

# ENABLING EFFECTIVE AND EQUITABLE MARINE PROTECTED AREAS:

guidance on combining  
governance approaches

## Case Study Compendium



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## Table of Contents

Glossary.....	6
MPAG Framework.....	10
Case study overview.....	18
1. Great Barrier Reef Marine Park, Australia .....	19
2. Darwin Mounds European Marine Site .....	25
3. North East Kent European Marine Site, UK .....	28
4. The Wash European Marine Site, UK .....	32
5. The Sanya Coral Reef National Marine Nature Reserve, China.....	37
6. Seaflower Marine Protected Area, Columbia.....	41
7. Galápagos Marine Reserve, Ecuador.....	45
8. Karimunjawa Marine National Park, Indonesia.....	49
9. Wakatobi National Park, SE Sulawesi, Indonesia.....	53
10. Tubbataha Reefs Natural Park, Philippines .....	57
11. Ha Long Bay Natural World Heritage Area, Vietnam .....	61
12. Os Miñarzos Marine Reserve of Fishing Interest, Spain.....	64
13. Isla Natividad MPA, Baja California Sur, Mexico .....	68
14. Great South Bay Marine Conservation Area, USA.....	71
15. Chumbe Island Coral Park, Tanzania .....	74
16. Baleia Franca Environmental Protected Area, Brazil.....	78
17. Pirajubaé Marine Extractive Reserve (RESEX), Brazil .....	81
18. Cres- Lošinj Special Marine Reserve .....	84
19. Velondriake Locally Managed Marine Area, Madagascar.....	87
20. Hol Chan Marine Reserve, Belize .....	90
21. Caye Caulker Marine Reserve, Belize .....	94
22. Bacalar Chico Marine Reserve, Belize .....	98
23. Fal & Helford European Marine Site, UK.....	101
24. Sandals Boscobel Special Fisheries Conservation Area, Jamaica.....	105
25. Oracabessa Special Fisheries Conservation Area, Jamaica.....	109
26. Bluefields Bay Special Fisheries Conservation Area, Jamaica .....	113
27. Nusa Penida MPA, Indonesia.....	116
28. Port-Cros National Park, France .....	120
29. Tavolara-Punta Coda Cavallo MPA, Italy.....	124
30. Ustica Island MPA, Italy.....	128
31. Cabo de Gata-Níjar National Park/MPA.....	132
32. Cabo de Palos-Islas Hormigas MPA, Spain .....	137
33. Shark Bay Marine Park, Australia .....	141
34. Ningaloo Marine Park, Australia .....	147

## Introduction

This technical appendix provides a compendium of the 34 case study summaries that form the evidence base for the main volume: UN Environment (2019) *Enabling Effective and Equitable Marine Protected Areas – guidance on combining governance approaches*. Authors - Jones PJS, Murray RH and Vestergaard O.

These summaries are based on the 'Marine Protected Area Governance (MPAG)' framework, which is set out in the section after the glossary, and defines all the incentives used, as well as providing further guidance on how these summaries are populated. More information on the rationale behind the MPAG governance approach is provided in Jones PJS (2014) *Governing Marine Protected Areas: resilience through diversity*. Routledge.

More details on the MPA Governance project are at:

- <https://www.unenvironment.org/resources/marine-protected-area-governance>
- <https://www.ucl.ac.uk/marine-protected-area-governance/>

## Glossary

All definitions after Jones (2014)<sup>1</sup> other than where other specific source cited. Italicised words in definitions are also separately defined in this glossary.

### Actors

People involved in a given MPA governance initiative, including local users, representatives of governmental and non-governmental organisations, etc.

### Basic conflicts

Conflicts based on differences between utilitarian values, focused on exploiting marine resources, and ecocentric-preservationist values, focused on conserving ecosystem health and setting areas aside from direct human uses, often revealed in the context of MPAs between those actors focused more on utilitarian objectives (using resources) and those focused more on conservation objectives (protecting biodiversity).

### Biodiversity

The diversity of different ecosystems, habitats and species, including genetic diversity amongst different populations of a given species.

### Conservation objective

An objective that is focused on protecting biodiversity and/or related natural resources from the direct and indirect impacts of human activities and related driving forces (also see operational objective). Effectiveness is focused on the degree and extent to which the impacts of users that can undermine the fulfilment of conservation objectives are reduced, and do not take account of operational objectives as these are considered in the MPAG framework in terms of incentives ('the means' by which effectiveness in achieving conservation objectives is reached).

### Decentralisation

The transfer of authority from central government to lower-level government levels, quasi-independent government organisations, NGOs or the private sector, degrees and forms of autonomy ranging from deconcentration, to delegation, to devolution.<sup>2</sup>

### Driving forces

The factors that can promote activities by users that can undermine effectiveness, such as increasing human populations, both from local population growth and inward migration, increasing demands from globalised fish and tourism markets, and the increasing aspirations of people to improve their living standards beyond subsistence livelihoods.

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<sup>1</sup> Jones, P.J.S. (2014) *Governing Marine Protected Areas: resilience through diversity*. Routledge. Use discount code DC361 for 20% discount at [Routledge](#).

<sup>2</sup> Rondinelli, D. (2000) What is decentralization? pp2-5 in J. Litvack and J. Seddon (eds) *Decentralization Briefing Notes*, World Bank Institute in collaboration with PREM network, Washington DC; Oxhorn, P. (2004) Unraveling the puzzle of decentralization, pp3-32 in P Oxhorn, JS Tulchin and AD Selee (eds) *Decentralization, Democratic Governance, and Civil Society in Comparative Perspective: Africa, Asia, and Latin America*, John Hopkins University Press, Baltimore

### **Ecosystem health**

A measure of the structural and functional integrity, biological diversity and resilience of marine ecosystems coupled with their capacity to provide sustainable flows of ecosystem services.

### **Ecosystem services**

'The direct and indirect use benefits people obtain from ecosystems'<sup>3</sup>, such as food provision, nutrient recycling, climate regulation and shoreline protection.

### **Effectiveness**

The degree to which an MPA's conservation objectives have been achieved and related obligations fulfilled, through the control of impacts, involving restrictions on the activities of users to which an MPA's species, habitats and ecosystems are sensitive. See next section for details.

### **Equity**

The fair distribution of costs (related to restrictions on users) and benefits (related to the achievement of conservation objectives) arising from MPAs, including recognition of the importance of local cultures and ways of life, and the rights of local people to participate in decision-making processes that affect them.

### **Governance**

Steering human behaviour through combinations of state, market and civil society approaches in order to achieve strategic objectives.

### **Incentives**

A particular institution that is instrumentally designed in relation to an MPA to encourage actors to choose to behave in a manner that provides for certain strategic policy outcomes, particularly conservation objectives, to be achieved.

### **Institutions**

Prescriptions that humans use to organize all forms of repetitive and structured interactions, including those within families, neighborhoods, markets, firms, sports leagues, churches, private associations, and governments at all scales.<sup>4</sup>

### **Management**

The day-to-day control of users and their activities, including related technical and administrative approaches (see governance).

### **No-take**

Marine areas designated for the conservation and restoration of their ecosystems, where all fishing activities are permanently banned, as are all other activities that involve the removal of living and non-living resources, e.g. recreational angling, shellfish collection, sand extraction. Can apply to a no-take MPA or a no-take zone (NTZ) (also see partially protected).

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<sup>3</sup> Beaumont, N.J. et al. (2007) 'Identification, definition and quantification of goods and services provided by marine biodiversity: implications for the ecosystem approach', *Marine Pollution Bulletin*, vol 54, pp253-265

<sup>4</sup> Ostrom, E. (1995) *Understanding institutional diversity*, Princeton University Press, Princeton, New Jersey. p3

### **Operational objective**

An objective focused on 'the means' by which conservation objectives ('the ends') are achieved, e.g. promoting the participation of local people, promoting awareness. These are considered in more detail in terms of incentives in this analysis, but such objectives are often explicitly stated as applying to many MPAs, so they are also listed as operational objectives in this analysis, recognising that such objective are considered in greater detail in later analyses of incentives.

### **Partially protected**

Marine areas designated for the conservation and restoration of particular habitats and/or species, in which some activities that are compatible with such objectives are allowed, on the basis that they do not significantly impact the particular habitats, species, or ecosystems. Such activities include recreational angling and commercial fishing with static gears (traps, pots, set nets, etc.) and pelagic trawls (towed through the water column, but not usually across the seabed). Can apply to an entire MPA or to a zone or zones of an MPA (also see no-take).

### **Resilience**

A measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables.<sup>5</sup>

### **Social capital**

A measure of the degree to which actors reach and implement decisions together through their professional and social networks, placing trust in one other, and having confidence that their cooperation with measures to achieve agreed collective objectives will be reciprocated by other actors.

### **Stakeholders**

People who have a stake in a given MPA as they are direct or indirect users and thereby benefit from ecosystem services. This is generally confined to users, but some definitions are more akin to actors in that they include representatives of state organisations, NGOs, etc., whilst others include wider members of wider society who may gain more distant indirect benefits, sometimes even extending to future generations. Due to the ambiguity of this term, it is only used where appropriate to the case study context.

### **State capacity**

The potential of the national government and related state agencies to govern the activities of the country's people and address their related interests. Based on the World Bank's Worldwide Governance Indicators (WGI) project, which is particularly focused on six dimensions of governance – voice and accountability; political stability and absence of violence; government effectiveness; regulatory quality; rule of law; control of corruption. Calculated by taking the average of the six scores (-2.5 to +2.5) and of the six percentile rankings assigned for that country in which the MPA is located. The 'country profiles' from which these scores and rankings are derived can be accessed at [www.govindicators.org](http://www.govindicators.org)

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<sup>5</sup> Holling, C.S. (1973) 'Resilience and stability of ecological systems', *Annual Review of Ecology and Systematics*, vol 4, pp1-23



## **Users**

People who use an MPA on a direct basis, by extracting natural resources, or on an indirect basis, through non-extractive recreational activities, aesthetic appreciation, etc.. For the purposes of this study, users are confined to those who live in the locality of the MPA or who often visit it for direct and indirect uses, i.e. it excludes people in wider society who may gain more distant indirect benefits. Representatives of state organisations are not considered as users.

**32. Cabo de Palos-Islas Hormigas MPA, Spain** – Katie Hogg, Maria Semitiel-Garcia and Pedro Noguera-Méndez, PhD research (2013)

Name	<b>Cabo de Palos-Islas Hormigas (CPH), Spain</b>	Year of designation	1995
Area	19.3 km <sup>2</sup>	State Capacity	0.86 (rank 76.3%, 2016)
GDP per capita	US\$30,100 (2013)	Human Development Index (HDI)	0.869
GDP Growth Rate	-1.3% (2013)	Population below the poverty line	21.1% (2013)

**MPA Objectives:**

Conservation	Operational
Protection, regeneration and development of fishing resources for the maintenance of sustainable fisheries	Enabling artisanal fishermen in the area to preserve their traditional way of life
	Support other low-impact activities (scuba-diving, environmental education, etc.) that contribute to economic development in the surrounding community

**Drivers and Conflicts:**

- The main conflict exists between the dive and fishing industries and is fuelled by the lack of control enforced by the regional government to better control recreational activities, particularly diving. The regional government does not enforce the regulations for the dive industry and it has grown exponentially. There are now social impacts on the community in terms of overcrowding and on the fishing industry due to displacement from fishing grounds.
- The fishers activities are heavily regulated whereas the divers are perceived to not be- which is generating feelings of animosity towards the group. Fishers feel they are losing the rights to a resource that was created for them.
- The economic crisis is also contributing to issues within the reserve. It has caused budget cuts, which has resulted in a reduction in surveillance and is also driving individuals to fish illegally, i.e. the problem is becoming circular.

**Governance Framework/Approach:**

Spain is a decentralised country with much governance devolved to autonomous regions. CPH includes regional waters (inside internal waters baseline) under the control of the regional government and national waters (beyond baseline in territorial waters) under the control of the national government (Ministry of Agriculture, Food and the Environment). The MPA is divided into a core zone (~14% of MPA area) surrounded by a buffer zone. The core zone is a highly protected no-entry area where only authorised research is permitted. Extractive and non-extractive use of marine resources, including artisanal fishing and low impact 'eco'-tourism, is permitted within the buffer zone, but recreational fishing is banned. Recreational diving has grown rapidly in an uncontrolled manner: since the establishment of the MPA in 1995, the dive industry has increased from zero to nine dive operators (2015 est.), with additional external operators and dive clubs regularly using the MPA. Theoretically, diving is restricted through a quota of allowed daily dives (25 a day in national waters, 75 a day in regional waters), but this is weakly enforced and the dive operators collectively agreed not to comply. Dive numbers have doubled in the last six years, surpassing 26000 with more than 500 immersions on peak days in 2013, leading to overcrowding, conflicts with artisanal fishers through displacement from their traditional grounds, anchor damage, diver impact, etc. As a result, the number of allowed dives has been legally restricted to 180 per day with 300 permitted on peak weekends since 2015, boats per buoy are limited to two, and dive operators must also follow good dive practice and respect fishing activity. Compliance rates and economic and social effects of these rule changes are yet to be seen. However, after the first summer there was consensus from dive operators that the regulations are satisfactory and they acknowledge the need to promote sustainable tourism.

Small-scale artisanal fishing is limited within the buffer zone to authorised boats from Cabo de Palos village: the 2014 census included 10 vessels, although only 5 regularly fish in the MPA. Trawling, purse seining and surface long-lining are effectively banned, with gill nets, trammel nets and bottom long lines being the main artisanal methods. Alternative traditional methods such as 'moruna' (fixed fishing nets for big demersal fishes) and pots for octopus are also used in regionally controlled internal waters outside the MPA's boundaries. Fishermen dispute the restriction of these methods in the MPA given they are traditional techniques and considered to be more selective than the permitted gill nets and trammel nets, many opting to fish outside the MPA with such alternative gears. The number of fishing vessels has dwindled in recent years, as a result of a lack of generational renewal, lack of institutional support and feelings of marginalisation within the fisheries sector. The younger generation are being attracted by jobs in the tourism sector, and despite the long cultural tradition within fishing families, the older generation see no future or support for the artisanal fishing sector and prefer their children to seek alternative livelihoods. Such trends raise concerns for the traditional fleets, especially when this MPA was created specifically to support this sector.

**Effectiveness:** 3 *Some impacts completely addressed, some partly addressed.* Recreational fishing is banned but still occurs, including illegal spear fishing by divers/snorkelers (particularly at night), as a result of weak enforcement capacity. The artisanal fishing sector is in decline so the impacts are reducing, but there are still instances of illegal commercial fishing, including by commercial anglers. Impacts from tourism activities, including diving and snorkelling, anchoring, sedimentation, waste management and tourism-related infrastructure development, are contributing to significant environmental degradation. During the peak season, amenities are over-run, infrastructure is stretched and traditional life for residents is disrupted.

**Incentives** (Y= used; Y\*= Used but particularly in need of strengthening; N= Not used; N\*= Not used but particularly in need of introducing; only used, needed and not used/needed but notable incentives for a given case study are listed in these tables)

#### Economic

Incentive type	Used	How/Why
<b>3. Reducing the leakage of benefits</b>	Y*	There are strict controls on who can fish and where fish can be sold which maintains the benefits of the MPA within the local community. However, this drives incomers to set up hotels and restaurants which does cause concern over the local community losing out on some benefits from tourism developments to incomers. Incoming illegal spear fishers (SCUBA and snorkelling, particularly at night, including for commercial gain), illegal commercial anglers and illegal commercial fishing vessels are impacting fish populations, leading to reduced catches by local artisanal fishers.
<b>4. Promoting profitable and sustainable fishing and tourism</b>	Y*	Restrictions are in place that are designed to promote profitable and sustainable fisheries, with only traditional methods of fishing allowed, as well as seasonal and size restrictions to promote sustainability, but the enforcement of these needs strengthening and illegal fishing occurs: fish stocks appear to be in decline, though stock assessments are lacking.
<b>5. Promoting green marketing</b>	Y	A short-term government funded programme called PescaSos aims to increase the revenue for fishers and the promotion of the value of artisanal fishing practices, and a programme is planned to develop eco-labels to highlight sustainably caught produce.
<b>6. Promoting diversified and supplementary livelihoods</b>	Y	Tourism has provided some alternative livelihoods and businesses in the area, though there are related challenges of waste management, environmental degradation, changes to local traditions and the costs of upgrading artisanal vessels to a standard safe for tourists.
<b>8. Investing MPA income/funding in facilities for local communities</b>	N*	If the MPA can generate a surplus, it would be very beneficial to invest this back into facilities for local communities given their very limited economic opportunities.

<b>9. Provision of state funding</b>	Y*	Recent budget cuts have resulted in the decrease in surveillance and in the last few years illegal fishing has increased substantially, the effects on fish stocks appearing to be significant. The protection that has been viewed as beneficial is being undone very quickly due to the governments lack of resources to continue protecting the area
<b>10. Provision of NGO, private sector and user fee funding</b>	Y*	A dive tax (€3 per diver) was introduced in 2014 but this income is channelled back into wider regional expenditure, so it is not serving as extra funding to support the MPA: a proportion of the dive tax income should be specifically invested back to support the MPA

### Communication

<b>11. Raising awareness</b>	N*	There is very little, if any, information regarding the MPA. As a highly touristic area more effort needs to be made to ensure visitors are aware that they are in an MPA, what the rules are, etc., in order to encourage more responsible behaviour.
<b>12. Promoting recognition of benefits</b>	Y	A university plays a key role in monitoring and writing studies on fish surveys conducted. There is increasing involvement with the community in these activities to promote the benefits of sustainable artisanal fishing
<b>Promoting recognition of regulations and restrictions</b>	N*	The local committee at the regional level coordinates activities and meet to inform actors of regional regulation changes, involving government departments, fisheries, the dive sector and scientific bodies.

### Knowledge

<b>14. Promoting collective learning</b>	Y	Long term monitoring conducted by the university of Murcia have helped to change dive regulations and help to justify the economic benefits from the MPA.
<b>15. Agreeing approaches for addressing uncertainty</b>	N*	The University of Murcia collects a lot of data about the MPA, however there is still a lack of information. The government is driven by evidence based decisions. Both the government and other actors do not understand or appreciate uncertainty and how to manage for it when making decisions. The use of alternative sources of knowledge would be very beneficial to address uncertainty, increase the knowledge base and increase the confidence in the data.
<b>16. Independent advice and arbitration</b>	N*	As above. The lack of a local manager means there is no one on site that can act as a bridge between the different actors involved. And due to the lack of confidence between different actors, it would be beneficial to introduce and develop platforms for independent advice.

### Legal

<b>17. Hierarchical obligations</b>	Y	This MPA is part of the Natura 2000 Network, designated as a SPAMI and also part of the MedPan Network which requires certain obligations and standards to be met.
<b>18. Capacity for enforcement</b>	Y*	There is capacity for enforcement through the Civil Guard and the TRAGSA surveillance service provider, but it needs improvement after a reduction in budget and there are challenges that remain for enforcing dive regulations and addressing illegal fishing. There is a lack of skill sets within the regional government to fulfil the required enforcement capacity.
<b>19. Penalties for deterrence</b>	Y*	There are penalties for deterrence however they are insufficient and are not a credible deterrent to illegal fishers. There are some fines issued but few are recorded and these tend to be mainly illegal spear fishers.
<b>20. Protection from incoming users</b>	Y	There is some protection but it is not sufficient to deter incoming illegal fishers.
<b>22. Cross-jurisdictional coordination</b>	Y*	The National Ministry of Agriculture, Food and Environment and the Council of Agriculture for the Region of Murcia are each responsible for their own regulations, and whilst there are some agreements and committees established to facilitate the

		sharing of activities and promote coordination, these meet infrequently and there is a need to better promote the integration of regional and national regulations.
<b>24. Clarity concerning jurisdictional limitations</b>	Y	There is awareness that there are challenges in areas outside of the MPA that cannot be addressed within the legislation of the MPA. There is different legislation for waters outside of the MPA that aims to address these challenges.
<b>25. Legal adjudication platforms</b>	Y	There are appeal platforms but adjudication is also needed to address concerns about inequitable enforcement
<b>26. Transparency, accountability and fairness</b>	N*	Issues exist between user groups related to legislation and restrictions- leading users to feel that rules are not applied fairly. There were also very few reports of transgressors being fined and caught, leading many to believe that corruption is becoming more prevalent.

### Participation

<b>27. Rules for Participation</b>	N*	At present there are very few, if any, meetings taking place. Establishing a clear plan for participation and defining clearly what participation will mean in terms of collaborative management and the role of all actors would be very beneficial. The government recognise the benefits of participation, but there are many barriers that are preventing it being introduced.
<b>28. Establishing collaborative platforms</b>	Y*	Although the regional government has a committee – there are no regular meetings and if there are they are restricted to the times when decisions have been made that will directly affect the other actors. The user level actors are demanding greater participation yet no opportunities currently exist that facilitate communication. There need to be more meetings especially to focus on promoting collaboration with users.
<b>29. Neutral facilitation</b>	N*	In general Spain is not familiar with participatory processes. The amount of distrust that exists between the different actors requires neutral facilitators with increased capacity to begin initiating these processes.
<b>30. Independent arbitration panels</b>	N*	This is needed to help with collaboration and to improve participation.
<b>31. Decentralising responsibilities</b>	Y	Most responsibilities for regulating uses in internal waters have been devolved to the regional government.
<b>33. Building trust and the capacity for cooperation</b>	N*	As above. The level of distrust is very high between the actors, and a lot of effort is required to overcome this.
<b>34. Building linkages between relevant authorities and user representatives</b>	N*	There is a need to develop strategic linkages between national, regional and user representation actors, particularly from the fisheries sectors, to improve integrated and effective governance.
<b>35. Building on local customs</b>	Y	This area continues to use traditional fishing practices and local customs, especially artisanal fishing.
<b>36. Potential to influence higher institutional levels</b>	N*	The non-administrative actors have very little influence, if any, but they want to have more say and to be empowered. Furthermore, there were also complaints that EU regulations were not contextually specific for the areas, yet were being applied with a blanket approach. There were calls for these regulations to be made more adaptable/flexible.

### Cross-cutting themes:

#### Leadership

There is no clear leadership. Both national and regional government demonstrate weak leadership. The University has acted as a leader for research and monitoring. Lack of NGOs operating locally to assume this role.

#### Equity issues

Issue of inequitable use of the MPA by the tourist industry despite its creation to support artisanal fishing.