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*Parks, people, planet:
inspiring solutions*

More and more marine protected areas ?

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Marine protected areas

This book (in French) provides an interdisciplinary perspective on the unprecedented development of marine protected areas. Several examples centered on **North-West Africa** illustrate both **successes** and the **uncertainties** of science on this issue and the hopes placed in the use of MPAs as tools for the conservation and sustainable use of marine and coastal areas.



In press: Bonnin, M., R. Laë, M. Behnassi (Eds). Les aires marines protégées. Défis scientifiques et enjeux sociétaux en Afrique du Nord-Ouest. IRD éditions.

Overview (book summary)

- There are great expectations around the creation of MPAs and a true **international consensus** exists as to the importance of increasing MPA numbers around the world.
- Their implementation raises **many hopes** in part because they are a key factor in the resilience of living systems to cope with environmental changes. However, **many uncertainties remain**.



- **Scientific challenges** in the implementation and **effectiveness** of these MPAs remain significant, as the **social issues** arising from the proliferation of these areas.

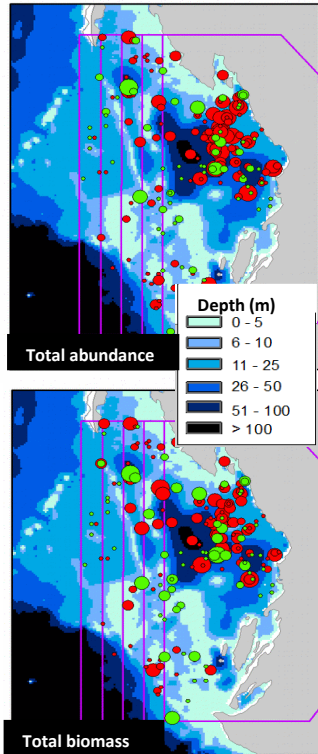
Researchers are currently split between supporting the development of MPAs and the importance of emphasizing the controversies which they are subject.

Notwithstanding being sometimes considered a success in terms of biological or economic criteria, MPAs can negatively affect some local stakeholders because they did not have the power to defend their interests.

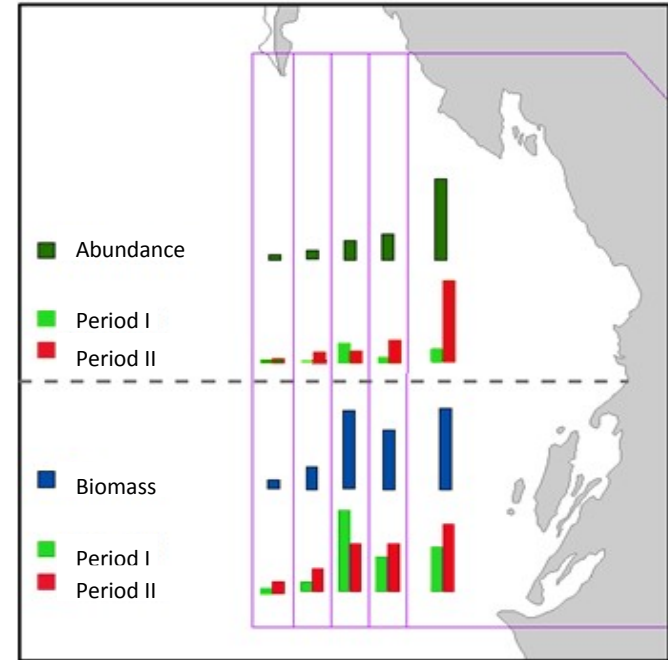
Global changes enhance the multifunctionality of MPAs beyond Fishing vs Nature Conservancy issues, and Public vs Private relationships.

In addition, the official goals highlighted by MPAs should be examined critically and should be subject to empirical evaluation. Some extremely strong lobbies can use the protection of certain areas to exclude other competitors.

Case study 1: effectiveness of a large MPA



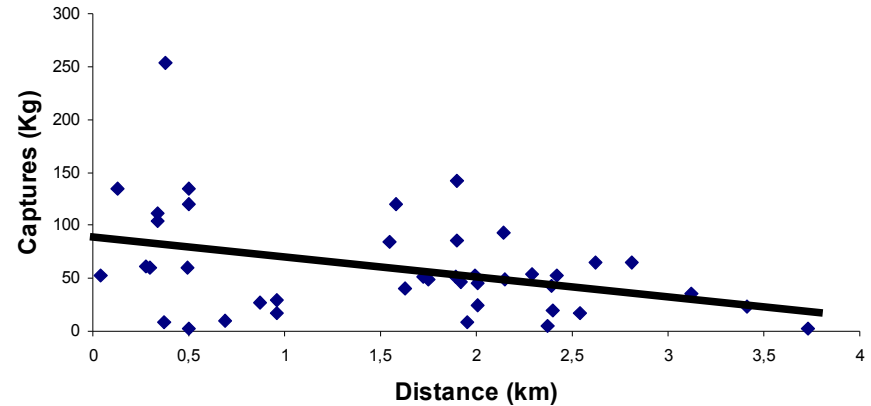
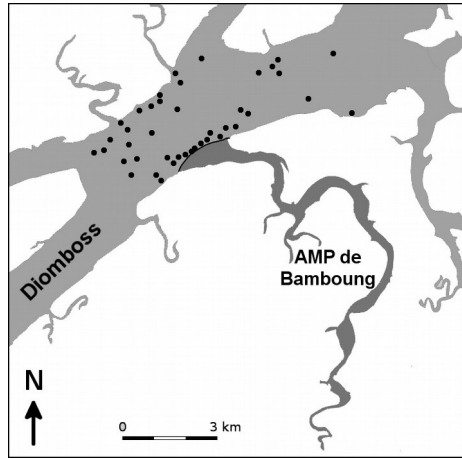
Scientific samplings in Mauritania within the Banc d'Arguin National Park and at 10, 20, 30 and 40-50 km apart show that fish biomass and particularly fish abundance decreases with distance from the core MPA. Trends are particularly marked for predators and commercially targeted species.



PNBA area: 12,000 km² (of which 6,000 marine)

Case 2: Benefits to fisheries in a very small MPA

The Bamboing is a small (68 km²) estuarine MPA in Senegal with a very small aquatic no-take area (a creek with 3 km² of free waters and 4.7 km² of intertidal banks).



Despite its small size, there are **positive effects outside the MPA** to about 2.5 km from the edge of the no-take zone. These effects were related to the narrowness (500 m) of the opening mouth of the MPA and the relative confinement of the first free fishing area nearby (2 km in large and less than 12m in depth). Fish exported from the MPA is spatially constrained and therefore easily accessible for fishermen.

Case 3: A source of conflict

- The creation of more and more MPAs in West Africa is a threat to fishermen migrations.
- Fishermen migrations is an important, but sometimes forgotten, process in the development of West African fisheries. They are nowadays one of the main troublemakers within MPAs.
- Depletion of fish stocks forces fishermen to increase the intensity of migrations, and leads them to illegally fish more within MPAs, the only places where resources have still some abundance.
- It is a form of serious tension because the effort required from local populations does not apply to migrant fishermen who defraud.
- Migrant fishing raises increasingly evident contradictions, in an under-informed political context and inadequate institutional frameworks.



Source: Failler *et al.*, Changements climatiques, pêche migrante et aires marines protégées en Afrique de l'Ouest.

The expectation of decision makers towards MPA is very important but doesn't take enough into account the notion of time and the necessity of setting up long term measures with returns on investment which can be late or relocated.



Les aires marines protégées
Défis scientifiques et enjeux sociétaux
Collection LATITUDE 23, IRD Editions
BONNIN M., LAË R., BEHNASSI M. (EDS)