The systems approach framework for collaborative, science-based management of complex systems - DTU Orbit (16/08/2019)

The systems approach framework for collaborative, science-based management of complex systems

Sustainable management of coastal systems can only be achieved with an effective science-policy interface that integrates the three pillars of sustainable development: environmental protection, social progress and economic growth. The Systems Approach Framework (SAF) provides a structure to guide such a process by embracing the challenge of assessing complex systems for scenario simulations to support potential policy decisions. Based on applications of the SAF in six Baltic Sea case studies within the BONUS BaltCoast project, the SAF was revisited and further developed. Two additional steps were introduced partly to enhance implementation and decision validation and partly to facilitate the reiterative process with the addition of monitoring and evaluation. The SAF now includes six steps (Issue Identification, System Design, System Formulation, System Assessment, Implementation, Monitoring and Evaluation). A list of actions for each step clearly defines what needs to be done before progressing to the next SAF step. Activities within each step were improved to better integrate governance - citizen collaboration and improve the science-policy interface. Three auxiliary tools, developed in the BONUS BaltCoast project to support particular actions, were integrated in the different steps to facilitate application of the SAF by practitioners and scientists alike. The added focus on the stakeholder participation resulted in further actions being listed in the new steps to maintain stakeholder engagement and counteract stakeholder fatigue. The revised SAF is presented and discussed together with lessons learned from the different applications in five Baltic Sea study sites.

General information
Publication status: Accepted/In press
Organisations: Technical University of Denmark, National Institute of Aquatic Resources, Section for Ecosystem based Marine Management, Leibniz Institute for Baltic Sea Research, Klaipeda University, Gillgren and Associates
Corresponding author: Støttrup, J. G.
Number of pages: 18
Publication date: 1 Jan 2019
Peer-reviewed: Yes

Publication information
Journal: Journal of Coastal Conservation
ISSN (Print): 1400-0350
Ratings:
Web of Science (2019): Indexed yes
Original language: English
Keywords: Integrated coastal management, Science-policy, Stakeholder engagement, System analyses
DOI: 10.1007/s11852-018-00677-5
Source: Scopus
Source-ID: 85060152737
Research output: Contribution to journal › Journal article – Annual report year: 2019 › Research › peer-review