Effective governance frameworks for implementing ecosystem-based marine spatial planning: the challenges of achieving ecological connectivity through institutional connectivity

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Marine spatial planning
“The public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic and social objectives that are usually specified through a political process. MSP should be ecosystem-based and is an element of sea use management.” (UNESCO 2009)

“The **ecosystem approach** is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way... It also recognizes that humans, with their cultural diversity, are an integral component of many ecosystems.” (CBD 2004)
Ecosystem approach

**Human elements**, given that humans are part of many ecosystems
- Stakeholder participation in decision-making;
- Equity amongst users;
- Economically sustainable;
- Inter-sectoral approach: integration of sectoral policies;
- Fulfilling societal needs, particularly for ecosystem services.

**Environmental elements**
- Focusing on ecological scales, rather than administrative boundaries;
- Maintaining the structural and functional attributes of ecosystems;
- Living within environmental limits:
  - sustainable use
  - taking account of cumulative impacts
- Maintaining ecosystem resilience through conserving biodiversity;
- **Ensuring that the flow of ecosystem services is maintained.**

: Analogous to sustainable development... and all about governance
Where should the governance ‘steer’ towards ecosystem-based marine spatial planning come from?

- State control – government and law
- Market steer – capitalism and economies
- People steer – communities and civil society
Governance is not just:-

‘Strategies used by governments to help govern’

‘Government by and through markets’

‘Governing without governments’

It is a combination of the three, as appropriate to a given context
Growing recognition in governance debates that there is a need to move beyond blinkered ideological arguments as to which approach is ‘best’ or ‘right’

: develop governance models, frameworks and approaches that combine the role of states, markets and people
Top-down hierarchical governance: command and control, fortress conservation
Polycentric governance: place-based self-governance
Fanning et al. (2007)
Focused on EBM of Caribbean large marine ecosystem (LME)

“The multi-scale component of the proposed governance framework with vertical and horizontal linkages among the different policy cycles. The multi-level linkages do not necessarily imply a controlling function”
As ecosystem-based MSP is scaled-up, governance challenges increase, so there arguably must be a degree of coordination & strategic steer, from higher institutional & cross-sectoral state bodies to address ecological & human inter-connections between places.

In reality can strategic steer be provided by linkages that act purely as channels for cooperation, deliberation, negotiation & conflict resolution to address competition, with no state ‘interference’ (i.e. ‘steer’)?
Participation & Institutional learning *ie* rules adapted in light of experiences from local places

Co-evolutionary Governance (Jones 2014)

‘Negotiated’ Compliance *ie* rules contextualised in places but in the shadow of hierarchy

Market interactions
50 case studies in 23 countries

www.mpag.info
Economic incentives (markets): using economic and property rights approaches to promote the fulfilment of PA objectives (10)

Communication incentives (education and awareness raising): promoting awareness of the conservation features of the PA, the related objectives for conserving them, the policies for achieving these objectives and support for related measures (3)

Knowledge incentives (collective learning): respecting and promoting the use of different sources of knowledge to better inform PA decisions (3)

Legal incentives (top down): use of relevant laws, regulations etc. as a source of ‘state steer’ to promote compliance with decisions and thereby the achievement of PA obligations (10)

Participation incentives (bottom-up): providing for users, communities and other interest groups to participate in and influence PA decision-making that may potentially affect them, in order to promote their ‘ownership’ of the PA and thereby their potential to cooperate in implementation of decisions (10)
<table>
<thead>
<tr>
<th>Incentive Category</th>
<th>Incentive</th>
<th>Associated Governance Approach</th>
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<tbody>
<tr>
<td>Economic</td>
<td>1. Payments for ecosystem services (PESs)</td>
<td>Market approach</td>
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<td>2. Assigning property rights</td>
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<td>3. Reducing the leakage of benefits</td>
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<td>4. Promoting profitable and sustainable fishing and tourism</td>
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<td>5. Promoting green marketing</td>
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<td>6. Promoting diversified and supplementary livelihoods</td>
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<td>7. Providing compensation</td>
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<td>8. Investing MPA income/funding in facilities for local communities</td>
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<td>9. Provision of state funding</td>
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<td>10. Provision of NGO, private sector and user fee funding</td>
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<td></td>
<td>11. Raising awareness</td>
<td>Supports all three approaches</td>
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<td>12. Promoting recognition of benefits</td>
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<td>13. Promoting recognition of regulations and restrictions</td>
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<td>Communication</td>
<td>14. Promoting collective learning</td>
<td>Supports all three approaches</td>
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<td>15. Agreeing approaches for addressing uncertainty</td>
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<td>16. Independent advice and arbitration</td>
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<tr>
<td>Knowledge</td>
<td>17. Hierarchical obligations</td>
<td>State approach/top-down</td>
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<td>18. Capacity for enforcement</td>
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<td>19. Penalties for deterrence</td>
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<td>20. Protection from incoming users</td>
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<td></td>
<td>21. Attaching conditions to use and property rights, decentralisation, etc.</td>
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<td>22. Cross-jurisdictional coordination</td>
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<td>23. Clear and consistent legal definitions</td>
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<td>24. Clarity concerning jurisdictional limitations</td>
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<td>25. Legal adjudication platforms</td>
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<td>26. Transparency, accountability and fairness</td>
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<tr>
<td>Legal</td>
<td>27. Rules for participation</td>
<td>People approach/bottom-up</td>
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<td>28. Establishing collaborative platforms</td>
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<td>29. Neutral facilitation</td>
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<td>30. Independent arbitration panels</td>
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<td>31. Decentralising responsibilities</td>
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<td>32. Peer enforcement</td>
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<td>33. Building trust and the capacity for cooperation</td>
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<td>34. Building linkages between relevant authorities and user representatives</td>
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<td>35. Building on local customs</td>
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<td>36. Potential to influence higher institutional levels</td>
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Important to consider how incentives from different categories interact with and support each other (~synecology), **co-evolving** and working **in combination**.

Distinction between top-down, bottom-up and market approaches thus becomes blurred, if not irrelevant, as you need to combine incentives based on all three approaches, including **cementing role** of participation, economic, communication & knowledge incentives and the **reinforcement role** of legal incentives.
Diversity is the key to resilience, both of species in ecosystems and incentives in governance systems.


www.mpag.info  #GoverningMPAs
Yet another definition of governance!

Steering human behaviour through combinations of state, market and civil society approaches in order to achieve strategic societal objectives.
Co-evolutionary governance: combine approaches
Need for cross-sectoral, cross-space institutional linkages, with some **overarching** priorities & controls: ecosystem-based
Often disconnected by design, *e.g.* Marine Plans in England; MSFD and DEFMSP

Business-as-usual
Need ecosystem connectivity through institutional connectivity: essentially it’s all about decentralising responsibilities whilst ensuring that strategic ecosystem-based MSP objectives are achieved.
Place-based management through self-governing systems is unlikely to be effective in leading to ecological connectivity and achieving longer-term & wider-scale strategic EB MSP objectives, so polycentrism is less useful as a conceptual & empirical framework.

Combinations of governance approaches are necessary: state, market and civil society, through a diversity of incentives.

Political will and leadership are particularly important.

Some degree and form of hierarchical coordination is necessary to achieve institutional connectivity and thereby ecological connectivity.

Analyse EB MSP case studies using more realistic conceptual & empirical frameworks such as co-evolutionary governance in terms of how a diversity of incentives interact, including whether & how decentralisation initiatives are (or are not) leading to ecological connectivity through institutional connectivity.
Case study: European Union (Jones et al. 2016 *MSP in Reality*)

Realities of marine spatial planning contrast with related conceptual ideals.

National blue growth priorities lead to a focus on ‘strategic sectoral planning’, particularly for nationally significant infrastructure & major economic development projects.

Top-down approaches dominate from which participative platforms are disconnected by design.

Politically expedient focus on blue growth is undermining environmental priorities.
Ecosystem-based MSP - hard sustainability

- Fisheries development
- Oil-gas development
- Renewables development
- Tourism etc. development

If ecosystems collapse.....

Integrated-use MSP - soft sustainability

- Fisheries development
- Oil-gas development
- Ecosystem development
- Renewables development
- Tourism etc. development

If economic sectors and growth collapse.....

Qiu & Jones 2013

➢ Longer-term priorities
➢ Conservation as the basis for sustainable development
➢ MPAs as foundation of EBM
➢ MSP as a mechanism for achieving ‘good environmental status’ (GES) by 2020


➢ Shorter-term priorities (GDP)
➢ Economic growth as the basis for sustainable development
➢ MPAs as a ‘sectoral use’
➢ MSP as a mechanism for achieving ‘blue growth’

➢ DG Environment

Qiu & Jones (2013) www.tinyurl.com/BGorGES
Ecosystem-Based Marine Spatial Planning (MSFD)

- Longer-term priorities
- Conservation as the basis for sustainable development
- MPAs as foundation of EBM
- MSP as a mechanism for achieving ‘good environmental status’ (GES) by 2020
- DG Environment

Integrated-Use Maritime Spatial Planning (DEFMSP)

- Shorter-term priorities (GDP)
- Economic growth as the basis for sustainable development
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- DG MARE
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Ecosystem-based MSP - hard sustainability

Fisheries development Oil-gas development Renewables development Tourism etc. development Society

Ecosystem Conservation

If ecosystems collapse.....

Integrated-use MSP - soft sustainability

Fisheries Oil-gas Ecosystem development development conservation development development Society

Economic Growth

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Qiu and Jones (2013)

Economic development activities can go ahead for “**reasons of overriding public interest which outweigh the negative impact on the environment**”, though such activities should not “preclude or compromise the achievement of GES” (Article 14)

Maritime Spatial Planning Directive

“Member States shall consider economic, social and environmental aspects to support sustainable development and growth in the maritime sector, **applying an ecosystem-based approach**, and to promote the coexistence of relevant activities and uses” (Article 5)……**but the obligation to achieve GES** is only mentioned in passing in the preamble to the MSP Directive and was controversially **removed from Article 5 so**
In reality, is ‘blue growth’ the objective that other objectives have to be integrated with, or is ‘good environmental status’ the objective that other objectives have to be integrated with?

**How can integrated-use MSP and ecosystem-based MSP be reconciled and integration achieved?**

**Risk that MSP could become a vehicle for blue growth and continued declines in ecosystem integrity and resilience?**
“The implementation of [the MSFD] framework shows, at best, a mixed picture. There are several positive examples of recovery of specific biodiversity features across Europe’s seas, reversing increasing pressure trends, and improved sustainability of some uses of the sea. However, these partial successes seem barely to register against the observed continued degradation and the expected increased use of the sea, as well as the observed and forecast worsening of climate change impacts on Europe’s seas.” (EEA 2020)
“Perceived role of government shifts from acting as a ‘pilot’, with the knowledge and tools to steer society towards sustainability, to a role as an enabler of society-wide innovation and transformation. 

Top-down planning still has a role in some contexts

But enabling systemic change will require a much broader policy mix to promote innovation and experimentation, to enable new ideas and approaches to spread, and to ensure that structural economic change produces beneficial and fair outcomes.

The complexity and uncertainty of transition processes means that governments will also need to find ways to coordinate and steer actions across society towards long-term sustainability goals and to manage the risks and unintended consequences that inevitably accompany systemic change.” (EEA 2020)

i.e. cannot rely on vertical and horizontal linkages in polycentric placed-based self governance to coordinate and steer MSP initiatives: need to combine a diversity of incentives in a co-evolutionary approach
Ocean Management Continuum

**Ecosystem-Based Management**

- Longer-term priorities (environment)
- Ecosystem-based approach, inc MPAs
- Accountability & Justice
- Conservation +
- Compatible economic development
- Cross-sectoral integration +
- trade-offs
- Effective conflict management
- High institutional connectivity
- High ecological connectivity
- High resilience
- **More sustainable**

**Business as Usual**

- Shorter-term priorities (GDP)
- Economic development-focus
- Dominance of elites
- Sectoral
- Many unresolved conflicts
- Low institutional connectivity
- Low ecological connectivity
- Low resilience
- **Less sustainable**
How can we build capacity to **evolve** towards ecosystem-based governance?

- **Accept** that purely place-based self governance is unlikely to be either effective or equitable as **direct/indirect state roles are also needed to provide steer and state capacity**
- Given that institutional connectivity is vital for an ecosystem-based approach, **recognise** that **state roles are also important to provide for inter-sectoral coordination** (I-22 see incentives table)
- **Focus** on **decentralisation** of ecosystem-based MSP to appropriate sectoral authorities and local groups, including attaching obligations and conditions when allocating responsibilities (I-21), i.e. **governance in the shadow of hierarchy** to achieve strategic wider-scale longer-term priorities
Implementation coordinated by an executive cross-sectoral authority that agrees targets, etc & has legal powers to ensure targets achieved, with supporting political will.

‘Negotiated’ Compliance ie targets & rules contextualised but in the shadow of hierarchy.

Participation & Institutional learning ie rules adapted in light of experiences from local contexts.
Implementation coordinated by an executive cross-sectoral authority that agrees targets, *etc* & has legal powers to ensure targets achieved, with supporting political will.

Co-evolve
• Whilst ecosystem services values & payments for ecosystem services (eg Blue Carbon) can incentivise effective conservation (I-1), still need state steer and obligations to ensure effectiveness & equity (I-21)
• Legal requirements for transparency, accountability & fairness needed in formulation & implementation of effective and equitable policies (I-26)
• Legal obligations (I-17) on national governments for effective/equitable MPAs, fish stock restoration, good environmental status (MSFD) important for ‘encouraging’ political will for EB MSP
• Rules for participation of locals (I-27) and establishment of collaborative platforms (I-28) also necessary to promote local ownership, cooperation & support, including peer enforcement (I-32)
• Important to build trust and capacity for cooperation with locals (I-33), including linkages between state & user representatives (I-34)
• Where appropriate & feasible, aim to build on local customs (I-35) and draw on traditional ecological knowledge in collective learning (I-14)
Rather than any particular tools/instruments, we need institutionally connected ecosystem-based marine spatial planning to effectively achieve integrated ecosystem-based marine spatial planning … and this needs political will and a diversity of incentives!

In order to assess different EB MSP approaches, we need to employ more realistic theoretical and empirical frameworks to analyse case studies