

## RESEARCH CLINIC

### General information

Supervisor:	<b>Dr. P.F. Hudson</b>
Title of clinic:	<b>Digital Landscapes</b>
Number of students:	2
Major ( <i>if applicable and approved by the Major Convener</i> ):	EES
(Pre)requisites ( <i>if applicable</i> ):	EES major, yr-2 or yr-3

### Research context

#### Overview and rationale:

This version of the *Digital Landscapes* RC utilizes digital hydrologic and geospatial databases to analyze this past summer's extreme flooding along the Maas River, NL. We will combine sedimentary data from field work with secondary hydrologic and geospatial datasets in a GIS to determine how the volume and character (sediment texture) of floodplain sedimentation varies according to different management strategies and riparian vegetation.

### Students' tasks and activities

*Please specify the tasks and activities, timeline, the learning aims and how they are assessed, i.e. what the deliverables will be.*

- Background work on watershed scale characteristics of the Maas River basin
- GIS overlay analysis of different environmental data sources (e.g., soils, vegetation, land cover, lidar DEM, hydraulic infrastructure etc...)
- Conduct spatial interpolation of sedimentary field data (GIS)
- Analyze the flooding using hydrologic and sedimentary data from the Rijkswaterstaat (Excel)
- Utilize satellite imagery via remote sensing procedures to examine flood impacts to riparian vegetation (GIS)
- Output and deliverables: databases, a poster that can be presented at a professional conference