MARINE SPATIAL PLANNING PILOT

Towards Marine Spatial Planning and Management *(Final)*

MSPP Consortium, November 2005
MARINE SPATIAL PLANNING PILOT PROJECT

Towards Marine Spatial Planning and Management

1. Purpose and Scope

This paper sets out the process of marine spatial plan production that has been piloted in the Irish Sea. It should be read in conjunction with the draft regional plan for part of the Irish Sea (http://mspp.abpmer.co.uk/mspp/draft_plan.asp) and with a separate note on a proposed Marine Spatial Plan Scheme (insert location).

The pilot has been used to test the suggested process, to identify strengths and weaknesses and to highlight issues in taking marine spatial planning forward in UK waters.

The paper is being circulated to all members of the MSPP Advisory Group for discussion at the workshop on September 29th at the third stakeholder workshop. It will also be placed on the MSPP website.

This paper is a product of previous comment and discussion and has been updated through the course of the project.

2. Introduction

Marine spatial planning is a process by which the sustainable exploitation of marine resources can be planned and managed. While the process will result in the preparation and adoption of a marine spatial plan, the emphasis is likely to be as much on the process of planning and ongoing management as on the development of the plan itself.

The Regional Marine Spatial Plan is primarily a framework for decision-making in the future.

In particular, the plan will provide a framework for the integrated management of human uses and assist decision-making across a wide range of cross cutting functions including:

- Spatial allocation;
- Advice on EIA/SEA within given areas;
- Consenting processes;
- Research into potential threats and impacts;
- Monitoring.

The data collected to inform plan production, for example, on spatial resources and activities, will have a long-term value. It would be expected that these information sources would be maintained and developed over time to support ongoing management. Maintenance of the information base would also provide a level of continuity that is currently lacking and would avoid new studies having to start from scratch.

The general process is represented in Figures 1 and 2 and the policy framework within which a marine spatial plan would be prepared is presented in Figure 3. The paper primarily focuses on the process of plan production (Figure 2), because this is the immediate task of the pilot project. However, as noted above, the activities associated with implementation and ongoing management will be key to achievement of plan objectives (Figure 1).

3. Definitions

It is important to be consistent in the use of terminology. For the purposes of this plan the following definitions (defined with assistance from "Policies for Spatial Plans: A guide to writing the policy content of Local Development Documents" Planning Officers' Society, July 2005) will be used:

- Goal – An overarching aim which sets out the purposes of the plan and may be derived from Government Policy for the marine environment;
- Objective – A statement that specifies the direction of desired change in trends or conditions;
- Policy – The expressed intentions of the plan-making agency;
- Proposal – A positively worded policy that proposes a course of action or an allocation for a particular use or purpose;
- Programme – A time-related schedule of operations and/or funding to achieve a stated purpose;
- Target – Proposals expressed in terms of specified amounts of change (thresholds) in specified periods of time;
- Sectoral Policy – Policy that relates to a specific sector of activity e.g. fishing, mineral extraction;
- Spatial Plan – A document that integrates policies across sectors, producing spatially differentiated application of those policies which may be expressed in plans or diagrams.

4. Plan Production Process

4.1 Goals and Objectives

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A plan cannot be produced in a policy vacuum and some overarching goals are required to set out, in general terms, what is to be achieved.

Following the Seas of Change consultation, undertaken as part of the Marine Stewardship initiative, the Government adopted the following goals for the marine environment, which have been taken as a starting point for marine spatial planning (Defra, 2004):

- To conserve and enhance the overall quality of our seas, their natural processes and their biodiversity;

- To use marine resources in a sustainable and ecologically sensitive manner in order to conserve ecosystems and achieve optimum environmental, social and economic benefit from the marine environment;
- To promote and encourage environmentally sustainable use of natural resources to ensure long term economic benefits and sustainable employment;
- To increase our understanding of the marine environment, its natural processes and our cultural marine heritage and the impact that human activities have upon them; and
- To promote public awareness, understanding and appreciation of the value of the marine environment and seek active public participation in the development of new policies.

These goals have been translated into more specific objectives and targets. Initial broad objectives have been developed for nature conservation (which incorporate existing objectives in relation to designated sites) through JNCC's Irish Sea Pilot Project undertaken as part of the Review of Marine Nature Conservation (Vincent et al, 2004). While these objectives have not yet been formally adopted, they provide a useful starting point when considering nature conservation requirements within the context of marine spatial planning.

Objectives for many sectoral uses exist in relevant policy documents, for example, ODPM policies in relation to mineral extraction, but the pilot has identified that further development of objectives for some sectors will be needed to facilitate formal plan development. Similarly, while some targets exist, for example, relating to sustainable development indicators, Biodiversity Action Plans etc and some ecological quality objectives (EcoQOs) are being developed, further development of targets is also likely to be necessary. For example, there is a general lack of clearly defined targets for many of the economic and social uses.

The difficult issues concern the balance of choices to pursue one objective at the expense of the others. One of the benefits of spatial planning is that sometimes it is possible to combine objectives and balance benefits and costs over a specific geographic area. In any event one of the main benefits should be the provision of greater certainty to future decision-making.

4.2 Scoping and Data Collection

The quality of the plan will depend (to some extent) on the quality of the data collected. JNCC (Tyldesley 2004) describes this phase as "stock-taking", but if plan making is to be efficient, data collection needs to focus on those topics which are seen to be important and which will enable decisions to be made. Large quantities of data are not required to justify a policy which is unambiguous and unchallengeable, e.g. the protection of a "World Heritage Site". However it may be important to collect considerable weight of evidence in an area of high development pressure and conflicts of use (such as an estuary), regardless of whether there is strong ecological interest or not.

The process whereby the decision, to include certain information in the plan, is made, is called "scoping". The SEA process begins with just the same sort of scoping

exercise, except that the question here is “what information is necessary to assess the impact of the proposed plan?”

The scoping phase will assist in determining the core set of information required for the plan area which is essential to underpin plan development.

Data needs to be presented in a useable form which means mapping it (where feasible) and manipulating it into comparable form i.e. covering similar areas of sea and time periods. This is also the appropriate stage at which to identify possible sub-regions within the study area. These may be determined on the basis of ecological, geographic and/or political factors.

4.3 Forecasting

The plan is envisaged to project forward over a twenty year period (2005-2025), and could possibly be broken down into phases, say five-year horizons within that period, although this has not been done in the case of the pilot. Thereafter, it is necessary to predict the demands for activities and their spatial manifestations. Forecasting will be dependent on adopting a number of assumptions about, for example, the relationship between past change and the future, government policy, the economy, technological change and climate change. Clearly a number of these parameters are unknowable but as long as the assumptions are well justified and explicit, the plan’s proposals can be monitored in this context and the plan reviewed and revised on a regular basis (possibly every five years).

4.4 Analysis

This is the point in the process where the information generated both through the data collection process and forecasting has been brought together and compared to identify the conflicts and, where there were any, the uncontested satisfiable demands on space.

Within the Irish Sea, while there are many different sectoral uses which overlap in time and space, to a considerable extent users manage to co-exist peaceably with each other, reflecting the already high level of active management of different uses and existing legal controls and conditions which are designed to avoid/minimise conflicts.

However, it is clear that conflicts continue to occur between uses and the environment, for example, some fisheries do not meet commonly accepted standards of sustainability. There is therefore a need to ensure that the plan delivers an ecosystem approach which respects environmental limits and that economic and social objectives are not set in such a way that they will compromise achievement of environmental objectives.

No detailed analysis of issues in the Irish Sea has been carried out as part of this study, although stakeholders were invited to document issues of concern as part of the process of plan development. In preparing formal plans, such analysis will serve to

better inform policies, objectives and targets, and help to ensure that such plans deliver sustainable development.

4.5 Generating spatial options

The generation of alternative spatial options (strategies) is the creative stage in the process of plan making. It can be aided by data handling techniques married to the weighting of objectives such that strategies which emphasise one set of values rather than another are favoured. However given the politics of environmental planning, options are rarely as open as quantitative techniques would suggest and difficult decisions tend to focus on relatively few but critical choices. Largely for these reasons the use of modelling techniques in land-use plan making has reduced considerably and options tend to be developed through consultation and consensus building.

In the Irish Sea Pilot Marine Spatial Plan this stage has been progressed by the development of scenarios for particular sectoral uses. Current uses of the Irish Sea were plotted using GIS to establish the current extent of activities and conservation designations. These were assumed to act as constraints on future development. The remaining areas were assumed to be available for other uses. Plotted on top of this data were maps identifying areas which had the necessary attributes for potential future use for (i) tidal stream energy production, and (ii) marine aggregate extraction. Where the conditions for future use coincided with areas available for development, it was assumed that these would be suitable areas for zoning. This is essentially a "sieve map" technique whereby areas are sieved for existing use and the best remaining areas designated for future uses.

A more sophisticated approach was taken in deriving scenario 3, marine protected areas. Here different conservation criteria were weighted to provide a gradation of desirable degrees of protection; shades of grey by comparison with the black and white approach of sieve mapping.

In a real plan-making process this stage would be subject to several iterations and represent the main opportunity for stakeholders to influence future spatial allocations. The outcome would be a combination of the technical and the political, with explicit choices and justifications being made to propose one type of future use rather than another in specific locations.

4.6 Evaluation

The evaluation of spatial options is an important stage in the process of developing robust strategies and is the point at which consultation with interested parties can play a significant role in shaping the final plan. To be credible options must be consistent with the objectives of the plan. However choices present themselves because the different objectives will inevitably conflict to some degree and giving more weight to one set of values rather than another gives rise to contrasting spatial consequences.

The most frequently used technique in evaluating options is the Goals Achievement Matrix, in which the axes of the matrix are formed by the objectives of the plan and the

elements of each option. Each element is assessed against the criteria of the objective and awarded either pass/fail or a score/ranking. In this way the elements of each option can be compared and an overall score/rank for the option as a whole ascertained. The assessment may be adjusted to reflect the preferences of consultees and different options may be seen to meet the interests of different groups to a greater or lesser extent.

In the Irish Sea Pilot, options of this sort were not explicitly developed, although the reconciliation of conflicts between the different scenarios involved implicit evaluation of alternative options. For example, some locations were identified as suitable for both tidal stream deployment and as marine protected areas. Given the flexibility in choice of location of MPA and the relatively constrained tidal stream resource, a practical judgement to identify the areas for tidal stream development was made and alternative locations for an MPA network were identified.

4.7 The Regional Marine Spatial Plan

The plan itself is a document that consists of a statement of objectives, an explanation of the spatial framework and a series of chapters setting out policies, explained and justified in supporting text, a zoning plan identifying those areas to which more general policies applied, and supporting detailed maps indicating where specific policies operate, primarily mapping existing activities and designations.

Where there is perceived to be a need for sub-regional (subsidiary) plans either incorporated in the regional plan or published separately (having gone through a similar process of plan making), these will also be identified. It is recommended that consideration be given to the idea of a Marine Spatial Plan Scheme similar to that which has been introduced in terrestrial planning as a result of the 2004 Planning and Compulsory Purchase Act. The Scheme would identify a portfolio of documents including the marine spatial plan for the regional sea and the sub-regional (subsidiary) plans which nest within it covering those areas requiring more detailed planning, possibly over a shorter time period.

4.8 Participation

The Government has been very keen to advocate greater public and stakeholder engagement in terrestrial plan making in its Sustainable Communities programme and recent legislation. Stakeholder engagement has also been a key tenet of its Marine Stewardship initiative. This approach, reflected in marine planning, would suggest that there should be involvement before, during and at the end of the process.
At the beginning of the process the stakeholders and interested members of the public would be asked to contribute to the identification and prioritisation of objectives. Later in the process further participation would be encouraged in the evaluation of options, as described above, with the agreed plan going to further consultation prior to a formal consideration of objections at a public examination (or equivalent).

The requirement for SEA/SA (see below) will also necessitate a high level of structured participation. Ideally a consolidated programme of public and stakeholder engagement should be developed to meet both the plan making and SEA requirements.

4.9 Strategic Environmental Assessment/Sustainability Appraisal

The overall objective of the SEA Directive is to provide high-level protection of the environment and to integrate environmental considerations into the preparation and adoption of plans and programmes. The Directive is implemented through UK Regulations and the ODPM has published guidance which states that SEA is mandatory for plans which are prepared for a number of sectors including fisheries, industry and water management, and for planning and land use which set the framework for future development consent for projects likely to have a significant effect on the environment. An SEA would therefore be required for each marine spatial plan. Under the existing requirements, sectoral plans such as for oil and gas licensing would also need SEA. These would be completed in the context of whatever marine spatial plan policies applied for the relevant area/sector in question.

Under the Planning and Compulsory Purchase Act 2004, Sustainability Appraisal is mandatory for Regional Spatial Strategies, Development Plan Documents and Supplementary Planning Documents. Draft ODPM guidance uses the term 'Sustainability Appraisal' to incorporate the requirements of the SEA Directive. SA/SEA is a systematic and iterative process the main purpose of which is to appraise the social, environmental and economic effects of plan strategies, from the outset of the preparation process. Consequently decisions can be made that accord with the objectives of sustainable development, i.e. social progress which recognises the needs of everyone, effective protection of the environment, the prudent use of natural resources and maintenance of high and stable levels of economic growth and employment.

4.10 Plan Adoption

The process of adoption would include independent examination of the plan and the production of a report into its findings. In land-use planning the report of the inspector is binding on the planning authority. Whether or not this approach is accepted for marine planning there does need to be a formal adoption of the plan for it to be the statutory basis on which to take action and monitor implementation.

It is recommended that a process akin to the Examination in Public (EiP) adopted for RSS should also be used in examining Regional Marine Spatial Plans. Following submission to the Secretary of State of the Regional MSP which the Marine Agency intends to adopt, the SoS would appoint an inspector to convene an EiP and to invite objectors and others with a direct interest to attend. The inspector would set an agenda of issues that s/he considered to require further examination, invite evidence, and conduct a round table hearing. On the basis of the plan, the objections, further evidence and EiP the inspector would issue a report which would be binding on the responsible body, i.e. the Marine Agency. The MSP as amended by the inspector's report would then be adopted as the MSP for that regional sea.

5. Plan Implementation, Monitoring and Review

5.1 Implementation

The process of implementing the plan is arguably beyond this study as it will rely, in part, on a review of existing procedures. It is assumed for the purpose of the Pilot that a new Marine Agency will be given overall responsibility for co-ordinating plan production. As a minimum, it is desirable that relevant authorities would be required to have regard to the plan and its policies in exercising their functions that relate to the plan, for example, in determining a development application.

The existence of the plan will provide the opportunity to consider the introduction of an umbrella 'marine development permit', similar to a planning permission, which would incorporate a variety of current licenses and permits in a one-stop application.

Plans are also used as mechanisms to steer public investment from Europe and national government. The MSP could also be used for this purpose requiring bids for public investment to demonstrate their conformity with and implementation of the marine spatial plan.

5.2 Monitoring and Review

Monitoring is an ongoing process by which the effects of the plan can be examined. It will play a key role in assessing the effectiveness of plan policies and their impacts and will be crucial to ongoing management decisions. There are different approaches to monitoring and these should all form part of the process.

The recently published LDF Monitoring; Good Practice Guide (ODPM March 2005) talks of targets and indicators linked to policies and objectives as being the means by which monitoring is operationalised. Four types of indicator are specified:

- Process targets - which measure the progress of plan preparation.
- Significant Effects indicators – linked to the sustainability appraisal and providing a benchmark for measuring the significant effects of implementing policy.
- Contextual indicators – to provide a backdrop against which to consider the effects of policy. For example, these might include progress towards achievement of marine EcoQOs, BAP targets etc in the plan area.
- Output indicators – to measure quantifiable physical activities directly related to the implementation of planning policies.

In interpreting indicators it is essential to be aware of the limitations of the plan's impact compared with, for example, climate change or other significant environmental, social or economic changes outwith the plan's scope. Often the precise effects of these factors are difficult to separate.

It is possible to track the plan's influence in relation to decision-making by recording the number of proposals which have been approved or refused by reference to the

plan. Equally the number of related organisations and their strategies which have referred to the marine plan in arriving at their strategy. This is a further way of monitoring influence of the Plan.

Finally it is possible to measure the cost effectiveness of the plan by comparing the costs of production, which are relatively easily measured, against the costs and benefits of the plan's impact, much of which is very difficult to measure especially, for example environmental benefits, where a monetary value is difficult to attribute.

Monitoring should lead to a greater understanding of the plan's successes and failures and provide an objective basis for subsequent plan reviews.

6. References

Defra, 2004. The Government's response to its Seas of Change consultation to help deliver our vision for the marine environment. Defra, London.

Vincent, M.A., Atkins, S.M., Lumb, C.M., Golding, N., Lieberknecht, L.M. and Webster, M., 2004. Marine nature conservation and sustainable development – the Irish Sea Pilot. Report to Defra by the Joint Nature Conservation Committee, Peterborough

Figure 1: Programming of Marine Spatial Planning and Management

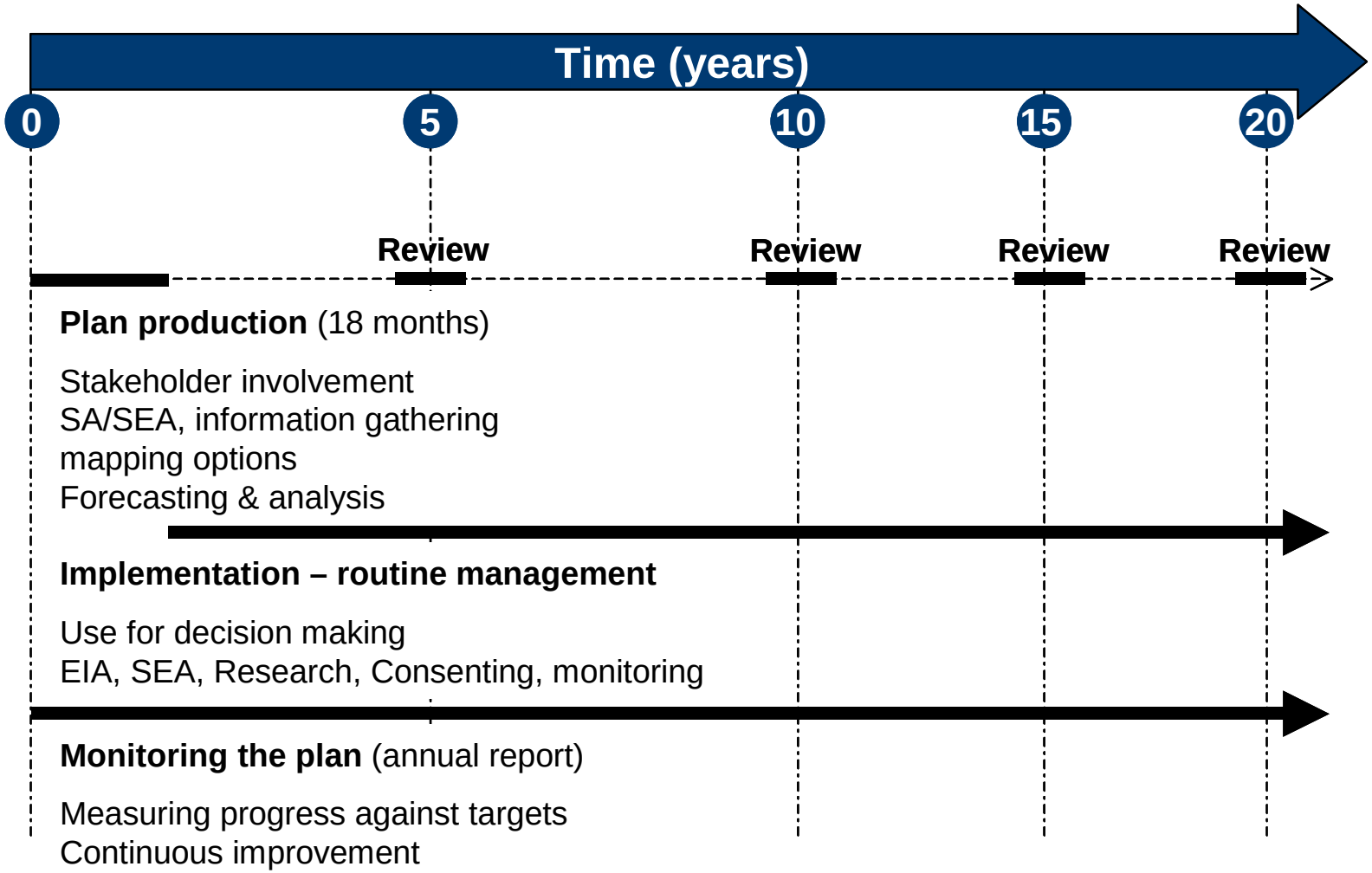

Figure 2: Marine Spatial Plan Production Process

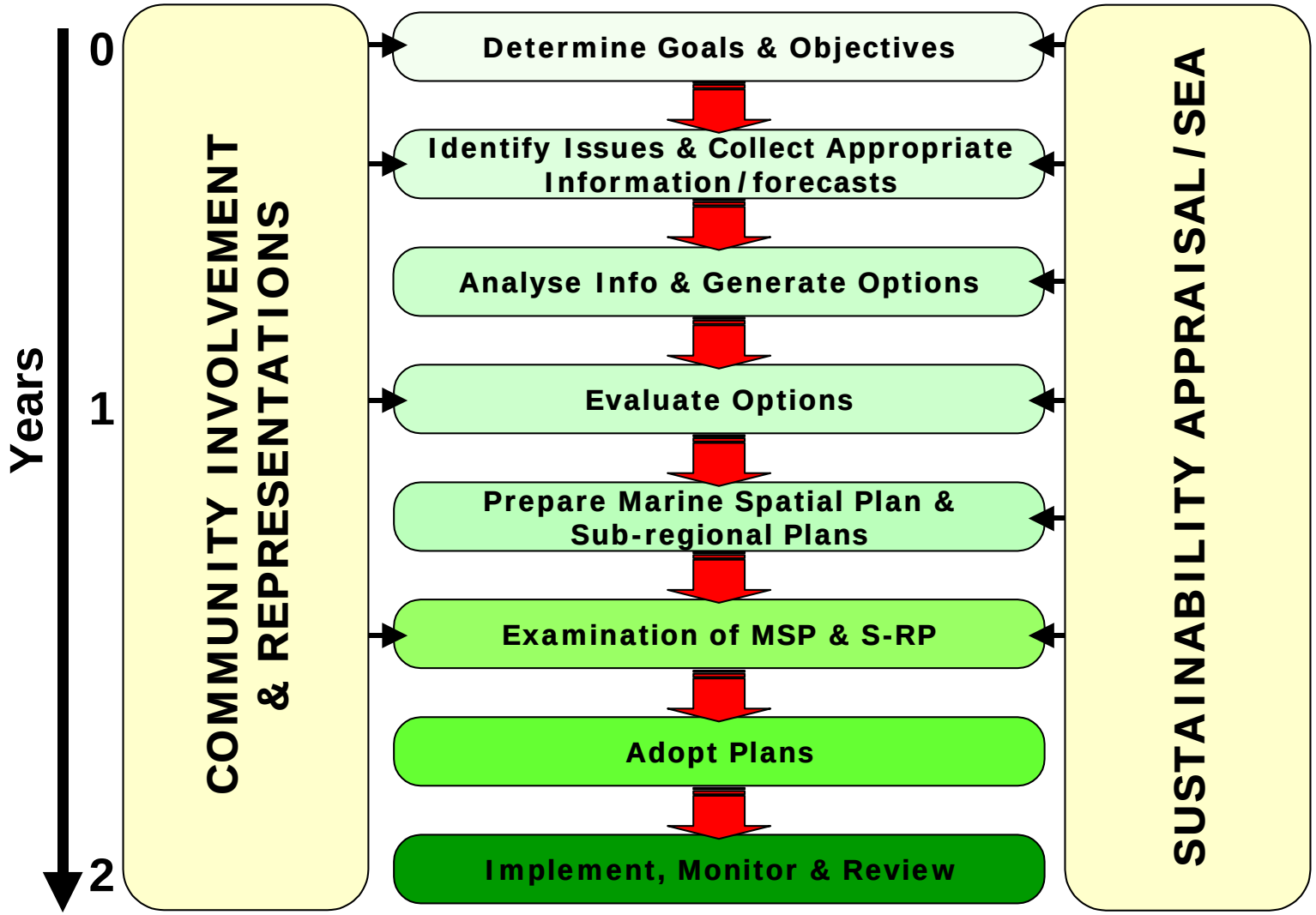

Figure 3: Policy Framework for Marine Spatial Planning