Preliminary mapping of groundwater potential zones using Remote sensing techniques in Ghana

International Water Management Institute

Objectives:

- Develop and verify a methodology for mapping groundwater potential zones applicable across sub-Saharan Africa (SSA)
- Apply the methodology to various SSA countries, including Ghana

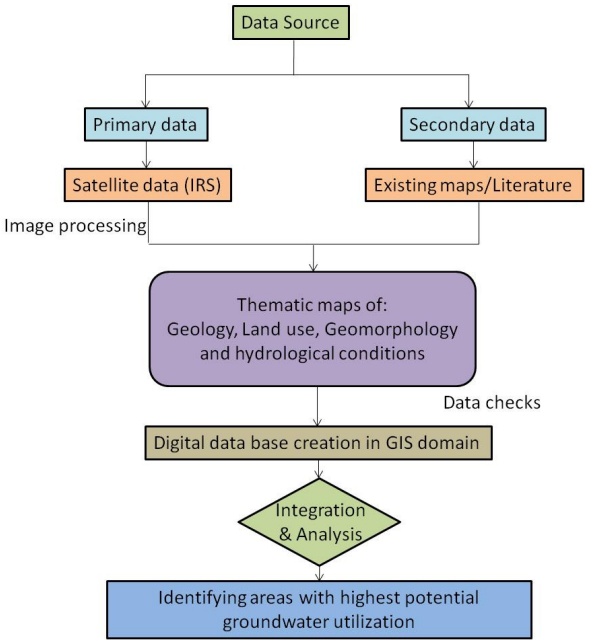
Datasets:

- SRTM 90m DEM
- Landsat ETM+
- Geology
- Soils
- Rainfall

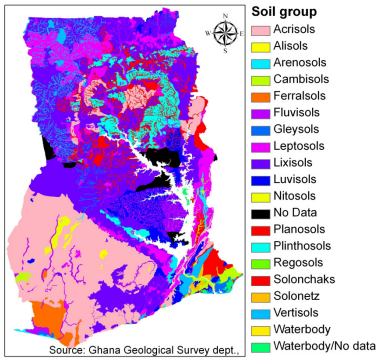
Methodology:

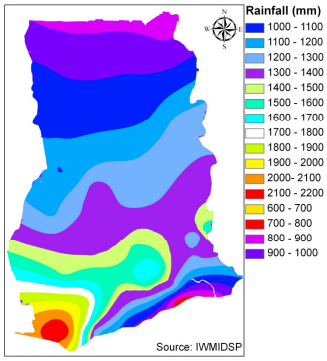
- Identify the most critical spatial data layers needed for mapping groundwater potential zones
- Provide ratings and weightages to spatial data layers based on the literature and expert knowledge
- Integrate the spatial data layers to assess map groundwater potential zones

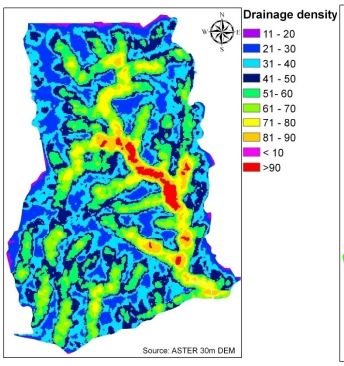
Methodology Flowchart:

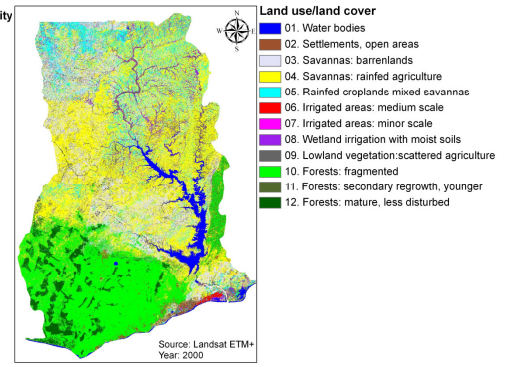


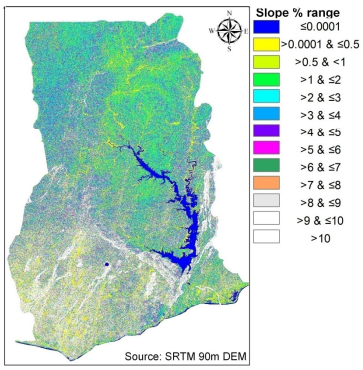
Spatial layers:

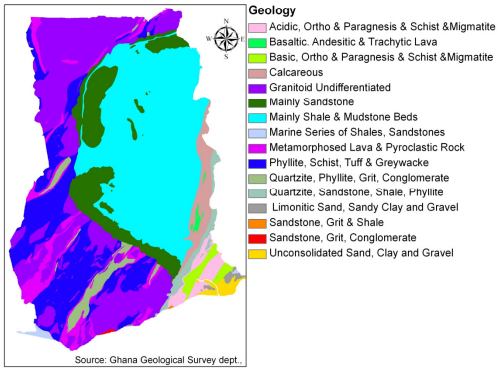






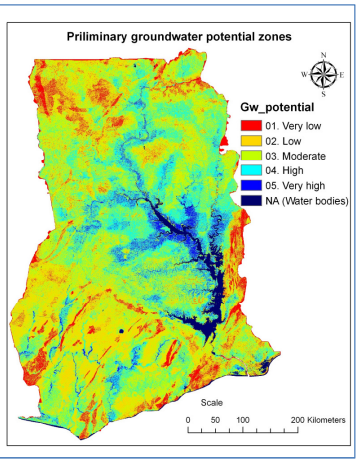






Results:

- Preliminary results to date show large parts of Ghana have at least moderate groundwater potential zone
- The methodology is still being refined and will be verified against observations of borehole yield
- Maps will be produced for several other SSA countries



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