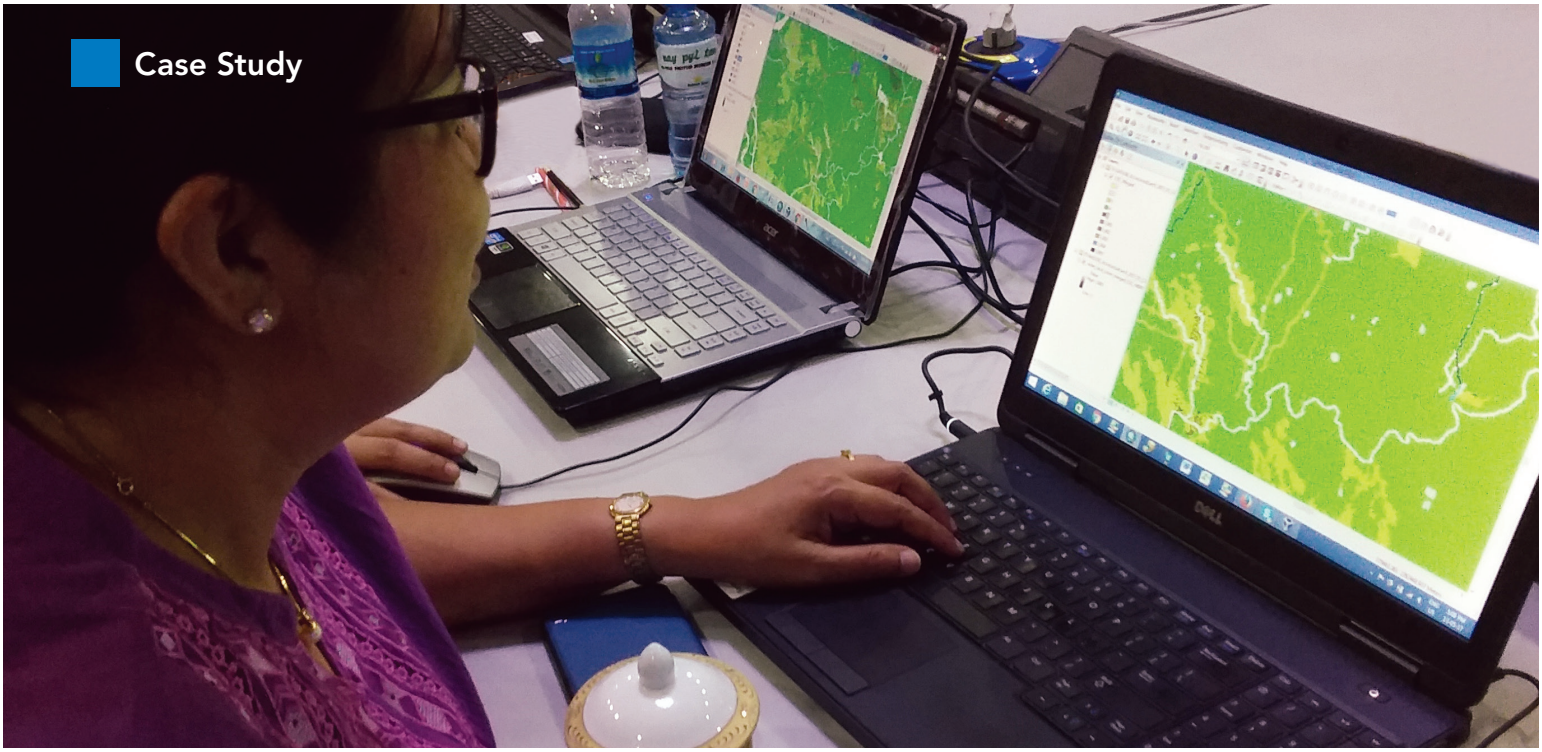
Case Study



PUBLIC HEALTH

User

The Department of Public Health
Ministry of Health and Sports, Myanmar

Challenge

The Health Information System needed to be geo-enabled and the ability to prioritize services using geographic knowledge developed

Partners

AeHin GIS lab (supported by Asian Development Bank and World Health Organization); Esri partner since 2015

Solution

ArcGIS® Desktop and ArcGIS℠ Online visualization and analysis tools embedded in good geospatial data management practices

Results

Trained MOHS staff; improved data quality; defined guidelines, standards, and protocols; and demonstrated the benefits of HIS geo-enabling, leading to institutionalization

Geo-enabling the Health Information System in Myanmar

Myanmar has wide geographic, ethnic, and socioeconomic disparities and is facing several public health challenges, including maternal and newborn death; diseases of national concern, such as malaria; and illnesses and injuries resulting from natural disasters.

To address this, the Department of Public Health, Ministry of Health and Sports (MOHS), has launched the National Health Plan (NHP) 2017–2021 with dual objectives: strengthening the country's health system and paving the way toward universal health coverage.

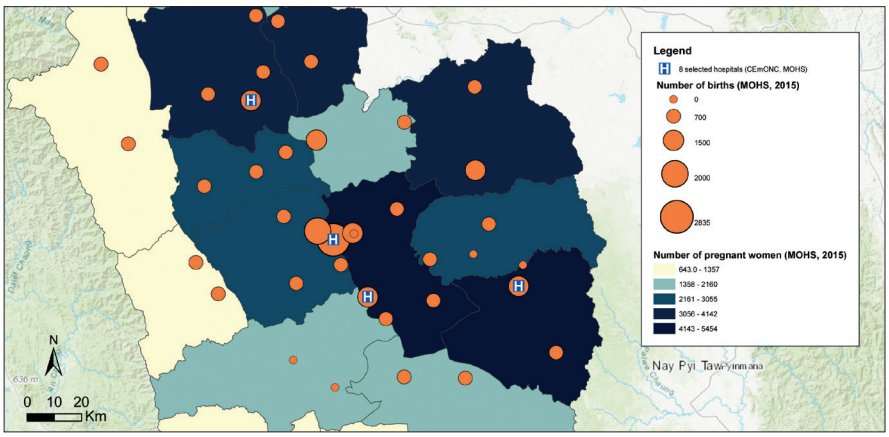
The Challenge

Implementing the objectives of the NHP compelled the MOHS to geo-enable its Health Information System (HIS). That meant defining the necessary governance structure, standards, protocols, guidelines, and policies to ensure powerful use of geospatial data and technologies across all health programs.

A major requirement of the process was to strengthen the technical capacity of the ministry and the ability to prioritize services geographically at the township level and track health issues through the use of a common geo-registry.

The Partners

The AeHIN GIS Lab is an innovative approach supported by the Asian Development Bank, the World Health Organization (WHO), and other partners such as Esri to strengthen the technical capacity of the health sector (government and partners) in Asia and the Pacific to fully benefit from the power of geography, geospatial data and technologies through the geo-enablement of their HIS.



"The geo-enablement of the Health Information System has given us a major leap forward in support of the implementation of the National Health Plan 2017–2021."

Aye Aye Sein
Deputy Director General
Department of Public Health
Ministry of Health and Sports, Myanmar

The Solution

The technical capacity of the MOHS has been strengthened and the benefits of using the same geography across the health sector demonstrated through the implementation of a pilot project covering three different health programs in the Region of Magway.

- ArcGIS Desktop and AccessMod have been used to propose a fully functional emergency obstetric care delivery network (BEmONC and CEmONC) as a way to support planning. AccessMod is a free and open-source WHO tool to model physical accessibility, geographic coverage, referral times, and scaling up scenarios for health services.
- The unique identifiers from the health facility master list have been integrated into the malaria database to visualize temporal changes in the number of positive malaria cases over 2015 as part of communicable disease monitoring and surveillance.
- The spatial analysis functions of ArcGIS Desktop have been used to conduct a rapid impact assessment after the Chauk earthquake (August 24, 2016) and therefore illustrate how emergency management can be supported.

The Results

The implementation of the pilot project throughout the Region of Magway (see the story map at go.esri.com/MOHS for more details) not only strengthened the technical capacity of the MOHS when it comes to the use of geospatial data and technologies but also demonstrated the benefits gained through geo-enabling the HIS:

- Avoiding duplication of efforts and therefore reducing costs through the use of common core geography-based registers and their associated geography
- Improving the quality (completeness, uniqueness, timeliness, validity, accuracy, and consistency) of geospatial data through the use of common guidelines, standards, and protocols
- Using geography as the dimension that connects data from different sources
- Using the powerful visualization and analytical capabilities of geographic information system (GIS) technology

All the above support the implementation of the National Health Plan 2017–2021 to reach the United Nations Sustainable Development Goals (SDGs) and will be used to institutionalize what has been initiated through the pilot project as part of the strategic action plan for strengthening health information 2017–2021 currently under development.

go.esri.com/myanmar