Site Suitability Analysis for water management using Geospatial Technologies in arid areas

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Context

- Water scarcity is more pronounced in the African arid and semi arid Lands (ASALs) as showing in Figure 1.

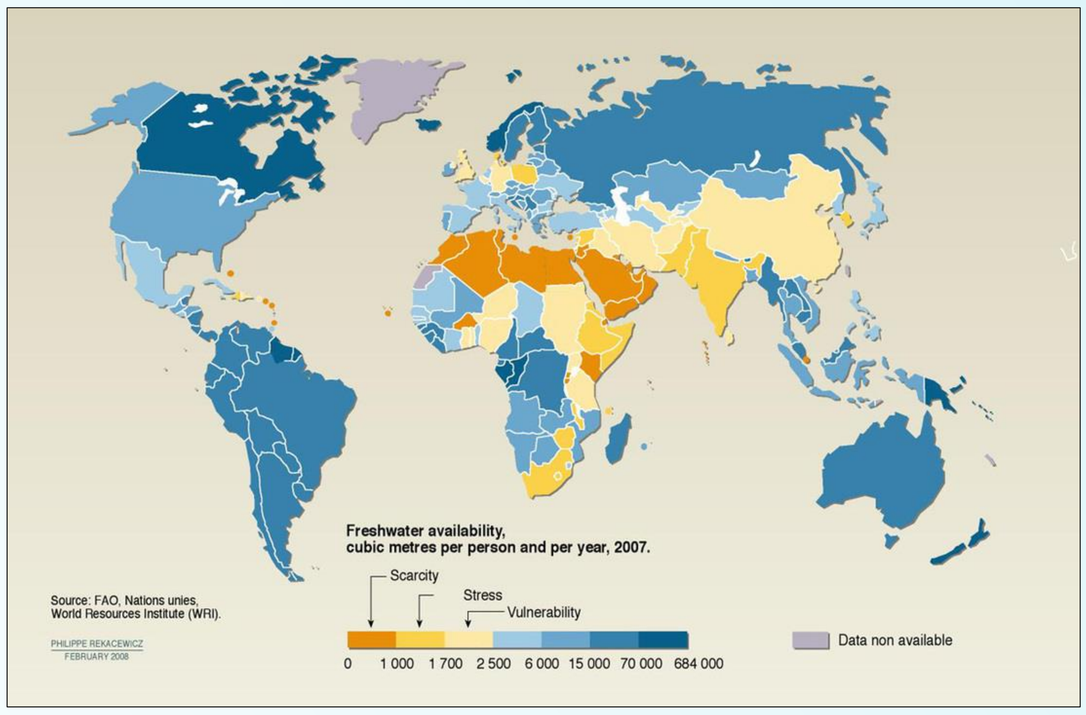


Fig 1. World water scarcity level

- Water harvesting using dams and its suitable management will help to extend the land-use period (Pedroza-Sandoval et al 2017).
- Geo-spatial tools can be used to identify and manage suitable sites for dam construction, but such expertise is still lacking.

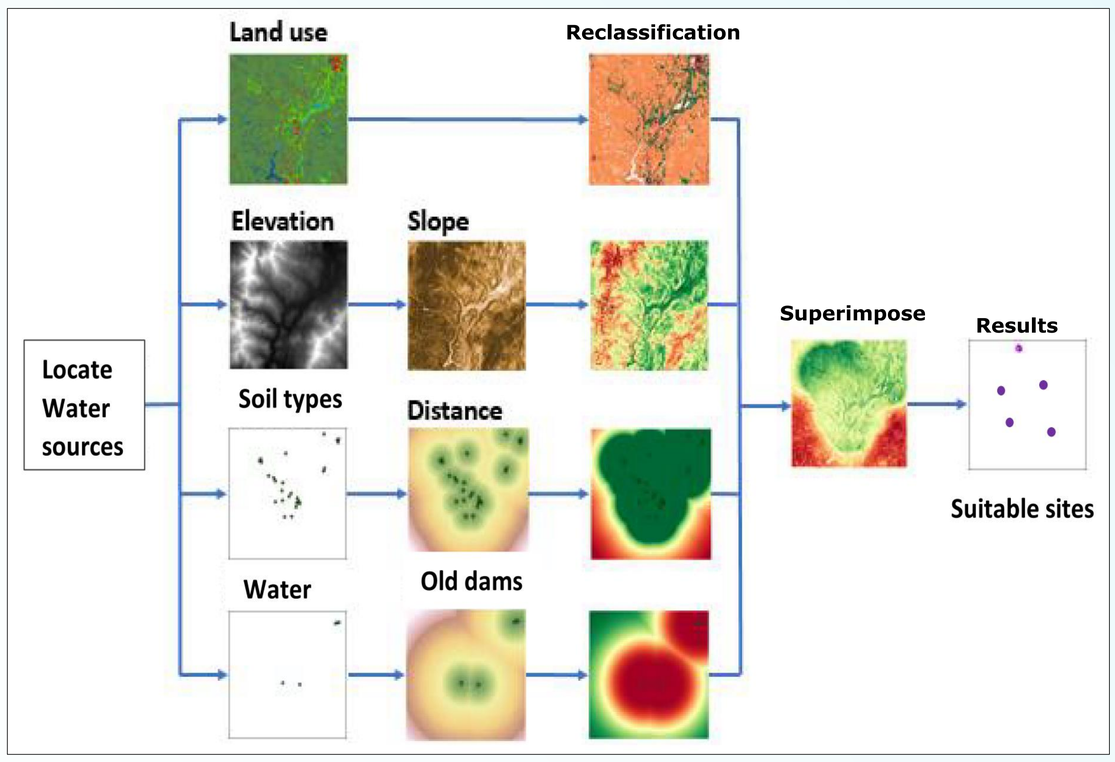


Fig 2. Site suitability analysis process

Photo 1. Constructed dam to address water scarcity

Learning goals, target group and outcome

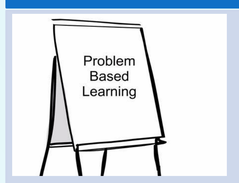
Learning goals
- Apply geospatial technologies to address water scarcity issues in ASALs
- Acquire skills related to suitability analysis for decision–making process

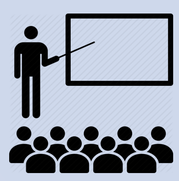
Targeted group
- Scholars and researchers
- Government and NGOs Officers with background in
  - Geoinformatics and agriculture,
  - Environment and land use planning

Learning outcomes
- Describe various GIS and remote sensing concepts
- Use R Studio program for data analysis
- Integrate geospatial technologies to suitability analysis for decision making in water resource management

Learning environment and course content

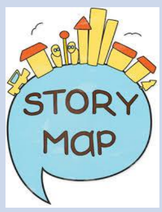
Forms of Teaching



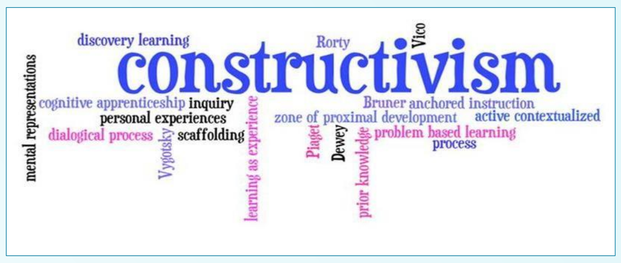


Teaching Materials

Media



Learning theory paradigms



Experiential Learning

Information

25 slots available

- Deadline: 25th June 2020
- 10-14 August, 2020

Sun Beach Hotel, Benin

For more details, visit www.geowater.org

References

- Dembele, C (2019). In-field water harvesting using contour bund with earth to cope with changing climate in semi-arid smallholder farming areas in Mali., dspace.codeobia.com
- Pedroza-Sandoval, A, Trejo-Calzada, R, & ... (2017). Water Harvesting and Soil Water Retention Practices for Forage Production in Degraded Areas in Arid Lands of Mexico. *New Perspectives in …*, books.google.com
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