

## **Shifts in bio-geochemical processes following extreme events**

Extreme events may impose a shift in geochemical boundary conditions at coastal sites. For instance, a coastal wetland, which has been formerly disconnected from the sea, may be flooded with saline water during a storm event.

How is an increasing salinity changing carbon sequestration and nutrient cycling? Likewise, a coastal wetland may be subjected to extreme droughts with an altered geochemical cycling (e.g. greenhouse gas emissions) and a shift in the wetland plant communities.

In the research theme 'Shifts in bio-geochemical processes following extreme events' we want to study the severity of changes observable after extreme events. It is also relevant to assess how long a system shift lasts.

- Case studies of extreme events
  - Flooding of low-lying coastal sites
  - Extreme drought and high temperature events
- Indicators for a regime shift in geo-chemical cycling and biological setting
- Changes in physical properties of soils and sediments following extreme events

The idea of the summer camp is to jointly work on data sets, which are provided by the participants, testing methods, for instance, of time series analysis. We want to develop an interesting story along case studies and bring it to the science community.