

# INTEGRATING SCIENCE AND SEDIMENT MANAGEMENT IN A BILATERAL SETTING, IN THE SCHELDT ESTUARY

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The Scheldt estuary plays a crucial role in the relationship between the Netherlands and Flanders/Belgium. Both countries require flood protection, need accessibility to large ports (Antwerp, Ghent, Terneuzen, Vlissingen) and value it as one of the few remaining natural estuaries in North West Europe. This requires a sustainable and balanced policy. A long term vision was developed and executed in cooperation between the two countries. The cooperation was formalized in a Treaty (December, 2005). It included the agreement to do joint research to support policy and management.

A main challenge is to come to 'integrated sediment management'. Soft measures (dredging, disposal, sand mining, nourishments) are, due to flexibility and reversibility, preferred over 'hard measures'. Options for sediment disposal differ horizontally (near or far away) and vertically (on intertidal areas, in secondary channels or in deep parts).

We discuss the recent (post 2005) history in cooperation, the bilateral aspects and efforts to come to a joint research program. A bilateral set of working groups is now responsible for 'posing the right questions' (a joint list), a common monitoring program and operational sediment management (a flexible disposal strategy).

We elaborate, using a policy analysis scheme, fig 1, on:

- -The importance of conceptual models to make system knowledge understandable and effective for policy and management;
- -How to balance between short and long term effects of management options, including autonomous developments like climate change;
- -The role of a joint framework, to assess monitoring results as well as for evaluation of management options;
- -Cooperation of knowledge institute, consultancies and estuarine managers;
- -Do's en don'ts to make research of value for decision making in estuarine management and policy. Usefulness depends on the ability to link states and changes in morphology and hydrodynamics to estuarine functions, including the ecological response.

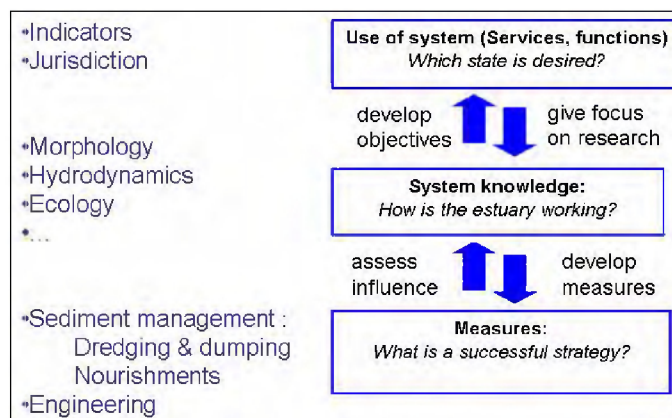


Fig. 1: Making bridges from management to system knowledge