Geography 815: Remote Sensing and GIS
Term Paper: Monitoring the Way of Change in the Nile Delta
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Dec 15, 2008

Abstract
The Nile Delta has been formed by the interplay of tidal and alluvial forces since at least the early Halocene. Within the span of a few human lifetimes the sources of change in the Nile Delta have shifted, affecting the coastal, littoral and pelagic biogeography of the eastern Mediterranean. Since it is such a long, old and interconnected system, results are difficult to predict; for example, how is this shift connected to modification of global climate systems?
Remote Sensing and GIS techniques are increasingly being deployed together to map and model the trajectory of change in the Nile Delta. This paper surveys recent work to identify which indices are most relevant to monitoring changes in biogeography. A simplified application for automated monitoring of these indicators using Remote Sensing and GIS is described.

Summary: Monitoring the Way of Change

- Modern vectors of change in the Nile Delta
- How are these vectors 'sensible' by remote systems?
- Which remote sensing instruments monitor Nile Delta region?
- Monitoring systems
- Some conclusions & next steps

What are modern vectors of change in the Nile Delta?

- background of dynamism
- dimensions & possible sources of change
- vectors connection to landcover/landuse indices

How are these vectors 'sensible' by remote systems?

- which remote systems monitor Nile Delta region?
- survey of ongoing studies
- biogeography indices

Monitoring Systems

- Automated monitoring & real-time querying
- What is a Gazetteer? Examples
- Process flow
- Functional requirements
- Systemic constraints

Some conclusions

- how can this be useful: help model trajectory of change
- next steps toward implementation

Methods (Table)
Models (Figure)
Process Flow Chart

Bibliography