

Towards a sustainable mangrove crab industry in Madagascar

Mangrove crab fishing has long been a secondary economic sector in Madagascar. But the situation has changed dramatically since 2014 with the expansion of live crab exports to the Asian market, which have boosted fishing effort and production.



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Measuring the size of a mangrove crab *Scylla serrata*, Madagascar.

In recent years, mangrove crab (*Scylla serrata*) fishing has become so important to Madagascar's economy that most stocks are now fished before they reach their legal maturity size (11 cm). This is a real challenge for sustainable management, which requires concerted action to strengthen the capacity of local bodies to monitor and manage fisheries, as well as exchanging information on the sector to improve joint management.

How can this be achieved? An action-research project has, among other initiatives, organised a series of regional workshops bringing together fishermen, fish traders, collection companies, government departments, NGOs and scientists to share knowledge about the fisheries and discuss research to address local concerns. This iterative approach has enabled progress to be made at a regional level, culminating in a national workshop. Alongside this, collaborative activities were undertaken in the villages, including participatory monitoring of fisheries, socioeconomic studies and tests of more selective fishing equipment.

“The participatory diagnosis of the fisheries played a key role in empowering some of the stakeholders involved, such as NGOs and export companies. The project has provided a framework for interaction, strengthening trust, social learning and collective action in favour of sustainability. We also need to remedy the serious lack of data and its management, which affects government decision-making despite the advice given by researchers”.

Deutz Zafimamatrapehy, Institute of Fisheries and Marine Sciences, University of Toliara, Madagascar

Thierry Razanakoto, Centre for Economic Studies and Research for Development, University of Antananarivo, Madagascar

... Action research on the mangrove crab industry is aimed at the sustainable use of resources and concerted management of them ...



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Field interview with fishermen and fish merchants in the mangrove crab industry, Madagascar.

What impact has this had? The multi-stakeholder workshops resulted in a collective diagnosis of the industry and the co-production of knowledge, which was then aggregated on a larger scale. However, on-site interactions did not improve technical knowledge within the villages, nor did they diversify exchanges. The poorly developed social network limited the flow of information. This outcome raised questions about the project's strategy and scale of intervention, but did not discourage the researchers.

The researchers are now giving priority to action research led by local partners and based on practical, local experimentation with promising solutions. These solutions, which are tested beforehand, reduce the number of small crabs being caught without reducing local incomes, which are often very low. The aim here is to show local communities and businesses that this strategy can ultimately be more profitable and sustainable. Proof by example, in short, before extending the scheme.

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Children fishing on a reef flat in Reao, French Polynesia. © IRD/S.Andréfouët

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