Adaptive policies to manage complex marine ecosystems

A fundamental shift is underway: environmental policy is moving from a more traditional, linear model to a cyclical, adaptive framework model. The key 'ingredients' to adaptive policies are: an integrated and forward-looking analysis, multi-stakeholder engagement, flexibility, decentralised decision-making and the ability to change and evolve over time as new insights are gained from monitoring results.

PERSEUS’s support to policymakers

PERSEUS is a first-of-its-kind, marine environmental research project that is targeting a large part of its activities at supporting policymakers in developing adaptive policies for the achievement of ‘Good Environmental Status’ (GES) across the Mediterranean and Black Seas, in line with the objectives and principles of the EU’s Marine Strategy Framework Directive (MSFD).

PERSEUS promotes the best possible scientific support to policy and decision makers, through the development of a new, science-based Adaptive Policy Framework (APF) Toolbox. The APF Toolbox will provide a set of knowledge and tools to increase the overall capability of policymakers to create policies and a regulatory framework for achieving and maintaining GES.

The Role of Science in the Adaptive Policy Framework

- Assess the state of the marine ecosystem, including its socio-economic dimension
- Identify the areas of uncertainty and risks as the basis for policy formulation
- Support the assessment of the alternative policy options (providing information on their sustainability based on foregone experiences, modelling and specific assessments)
- Test the assumptions related to policy’s performance
- Provide assistance for the adjustment of current policies or the design of a new policy cycle

The APF Toolbox in brief

**WHAT:** The PERSEUS APF Toolbox is a specific decision support system based on scientific evidence, using a scenario-planning approach to support management schemes. It is organised as a guidebook for policymakers and linked to a set of tools, resources and databases.

**HOW:** It uses a step-by-step, cyclical approach to policymaking and offering a wide range of tools, useful resources, databases and case studies for each step.

**FOR WHOM:** Policymakers, decision makers, practitioners and stakeholders.

**WHERE:** The APF Toolbox will be tested on the four APF Pilot Cases and the lessons from these will then be applied on the whole of the Mediterranean and Black Sea basins.

**WHEN:** The APF Toolbox is under preparation and a working version will be ready by the end of 2013. As it develops, it will be showcased on the PERSEUS website.
PERSEUS AF TOOLBOX: Provides tools and guidance for each of the 5 steps of policymaking

Step 1: Setting the scene - describe the problem and define policy goals
A detailed diagnosis of the present state of the marine environment is essential for the detection of drivers, pressures and impacts on the marine environment and the establishment of priorities for policy action.

Step 2: Assemble a basic policy
Single measures and their combinations are composed to policy pathways, using specific selection criteria like efficacy, cost - effectiveness, time horizons, etc., including consideration of costs and benefits.

Step 3: Making policy robust
Once defined, the chosen set of policy measures is made robust against uncertainties. Contingency planning allows for anticipating future problems, identification of necessary mitigation measures and triggers, which should result in an adaptation of the policy.

Step 4: Implement the strategy
This core step requires detailed planning, control of budget and coordination of actions, including the involvement of relevant institutions, stakeholders and the public, following a regularly updated protocol.

Step 5: Evaluate and adjust policies
The continuous monitoring and review process combined with the use of thresholds and alarm levels defined during the step 3 can help to detect, in time, expected and unexpected trends and policy outcomes, which will require the formulation of new measures and/or the modulation of existing ones (policy adjustment).

Examples of supporting tools associated to the AF five steps
- Stakeholder mapping
- Assessment of DPSIR (Drivers, Pressures, State, Impact, Response)
- Cost benefits assessment
- Decision Support Systems
- Integrated models for policy simulation
- Monitoring systems
- Policy performance evaluation methods
- Participatory methods
- Communication tools
- Project management tools

For more information on the PERSEUS AF Toolbox, please contact:
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