

# QATAR GEOLOGICAL MAPPING PROJECT PHASE-II

WE ARE PLEASED TO PRESENT THE FOURTH EDITION OF OUR NEWSLETTER, HIGHLIGHTING KEY UPDATES AND MILESTONES ACHIEVED BETWEEN AUGUST 2025 AND JANUARY 2026. THIS EDITION SHOWCASES THE CONTINUED PROGRESS, MAJOR ACHIEVEMENTS, AND ONGOING ADVANCEMENTS OF THE QATAR GEOLOGICAL MAPPING PROJECT - PHASE II.

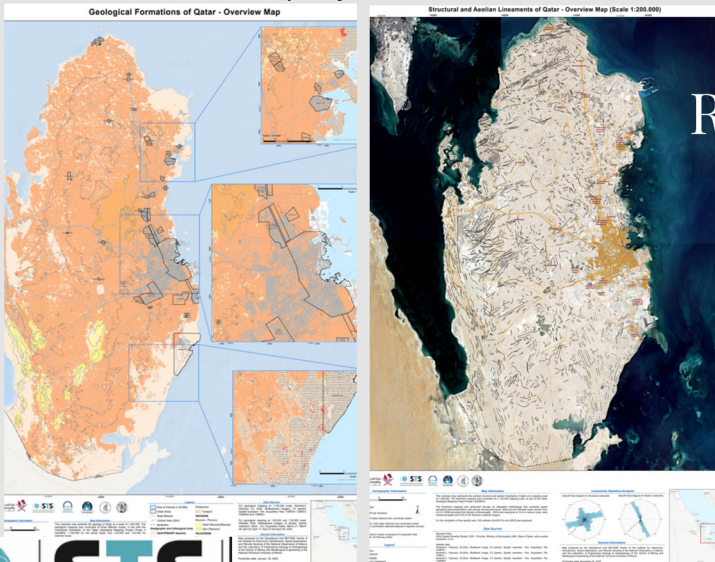


## COORDINATION MEETINGS STRENGTHEN PROJECT ALIGNMENT

Between 29 July 2025 and 29 January 2026, a series of technical and administrative coordination meetings were held between project partners and the Ministry of Municipality team. These meetings focused on reviewing progress, strengthening collaboration, and ensuring effective alignment of efforts across all project activities.

## GEOTECHNICAL LAB. TESTS

Geotechnical testing has begun under QGMP-II as part of the subsurface investigation program. These tests evaluate the engineering properties of soil and rock, including bearing capacity, to confirm the stability and suitability of the proposed works. The results will support safe and reliable design in accordance with project standards.

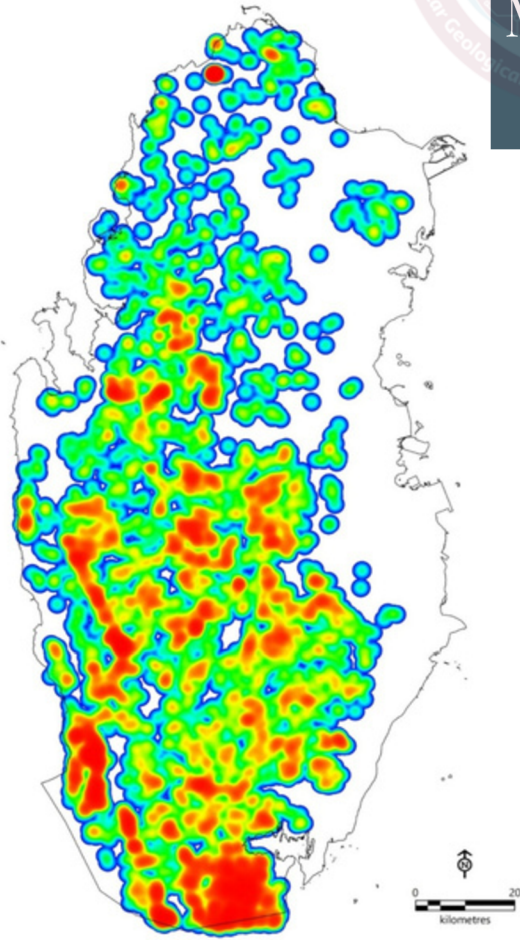


## REMOTE SENSING MAPS

An extended remote sensing geological map at a scale of 1:50,000 has been produced, covering the entire State of Qatar. In addition, the Qatar Structure and Aeolian Lineament Map has been completed and submitted to the Ministry.

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## MAPPING KARST RISKS TO SAFEGUARD QATAR'S FUTURE



Karst Team of Task-3 is developing a karst hazard susceptibility map for Qatar to better understand the relationship between geological conditions and karst formation. Field observations show that sinkholes and ground collapses pose potential risks to infrastructure and public safety.

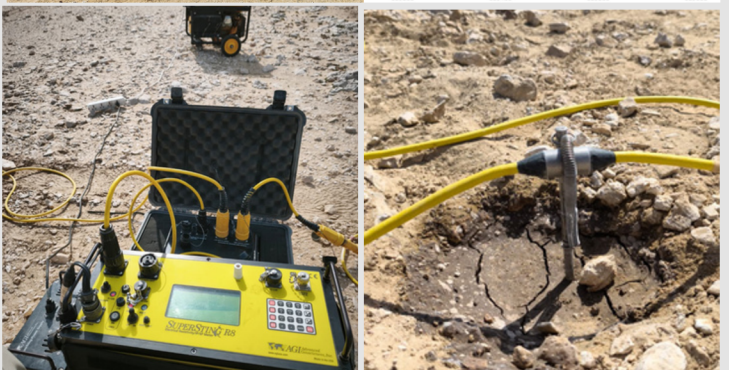
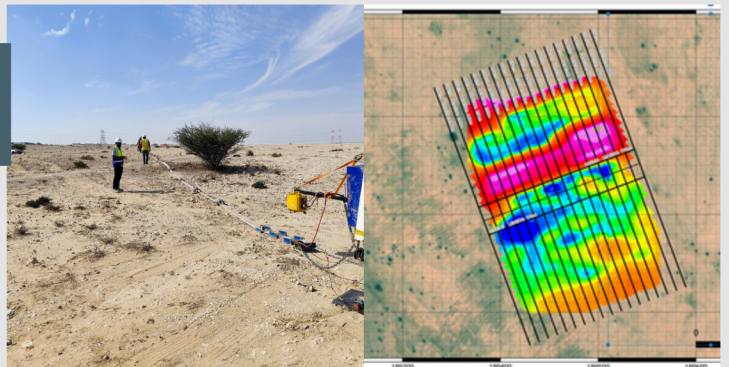
The project combines geological maps, groundwater data, topographic analysis from high-resolution DEMs, and time-series Sentinel-1 InSAR data to detect ground deformation. Including InSAR-based subsidence rates is essential for identifying high-risk areas early.

This data-driven approach will support informed land-use planning, safer infrastructure development, and proactive risk management across the country.

## SURFACE GEOPHYSICAL SURVEY

Surface geophysical survey begins at key karst sites. Surface geophysical investigations are now underway at Al Sailya sinkhole, Dahl Mudhleim Cave, and the Al Jumayliyah-1 and -2 sinkholes, marking an important step in advancing karst hazard assessment efforts.

These surveys aim to detect subsurface cavities, voids, and weakened zones that could lead to future collapses or sinkhole formation. By applying advanced geophysical techniques, the team will gain clearer insight into underground conditions without intrusive excavation.



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## GEOPORTAL VERSION 3

The third version of the Geoportal was officially delivered at M24, accompanied by a comprehensive User Guide to support users and ensure smooth adoption across teams.

This upgraded version introduces several powerful enhancements designed to improve functionality and user experience:

### Advanced Draw Widget

Users can now create customized drawings directly on the map and convert temporary graphics into permanent layers. This feature enables better collaboration and broader organizational use of spatial data.

### Enhanced Analysis Tools

The platform now supports both spatial and attribute-based analysis, allowing users to perform more detailed investigations and data queries within the system.

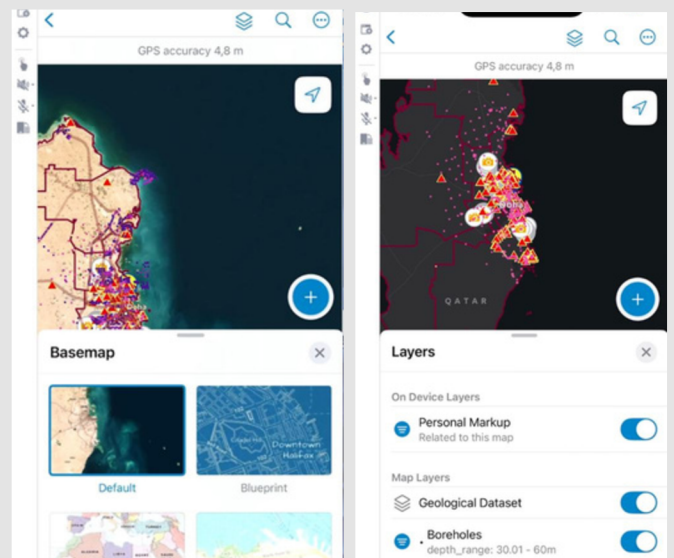
### Integrated Reporting Tool

Users can generate and download structured reports for selected datasets or geographic areas, streamlining documentation and decision-making processes.

This application supports mobile data collection and real-time visualization, enabling field teams to capture, update, and review spatial information directly on-site.

Built on ArcGIS Field Maps, the app ensures native performance on both iOS and Android platforms, providing a reliable and user-friendly experience across devices.

A comprehensive User Guide has also been developed and submitted to the MM for review and approval, ensuring smooth implementation and effective user adoption.



## CAPACITY DEVELOPMENT PROGRAMS

A four-day training program was held on September and October for the the Ministry team, providing a comprehensive overview of the geological, geotechnical, and subsurface investigation works. The program combined detailed office-based presentations and a workshop at the Ministry building with practical field visits to drilling and GPR survey locations, as well as a visit to the geotechnical laboratory.



## QGMP-II MOBILE APP

Mobile Application Version 1 Delivered The first version of the Mobile Application was successfully delivered at M24, marking a major milestone in enhancing field operations and data accessibility.

