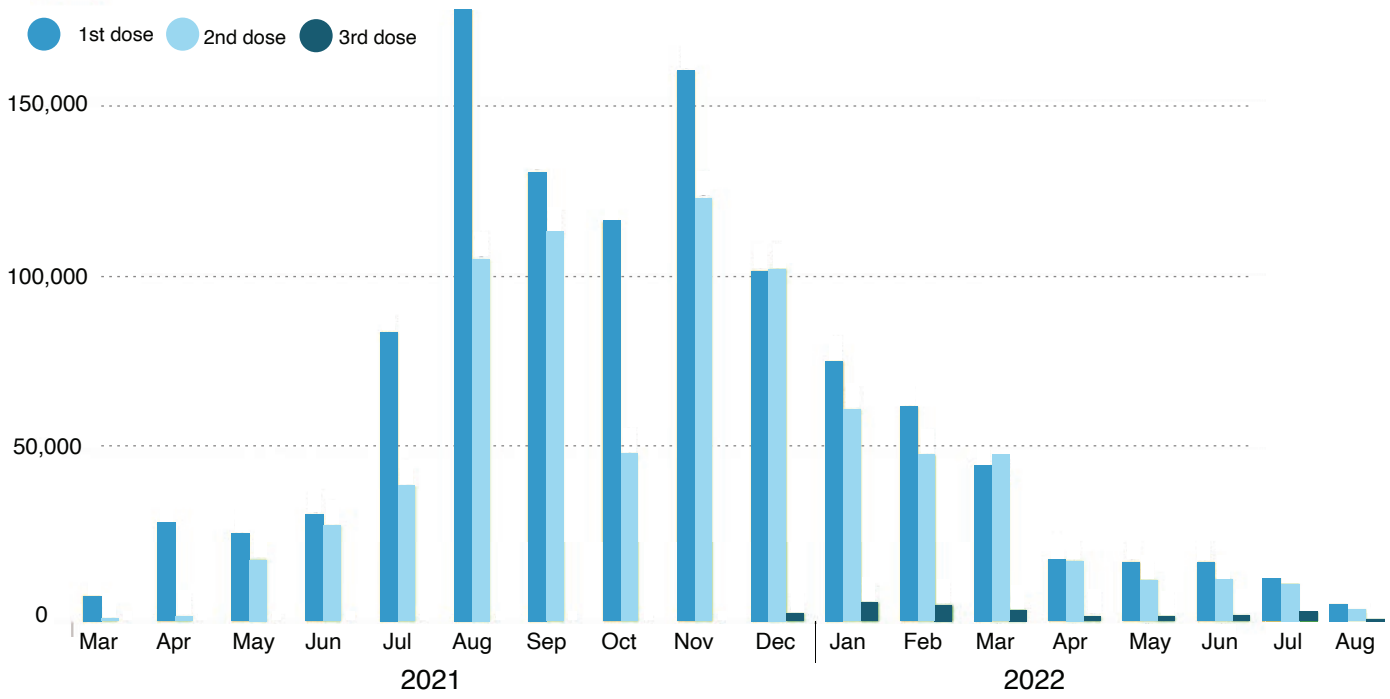
COVID-19 vaccination:

- As of 14 August 2022, a total of 19,026,929 vaccine doses were administered countrywide. A total of 11,037,727 people -- 26.1% of the population -- received the first dose, while 7,759,616 -- 18.4% of the population -- have received the second dose.
- Vaccine administration statistics showed that 6,727,019 males (61%) and 4,309,681 females (39%) were vaccinated.
- A total of 41 766 people received the COVID-19 vaccine during week 32, representing a 32% increase compared to the previous week.

Cumulative distribution of confirmed COVID cases by DoH



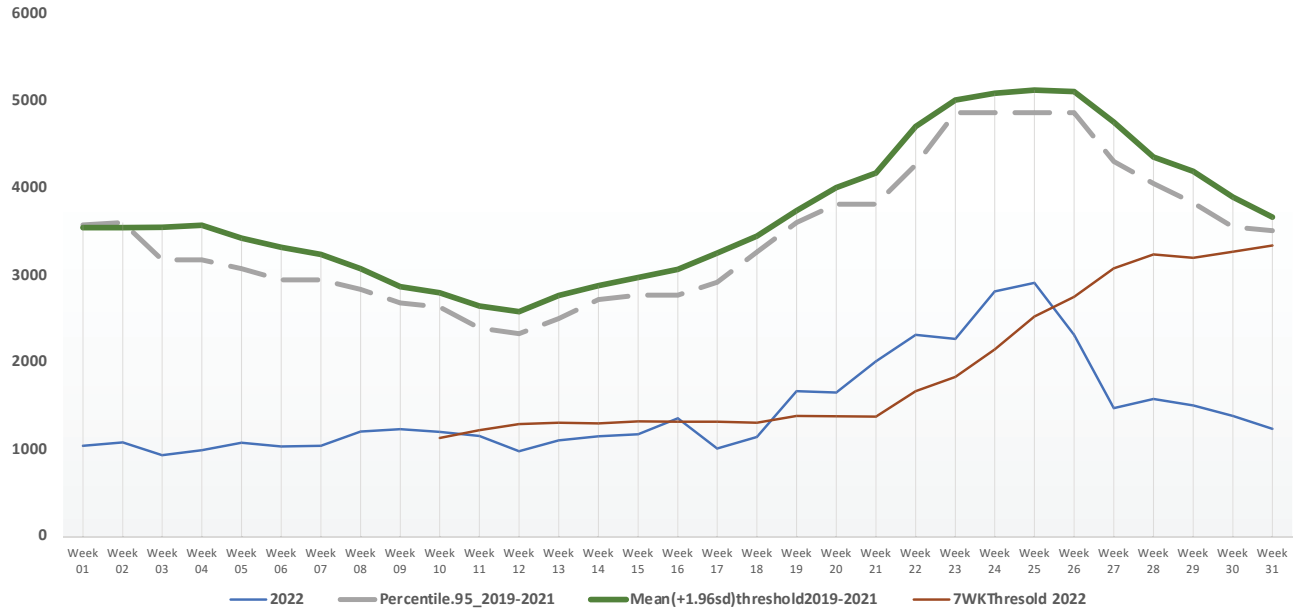
COVID-19 monthly vaccination by doses



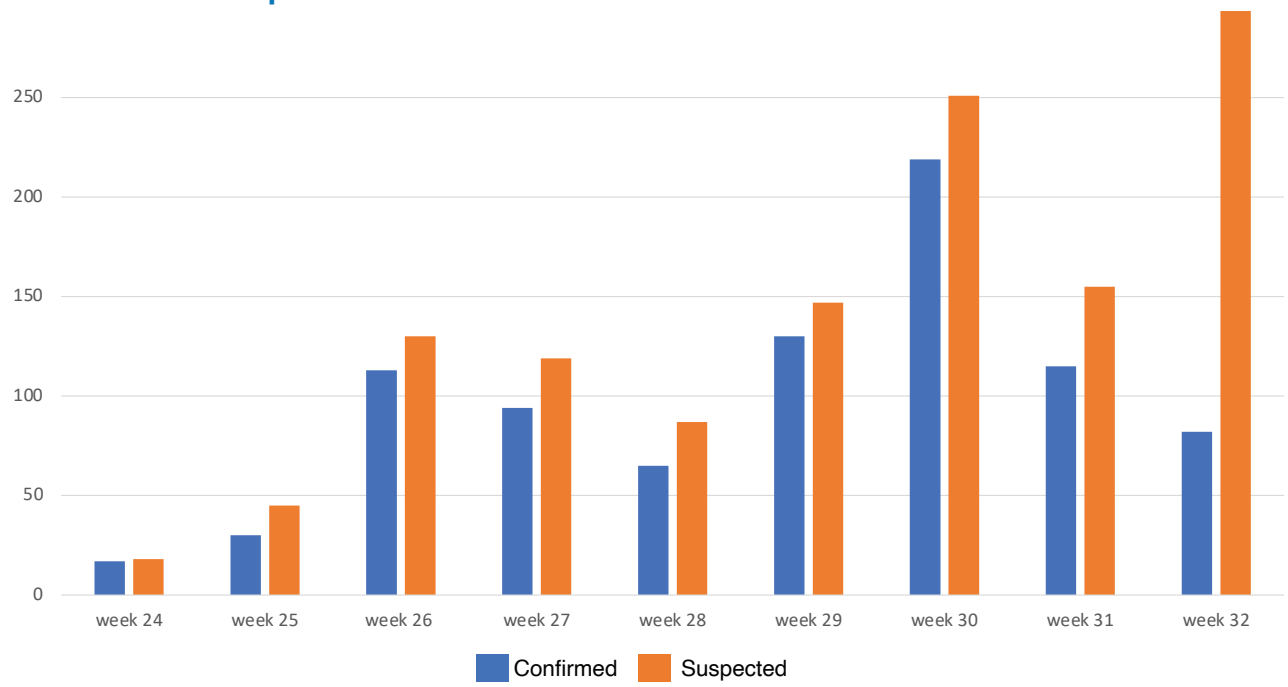
Cholera update:

- A total of 82 confirmed cholera cases were reported in week 32, representing a 29% decrease compared to week 31. However, the number of suspected cholera cases jumped to 330, representing the highest number of suspected cases reported since week 24.
- The cholera case management is deemed effective as the case fatality rate (CFR) stands at 0.5% as required by the WHO standards (appropriate cholera case management should keep CFR below 1%).
- Effective collaboration between the water and health directorates in Sulaymaniyah governorate led to the treatment of several water sources and engaged with water truckers to ensure the provision of safe water to populations within the governorate. This together with proper case management contributed to lowering cholera cases in Sulaymaniya governorate.

Acute diarrhea compared to the alert threshold by week in Iraq



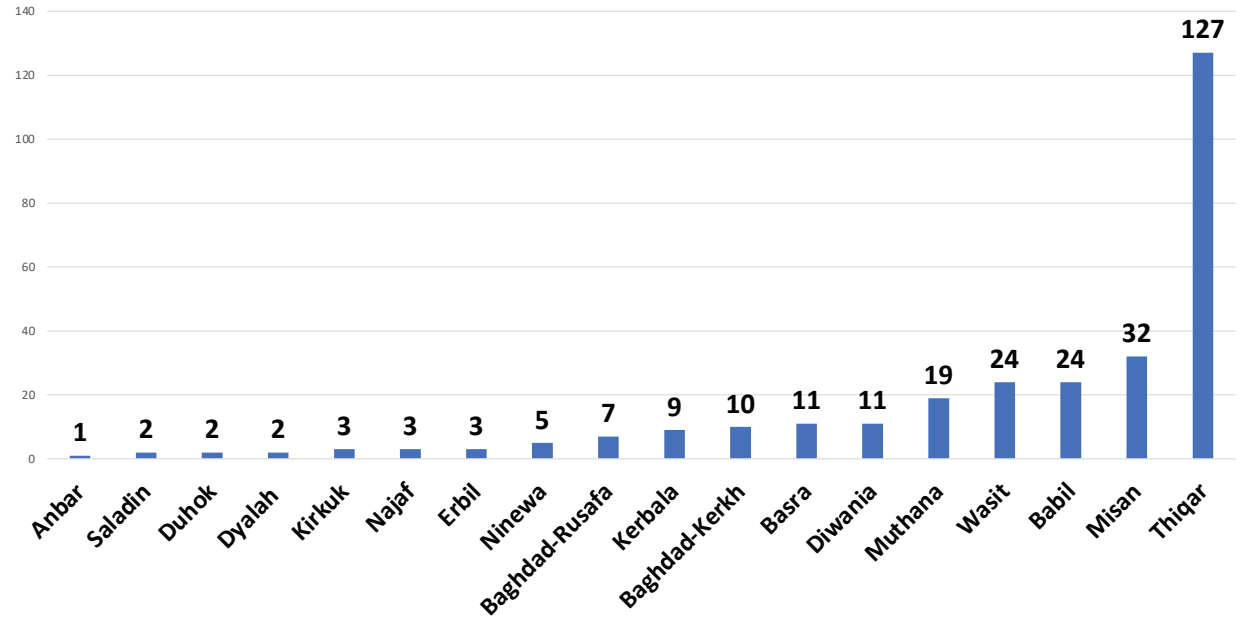
Suspected and confirmed cases of cholera since week 24



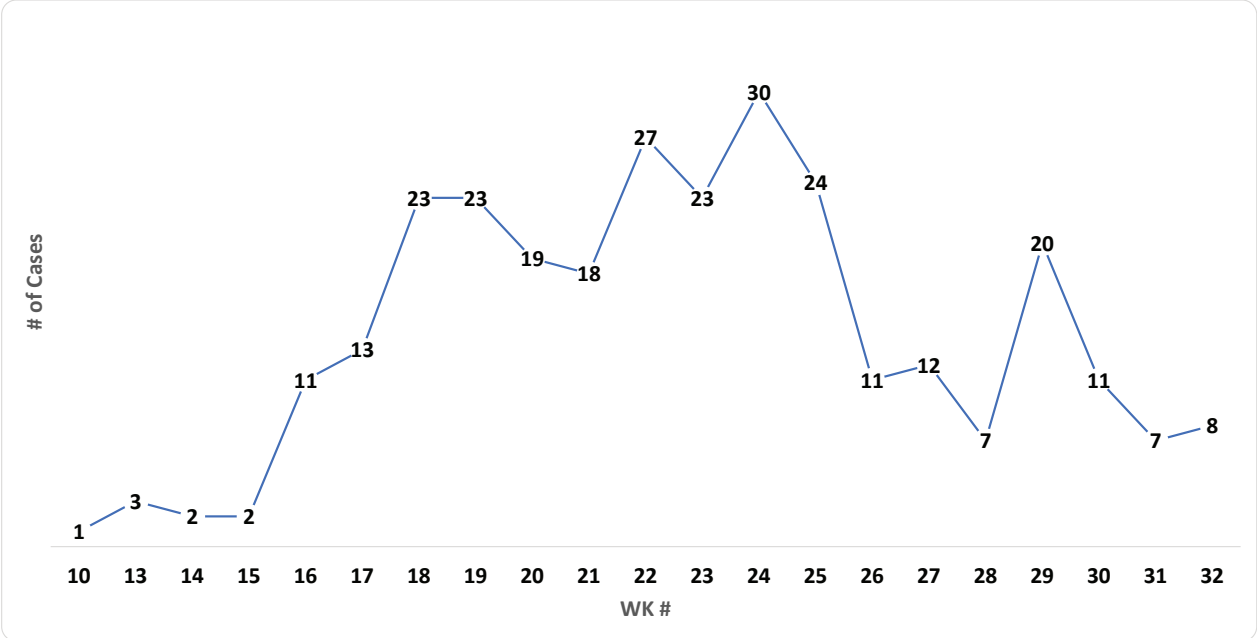
CCHF update:

- A total of eight confirmed cases of CCHF were reported in week 32, representing an increase of 14% compared to the previous week.
- Thi-Qar is still on the top of the list of the governorates affected by the CCHF outbreak, with 127 confirmed cases, representing 43% of the total cases. Missan, Babil, Wassit and Muthanna governorates also reported a significant number of cases.
- Housewives, butchers and livestock breeders and traders represent 84% of those reported to be infected with CCHF across Iraq. No cases were reported among health workers.

CCHF distribution by provinces - 2022



CCHF epi-curve by weeks - 2022



WHO preparedness and response:

- With support from WHO Headquarter, the country office, together with the Ministry of Health, held a meeting on 11 August to complete an all-hazard risk assessment tool to foster adequate pre-planning preparedness, response and mitigation of health hazards associated with the Arbaeen visit and mass gathering events.
- On 10 August 2022, WHO, in collaboration with the Ministry of Health and UNICEF, concluded a three-day risk communication and community engagement training in Kurdistan Region on cholera outbreak to boost the public health and socio-behavioral capacities of 28 healthcare workers and educators in building a relationship and trust between communities and health authorities. During the training, participants were sensitized to different types of engagement with communities to make sure interventions are safe, feasible and acceptable.

WHO and the Ministry of Health meets to complete an all-hazard risk assessment tool

28 healthcare workers and educator were trained in building relationship and trust between communities and health authorities.

- On 8 August, WHO met with IRCS to discuss the collaboration project to engage a wide range of community-based volunteers to stimulate and support positive behaviors on CCHF and other outbreaks. These partners and volunteers will be instrumental in promoting correct information and countering misconceptions about CCHF and additional outbreaks in the country. As a result, more community members will be influenced to adopt the right behaviors regarding CCHF and other outbreaks in Iraq. The project aims to cover cities and pilgrims during mass gatherings.
- WHO produced a CCHF animation video that raises awareness on the best household practices and others who deal with animals or handle meat. The video adopted contextualized Iraqi dialect and scenario to make it more acceptable/understandable to Iraqi communities.

Health Cluster coordination:

- As part of the transition initiated by the Health Cluster, extensive discussions took place with several partners to support building resilience in health systems serving local populations as well as populations of humanitarian concern. This was the case with Pekawa NGO that initiated a process to temporarily support the medical waste management activities in Hawija Hospital and Hawija primary healthcare centre based on the request of the Directorate of Health in Kirkuk.
- The Global Health Cluster is conducting a series of studies on COVID-19 in countries, including the vaccination in humanitarian settings; Iraq's Health Cluster volunteered to participate in several studies and identified a number of key informants to launch the study both in Federal Iraq and KRI.
- The Health Cluster Transition Advisory Group (TAG) was formed during the reporting period, comprising agencies that are members of the Durable Solutions Technical Working Group's (DSTWG) Area Based Coordination (ABC) forums and/or those having long-term funding to support post-humanitarian interventions.

Conclusions:

- The number of COVID-19 cases reported in week 32 is the lowest since week 25. The current level of community transmission is moderate since week 31.
- The impact of preparedness and response activities in Sulaymaniyah resulted in a significant decrease in confirmed cholera cases to 82 during week 32, compared to 115 in week 31. However, the coming weeks are critical for monitoring the cholera situation as historically the cholera outbreaks occurred during August-September in Iraq.
- The continuation of extensive RCCE and anti-tick activities, including spraying and dipping of livestock, contributed to the decline in number of CCHF cases. However, a significant movement of livestock and animal slaughtering is taking place during Arbaeen event, increasing the risk of further transmission of CCHF.

Recommendations:

- As cholera cases historically are reported to increase during the last quarter of the year, increased vigilance and effective surveillance activities during the upcoming weeks are critical for monitoring the cholera situation.
- Advocating for WASH interventions and daily monitoring of drinking water sources are recommended to ensure safe drinking water for the population. RCCE activities must be enhanced to raise awareness of the communities about the prevention measures.
- Coordination between the health and agriculture sectors is underway and needs to be further enhanced and sustained to control the ongoing outbreak and prevent expected flare-ups in the coming weeks.
- As the mass gathering for Arbaeen visit will take place for about four weeks, enhanced public health, preparedness and response should be coordinated among the Ministry of Health, the religious institutions and other stakeholders.

The response to the COVID-19 pandemic and other outbreaks in Iraq is made possible with the generous contributions from WHO Iraq's long-term partners:

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OCHA Office for the Coordination of Humanitarian Affairs
ITALIAN AGENCY FOR DEVELOPMENT COOPERATION
Foreign Affairs, Trade and Development Canada
BILL & MELINDA GATES foundation

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For the latest data and other updates on COVID-19, please see:

COVID-19 vaccination dashboard in Iraq

COVID-19 dynamic infographic dashboard in Iraq

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WHO, WORLD BANK & German Government reports on Iraq

German Gov. Statistical Country Profile- Iraq- 2023

Iraq

Statistical Country Profile

Edition 02/2023

Publication date: 09 Februar 2023

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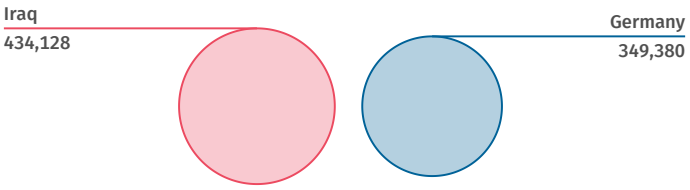
Contents

General information

Capital city	Official language	Currency
Baghdad	**Arabic, Kurdish**	**Iraqi Dinar**

Land area in relation to Germany

km²



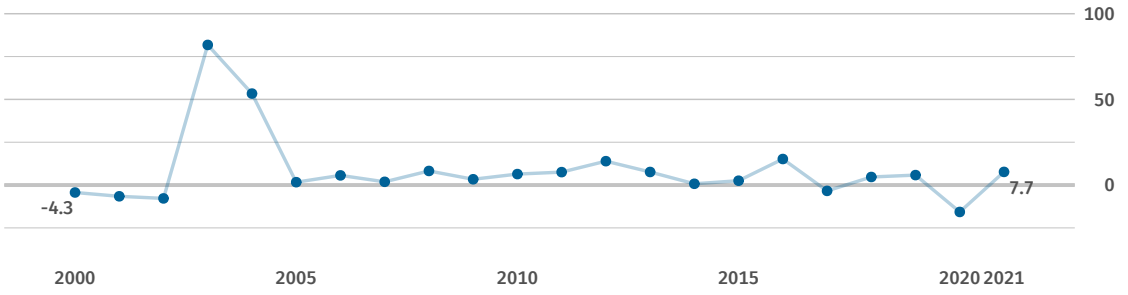
Source: WB-WDI

Economy and finance

Gross domestic product (GDP), total	GDP, real change	GDP per capita	GDP per capita
bn US$	% since 2000	US$	internat. US$
207	**+377**	**5,021**	**10,878**
(2021)	(2021)	(2021)	(2021)
Source: IMF-WEO	Source: IMF-WEO*	Source: IMF-WEO	Source: IMF-WEO

Gross domestic product, real change

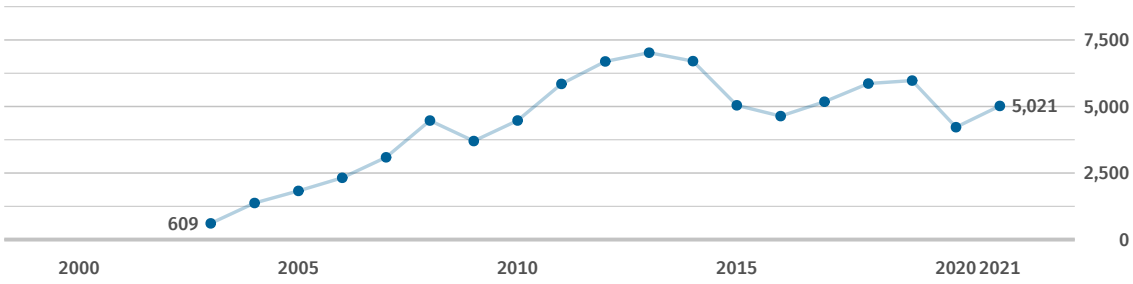
% on previous year



Source: IMF-WEO

Gross domestic product per capita

US$

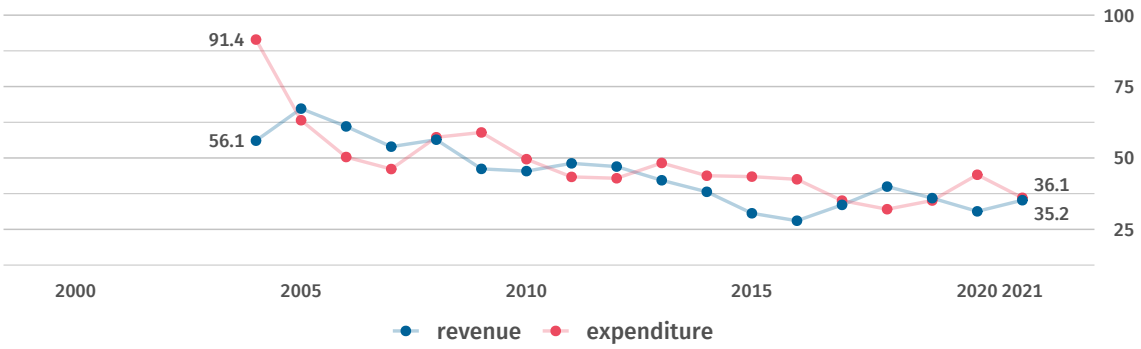


Source: IMF-WEO

Inflation rate (change of consumer price index)	General government gross debt	General government net lending / borrowing
% on previous year	% of GDP	% of GDP
+6.0	**59.1**	**-0.8**
(2021)	(2021)	(2021)
Source: IMF-IFS	Source: IMF-WEO	Source: IMF-WEO

General government revenue and expenditure

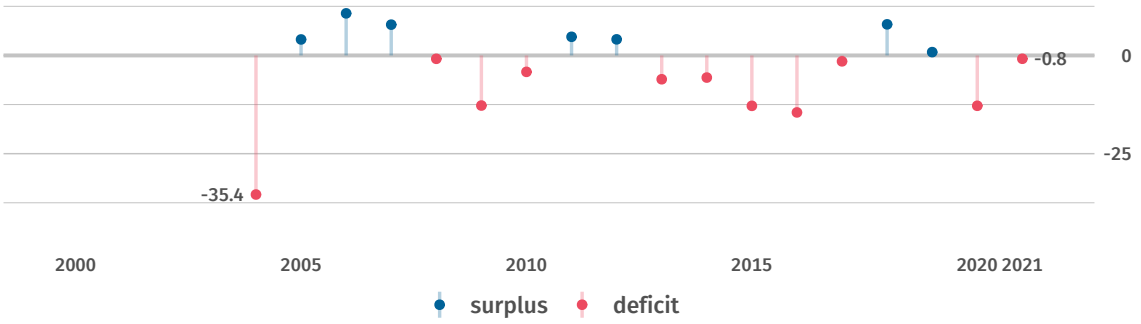
% of GDP



Source: IMF-WEO

General government net lending / borrowing

% of GDP



Source: IMF-WEO

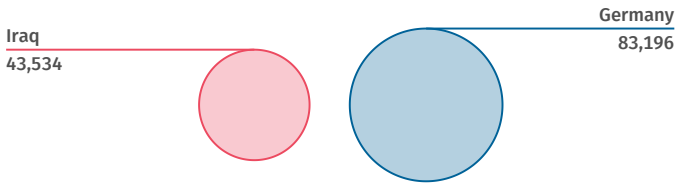
Foreign direct investment (FDI): inward stocks	Foreign direct investment (FDI): outward stocks	Foreign direct investment (FDI): net flow, inward	Foreign direct investment (FDI): net flow, outward
bn US$	bn US$	bn US$	bn US$
0.000	**3.151**	**-2.613**	**0.135**
(2021)	(2021)	(2021)	(2021)
Source: UNCTAD	Source: UNCTAD	Source: UNCTAD	Source: UNCTAD

Population

Population total	Population density	Life expectancy at birth (women)	Life expectancy at birth (men)
1,000	inhabitants per km²	years	years
43,534	**95**	**71.2**	**67.0**
(2021)	(2021)	(2020)	(2020)
Source: WB-WDI	Source: WB-WDI	Source: WB-WDI	Source: WB-WDI

Population in relation to Germany 2021

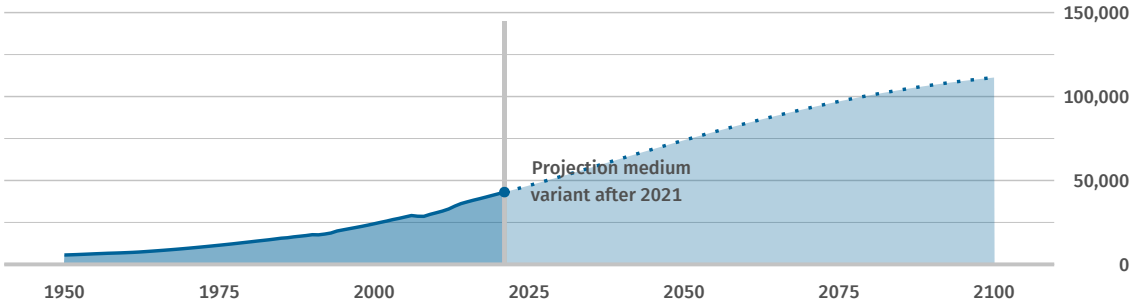
1,000



Source: WB-WDI

Population

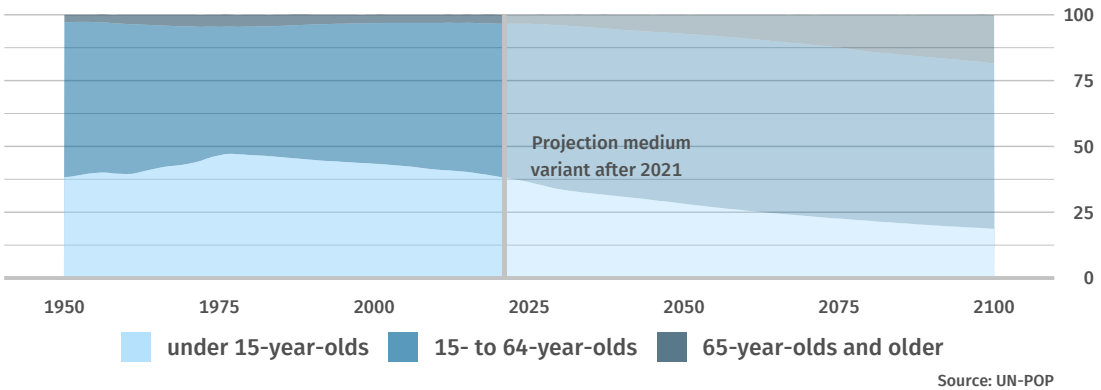
1,000



Source: UN-POP

Population by age group

proportion, %



Source: UN-POP

Health

Practising physicians	Hospital beds	Prevalence of raised blood pressure	Prevalence of obesity (BMI >= 30)
per 1,000 inhabitants	per 1,000 inhabitants	%	%
1.0	**1.3**	**25.2**	**30.4**
(2020)	(2017)	(2015)	(2016)
Source: WHO	Source: WHO	Source: WHO	Source: WHO

Education

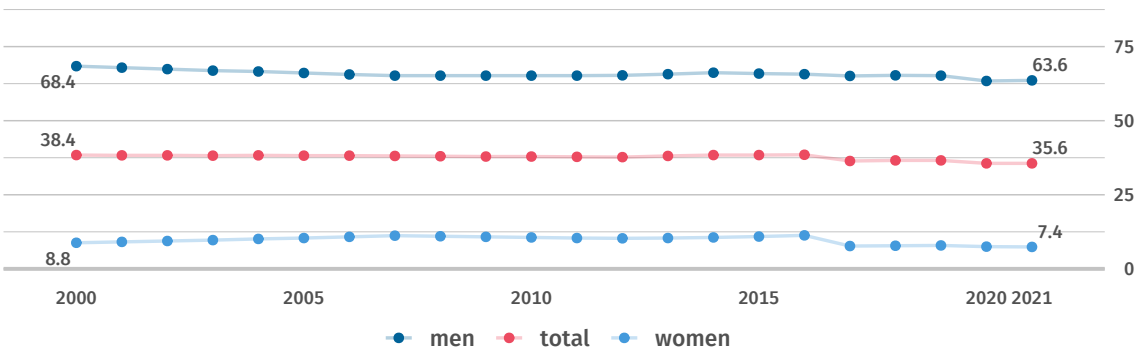
Government expenditure on education	Pupil-teacher ratio (primary education)	Pupil-teacher ratio (secondary education)	Students (tertiary education)
% of GDP	number	number	per 100,000 inhabitants
No data	**17.0**	**13.7**	**1,578**
	(2007)	(2007)	(2005)
Source: UNESCO	Source: UNESCO	Source: UNESCO	Source: UNESCO*

Labour force

Employment rate (persons aged 15+)	Labour force (persons aged 15+)	Labour force participation rate (persons aged 15+)	Self-employment (persons aged 15+)
%	1,000	%	%
35.6	**10,719**	**41.5**	**21.4**
(2021)	(2021)	(2021)	(2021)
Source: ILOSTAT	Source: ILOSTAT	Source: ILOSTAT	Source: ILOSTAT

Employment rate (persons aged 15+)

%



Source: ILOSTAT

Employment and gross value added by sector 2020

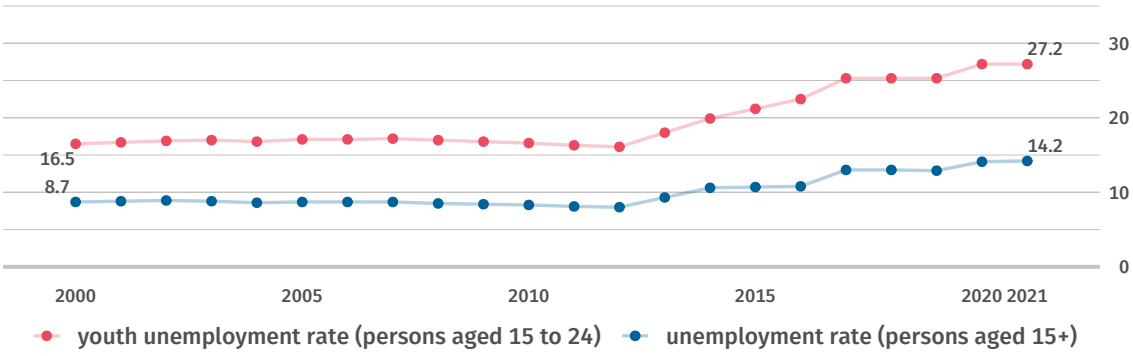
%

Source employment: ILOSTAT
Source gross value added: UNSD

Unemployment rate (persons aged 15+)	Unemployment rate (persons aged 15 to 24)	Long-term unemployment rate (persons aged 15+)
%	%	% of unemployed persons
14.2	**27.2**	**No data**
(2021)	(2021)	
Source: ILOSTAT	Source: ILOSTAT	Source: ILOSTAT

Unemployment rate and youth unemployment rate

%



Source: ILOSTAT

Living conditions

Human Development Index (HDI)	Human Development Index (HDI)	Income distribution: Gini coefficient
value (0 low to 1 high)	rank (of 188 countries)	value (0 to 100; 0=equal distribution)
0.686	**121**	**29.5**
(2021)	(2021)	(2012)
Source: UNDP	Source: UNDP	Source: WB-WDI

Production

Index of industrial production
2010=100

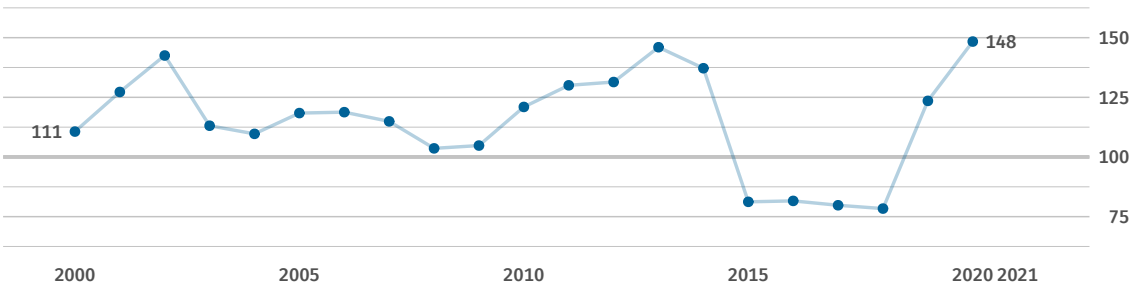
No data

Source: IMF-IFS

Agriculture and forestry

Change of agricultural production	Agricultural land	Forest area
% since 2000	% of land area	% of land area
+34	**21.3**	**1.9**
(2020)	(2020)	(2020)
Source: FAO*	Source: FAO*	Source: FAO*

Index of agricultural production
2014 to 2016 = 100



Source: FAO

Foreign trade

Export of goods	Import of goods	Trade balance, goods
bn US$	bn US$	bn US$
43.774	**37.064**	**+47.442**
(2016)	(2014)	(2016)
Source: UN Comtrade	Source: UN Comtrade	Source: UN Comtrade*

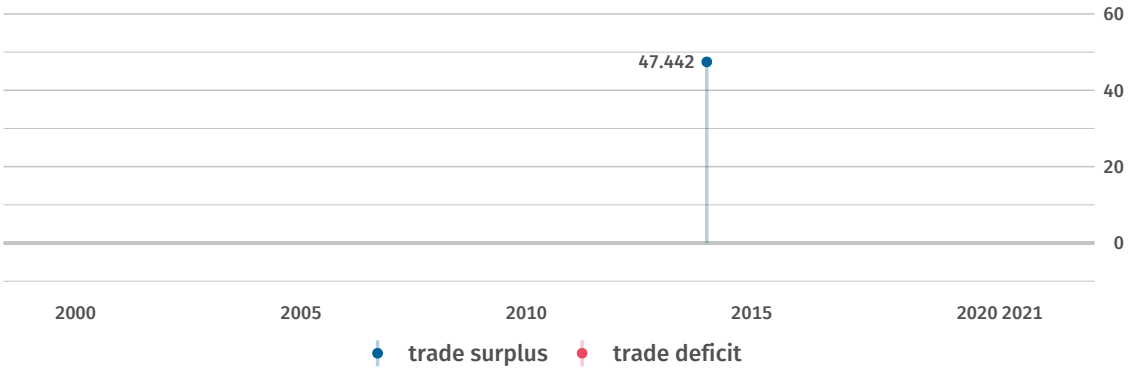
Export and import of goods

bn US$

Source: UN Comtrade

Foreign trade balance

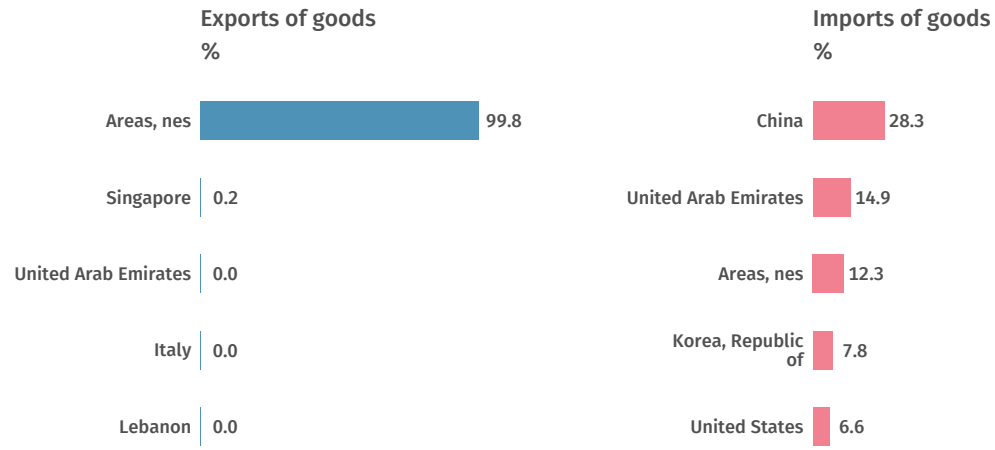
bn US$



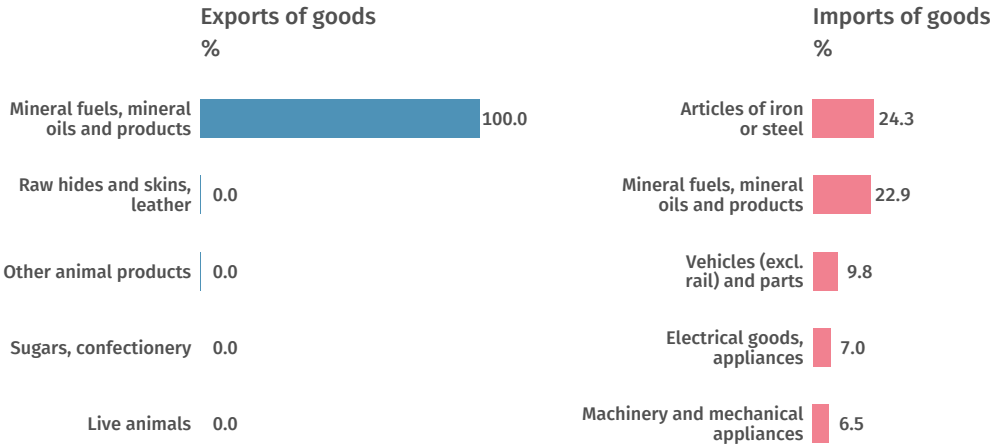
Source: UN Comtrade

Goods exported to Germany	Goods exported to Germany	Goods imported from Germany	Goods imported from Germany
mn US$	% of all goods exported	mn US$	% of all goods imported
0.0	**0.0**	**404**	**1.1**
(2016)	(2016)	(2014)	(2014)
Source: UN Comtrade	Source: UN Comtrade*	Source: UN Comtrade	Source: UN Comtrade*

Main trading partners 2016



Main commodities traded 2016



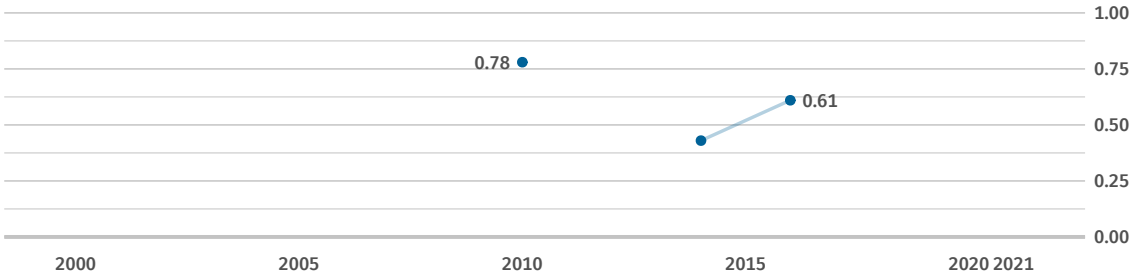
Source: UN Comtrade*

Classification of commodities: Harmonized Commodity Description and Coding Systems (HS2).

Transport

Passenger cars	Total rail network	Air transport, passengers
per 1,000 inhabitants	km per 1 mn inhabitants	per 1,000 inhabitants
48	**64**	**18**
(2015)	(2014)	(2020)
Source: OICA*	Source: WB-WDI*	Source: WB-WDI*

Gasoline price at the pump
US$ per litre

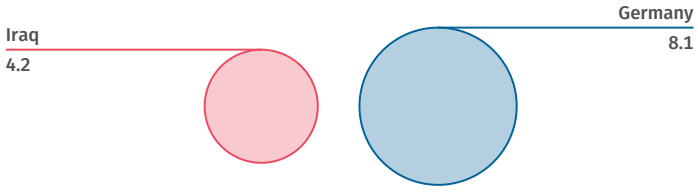


Data collection conducted every two years.
2012: Missing data. Source: WB-WDI

Environment and energy

Carbon dioxide emissions	Total primary energy supply	Gross electricity consumption	Renewable energy
tonnes per capita	kg oil equivalent per capita	kWh per capita	% of total final energy consumption
4.2	**1,347**	**1,244**	**0.4**
(2021)	(2014)	(2014)	(2019)
Source: EDGAR	Source: WB-WDI	Source: WB-WDI	Source: WB-WDI

Carbon dioxide emissions in relation to Germany 2021
tonnes per capita

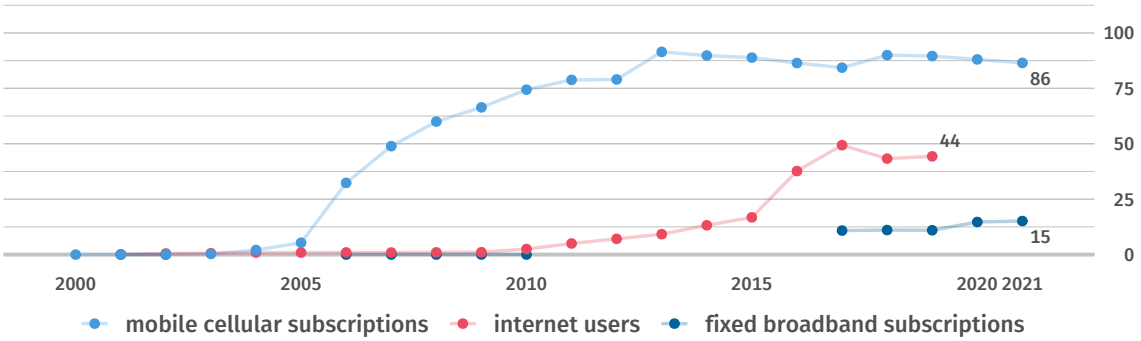


Source: EDGAR

Science, research, technology

Gross domestic expenditure on R&D	Researchers	Resident patent applications
% of GDP	per 1 mn inhabitants	per 1 mn inhabitants
0.0	**111**	**16**
(2018)	(2018)	(2020)
Source: UNESCO	Source: UNESCO	Source: WIPO

Dissemination of modern communication technology
per 100 inhabitants



2003, 2004, 2005, 2011, 2012, 2013, 2014, 2015, 2016: Missing data. Source: ITU

Sources

EDGAR	Emissions Database for Global Atmospheric Research, European Commission
FAO	United Nations, Food and Agricultural Organization
ILOSTAT	International Labour Organization, ILOSTAT - Database
IMF-IFS	International Monetary Fund, International Financial Statistics
IMF-WEO	International Monetary Fund, World Economic Outlook
ITU	United Nations, International Telecommunication Union
OICA	International Organization of Motor Vehicle Manufacturers
UN Comtrade	United Nations, Comtrade Database
UNCTAD	United Nations, Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations, Educational, Scientific and Cultural Organization
UNPOP	United Nations, Population Division
UNSD	United Nations, Statistics Division
WB-WDI	World Bank, World Development Indicators
WHO	World Health Organization, Global Health Observatory
WIPO	World Intellectual Property Organization

* Own calculations based on the original data source.

Statistical country profiles on all UN Member States: www.destatis.de/countryprofiles