

ENABLING EFFECTIVE AND EQUITABLE MARINE PROTECTED AREAS:

guidance on combining
governance approaches

Case Study Compendium



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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)¹ 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.²

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.

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

² 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'³, 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.⁴

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).

³ 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

⁴ 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.⁵

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

⁵ 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.

31. Cabo de Gata-Nijar National Park/MPA - Katie Hogg, Maria Semitiel-Garcia & Pedro Noguera-Méndez, PhD research (2013)

Name	Cabo de Gata-Nijar, (CGN) Marine Protected Area (MPA)/National Park NP), Spain	Year of designation	MPA 1995, NP 1987
Area	120 KM ² (MPA 46.5 KM ² , NP 73.5 KM ²)	Unemployment Rate	26.3% (2013)
Coastline Length		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
protect the territorial waters adjacent to the pre-existing CGN-NP	
contribute to the regeneration and development of fishing resources	
offer particular protection to seagrass beds	

Drivers and Conflicts:

- As part of a larger terrestrial National Park (NP), development is tightly restricted. However, tourism and tourist activities are popular. Many kayak businesses operate in the area and are unmonitored. This has opened up opportunities for illegal spear fishing to become a greater issue. Diving is a popular activity, yet there are few centres and the divers are spread out across a much larger area, again making enforcement of restrictions on diving difficult to enforce.
- The lack of integration in enforcement of restrictions on small-scale artisanal fishing between the NP waters managed by the regional administration and the MPA waters managed by the national government is a major issue. The existence of a census, through which local fishers are identified and allowed, for the MPA waters yet not for regional waters, and different fishing regulations between the two designations are creating very serious enforcement issues. Many fishers reported that the Servicio Marítimo de la Guardia Civil (Maritime Service of the Civil Guard) and their surveillance service provider TRAGSIA, who enforce the area, are not aware of or do not understand the NP/MPA restrictions. The breaching of fishing regulations by illegal commercial fishers, anglers and divers is therefore becoming a bigger conflict. The drive to increase catches is being driven by the economic crisis. The crisis is also cutting funds available for enforcement so the problem is becoming circular.

Governance Framework/Approach:

Spain is a decentralised country with much governance devolved to autonomous regions. CGN consists of a natural park (NP) which extends to the regional limits (internal waters baseline) and is under the control of the regional government (Junta of Andalusia - Council of Environment and Rural Development and Environmental Spatial Planning), and then the MPA which is in territorial waters and is under the control of the national government (Ministry of Agriculture, Food and the Environment). The NP/MPA is divided into core zones (~20%) and buffer zones. The core zones are highly protected no-entry areas where only authorised research is permitted. Extractive and non-extractive use of marine resources, including low impact 'eco'-tourism, particularly through diving, is permitted within the buffer zones, but there are no limitations on the number of dive operator permits or on the number of divers. Small-scale artisanal fishing is also permitted in buffer zones, and restricted to local vessels through a census to limit access, gear type, fishing seasons and vessel size. 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 and outside the MPA's boundaries. Fishermen dispute the restriction

of these methods in the nationally regulated MPA (territorial waters outside the baseline) given they are traditional techniques and considered to be more selective than the permitted gill nets and trammel nets. 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.

A census was taken to determine the number of artisanal fishers that should be permitted to fish in the national waters of the MPA. The census identified boats at each port and on beaches and subsequently allocated permits to 36 boats (of which only 10-12 fish regularly). However, the exercise was controversial since in failing to consult the two associated *cofradías* (Almería and Carboneras) and local fishers, the census excluded a number of legitimate vessels that were at sea at the time. This was reported to have exacerbated negative attitudes towards the administration. No census or restriction exists for the regionally managed internal waters under the control of the autonomous community of Andalusia, hence any vessel can fish. The different regulatory regimes applied in the internal and territorial waters in CGN-MPA creates great complexity and controversy, with inconsistencies regarding schedules and permitted uses, causing difficulties for daily planning and management, and confusion among both users and authorities.

Recreational fishing used to be prohibited throughout the MPA but privately funded research initiated by a recreational fishers association resulted in this prohibition being lifted for the buffer zones in 2011. Quotas do not exist to restrict the number of recreational fishing licences and the number of authorised recreational vessels registered in 2013 exceeded 350, far outweighing the number of professional fishers. Although regulations do apply regarding catch limits (4kg per permit per day), calendar and gear type, permitting recreational fishing in a MPA has caused much controversy, with many claiming that such an activity is inconsistent with a protected area. Within internal waters calendar restrictions for recreational fishing do not exist, complicating enforcement further. The lack of any other scientific studies, or fisheries records, and the power and financial support behind the recreational fishing sector makes this a powerful and influential actor, further exacerbating feelings of abandonment and negative social standing within the commercial fishing community.

Theoretically there is a joint management committee between the regional and national authorities, but this has not met for the last six years. The CGN-NP has a participatory body (board of governors for internal waters), which includes scientists and dive operators, but does not include the fisheries sector. Regulations regarding the composition of governing boards are notoriously complex in Andalusia, and this has contributed to the continued exclusion of the fisheries sector.

Effectiveness: 2 - *Some impacts partly addressed but some impacts not yet addressed.* The impacts of tourism (particularly spear fishing including for commercial purposes), illegal commercial angling and encroaching commercial fishing remain a concern. There are very few studies in this area that can confirm whether or not the MPA is having any real effect.

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
3. Reducing the leakage of benefits	N*	The census restricts commercial fishing to local artisanal vessels so this should restrict the leakage of benefits but 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.
4. Promoting profitable and sustainable fishing and tourism	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 as fish stocks appear to be in decline, though stock assessments are lacking.
5. Promoting green marketing	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 has begun to develop eco-labels to highlight sustainably caught produce.
6. Promoting diversified and supplementary livelihoods	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.
8. Investing MPA income/funding in facilities for local communities	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.
9. Provision of state funding	Y*	Recent budget cuts have resulted in the decrease in surveillance and absence of a local manager. In the last few years illegal fishing has increased substantially and the effects on fish stocks appear to be significant. The protection that has been viewed as beneficial is being undone very quickly due to the government's lack of resources to continue protecting the area.
10. Provision of NGO, private sector and user fee funding	N*	There is scope to charge a user fee to incoming users, particularly divers (such fees charged at other MPAs in Spain, including Cabo de Palos-Islas Hormigas MPA) to raise funds to support the MPA and invest in local facilities, though this is dependent on at least some of the fees being channeled back to support the MPA, rather than just for wider regional expenditure.

Communication

11. Raising awareness	N*	Needed - There are materials and signs around the natural park. However, they are old, damaged and out of date. They are also related to the natural park not the MPA. The awareness of the natural park is quite high- but whether this knowledge extends to the marine environment is unclear and there would seem to be much lower awareness of the MPA.
12. Promoting recognition of benefits	Y	Local fishers have reported that they have seen benefits to protection and agree with the need and practice of regulations for sustainable fisheries management
Promoting recognition of regulations and restrictions	N*	There is a need to promote recognition of the fisheries restrictions in the MPA amongst both fishers and the Civil Guard that enforce the restrictions on them, as well as amongst incoming divers, snorkelers, anglers and other recreational users.

Knowledge

14. Promoting collective learning	N*	Few studies are available in CGN-MPA. Fishers lack confidence in the decisions taken and are requesting more research be conducted. However, the use of their knowledge would be very beneficial to promote collective learning and increase the confidence in the data.
15. Agreeing approaches for addressing uncertainty	N*	There is a need for an agreed approach on how to address uncertainty in decisions related to the MPA to support collective learning.
16. Independent advice and arbitration	N*	The lack of a local manager means there is not a person on-site that can act as a bridge between the different actors involved and seek independent experts to provide advice and arbitration roles.

Legal

17. Hierarchical obligations	Y	This MPA is part of the Natura 2000, SPAMI and MedPan Networks and is subject to related obligations. It has also been declared a UNESCO Biosphere Reserve and as such has to deliver to certain standards.
18. Capacity for enforcement	Y*	The Civil Guard and the TRAGSA surveillance service provider are responsible for the daily management and enforcement of the area. This is in need of improvement, including through patrols from the CGN management body patrol vessel and the provision of related enforcement powers to the CGN wardens.
19. Penalties for deterrence	Y*	Penalties are in place but they are not severe enough to be a credible deterrent. There is also confusion over the legislation so they are not used enough.
20. Protection from incoming users	Y	There is some protection but it is not sufficient to deter incoming illegal fishers. The local census only allows local boats to fish and not regional ones, however, there is little to deter them as penalties are insufficient and not used.
22. Cross-jurisdictional coordination	N*	The decentralised nature of Spain means the regional and national government operate independently from each other. There is also very poor coordination within the level of government across sectors, but many issues exist due to the lack of coordination between the regional and national government, particularly with regards to a lack of coordination between the Civil Guard/TRAGSA and the CGN NP/MPA authorities
23. Clear and consistent legal definitions	N*	Decentralisation has led to some inconsistencies between national and regional legislation that need to be addressed
24. Clarity concerning jurisdictional limitations	N*	As above
25. Legal adjudication platforms	Y	There are appeal platforms but adjudication is also needed to address concerns about inequitable enforcement
26. Transparency, accountability and fairness	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

27. Rules for Participation	N*	At present there are very few meetings taking place (joint NP/MPA management committee has not met for six years). Establishing a clear plan for participation and defining clearly what participation will mean in terms of power sharing and the role of all sectoral actors would be very beneficial. The government recognise the benefits of participation, but there are many barriers that are preventing it being introduced. In particular, the regional rules for who participates in the NP governing board need to be revised to require the participation of fisheries sectors.
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28. Establishing collaborative platforms	N*	As above. Fisheries actors are demanding greater participation yet no opportunities currently exist that facilitate their participation
29. Neutral facilitation	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.
30. Independent arbitration panels	N*	As above- to deal with distrust
31. Decentralising responsibilities	Y*	Some responsibilities have theoretically been decentralised to the joint management committee but this is not functioning: there is a need to improve the decentralisation arrangements to make them effective
33. Building trust and the capacity for cooperation	N*	As above. The level of distrust is very high between the actors, and a lot of effort is required to overcome this.
34. Building linkages between relevant authorities and user representatives	N*	There is a need to develop strategic linkages between national, regional and user representation actors, particularly from the fisheries sectors, and between the NP and the MPA authorities, to improve integrated and effective governance.
35. Building on local customs	Y*	The area is a big NP and MPA and is very underdeveloped, so maintaining a lot of traditional fishing practices and traditions is relatively easy and also allows a lot of cultural activities to continue. However, traditional low impact fisheries should be permitted to ease cultural and related economic impacts and help build trust with the traditional fishing sector
36. Potential to influence higher institutional levels	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

Weak leadership was evident from both national and regional governments.

Equity issues

Issues exist regarding equity due to the lack of a census in internal waters, which means that local fishers in the regionally controlled national park cannot be distinguished from incoming fishers, where a census for the nationally controlled MPA waters means that incoming fishers can be excluded (subject to sufficient enforcement capacity). This is creating issues with equity, enforcement and compliance, particularly in terms of inconsistency between regional (NP) and national (MPA) waters.