Online Meeting of the Oasis Hydrology Group on November 5, 2025

Maps and data collection

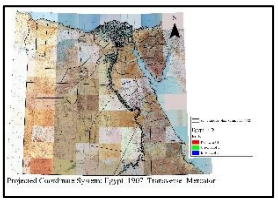
This report outlines the available spatial datasets for the project and details the processing steps in ArcGIS Pro. Its purpose is to clarify the data sources, formats, and the work ongoing to prepare the data for further analysis.

Introduction

The project relies on multiple datasets representing different spatial and hydrological components across Egypt. These datasets were obtained in various formats and levels of completeness. Therefore, consistent preprocessing within ArcGIS Pro is essential to ensure accurate integration and analysis. This report summarises three primary categories of available data—topographic maps, well information, and drainage canal networks—and describes the progress made in preparing them for use.

1. Topographic Maps

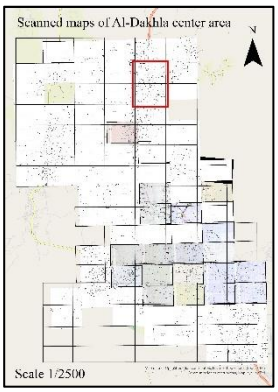
The first primary data source consists of topographic maps on two scales:



- 1:25,000 scale maps dating from the 1930s

- 1:2,500 scale UTM maps

The 1:2,500 have been georeferenced into WGS 84 / UTM Zone 35N and organised into a collection of 91 fully processed sheets. All are now ready for use.

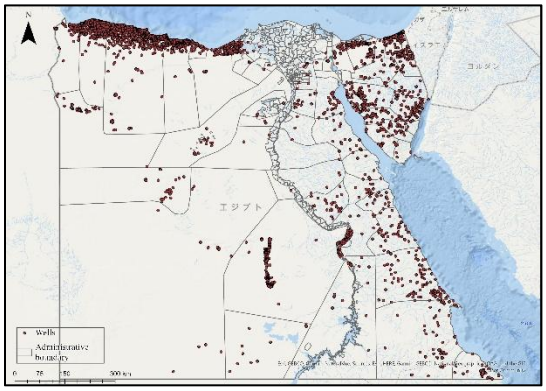


The more detailed 1:2,500 maps are currently being digitised to extract key geographical features. Six priority layers are under preparation, representing the initial phase of a systematic digitisation workflow. This digitised information will support detailed spatial assessments across selected areas.

2. Well Data

The second primary dataset comprises well information obtained from multiple formats, including Excel and Word files. Approximately 4,000 wells are distributed across Egypt. The accompanying attribute table includes both Arabic and English names for each well, ensuring proper identification.

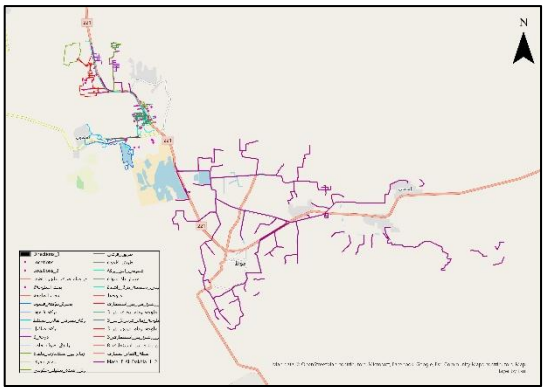
Governmental well data has been fully processed, with each record transferred from Excel into the corresponding attribute fields of the shapefile. However, due to character limitations in shapefile attribute tables, a CSV version of the database is being retained to preserve full field descriptions and allow precise verification of well metadata.



In addition to national well records, the project also includes detailed information on surface wells and Roman springs in Al-Dakhla. These wells are distributed across four main areas—Bdkhlo, Elmoshia, Qalamon, and Rashda—and include detailed attributes, such as depth, water level, and geographic location.

3. Drainage Canal Data

The final dataset consists of the drainage canal network, originally received in KMZ format. These KMZ files required substantial preprocessing because the data was organised across multiple layers with inconsistent or unclear naming conventions. For example, certain shapefile groups contained elements named only with numbers (e.g. “4”) without any descriptive attributes, while others—such as the Qalamun Lake group—were more clearly structured.



All drainage canal features have now been converted into shapefiles, including the correct names where available. A dedicated layout has been prepared showing the drainage canals overlaid on the detailed 1:2,500 UTM maps, with directional arrows added to indicate flow direction. This integration provides a clearer understanding of canal alignments and their relationships with other geographic features.

To date, we confirm this is the full data set available to us.