

### **Fact Box 4 - Overall Objectives of LOIS**

1. To estimate contemporary fluxes of materials (sediments, nutrients, contaminants) into and out of the coastal zone, including transfers *via* rivers, coasts, groundwater, the atmosphere and the shelf edge boundary.
2. To characterise the key physical and biogeochemical processes that govern coastal morphodynamics and the functioning of ecosystems, with particular reference to the effects of variations in sediment supply and inputs of pollutants.
3. To describe the evolution of coastal systems from Holocene to present in response to changes in climatic conditions, changes in relative sea level and the impact of human activity.
4. To develop coupled land-ocean models to simulate the transport, transformation and fate of materials in the coastal zone, and provide the basis for predicting hydrological, geomorphological and ecological conditions under different environmental scenarios for the next 50-100 years.