

The Cote Bleue Marine Park (France, NW Mediterranean): a success story in co-construction with small scale fisheries since 35 years

The Cote Bleue Marine Park (PMCB) was created 35 years ago in 1983 on the basis of an experimental cooperation between local public authorities and professional small scale fishermen to implement a program for the sustainable development of fishing activity, the protection of marine environment, experimental research and public awareness. The Marine Park territory (9.873 ha) includes 2 no-takes reserves of 295 ha and the deployment of 4.884 m³ of artificial reefs, both for production and protection against illegal trawling within the 3NM (Figure 1).



Figure 1 : Location of Côte Bleue Marine Park territory (9.873 ha), including 2 no-take reserves (Carry and Couronne) and artificial reefs of protection and production.

The Park is a local initiative and was founded with a "bottom-up" approach. This co-construction is based on strong dialog process with professional fishermen and in particular with the local fishermen organizations ("Prud'homies" of Marseille and Martigues), which share the Côte Bleue fishing territory.

That's one of the main benefits that the PMCB offers. The association of local fishers within the PMCB's decision body is truly effective, but the joint association, which is also composed of local (mayors of the 5 villages), regional and departmental elected representatives, deals primarily with the formal obligations to manage a local public institution (budgetary decisions, public procurement, territorial public service, *etc.*).

A real success was the re-conduction of the 2 no-takes reserves in 2014, obtained for an unlimited time. These no-takes zones have a legal status of fisheries reserves and the renewal was asked by the fishermen themselves.

The Marine Park has daily contacts with individual fishermen in 5 ports through patrol at sea, interviews and monitoring on landing, effort, catches (=conducted every month in each harbor).

We have also formal but irregular meetings, depending of programs (*eg.* Natura2000 process, phD study on fisheries between 2010-2012). The social acceptance of the Park is an important factor, which has conditioned its success for more than 35 years.

Professional fishermen feel integrated in the decision mechanism and the relationship between managers and them is based on trust and mutual exchange.



Small scale fishermen in the Côte Bleue Marine Park. Photo: E. Charbonnel/PMCB.

In 2018, under the frame of an EU scientific program called "FishMPABlue2", the PMCB conducted

interviews of fishers on their perception of the management of marine protected areas and social acceptance.

The level of trust with PMCB is very high (82%), same as the level of support (77%) ; while in the others MPA case studies (11 in Mediterranean, belonged to 6 countries); there is only 40% of fishers were satisfied with MPA management.



Exchanges between fishermen and staff of PMCB during the green list process in 2017. Photo: J.F. Sys/IUCN.

The protection and surveillance within the 2 no-take reserves is effective: more than 2400 hours of

enforcement per year, and led to a great increase in fish biomass and therefore to a reserve effect clearly observed: In 21 years, the mean weight of a fish increased by a factor of 2.5 (280 g in 2016 vs. 111 g in 1995) and fishing captures have been multiplied by a factor of 5, with a catch rate per CPUE effort unit increasing from 1.08 kg / 100 m in 1995 to a maximum of 5.46 kg / 100 m in 2013 (Figure 2).

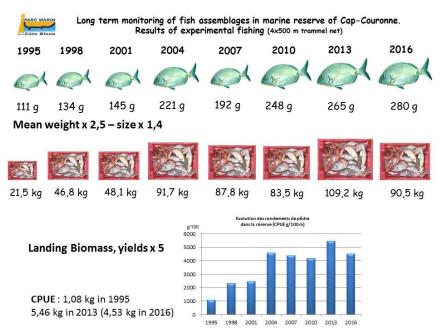


Figure 2: main results of experimental fishing monitoring conducted by PMCB and fishers every 3 years in Couronne no-take reserve.

Recreational fishing is a fast-growing activity, with high performance technologies, which has never

been taken into account in the management of fishery resources, despite their catches (53 tons/year) are equivalent to those of professional fishing (60 t/y) in the coastal territory shared by the two activities. Interactions with recreational fisheries seem to be higher, in the context of a decline in the resource described above, because harvesting takes place on the same territory, same species and at the same seasons for high prized target species, *eg.* large Sparidae. The quantities harvested by recreational fishing induce conflicts of interest In this context, there is a great need to find a place making the dialog possible among stakeholders and decision makers, in order to protect the marine biodiversity and manage the natural resources the best way.



Enquiry on recreational fishing done by PMCB team. Photo: E. Charbonnel/PMCB.

The Côte Bleue Marine Park is a "sea-life size laboratory" and conduct several programs of applied research and scientific studies that have became references in scientific litterature, particularly on the "reserve effect", with about forty five scientific monitoring, like fish visual census, sea-urchins, red

coral, Posidonia meadow, frequentation, etc. Since its origin, the Park also created awareness and educational programs for scholars, with the implementation of one week training courses on field. More than 27 000 children made sensitive to the marine environment within the framework of these educational school trips, the same amount of permanent people living in Côte Bleue territory. An underwater pathway in the notake reserve of Carry also welcomes public and tourists and the PMCB organized visits during summer since 1994.



UW visual census conducted every 3 years in the reserve of Couronne. Photo: J.G. Harmelin/PMCB.

Finally, the Côte Bleue Marine Park get an international recognition for well MPA management efficiency with the label "Green List" of Protected Areas delivered by IUCN, and the SPAMI (Specially Protected Area of Mediterranean Importance) label in 2012 and inclusion in European Natura 2000 network since 2009 (site "Côte Bleue Marine" of 18 928 ha). A real success for this small team (7 employees) and local initiative co-constructed with fishers since 35 years.