



Building scenarios to explore marine ecosystem services

A key part of the VALMER project is engaging important stakeholders in discussions. The 'scenario' approach has been chosen deliberately, as it is an effective way of involving people and moving from theory to practice. Scenario building can also be a standalone exercise, improving stakeholders' engagement and discussion on management questions. Good engagement of stakeholders can give better shared ownership of decisions that then improve the delivery of policy. In VALMER, scenarios are being used with ecosystem service assessments and valuations to explore stakeholder views and preferences on various management options and trade-offs. The elements presented here deal only with the scenario building process.



What are scenarios?

Scenarios are a proven tool and one that produces results. The method is simple in that it invites the 'audience' to react to a plausible set of future events. Scenario building is a participative activity and a very flexible and adaptative process. It can be used to develop ideas from a very basic starting point or to enhance existing ideas.

Scenarios are stories that portray plausible future events. They are designed to systematically explore, create and test possible future conditions. They are a useful tool, often employed to help with complex management questions (e.g. environmental management, climate change, urban planning, etc.). Scenarios that include different scientific disciplines, a wide range of interests and responsibilities and are collaborative are more likely to achieve successful community-based management.

The advantages of scenarios are numerous, since they can:

- combine qualitative and quantitative information;
- identify uncertainties and knowledge gaps;
- organise and interpret our thinking about the future;
- help understand how to create the conditions in which a desired future can be achieved;
- support decisions which are more likely to be implemented successfully and
- generate long-term policies, strategies and plans.

Scenario building exercises can help people to interpret complex knowledge and information associated with related management problems. Scenarios are a useful tool when creating a range of possible future options as they can combine different elements in different ways. Often a number of scenarios can be developed in parallel and choices made (e.g. 3 to 4 'narratives').

There are three major types of scenarios: exploratory, normative and predictive. They can take different forms including a story or 'narrative' consisting of a few lines of text to many pages, with maps, graphics, drawings, pictures, etc. Modelling and/or simulations can also accompany scenarios.



The three major types of scenarios: exploratory, normative and predictive



Why do we build scenarios?

Combined with ecosystem services assessment (ESA) methods in the VALMER project, scenarios are useful participative tools to engage stakeholders on marine and coastal management issues. All VALMER's workpackages (WP) are interconnected and can be associated in different ways depending of the context and skills of the team at the site being studied.



The scenario building process involving stakeholders in VALMER is a way to:

- better understand longer-term issues;
- better understand the links between the ecosystems and human activities;
- create an understanding or "common culture" between stakeholders;
- develop perspectives together on possible future events (exploratory scenarios);
- compare these perspectives and choose the best one;
- develop an action plan (normative scenario) and
- inform decisions and actions that need to be taken to achieve the desired future.

Modelling techniques can be used to allow predictions to be made (predictive scenario). NB : this type of scenario was not used in the VALMER project.

The scenario building process can take several months but can be longer or shorter depending on the methodologies chosen, resources available, the problem to be overcome and the required level of stakeholder participation.

The aims, and consequently the type of scenarios developed, will be different depending on:

- the management questions studied;
- the governance and environmental contexts of the sites studied and
- the legitimacy and skills of the team studying the site (e.g. implementation of measures).



The scenario building process is divided into **5 complementary phases** that occur sequentially.



From scenarios to management outputs

Using scenarios, it is possible to compare different situations at a site and to show the consequences of management choices taken. Outputs from the scenarios can then be shared in order to propose new management options.

Depending on their aims and governance context, each VALMER case study site will be able to use their scenario results to put forward management proposals.



More information on scenario building process in our guideline: <u>http://www.valmer.eu/outputs/reports-guidance-documents-and-articles/</u>

