



The home of health data

**World Health Data Hub**  
**PSA State of Qatar – June 6<sup>th</sup>, 2023**

**Why the Hub**

## Transformation agenda

'We will build a modern data "backbone" in WHO that allows sharing and analysis of data between the three levels of the organization and countries.'

Dr Tedros Adhanom Ghebreyesus, 6 March 2019



### Mandate (WHO Constitution art. 61-65)

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- Collect data on trends in health and health policy and disseminate that information.

### Responding to Member States and PBAC recommendations (EB146/3)

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- Resolve data fragmentation by consolidating WHO's data repositories, portals and datasets.
- Reduce data collection burden on countries.
- Support country capacity in data and health information systems.
- Track GPW13 Triple Billion targets and health-related SDGs by providing timely, reliable and actionable data.

# WHO - A Data Centric Organisation

In 2021 : WHO released 874 publications, this averages to 73 a month.

The image displays a grid of 100 small screenshots, each representing a different data collection tool or report from the World Health Organization (WHO). The screenshots are arranged in a 10x10 grid. Each screenshot shows a different interface, often featuring maps, charts, and text-based information. The titles of the data collections are listed on the left side of the grid, such as 'Environmental burden of disease', 'Violence and injury prevention country profiles', 'HIV global price reporting mechanism', 'Point of Entry Database', 'Tobacco Control Database for the WHO European Region', 'WHO South-East Asia Region Noncommunicable diseases publication repository', 'Road safety data', 'Food safety collaborative platform', 'Global Health Expenditure Database', 'Noncommunicable diseases profiles', 'e-SPAR', 'The global observatory for health research and development', 'HIV laws and policies database', 'PAHO health information system for the Americas (PLISA)', 'South-East Asia Regional Microdata Repository', 'WHO Immunization Data portal', 'ELSI Genetics Resource Directory', 'Global Dementia Observatory', 'Global Database on P. falciparum hsp70 gene deletions', 'Household drinking water, sanitation and hygiene', 'Global database on invasive vector species', 'Maternal and perinatal health', 'UNADS AODInfo', 'Neglected tropical diseases', 'Immunization coverage country punctured', 'WHO Global Database on Child Growth and Malnutrition', 'NCD Document Repository', 'Eliminating malaria: 21 countries, a common goal', 'Regional Health Observatory for the eastern Mediterranean region', 'WHO GRSInfo: An app for road safety data', 'European health information gateway', 'Global Information system on Alcohol and Health (GISAH)', 'Global Database of Age-friendly Practices', 'Influenza FluNet', 'Mental Health Atlas Country profiles', 'Malaria country profiles', 'WHO Global Health Expenditure Database', 'GLASS country profiles, 2017', 'Global antimicrobial resistance surveillance system (GLASS)', 'Global Vaccine Action Plan Indicator Portal', 'GOARN Knowledge Platform', 'Influenza FluMart', 'Joint Committee on Food Additives and Contaminants (JECFA) database', 'South-East Asia Regional Microdata Repository', 'WHO Mortality database', 'PC Data Portal', 'NCD Microdata Repository', 'Global Price Reporting Mechanism', 'Tuberculosis data', 'WHO Micronutrient database', 'FOSCOLLAB', 'Joint FAO/WHO Meeting on Pesticide Residues (JMPR) database', 'International Clinical Trials Registry Platform (ICTRP)', 'Maternal, newborn, child and adolescent health data portal', 'FOSCOLLAB', 'Noncommunicable Disease Document Repository', 'South-East Asia NCDs publication repository', 'Health Information Platform for the WHO South-East Asia Region', 'Global database on antimicrobial drug efficacy and resistance', 'HIV country profiles', 'WHO AIMS country reports on Mental health systems', and 'Cholera areas reporting outbreaks'. The screenshots themselves show various data visualizations, including world maps, bar charts, line graphs, and text-heavy reports. The WHO logo is visible in the top left corner of the overall image.

**Regions**

- Africa
- Americas
- Eastern Mediterranean
- Europe
- South-East Asia
- Western Pacific

Privacy Legal Notice

# Why the Hub ?

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## For Programs / Member States

### **Streamlined Communications**

- ✓ Consistent engagement models / process
- ✓ Reduced data related burden
- ✓ Consistent data modelling

### **Data**

- ✓ Data Quality / Timeliness / Accuracy
- ✓ Consistent Collection / Consultation Processes

### **Clarity and Accessibility**

- ✓ Consistent and Clear Data Communications
- ✓ Policy helping transparency

## For World Health Organization

### **Economies of scale**

- ✓ Through a shared central platform / service
- ✓ Common processes, Consistent technologies
- ✓ Shared technical and functional expertise

### **Security and Compliance**

- ✓ A single end-to-end environment to secure
- ✓ « Embedded » compliance

### **Performance, Usage and Costs**

- ✓ Central monitoring for best-in-class performance
- ✓ Continuous monitoring for Usage and Cost Control

Zoom in

# Typical WHO Data Cycle

## Disseminate

Use Conformed Pages  
Create Visualizations  
Expose Data / APIs  
**WHDH : Datadot Suite**



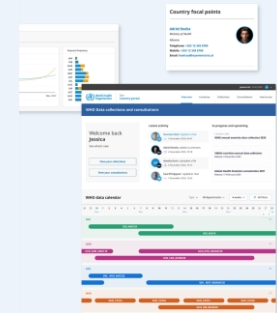
## Harmonize, Store

Conform your Data  
Adapt to Design Language  
Map to Reference Data  
Quality Assurance  
**WHDH : xMart**



## Consult, Collect, Host

Engage with Member States  
Run Consultations / Collections / Calls  
Host Data and Collaborate  
Advertise Collection and Consultations  
**WHDH : Country Portal**



## Clean, Model, Estimate

Automate Acquisition & Cleansing  
Use Machine Learning and AI  
Create and Share Estimates  
**WHDH : Collab Research Environment (CRE)**

# World Health Data Hub

- A trusted source for global health data, fulfilling WHO's commitment to provide health data as a public good.
- Ambitious product stack to deliver an end-to-end solution for WHO data processes.
- World class development leveraging innovative technology to address challenges and pain points.

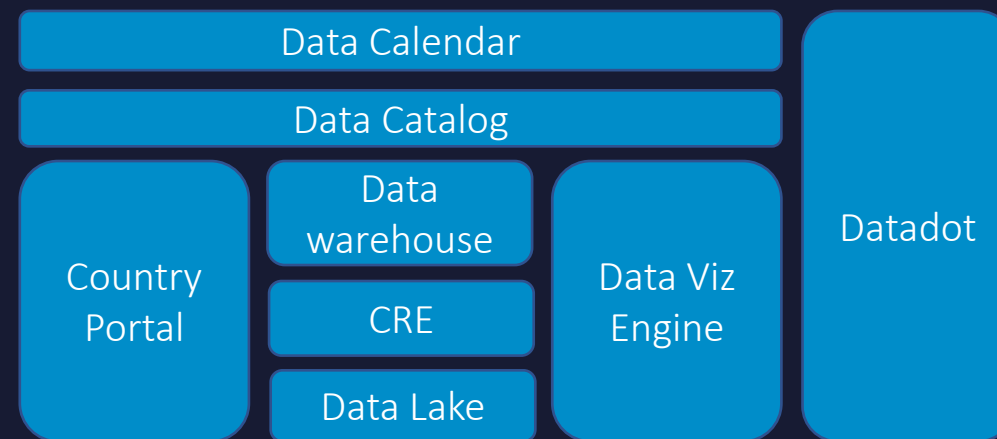
2 yrs

Thanks to key partners and WHO investment v1 developed in just 2 years

55

Program Teams engaged with at least one WHDH product

# Data.



Responsive



Multilingual



Inclusive



Performant



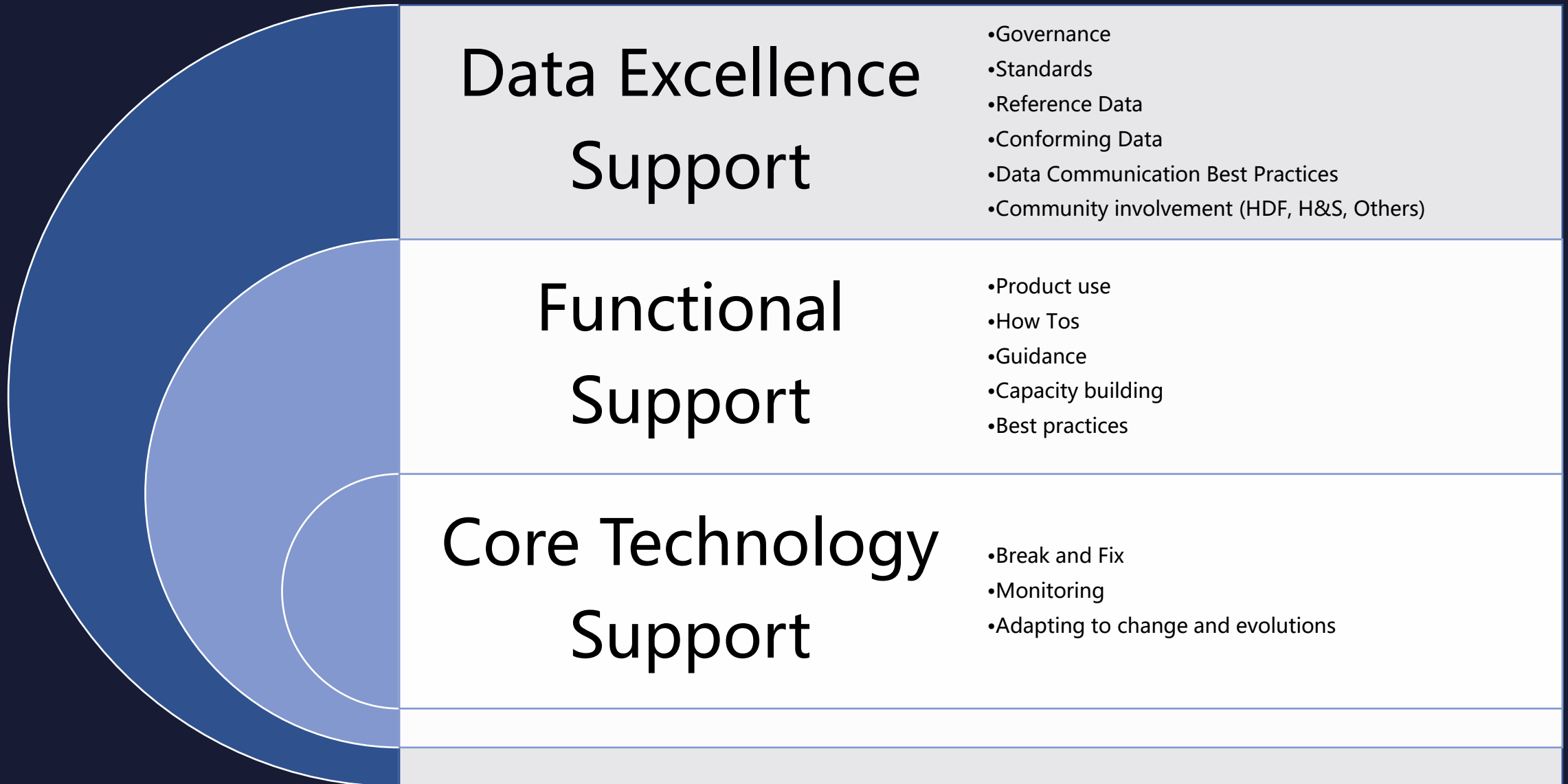
Shareable

[data.who.int](https://data.who.int)



# Three Levels of Support

whdh@who.int



# Data.

## The home of Health data

[data.who.int](https://data.who.int)

The image shows a screenshot of the WHO Data dashboard. The main header includes the WHO logo and the word "Data." with navigation options for "Explore data", "Insights", and "Tools". The dashboard features a search bar with the text "Find health data" and a "Menu" icon. Below this, there are links for "Topics", "Countries", and "Goals". A "LATEST DATA" section displays "COVID-19 confirmed cases" with a "+ 0.9%" change and "Updated 36 minutes" ago, and "COVID-19 confirmed deaths" with "+ 5 123 (2.4%) in previous 7 days" and "Updated 54 minutes" ago. A world map is shown with a color scale from light blue to dark blue. The dashboard also includes several line charts: one for "Confirmed deaths" showing a sharp increase, another for "Deaths per day" showing a fluctuating trend, and a third for "Total confirmed cases" showing a steady upward trend. The date range is set to "Jan 1, 2020" to "Nov 11, 2020".

# Working with countries and ministries of health

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Through WHO's regional and country offices

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## Information products

- Country profiles for WRs
- Country profiles as data consolidation points for Ministries of Health
- Dissemination of data and statistics

## Technical support

- Documentation assets for the WHDH can be used as starting templates
- High level designs for data management infrastructure

## Operational support

- Country engagement portal
- Content and statistics support from the Data and Delivery for Impact (DDI) Cluster

## Contacts

- World Health Data Hub: [whdh@who.int](mailto:whdh@who.int)
- Rayana Bou Haka, WHO representative Qatar, [bouhakar@who.int](mailto:bouhakar@who.int)
- Samira Asma, Assistant Director General: [asmas@who.int](mailto:asmas@who.int)
- Steve Macfeely, Director Data and Analytics: [macfeelys@who.int](mailto:macfeelys@who.int)
- Pavel Ursu, Director Delivery for Impact: [ursup@who.int](mailto:ursup@who.int)

# Annex

Additional support slides

How the Hub

# Country Portal

Dedicated data exchange portal between Member States & WHO

- Improve engagement with Member States
- Efficiently manage data collection, consultation & calls
- Collaborate across WHO levels with country focal points
- Manage country focal points

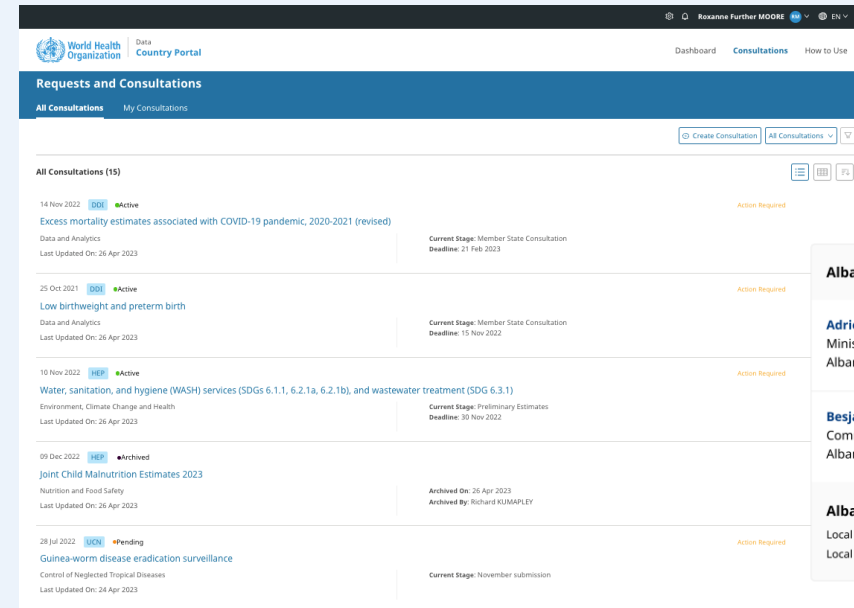
## Status

Launched Sept 2021

Available in 6 languages

12 consultations completed, 4 ongoing

Data collection management v1: Q4 2023



**MICHAELS, Antoinette**  
Many thanks for sending the updated data, is there any additional way I can be of assistance today?

**CARRASCO, Tomás**  
This is all thank you.

**MICHAELS, Antoinette**  
Have a great day Tomás.

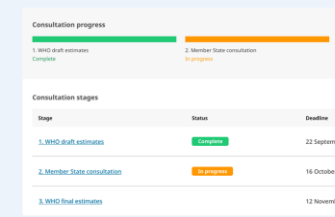
**Countries accessing consultation**  
**73.44%**  
132 out of 194 countries and areas

**Downloaded draft estimates**  
**65.46%**  
127 out of 194 countries

**Countries completed collection**  
**19.27%**  
37 out of 194 countries and areas

**Responded to data**  
**30.41%**  
59 out of 194 countries and areas

Country prefix	Example file name
Yes	AFG_LT_AR.xls AFG_COD_AR.xls
No	GHE 2019 LT Methods_RU.pdf GHE 2019 COD Methods_RU.pdf GHE Consultation Process_RU.pdf
No	JME Data Sharing_Ex.pdf
Yes	AFG_LT_EN.xls AFG_COD_EN.xls



# Data lake

Central data repository for WHO teams to store and manage files

- Ingest data from anywhere and store easily
- Eliminate data silos with one central repository
- Robust data security
- Harmonize data through data warehouse (xMart)

## Status

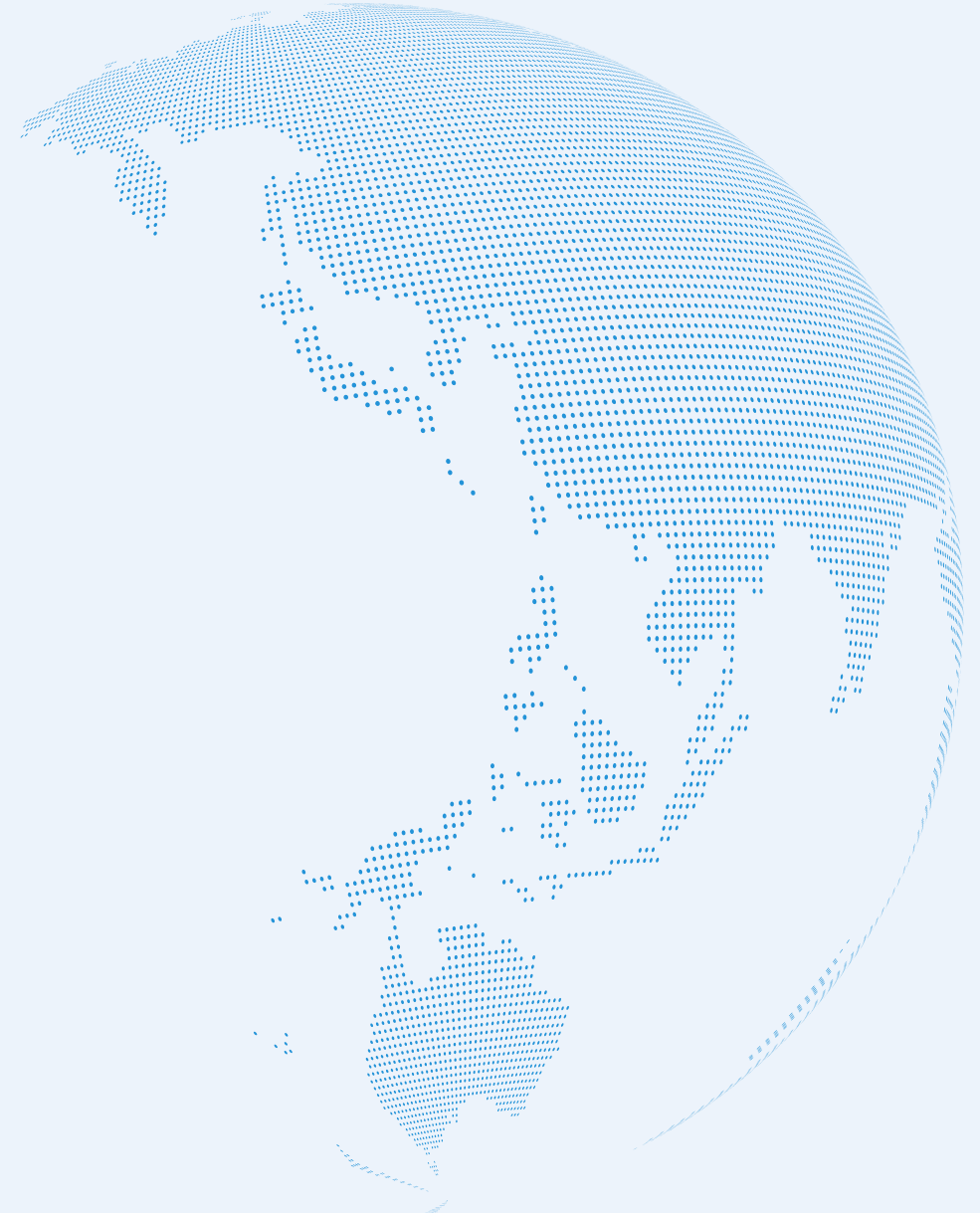
Launched 2021

Hosting terabytes of WHO data from 28 technical programmes

xMart (launched 2012, integrated as part of WHDH in 2021)

operating 50 data marts, 1,382 users, 86 connected

applications, 1,537 pipelines, 1,971 tables, 569 custom views



# Data.

State-of-the-art data hub to access WHO's health data

- Single source for WHO health data, reducing fragmentation
- WHO's most accessible, dynamic data visualization
- Downable data and API access
- Systematic data cataloguing and high-quality publishing
- Enhanced browsing and search capabilities

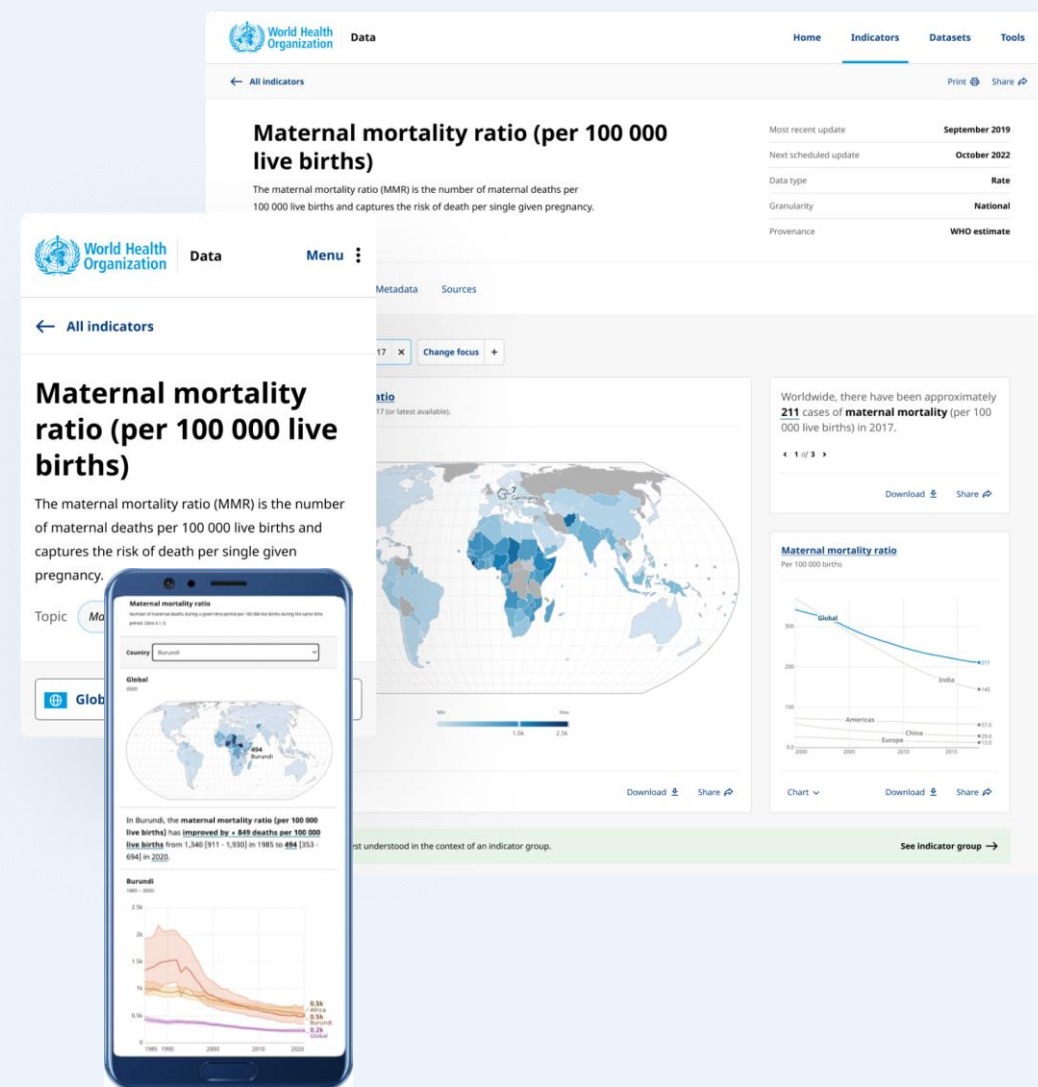
## Status

Data description schema launched May 2022

Country pages launched Dec 2022

Data visualization engine launched Dec 2022

Indicator pages launch May 2023





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# New releases

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Dec 2023 **Country portal:** Support for Data Collection (v 1.0)

**Data.who.int:** Indicator groups, country profiles, dashboards, topic pages

## **Collaborative Research Environment**

Machine learning, R and Shiny for advanced data science

## **Application of AI to Data Accessibility**

Use of AI for Natural Language queries

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# New products

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Prototypes May 2023

## **Data Activity Calendar**

Tracking data activity to reduce country burden

- Log all data activity: collections, consultations, releases
- Improve transparency of data requested
- Provide analytics on the data reporting schedule
- Quantify Member State reporting burden

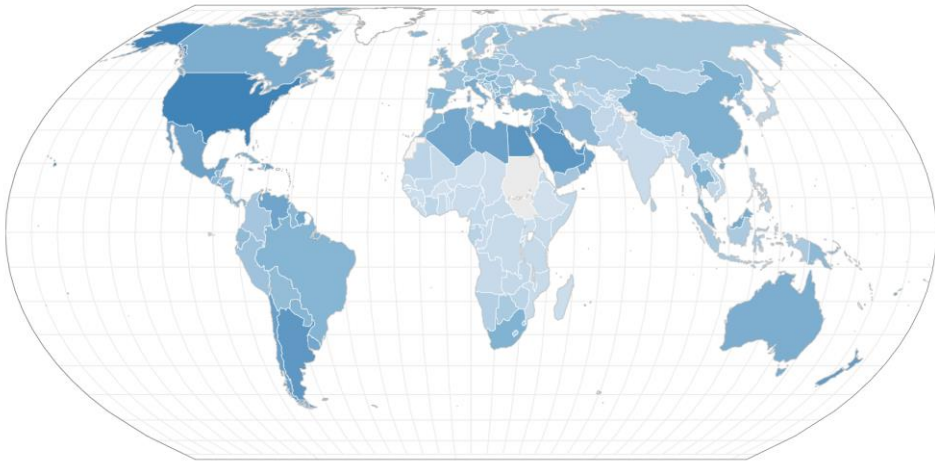
## **Data Catalog**

Comprehensive catalog of all WHO health data

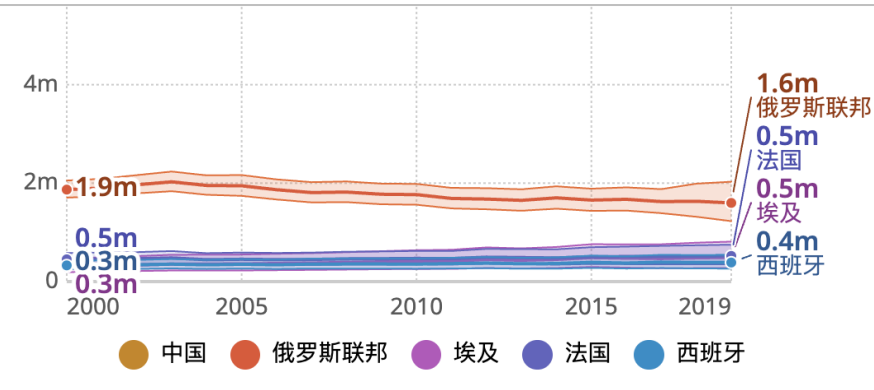
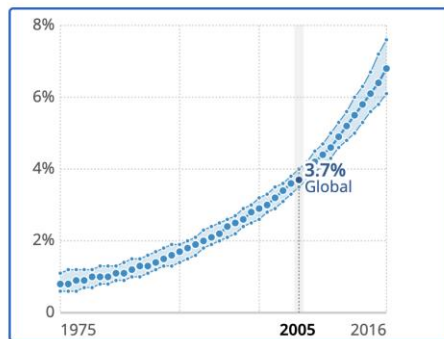
- Easily find and download WHO data
- Access datasets from across WHO leveraging rich metadata
- Explore data from all sources

Country

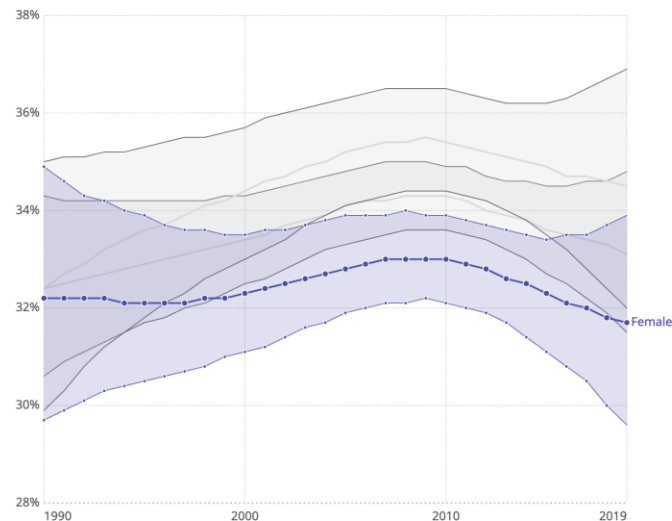
Worldwide, the prevalence of obesity among children aged 5 to 19 years has **worsened** by **▲ 6%** from 0.8% [0.6% - 1.1%] in 1975 to **6.8%** [6.1% - 7.6%] in 2016.



**Global**  
1975 - 2016



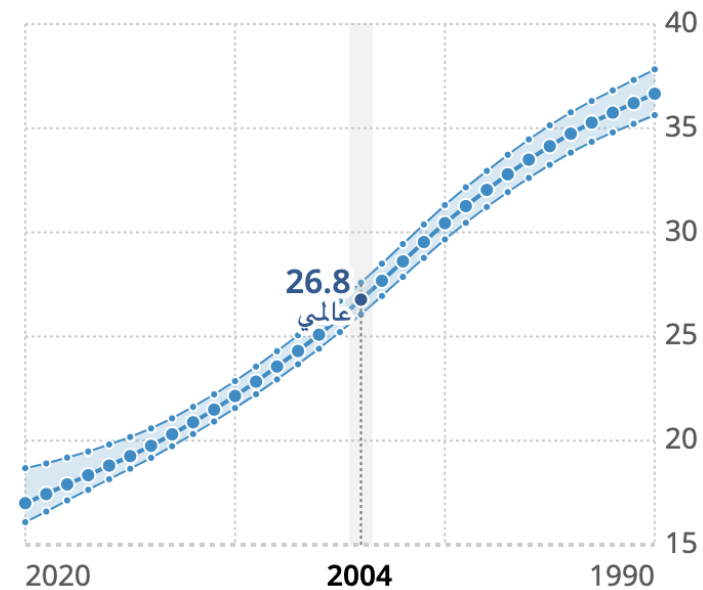
**Global, Female**  
1990 - 2019

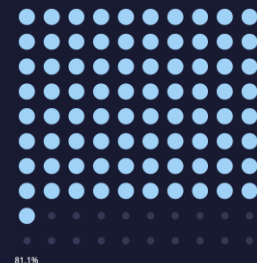
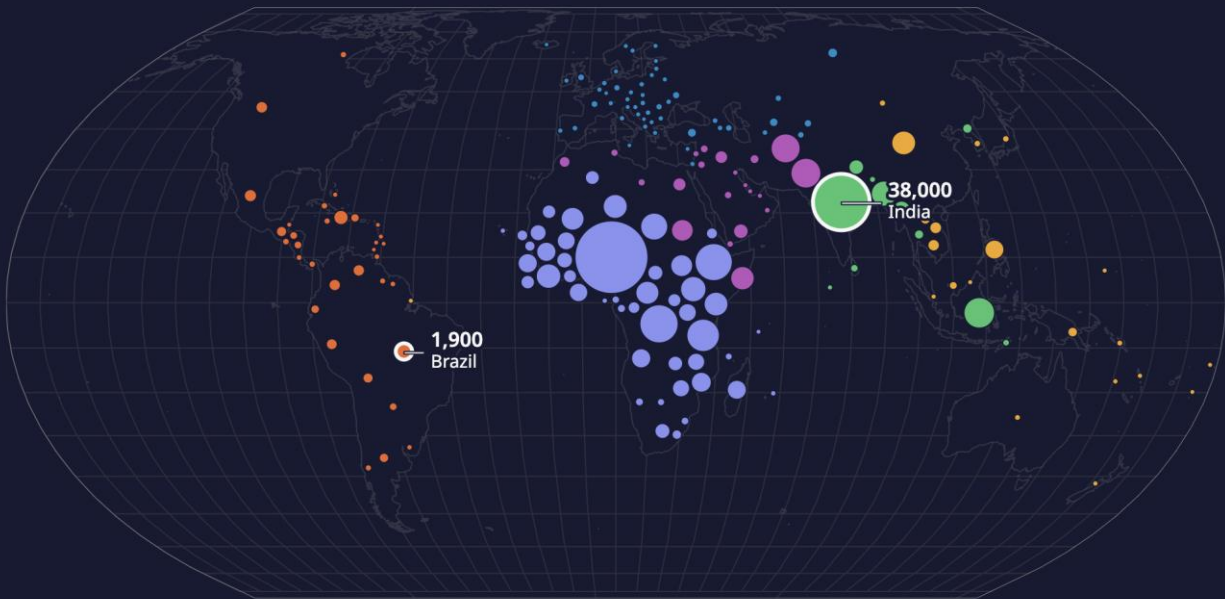
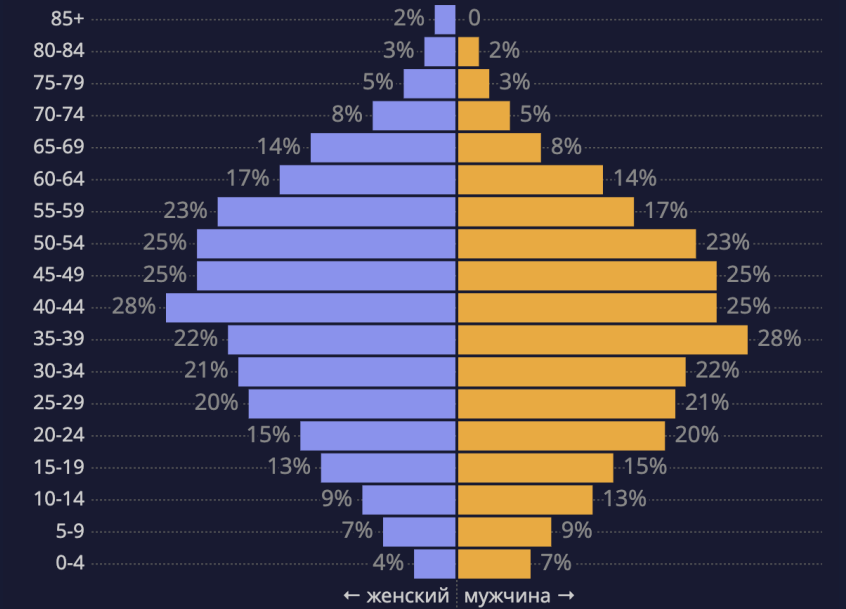
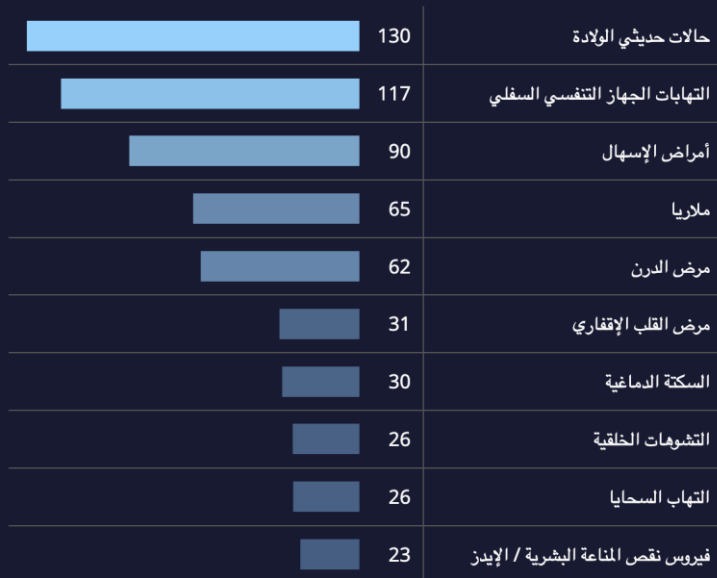
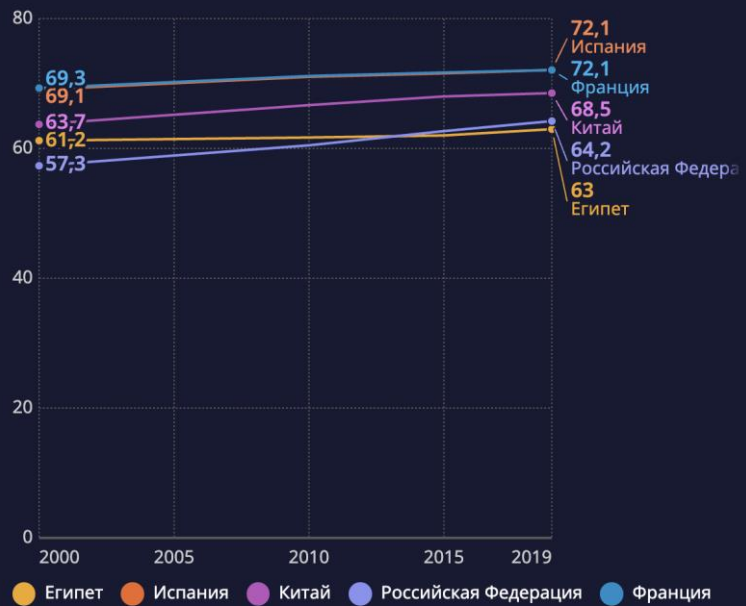


**Countries**  
2019

Country	2019 ▲
Switzerland	17.5%
Peru	18.4%
Canada	19.9%
Show 45 more	
Malawi	31.6%
<b>Global</b>	<b>31.7%</b>
Burkina Faso	31.7%
Show 142 more	
Dominica	49.9%
Tuvalu	50.8%
Paraguay	50.9%

**عالمي**  
2020 - 1990





**424.7**  
[374.7 - 474.7]  
+89 improving since 2010

