





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





Integration of the different scales (ecosystemic, governance) into policies and frameworks to support sustainable marine governance.

ABSTRACT

The English Channel is one of Europe's most intensively used areas for marine human activities. Managing those activities on only one scale is not appropriate due to factors such as: (1) the transboundary market for shipping, marine energy, marine aggregates, tourism, water-sports, leisure and fisheries; (2) the absence of frontiers for species and ecological processes; (3) the growth in transboundary cooperation arising out of European policies and funding (Interreg programs); (4) sectoral interests and issues having both local and macro-scale dimensions; and (5) growing recognition of the need for public and stakeholder consultation within governance.

KEY WORDS

GOVERNANCE
INTEGRATION
MANAGEMENT
MARINE ACTIVITIES
MARINE PROTECTED AREAS
MULTI-SCALE

DESCRIPTION OF KEY FINDINGS

Introduction

The governance of the Channel must be considered at different spatial scales due to the multiplicity of agencies and bodies with responsibility for its management and protection. For example, at an international level, the English Channel is recognized as a strategic maritime route. The United Kingdom (UK) and France are parties of the OSPAR convention which aims to protect the marine environment through its commitments under five thematic strategies¹-biodiversity and ecosystems, eutrophication, hazardous substances, offshore industries and radioactive substances. The European common policies and directives are also very significant in sea management, starting with the over-arching Marine Framework Strategy Directive (MFSD), but also through sectorial ones such as the Common Fisheries Policy, Natura 2000 and directives relating to bathing waters and nitrates, for example.

1 OSPAR Commission (2010). North-East Atlantic Environment Strategy. OSPAR Agreement 2010-3. Available at: http://www. ospar.org/html. documents/ospar/html/10-03e. nea.environment.strategy.pdf.



Considering this very prevalent international context, the governance of the Sea is organised, in France:

- At the national level around a National Council for Sea and Shoreline (Conseil National pour la Mer et le Littoral) and a dedicated State Secretary. The national level is still predominant for the sea management (adoption of laws, regulations and main strategies).
- •At the regional level with maritime councils ('Conseils Maritimes de Façade': one of which is dedicated to the Northern Sea and the Channel) and regional competent State services (e.g. direction interrégionale de la mer, Directions Régionales de l'Environnement de l'Aménagement et du Logement) under the authorities of maritime prefects. There is also an increasing role of regional public authorities (region and department) in maritime policies. This scale is in charge of elaborating programs of measures for the MFSD, strategic documents (Documents stratégiques de façade) and future Marine Spatial Planning developments.
- At the local level for MPAs management, fisheries, harbours and renewable maritime energy farms, dedicated councils and committees are put in place by the State services.

In the UK:

- Nationally, the key policy is the 'Marine Policy Statement'², a framework for preparing Marine Plans and making decisions affecting the marine environment. For England, Marine Plans, policies and decisions are adopted by the UK Government. Emergency planning and response is undertaken at a UK level in all territorial waters.
- There is no regional government comparable to France. Government agencies
 deliver services at a strategic scale, involving local authority administrative areas
 to deliver policy from central government. For example, coastal defences (e.g.
 Shoreline Management Plans, Regional Flood and Coastal Committees) are based
 on areas that have 'natural' boundaries; 'Inshore Fisheries and Conservation
 Authorities' are based on local authority administration boundaries.
- Local level 'governance' is delivered through local authorities and County, Unitary and District/Borough councils. Powers and duties at District/Unitary scale include: beach management, coastal defence installations, and running 'municipal' ports. All levels have a responsibility for emergency planning (shoreline only), with County authorities providing coordination for larger incidents. Local authorities have no jurisdiction beyond the Mean Low Water mark, except for some powers relating to controlling inshore water-based activity, e.g. bathing areas.
- The UK has numerous marine and coastal partnerships providing a non-statutory coordination mechanism and operating under the principles of Integrated Coastal Zone Management.

The projects involved in the PEGASEAS cluster operate on scales different from the regional, national and European scales of governance. They can be spatial (referring to the identification of spatial patterns such as local and regional), temporal (to do with the frequency of occurrence) and decisional (which can be different from the spatial scale of effective management). The projects have developed or are developing tools, methods, space and active collaboration across a wide range of fields for transboundary cooperation.

Although networks are in place or in development to facilitate transboundary co-operation and trans-sectoral approaches, a gap still exists within policies which remain more sectoral or limited by regional or national boundaries, and/or inappropriate time frames. One of the purposes of this report is to extract a range of material that will bridge this gap and identify lessons on how to integrate the different scales into policies/frameworks to support marine effective governance.



Data collection and analysis for use by decision-makers

The significant outputs from previous projects have been analysed and organised in order to be used by decision-makers at different scales to support effective governance.

The CHARM 2 project collected, analysed and modelled marine data in the Eastern Channel, culminating in a published atlas³ and proposals in term of MPA implementation and management of marine resources and fisheries activities. This holistic synthesis is important in order to identify local stakeholders and responsibilities for management. However, there is the potential to lose important habitat or functionality by considering only its value and status at alocal level rather than within the broader Channel context. The CHARM 3 project has therefore broadened the field of study to the Western Channel and expanded into new discipline and sectoral areas.

The availability of only the synthesis and published results for decision makers was identified as a limitation of CHARM 2. Moreover some of the undertaken analyses and modelling were rather theoretical and somewhat disconnected from real policies. In some situations, the requirements of decision makers may mean that the actual data should also be made available to undertake new analysis, rather than only a published synthesis.

Prior to taking decisions or making changes in policies/frameworks, it is also important to take into account the temporal scale, as the information observed at a specific date might not be relevant for long-term decisions. The use of models can, however, help to predict possible changes that will occur over months, years or decades. A model developed by the CRESH project is able to estimate the exploitation rate and the stock-recruitment relationship for cuttlefish in real time using current data and also data from previous years. The results obtained could help decision-makers to change policies if it was observed that the stock was decreasing for example.

The on-going OFELIA project noted, the data requirements necessary for effective governance are ever increasing. Pushed by the blue growth momentum, regional, national and EU active policies, marine energy technologies are rapidly being introduced in the Channel. Dedicated to the assessment of the environmental impacts of existing and planned wind-farms at both local and regional scales, the added value of this project should be to specifically deal with Channel environmental issues and to bring answers collectively to assist the management of this growing sector, rather than relying on piecemeal observations.

Stakeholder involvement through the scales

Stakeholders have their own spatial and time scales for their activities. As we deal with human activities, we have to consider and give opportunities to take into account those scales. The duty of decision makers is to cross activities and marine environment scales for an effective management.

A key observation is the need to involve stakeholders such as fisheries representatives or regional and state authorities (as occurred during the CHARM project, phase 2 & 3), to incorporate and cross-analyse their views for richness of information and to facilitate the future use of the outputs. There is no doubt that the results of CHARM will be useful to a wide range of decision makers and stakeholders thanks to better connections and access to data as they have now been published.

The need for local involvement of stakeholders has also been considered as part of the LiCCo project, which addresses the challenge facing the Channel shorelines given the effects of climate change and sea-level rise. In that context, the LiCCo project considers local involvement of stakeholders and the development of scenarios to adapt to climate change impact and identify potential opportunities.

3 CHARM 2 (2009). Channel Habitat Atlas for Marine Resource Management. Available at: http://archimer.ifremer.fr/ doc000007377/

4 OFELIA. See: http://www.interreg-afelia. eu/



The lessons learnt from this project (stakeholder involvement, methodological tools and shared culture of risk) should be very useful to concretely implement regional and national strategies in term of climate changes adaptation and management of the coastline.

The CAMIS project involved the relevant authorities at a regional level in France and the UK, together with a range of stakeholders' representatives in a very broad and ambitious desire to implement an Integrated Maritime Strategy (IMS) at the Channel scale⁵. That strategy also considers local scale challenges and opportunities. As a result, the scale of the cross-Channel forums has captured other networks such as the coastal partnerships and Conseil Maritime de Façade which operate at smaller scales within the Channel. Finally it also recognised the need for maintaining links with neighbouring sea areas (the North East Atlantic and the North Sea). The tools developed (database, atlas, etc.) and the cross-channel forums built the link between local, regional and national maritime debates and fill an existing gap. There is a potential for the CAMIS tools and forums to become relevant for ICZM and/or MSP in the Channel, which depends on State and European authorities.

Coherence

As we share the common environment and it is impossible to segregate each issue, each area of the Channel, each activity and to manage them separately, effective governance must lead to coherent management. The projects give opportunities to apply such principle in concrete domains.

The in-depth investigation of specific issues and sectors has enabled, as demonstrated by the SETARMS project, the promotion of best practices, the study of opportunities (e.g. sediment re-use) and the proposal of options to implement facilities (common markets, joint purchases) for collective management. The availability of such decision-aids to decision-makers is a potentially valuable asset for effective marine governance. As with other sectors and beyond their particular scale of management, ports face the same environmental context and share the same issues of increasing demand for the modernisation of fleet, leisure boating, dredging activities and environmental regulations and policies which makes the recommendations of projects such as SETARMS applicable across the spatial scales within the Channel.

In the same spirit as the former Interreg IV MAIA project, the on-going PANACHE® project is dedicated to MPA issues. The project demonstrates that coherence and complementarity is needed to integrate the different scales into policies/ frameworks to support effective marine governance. By testing different methods of assessing ecological coherence of the network, by compiling and sharing methods of management and monitoring and by developing citizen science, its purpose is to bring coherent answers to similar problematic issues. It also points out the need for complementarity – to identify, organize and tackle issues at the appropriate scale: not only locally but also regionally, by group of nearby sites in order to act as a real network and not only as a collection of individual cases. One of its goals was to place the results of MPA monitoring at the heart of MPA management with the needs of MPA networks being taken into account in other and wider sectoral and maritime policies. Coordination of the management of MPAs is in place in both countries but the challenge will be to cross the border and apply common methods.

In the VALMER Project, 6 sites are playing the role of pilot sites in the Channel context and beyond. At this scale, the project aims to share scientific approaches which could be quite different and significantly influence the results of their implementation although they are tackling similar issues, addressing the need for transferability and useability of methods. There is also a need for the techniques to be available and suitable for use by decision-makers and stakeholders.

5 CAMIS (2013). Integrated Maritime Strategy for the Channel Region: A Plan for Action. Available at: https://camis. arcmanche.eu/stock/files/users/13.247_ Camis. doc. strategie. maritime. UK. BD. pdf

6 PANACHE project (2014) - www.panache.eu.com.



Environmental services

Maintaining or restoring environmental services could result from effective management in situations where management measures are accepted by stakeholders. The VALMER project deals with the scale of management of MPAs at a local level, quite original in a context where global scales are normally considered. In that domain therefore, the interconnections between macro and local scales are relevant to enhance the quality of decision.

In addition, a further observation is the need for appropriate techniques to level the playing field between marketed goods and the non-marketed environmental goods and services, which cross the scales. In the active world of ecosystem services valuation, the specificity and the originality of VALMER is to apply this rather theoretical concept to effective management. As the project is ongoing, we can only talk about expectations, which is making available an approach for managers that will use the inputs of multidisciplinary science data at every useful scale, together with analyses and modelling for decision making on complex issues. The hope is that this kind of approach will help to overcome gaps in debates that are currently too sector-oriented, too short-term and market oriented.

The ecosystem services valuation approach within VALMER will also help to legitimise the ecosystem approach and MPA management also highlighted as necessary to address the needs of effective multi-sectoral and multi-scale governance. For example, in the Iroise Marine Park, the challenge is to collectively manage the huge kelp field of Molène archipelago, not only as an exploited marine resource but also as a whole ecosystem provides a range of different services such as leisure services, which are separate from specific marine resources.

CONCLUSIONS/WORK LEADS

The projects examined by the PEGASEAS project encompass every scale of management and a large variety of activities. Decision makers and managers have been provided with tools, and a range of various materials to assist their activities. They include professional networks, databases, methods, models, analyses, forums, etc.

Various levels of results have been achieved as the projects are at different stages, some sectors of activities have not been covered. Despite this, a number of conclusions can be drawn:

For data collection, there is a need to:

- Bridge important gaps at a regional scale, which is important to feed into local decisions,
- Highlight the importance for long-term studies for decision-making.
- Increase the availability of data, results and tools for decision making and management.

For stakeholder involvement, there is a need to:

Develop opportunities and tools at both temporal and spatial scales of activities.
 The challenge is to use different outputs together and to link them with the different scales.



For coherence of management, there is a need to:

 Improved coherence of management for MPAs, harbours, marine energies and, moving forward, they must be applied and develop for other sectors.

For ecosystem services, there is a need to:

- Bring together stakeholders across scales and activities to manage the Channel.
 Further research is necessary to identify the synergies and benefits coming from this approach.
- Complete the global or regional approaches by conducing analyses at local MPA scale.
- Give opportunities to spread methods in management of MPAs at Channel scale. In some cases, Interreg projects should lead to improved policies which will better consider various scales of management. From other projects, research carried out in one area of the Channel should be repeated in other areas as a way of identifying whether they are applicable elsewhere.

Moreover, the different time scales of environmental studies must be taken into account within the short term policies and decisions. Effective governance and adaptive management of marine activities must give importance also to those different time scales and to long term monitoring.

For the next Interreg program attention should be paid to interconnections between projects to increase reciprocal benefits, the availability of tools and data, and the effective application of them in the particular and active context of MSP implementation (EU-directive in progress).

Authors: Carpenter Angela (Plymouth University), Evariste Emmanuelle (Université de Caen), Germain Laurent (Agence des aires marines protégées), Petit Laëtitia (Agence des aires marines protégées), Toison Vincent (Agence des aires marines protégées)