Iraq

Development of a GIS System to Support the Iraq Ministry of Health Primary Health Care (PHC) Service Coverage Mapping and Reporting and Expanded Programme on Immunization (EPI) in Iraq

iMMAP

Background

More than 3 decades of humanitarian crisis, mass population displacement, migration, unemployment and poverty have significantly affected the Iraqi government capacity to upgrade the level of public services, including in the health sector. Immunization programs have been particularly affected by the crisis and according to UNICEF, "even though Iraq has achieved 80% and 82% coverage for DTP3 containing antigen in 2016 and 2017 respectively, Iraq is among the top ten countries globally in term of DTP3 unvaccinated children (about half million children) which highlight the urgent need to reach for those missed communities and unvaccinated children".

UNICEF, WHO and the Iraqi Ministry of Health (MoH) identified a need to digitize MoH's Expanded Programme on Immunization (EPI) to better support the Iraqi population accessing immunization services and in particular currently untargeted groups. Without updated population data and updated primary health centers catchment areas, MoH lacks crucial information to adjust its immunization strategy. The integration of Geographic Information System (GIS) with existing MoH information systems can cover this initial gap.

Moreover, the support is being extended to ensure the inclusion of GIS in the Ministry of Health's Digital Health Strategy. Additionally, significant responsibilities encompass supporting the configuration of the GIS server, crafting Standard Operating Procedures (SOPs) for GIS data administration, sharing and ownership, determining the roles and responsibilities of key stakeholders, creating a data visualization dashboard, identifying gaps, assessing the current spatial structure of the Ministry of Health, and presenting recommendations to improve efficiency and engage key stakeholders.
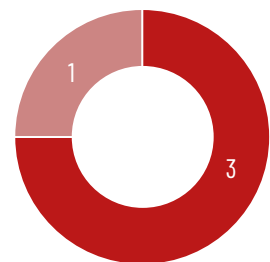
Donor: UNICEF Iraq

Current project: Development of a GIS System to Support the Iraq Ministry of Health Primary Health Care (PHC) Service Coverage Mapping and Reporting and Expanded Programme on Immunization (EPI) in Iraq
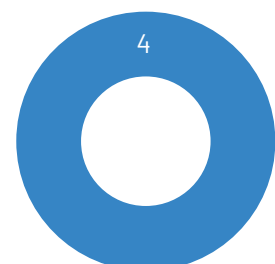
Project Budget: USD 795,266.79

Project Duration: October 26th, 2022 - October 30th, 2024

Personnel
Number of personnel: 4

1
3

- Women
- Men
- International

4

Proof of concept models were developed using real world data to demonstrate the potential use and value of GIS and spatial statistics for improved registration and recording of service delivery to facilitate essential microplanning strategies and reporting of health intervention coverage. The models utilized estimated population numbers and travel distance and time from Primary Health Care Centres (PHCC). Development of a GIS system to map PHCC catchment areas and population data will support identification of underserved populations and support planning for equitable access to health services.

Project Activities

iMMAP, in coordination with UNICEF and the Iraqi MoH, will support development of a GIS system to support the Expanded Programme on Immunization.

Following the definition of key health service indicators, iMMAP will provide GIS training to MoH EPI focal points to delineate the PHCC catchment areas across 155 health districts in Iraq and create a comprehensive mapping of its operational footprint.

Buffering of essential health services coverage, mapping of settlement and population density, as well as epidemiological outbreaks, will enable support an equity spatial analysis to identify potentially underserved populations.

The GIS system will also serve as a tool to link digital birth registrations with the EPI, for more effective monitoring of childhood immunization uptake and will be expanded to include other essential health services.

The creation of GIS-based strategic and operational dashboards, which integrate interactive maps and charts for geospatial and statistical analysis, to enhance the common operating picture for informed planning and decision-making through the creation of EPI microplans.

Following the development of the GIS tools and equity spatial analysis, iMMAP will identify existing gaps and provide recommendations to enhance health services surveillance. iMMAP will develop a report and roadmap, outlining a phased recommendations workplan to support the MoH in developing its existing IM and GIS systems.

The roadmap will outline the steps to be taken to improve its GIS capacity, so that geospatial analysis can be used to effectively solve planning, resource allocation, operational and reporting challenges.
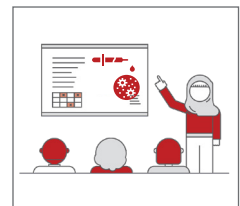
Expected Outcomes

Improved access to evidence based data on updated PHCC catchment areas

Identification and geolocation of underserved population groups

Improved Capacity from MoH Staff to Update and Maintain the Geographic Information System