

# Assessment of ecosystem services in dredging and marine construction works

Cor Schipper<sup>12</sup>,

1. Deltares, PO Box 177, 2600 MH Delft, The Netherlands

Phone: +31-(0)-653794288

E-mail: cor.schipper@deltares.nl

2. CEDA; On behalf of the CEDA WG on Ecosystem Services; Secretariat  
Radex Building, Rotterdamseweg 183C, 2629 HD Delft, The Netherlands C

**Introduction:** It is obvious that dredging and marine construction works will have an impact on the structures and fluxes of coastal and marine ecosystems. The challenge now is to use the concept of ecosystem services (ES) to make dredging and marine construction projects good for both society and environment.

**CEC Working Group + TOR** The concept of ecosystem services (ES) is under development. If it is not possible to value services in an unbiased way the actual valuing of impacts and services should be done together with stakeholders. For this reason CEDA Working Group develops a position paper (1) about assessment of ecosystem services in dredging and marine construction works. Several dredging case studies are studied for design processes with stakeholder involvement. The Building with Nature program of the Ecoshape consortium was especially developed to integrate economic development, nature values, and quality of life. It uses the balance between cost, reliability and performance of a product, project, process or service.

**Content of the position paper:** Studies as Building With Nature are being used to point out the integrated character of a ES project. Since it combine techniques with environmental aspects in planning and realization. In the CEDA Position Paper It provides the consideration of ecosystem goods and services in the project development, appraisal and decision making process. The assessment of ecosystem services in dredging and marine construction works based on experience of working in Working with Nature philosophy showed improvements in ecosystem services.

**Key message:** The concept of ES offers the opportunity to use a pro-active, opportunity driven approach in project engineering. Therefore it is encouraged to try to incorporate the ES approach in dredging and marine construction projects so that practice can help the further development and implementation of the concept. In line with the

Marine Framework Strategy Directive an analysis of drivers, pressures, state, impact and response relations (DPSIR) can be used as the starting point for assessment

An open and early dialogue between the developer, stakeholders and the regulator could be a key to the success of applying the Ecosystem Services approach.

## References:

1. CEDA Position Paper, Assessment of ecosystem services in dredging and marine construction works (in press), 2013