



## Session 02

## Integrating local knowledge on the implantation of artificial reefs in a Marine Protected Area: the case of a small scale fisheries village, South Senegal

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### Abstract

In West Africa, the implantation of artificial reefs and marine protected area are set in a context of gradual decrease in fish landing, fishermen poverty and an increased population pressure, triggered sometimes misleading action from public, governmental, and non governmental actors. From 2004 to 2005, a project of artificial reef implantation have been initiated a small Senegalese's community of Yenne, with the aims to encourage co-management. However at the end of the project, the monitoring of artificial reefs was interrupted and the local fishing effort on these artificial habitats suddenly significantly increases. This result, complete previous studie swchich had also concluded that artificial reefs may have a negative impact on the fish resources in the case of lack of management *e.g.* leading to an 'intensive fishing on artificial reefs'. To asses the validity of our analysis we use the local knowledge of the artisanal fishermen. A survey was carried out in June-July 2014. The survey covered a sample of a representative panel of fishermen from the fishing villages of Yenne who operate on and co-manage the artificial reefs and the marine protected area. The results of this survey showed that the majority of the fishermen describes some key features of the artificial reef effect on fish population dynamics. Fishermen, called 'experimented' who get a complex perception of the ecosystem also agreed the need to prohibit fishing on artificial reefs. Alternatively fishermen 'naïve' getting less empirical knowledge, than the 'experimented' group, do not understand the interest of fishing regulation over the artificial reef. We present preliminary results of our filed study, as well as the exhibition to provide (1) a feedback to the villages surveyed which comfort the first conclusion obtains from our mathematical



approach and (2) enhance public awareness on the co-management of fisheries resources, particularly in the case of artificial reef management inside a marine protected area.

**Keywords:** Artificial reef, MPA, Co-management, Artisanal fisheries, local knowledge, West Africa.



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