



Advice note

for using ecosystem service assessment
to support marine governance

"The findings and learnings from the VALMER project help to demonstrate that taking an ecosystem services approach really can support marine and coastal management efforts at different scales. For managers it can mean improving the evidence base for decision making and supporting improved stakeholder engagement."

Dr Dickon Howell, Acting Chief Scientific Advisor, Marine Management Organisation.

"The VALMER project has shown that the ecosystem services approach was a brilliant vehicle for dialogue between the different stakeholders of the marine environment. Bringing together people with a nature conservation background and those more receptive to the vocabulary of socio-economic activities is crucial for the governance of the marine environment. Talking about ecological functions and ecosystem services is a means to achieve this. For the French Marine Protected Areas Agency, VALMER also presents a great opportunity to reflect upon the significance of ecosystem services assessment as a tool for developing, analysing or evaluating management plans for marine protected areas."

François Gauthiez, Deputy Director of the French Marine Protected Areas Agency.



The VALMER project was selected under the European cross-border cooperation programme INTERREG IV A France (Channel) - England, co-funded by the ERDF.



Advice for incorporating Ecosystem Service Assessments into Marine Governance

The VALMER project has demonstrated that ecosystem service assessments can support good marine governance, principally through improving the evidence base for decision making and supporting improved stakeholder engagement. However, undertaking an ecosystem service assessment represents a significant investment of time, money and human resources. To ensure that such an investment is used as effectively as possible to support improved marine governance, the following points represent advice based on the project's experience:

- The commissioning of the ecosystem service assessment should be undertaken in partnership between marine managers and researchers with the necessary technical expertise;
- A structured decision making process, such as the Triage approach, should be used to ensure the ecosystem service assessment is focused on management needs. This approach determines the objective of the ecosystem service assessment and guides key decisions concerning the method and scale of assessment;
- The ecosystem service assessment should be co-produced, with engagement tailored to the needs of the assessment to enable full participation of all relevant stakeholders; and the format of outputs should be explored with stakeholders to deliver information in an appropriate and practical format
- Ecosystem service assessment results, especially monetary valuations, should be handled with care as these can be dangerous if taken out of context and financial values may be counter-productive. Limitations and uncertainties associated with ecosystem service assessment results need to be clearly communicated in a non-technical way.








Overall, a process of co-production of ecosystem service assessments with stakeholders can be extremely valuable, as in addition to the technical outputs and results, the process itself can generate considerable benefits. It can build trust and faith in the ecosystem service assessment process and results. The process can also create an ecosystem view of the site, bypassing sectoral positions and helping to re-frame contentious management discussions.

The following pages present evidence-based reflections on the application of Ecosystem Services Assessment to support marine governance from six pilot studies within the Western Channel. These sites mirror the diversity of coastal and marine environments and the varying governance contexts that exist within the Western Channel. Over fifty interviews with stakeholders and managers engaged at the sites were conducted to gather views on their experiences with ecosystem service assessment, generating crucial insight and evidence into how the ecosystem service assessment can be used to support marine governance.



Integrating ecosystem service assessment into marine governance: lessons learned from the VALMER stakeholders and case study site coordinators

Ecosystem service assessment can support the planning phases of marine and coastal management by:

| BUILDING an evidence base by increasing understanding of marine ecosystem services | INTEGRATING ecological knowledge and social values into the marine evidence base | EXPLORING alternative plausible future marine management options and their socio-ecological implications and trade-offs | ANTICIPATING future changes in marine ecosystem services |
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| <p>Strengthening marine strategy development through improved evidence.</p> <p> For example in Poole Harbour:</p> <p>The ecosystem service assessment contributed to the development of the draft Bournemouth and Poole Sports Strategy 2014-2026 which investigated the need for new facilities to enhance people's enjoyment of non-traditional watersports along the Bournemouth & Poole coastline, and considered where these should be located.</p> <p> For example in Plymouth Sound- Fowey:</p> <p>Stakeholders felt that ecosystem service assessments could be used to support management at a variety of spatial scales, for example, "informing leisure management in the estuary" (Stakeholder); and, supporting "strategy development or management plan development or coastal partnerships..." (Stakeholder).</p> | <p>Considering different forms of relevant information, including scientific and local knowledge.</p> <p> For example in North Devon:</p> <p>Ecosystem service assessment modelling using a Bayesian Belief Network approach utilised ecological knowledge of seabed habitats together with stakeholder's perceived importance of services, to explore changes in seabed ecology in response to hypothetical management change. Such a method can be used as a decision support tool for the North Devon UNESCO Biosphere Reserve.</p> <p>"With the decision support tool you have the ability to make changes and tweaks, and run the model a number of times, using different variables, to see different outcomes" (Site Coordinator).</p> <p> For example in Plymouth Sound- Fowey:</p> <p>People living and working at the coast took part in a mapping exercise and survey which examined their relationship with their coastal and marine surroundings and how this reflected in their sense of wellbeing.</p> <p>"We do have an inherent value on our environment here in Fowey because we know it is important to people, that cultural side of things..." (Stakeholder).</p> | <p>Supporting the design of policy options to inform management decisions.</p> <p> For example in Golfe Normand-Breton:</p> <p>After having identified the main ecosystem services, possible scenarios for the future area were built (including social, economic, environmental, legal, political and technical evolutions) and the potential implications of these scenarios on marine ecosystem service delivery were evaluated.</p> <p>"Scenario building is a good approach to work with ecosystem services: it shows how a management choice can affect an activity and the environment" (Stakeholder)</p> <p> For example in the Parc Naturel Marin d'Iroise:</p> <p>In the Park, where kelp is harvested, the fishery, environmental conditions and the other economic and social activities in the site are strongly linked. Through an Ecosystem Services approach, possible futures were identified and plausible management options discussed with stakeholders. This represents a much broader approach than the one classically used for fisheries management.</p> <p>"Using scenarios is a good way to interest stakeholders in the subject of ecosystem services" (Site Coordinator).</p> | <p>Promoting a longer term perspective of marine management.</p> <p> For example in Plymouth Sound- Fowey: case study:</p> <p>The baseline ecosystem service assessment and the recalculated ecosystem service assessment values for the scenarios allowed stakeholders consider future impacts of decisions that they may not have been aware, "A benefit is that doing an assessment can give a better idea and understanding of the implications of a decision, e.g. what would be affected either immediately or in the longer term" (Stakeholder).</p> |

Experiences from VALMER:

- There are a range of ecosystem service assessment methods available, with some requiring considerable amounts of information and others less so. An approach such as the Triage, can help guide which method to use and which services to focus on.
- It is not possible to assess all marine ecosystem services due to data and methodological limitations; this should be communicated to stakeholders to ensure expectations of ecosystem service assessments are realistic and implications for marine governance explained.
- If the ecosystem service assessment only covers a selection of marine ecosystem services, it should be communicated to stakeholders that the ecosystem service assessment is a partial representation and not a comprehensive ecosystem service assessment of the whole site.
- Ecosystem service assessments and scenario building exercises can support stakeholders and managers exploring management options, trade-offs and different scenarios of change.
- Trends of ecosystem service delivery described in text or using graphics rather than numbers, can be just as useful as more technical quantitative outputs for helping to explore marine management trade-offs.
- The Ecosystem Approach can be a catalyst for communication amongst stakeholders about future marine management and can be useful to bypass entrenched sectoral positions.






Supporting VALMER document's

- A Framework for the Operational Assessment of Marine Ecosystem Services
- Practical approaches to the management of marine social and economic data
- Building site based scenarios: tools and approaches for implementation from the VALMER project
- Improving stakeholder engagement in marine management through ecosystem service assessment
- A summary of the lessons learnt from the VALMER scenario development process



Integrating ecosystem service assessment into marine governance: lessons learned from the VALMER stakeholders and case study site coordinators

Ecosystem service assessment can support the implementation of marine and coastal management by:

| <p>CREATING ecosystems view and CONNECTING people to nature</p> | <p>ENCOURAGING support and justification for marine policy and greater buy-in of decisions to be taken</p> | <p>DEVELOPING capacity of stakeholders to engage in marine governance</p> |
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| <p>Facilitating dialogue and cooperation between managers and stakeholders to promote a better understanding of the site, bypassing sectoral approaches and reducing conflict.</p> <p> For example in Golfe du Morbihan:</p> <p>This case study addressed seagrass conservation in the face of intense anthropogenic pressure and the research process included identification of ecosystem services, beneficiaries, pressures and impacts on the seagrass. Taking such an ecosystem view did not focus on a particular activity, sector or impacts thus helping to overcome the problems which often result from single sector approaches.</p> <p><i>"For me, The ecosystem approach is a management approach where the land, water and the living resources are integrated to promote the conservation and sustainable use of natural resources, in order to respect the interactions in an ecosystem on which humans depend. All elements of an ecosystem are linked, it is thus necessary to take them all into consideration." (Stakeholder).</i></p> <p>Experiences from VALMER:</p> <ul style="list-style-type: none"> • The stakeholders were able to learn about the marine ecosystem services within their site, including the links and interactions between humans and marine environment that were not previously apparent. • The project found many stakeholders willing to contribute time and data to site-based ecosystem service assessments to explore and support future management decisions. • The concept of ecosystem services and ecosystem service assessment approaches can be difficult to communicate to stakeholders. Using straight forward terminology and case studies can help overcome this barrier. • Stakeholder involvement in ecosystem service assessment requires an effective engagement strategy with adequate resources. Engagement and co-production can take considerable amounts of time, for example, 4-5 workshops over 12-18 months. <p>Supporting VALMER document's</p> <ul style="list-style-type: none"> • Improving stakeholder engagement in marine management through ecosystem service assessment | <p>Enabling all relevant parties to participate in and contribute to management discussions.</p> <p> For example in Plymouth Sound- Fowey:</p> <p>Engagement by a range of regulators and managers in the case study to develop hypothetical actions under the auspices of the Cornwall Maritime Strategy raised awareness of governance issues in the site and the need for implementation of this strategy through local actions.</p> <p> For example in Golfe du Morbihan:</p> <p>The ecosystem service assessment study raised awareness of seagrass habitats in the Gulf, the services they provide, the interactions between seagrass and different users of the Gulf and the need for management.</p> <p>As highlighted by one stakeholder, <i>"the approach is more appropriate for communicating with a wider public and makes it more likely to gain the support of those stakeholders that will be affected by the regulation/restrictions...it provides arguments to justify management measures"</i> (Stakeholder).</p> | <p>Building stakeholder capacity on marine ecosystem services to use ecosystem service assessments for governance.</p> <p> For example in North Devon:</p> <p>Participation in the case study increased not only knowledge of marine ecosystem services but also about other stakeholders involved in governance, <i>"...know more about the other bodies that are out there and the other people who are interested and protecting our seas. All the different organisations that come together. I think that is quite important, that we all understand what is behind everything and what is going on out there to protect the seas and monitor them."</i> (stakeholder).</p> <p> For example in Plymouth Sound- Fowey:</p> <p>The VALMER case study process has developed local capacity in the Cornwall environment sector on the topic of marine ecosystem services and ecosystem service assessments.</p> <p><i>"As a result of this case study, there are now stakeholders in the Cornwall environment sector that are more knowledgeable about ecosystem service assessment, and have the language and understanding of it"</i> (Site Coordinator).</p> |



Integrating ecosystem service assessment into marine governance: lessons learned from the VALMER stakeholders and case study site coordinators

Ecosystem service assessment can support the monitoring and evaluation of marine and coastal management by:

GENERATING

locally relevant data on marine ecosystem services, including values such as monetary valuations and cultural values

Establishing and analysing existing conditions and baselines to supporting site monitoring.



For example in North Devon:

"The VALMER project has helped pulled together a lot of useful marine data, which was used to create the initial knowledge base for the process. This was useful" (Site Coordinator A).



For example in the Parc Naturel Marin d'Iroise:

The ecosystem service assessment study has involved mapping and assessing of current kelp harvesting levels to inform management and extraction policies for this important fishery within the marine park.

"We had never done modelling of management options before. It is an interesting approach for managers" (Site coordinator).

Reviewing management effort and being adaptive to changes in intensity and spatial extent of activities site.



For example in Poole Harbour:

The ecosystem service assessment results will support the review of the Poole Harbour Aquatic Management Plan. This strategy acts as the management scheme for the European Marine Site protecting important marine habitats and species.

"I'm hoping it will have an impact, because we've got a management matrix and everybody has different actions in that, relating to management of shoreline, shellfish dredging, netting, bait digging – all those kind of Harbour activities. Now we should review where we are doing these activities and why we need to do them and when, from a recreational point of view as well. And if we are going to make a decision, just to check and double cross what did the results of the VALMER study say, is there anything that will conflict there? I mean that is how we use data and evidence in decision making" (Stakeholder).

Experiences from VALMER:

- Local knowledge and data held by site users can be incorporated into the ecosystem service assessment.
- Data validation by managers and stakeholders of researcher's technical understanding of the site can be valuable and help build trust in the ecosystem service assessment methods and outputs.
- Ecosystem service assessment results and outputs can be communicated in a range of ways, including technical and non-technical formats, which can be understood by site users and the public.

Supporting VALMER document's

- A Framework for the Operational Assessment of Marine Ecosystem Services
- Ecosystem Service Assessment in Practice: Lessons Learned
- Practical approaches to the management of marine social and economic data





VALMER Valuing ecosystem services in the western English Channel

The VALMER project was selected under the European cross-border cooperation programme INTERREG IV A France (Channel) - England, co-funded by the ERDF.

The aim of the project was to examine how marine ecosystem services assessments (ESA) can support effective and informed marine management. The project involved six case studies at three sites in the UK and three sites in France. You can find further information about VALMER on the project website www.valmer.eu.

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This document forms part of a complementary set of reports and recommendations from VALMER, which we suggest be read together for a better understanding of the use of ESA in marine ecosystems. All VALMER outputs are available on the project website www.valmer.eu. Supporting evidence for this guide can be found in the report on the potential role of ecosystem service assessment on marine governance in the Western Channel.

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