

ARCH: Architecture and roadmap to manage multiple pressures on lagoons

Amy M.P. Oen¹, Gijs D. Breedveld¹, Geiske Bouma², Adriaan Slob²

¹Norwegian Geotechnical Institute, Oslo, Norway

²TNO, Delft, the Netherlands

Phone: +47-99797685

E-mail: amy.oen@ngi.no

Introduction: The European Union Commission has taken the lead to promote Integrated Coastal Zone Management (ICZM) to balance the management of lagoon and estuary systems. This initiative provides an opportunity to enable stakeholders in the development of management strategies with a basis in both evidence-based science and current policy. The challenge for implementing existing science and policy is the lack of integration and interpretation between the two. The ARCH research project (EU-FP7, 2011-2015) aims to overcome this limitation by consciously minimizing the boundaries between the multiple scientific disciplines as well as by developing participative methodologies to be implemented at 10 different case study sites throughout Europe (**Fig. 1**).



Fig. 1: Location of case study sites in the ARCH project.

Methods: The central objective of the ARCH research project is to develop participative methodologies in collaboration with the involved managers, policy makers and stakeholders to manage the multiple problems affecting lagoons in Europe. This will generate realistic solutions and provide roadmaps for their implementation at the lagoon scale, to ensure their legacy. Important components towards this goal include (i) the promotion of an integrated research approach, (ii) the employment of a true participatory process and (iii) formulating realistic strategies towards sustainable lagoon management.

Consortium meetings with all of the project partners provide a platform for integrating multiple disciplines. The project itself is organized in order to facilitate knowledge transfer among the partners, representing the environmental, economic and social-sciences. Project meetings are organized to illustrate the use of knowledge brokering instruments as well as to prepare the project partners for enabling stakeholders at the various case study sites. The participatory methodology which is to be employed includes a series of three workshops.

A scientific “state-of-the-lagoon” report for each case has been completed and is the starting point for a joint process that is directed towards (i) problem identification, (ii) identification of possible solutions, and (iii) identification of desired solutions. During this whole process, policy makers, scientists, users and managers are involved to identify realistic solutions at the local scale.

Discussion: Observations in the process thus far will be highlighted. This includes evaluating the integrated research approach as well as drawing on comparisons between the different case study sites to explore how the context of their issues influence identifying opportunities and enabling stakeholders. The ARCH research project will build on these experiences in order to raise awareness and enhance system understanding. Involvement in the selection of management strategies enhances commitment towards implementing feasible solutions.

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