

# Economically Valuable

**Though often overlooked and undervalued, small-scale fisheries make key economic contributions and are overwhelmingly important for coastal communities**

**S**mall-scale fisheries are not so small after all. In a remote, rural, locally managed marine area along the southwest coast of Madagascar, we find that small-scale fisheries and their host ecosystems are crucial to supporting the welfare and livelihoods of over 6,000 coastal inhabitants. Nearly everyone fishes, earns their livelihood from fishing, and subsists on seafood. There is nothing small about their economic value, either—the fishery in this 1,000-sq-km, locally managed marine area was worth nearly US\$3.4 mn in 2010 alone.

National fisheries policies tend to ignore small-scale fisheries because their true value is obscured by their dispersed nature. Worse, fisheries policies privilege commercial/industrial fisheries due to their perceived market value. Our research shows that small-scale fisheries can have significant economic value, in addition to their role in food security and livelihoods for some of the poorest people on earth. Quantifying their economic contribution, such as we did in this study, should help this important sector gain more policy attention.

Small-scale fisheries (often also referred to as artisanal) provide a crucial source of food, income, and well-being for coastal populations worldwide. Over 90 per cent of the world's fishers work in the small-scale fisheries sector. Together, their fishing activity supports the livelihoods of over 500 mn people globally, many of whom belong to the world's most impoverished communities.

Despite small-scale fisheries' importance, very little information

exists on the worldwide scope and impact of small-scale fisheries. We, therefore, can only guess at the significance of small-scale fisheries for combating food insecurity and poverty, as well as their contribution to the broader local and regional economies. Due to this lack of information, small-scale fisheries are often undervalued and overlooked in policy.

In contrast, policymakers usually are better informed about the scope and value of large-scale industrial

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fisheries. These fisheries are typically export-oriented, and, in many cases, access is granted to foreign fishing vessels through concessions. Since economic development is, typically, a priority, policies are often designed to favour these large-scale export-oriented industrial fisheries.

## **Considerable pressures**

Meanwhile, marine and coastal fisheries face considerable pressures on a global scale, with several in a state of precarious decline. These pressures threaten the livelihoods of millions of people worldwide who depend on them for subsistence and income. In many developing countries, this situation is worsened by weak governance, which makes it even more difficult to design, implement and support effective fisheries policies.

*This report has been written by **Michele Barnes-Mauthe** ([barnesm@hawaii.edu](mailto:barnesm@hawaii.edu)) and **Kirsten L.L. Oleson** ([koleson@hawaii.edu](mailto:koleson@hawaii.edu)) from the Department of Natural Resources and Environmental Management at the University of Hawaii, Honolulu, US*

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Small-scale fishers in Madagascar returning to shore in their traditional fishing crafts, called *pirogues*

In order to safeguard the livelihoods of some of the world's poorest communities, decisionmakers must recognize the crucial importance of small-scale fisheries and develop sustainable management policies. To support this process, we need a better understanding of the scope and significance of small-scale fisheries and their social and economic value.

The developing country of Madagascar, located in the western Indian Ocean off the east coast of Africa, is a prime example of the issues surrounding small-scale fisheries globally. Madagascar is one of the poorest countries in the world, and is plagued by chronic political instability and declining economic trends. The majority of people in Madagascar depend directly on small-scale fisheries or other natural resources to support their livelihoods. Yet the country is increasingly threatened by ecological degradation and a growing population.

To demonstrate the crucial contribution that small-scale fisheries make to the daily survival of coastal populations, and to highlight the need for their consideration in policy discussions, we conducted a large and comprehensive study on the total economic value of small-scale fisheries in the Velondriake locally managed marine area in southwest

Madagascar, which we summarize here.

Velondriake spans over 1000 sq km of Madagascar's southwest coast. This region is home to indigenous people who support their livelihoods primarily by fishing and gleaning on coral reef flats, or "reef gleaning".

In 2010, we interviewed over 150 fishers, held discussions with several groups of fishers, surveyed over 300 households, and talked with several other key individuals in Velondriake about all aspects of fishing. We asked fishers about what fish they caught, where they caught it, what they did with it (for example, did they eat it, share it, sell it or trade it) and what gear they used.

From household members, we collected information on how much of their income depended on fishing or reef gleaning, and how many people they supported with their catch and income. In the group discussions, we gathered information on the cost of different fishing gear items, and how often they had to replace them. Finally, we asked key individuals the price in the local market for the different species of fish or other seafood items gathered when reef gleaning.

We summarize below the information we gathered, and its implications for fisheries policy and management globally. We estimate that in 2010 alone 5,524 tonnes of fish and other seafood species were extracted by small-scale fishers in the region, primarily from coral reef ecosystems. The total economic value of the fishery for 2010 was \$3.4 mn. Eighty-three per cent was sold commercially, generating fishing revenues of nearly \$2.9 mn.

In this region, the local small-scale fishing sector employs 87 per cent of the adult population, generates an average of 82 per cent of all household income, and is virtually the only non-rice source of protein people eat.

### Men and women

Fishers are predominantly men, while reef gleaners are predominantly women. Fishers primarily target

finfish, while reef gleaners primarily target octopus, sea cucumber, shellfish and crab. Other species, such as Madagascar round herring, squid and urchin are also occasionally caught by both fishers and reef gleaners.

The majority of the total annual catch in the region is cheaply priced finfish, such as *mojarras*, damselfish and squirrelfish. Second is octopus (mainly *Octopus cyanea*), which is closely followed by average priced finfish, such as sea bass and groupers. We found that cheaply priced finfish contributes the highest revenues, followed by sea cucumber, octopus and average-priced finfish.

Gleaners typically gather their catch by hand or use wooden spears on coral reef flats and seagrass beds. The majority of fishers use nets. Fishers find their catch primarily on coral reefs, but also in mangroves, seagrass beds, pelagic waters, mud and other miscellaneous habitats.

Fishers catch the most per fishing day, followed by those who both fish and reef glean, and then those who only reef glean.

All of the octopus, sea cucumber, crab and lobster, and almost all of the Madagascar round herring, is sold commercially in local markets. Approximately three-quarters of the total catch of finfish, squid, shrimp and shark is also sold. Shellfish, urchins, bivalves, turtles and rays are primarily consumed and shared locally, as is the remainder of finfish, squid, shrimp and shark.

Fishers generate the highest revenue per day, but those who both fish and reef glean reported a greater number of days of fishing/gleaning per year.

Accounting for the cost of fishing gear for each type of fisher, those who both fish and reef glean generated the highest net annual income, where the costs of fishing are subtracted from total revenues.

Though national policies typically disregard small-scale fisheries due to their assumed minor contribution to the greater economy, this sector can generate substantial revenues. Our findings indicate that the small-

scale fisheries sector in this single 1000-sq-km region of Madagascar is at least one-and-a-half times as valuable as the total annual revenue Madagascar earns from concessioning its exclusive economic zone waters to European Union tuna vessels, and a sixth as valuable as the country's entire domestic shrimp industry—two industries that receive substantial policy attention.

Extrapolating our local results to the national level, we estimate that subsistence and artisanal fishers in Madagascar catch over 350,000 tonnes of fish and other seafood species per year. Though this estimate is uncertain and should be updated as more regional-scale data become available, it suggests that the small-scale fisheries sector is likely much more valuable than previously thought.

Our findings also pointed to the crucial role that small-scale fisheries play for food security and in combating poverty. In Madagascar, nine out of ten people live in poverty, and half of all children are malnourished. According to our results, virtually all meals with animal protein and nearly all household income depended on small-scale fisheries resources. Daily per capita income from fishing and reef gleaning amounted to \$1.04, which is

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only slightly above the international poverty line. Small-scale fisheries thus play a crucial role in sustaining local populations and preventing households from falling further into poverty.

### **Institutional capacity**

Considering the overwhelming significance of small-scale fisheries, as demonstrated here, there is an urgent need to improve institutional capacity and re-orient national fisheries

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Local fisherwomen gleaning octopus in Velondriake, southwest Madagascar. Wooden spears are the most commonly used gear in this region

As small-scale fisheries are both of considerable importance for millions of people throughout the world, and worth a lot economically, national and regional policymakers need to re-examine existing fisheries policies that neglect this sector.

Determining the economic value and contribution of small-scale fisheries can help ensure their consideration in policy; efforts should, therefore, be undertaken to quantify them wherever possible. **3**

policies toward the small-scale sector. This is necessary not only for the country of Madagascar, but for regions throughout the world, where small-scale fisheries have likewise been undervalued and overlooked.

Long-term sustainability should be a fundamental goal of small-scale fisheries policy in order to protect and maintain their contributions toward food security and poverty alleviation.

Small-scale fisheries face a range of impacts, including the looming threat of climate change. Further, small-scale fishers face increasing resource competition from commercial fleets, sparked by declining catch.

Sustaining small-scale fisheries should, therefore, be viewed as a human-rights issue, and given precedence over export oriented commercial or foreign access to fishers in circumstances where they are vital for supporting local populations.

The establishment of locally managed or co-managed marine and coastal areas, such as the one we studied in Madagascar, may help to sustain and even increase benefits provided by small-scale fisheries. However, these initiatives will need to be supported at the regional, national and international level to be successful in achieving long-term sustainability.

#### For more



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**The Total Economic Value of Small-scale Fisheries with a Characterization of Post-landing Trends: An Application in Madagascar with Global Relevance**

## Running too fast?

**For traditional fisheries in Madagascar, it is a long road to recognition**

**H**indsight, they say, is a great teacher, and we all know the benefits its wisdom can bring! However, its lessons are often learned at great cost. This is particularly so in Madagascar, where, for a number of years, the attention of several European NGOs has focused on the Malagasy maritime sector. In the last few years, the approach of these NGOs has changed dramatically, thanks mainly to the several hard lessons of the past. Issues of livelihood rights and food security in the traditional fisheries sector have only really come on to their agenda in the last four years. Previously, the NGO development agenda had largely been determined outside Madagascar, and had focused on technology transfer, foreign training, and institutional support in the seafarer sector.

Given what we now know about traditional fisheries in Madagascar, it is easy to be critical of French agencies that financed the transfer of a trawler to Madagascar over a decade ago. If they knew then what we know now, it is likely that the project would have drowned in the water long before it came to grief in Madagascar. At the time, however, the initiative was strongly supported by, on the one hand, NGOs—the Catholic Committee for Development and Relief from Hunger (CCFD) and the Apostleship of the Sea) and, on the other, by the French fishing sector—Le Marin, Credit Maritime and people from several fishing communities.

For them, the northern development model was still the model to be followed by the small-scale fisheries in developing countries, and institutional development was along the lines of Northern NGOs. Perhaps, there was also some confusion in understanding about artisanal fisheries. The official French and Malagasy

government definitions of artisanal fisheries bear little relation to the reality of small-scale, traditional coastal fishing communities in Madagascar. In France, where a “small inshore boat” is a 20-25 m trawler, powerful trawlers up to 25 m in length are classified as “artisanal”. In Madagascar, the artisanal fishing sector describes a small fleet of trawlers, with a maximum of 50 HP. The traditional fisheries, which would be described as small-scale or artisanal in other countries, are still not officially recognized in Madagascar.

To a large extent, it is thanks to such lessons that earlier this year, in March 2001, for the first time ever, representatives from several traditional fishing communities were able to meet with government officials to jointly discuss the development priorities of their sector. This roundtable meeting was organized by the Collective of Malagasy Maritime Organizations (COMM), with support from CCFD, Coalition for Fair Fisheries Agreements (CFFA) and the International Collective in Support of Fishworkers (ICSF). It was entitled *Sustainable Development, Poverty Alleviation and Food Security: the Role of Traditional Malagasy Fishing Communities*. The meeting was a further step in the “long march” towards the recognition of the Malagasy traditional fishing sector by the Malagasy authorities.

### **Dominant interests**

In the current context of Malagasy fisheries, where French government and fishing industry interests are dominating the scene (see *Pink gold, muddy waters*, SAMUDRA Report No 25), the road ahead seems a long and daunting one. In addition to the task of building up a national network of groups representing their interests and developing their

capacity to participate in management and decision-making processes, traditional fishing communities find themselves in a highly confusing and competitive situation. Two significant national programmes in fisheries and coastal area development are currently being initiated, whilst the European Union (EU) is providing significant revenues to the Malagasy government to pay for fishing rights. Some of the latter have been earmarked for the development of the traditional fishing sector.

**B**acked by French public monies for development aid, the French industrial fishing interests in Madagascar (the GAPCM) are promoting “Fisheries Concerted Management Zones (ZACs)” as an experimental tool for resolving resource allocation problems and conflicts between fishing sectors. The scheme has the backing of the Malagasy Ministry of Fisheries, and is to be piloted over the next five years primarily as a means of resolving conflicts and encouraging the rational development of the shrimp sector.

The GAPCM acknowledges that the ZAC is not fully developed as a tool, and that the concept requires testing and refinement. However, the fact remains that with the backing of French public funds, this ZAC project and the agenda of the French fishing industry will dominate the fisheries management debate in

Madagascar. Rather than promoting the autonomous development of traditional fisheries in Madagascar, the GAPCM would like to see the development of small-scale coastal fisheries as a service sector to the shrimp industry. At another level, the National Office for the Environment (ONE) is promoting integrated coastal area management. Through a decentralized approach to management and resource conservation, the GELOSE (Protected Local Management) project is being developed. This will encourage the formation of local groups and their participation in autonomous provincial councils to manage coastal resources and activities (mainly forestry, farming, aquaculture and fishing). The GELOSE approach would seem to be entirely different to ZAC in that GELOSE is about local management, whilst ZAC is mainly about allocation of access rights.

As regards the EU fisheries agreement compensation monies, it is ironic that the first steps taken towards recognizing the traditional Malagasy fishing sector were perhaps precipitated by the renewal of the 1998 EU-Madagascar fisheries agreement. That agreement, for the first time, included provisions for supporting the development of traditional fisheries in Madagascar.

#### **Recognition**

This first symbolic recognition came about as a result of the efforts of the Madagascar

Maritime Programme (the PMM, an NGO and trade union platform), and thanks to the campaign initiated by the Brussels-based CFFA. At their request, letters of support were sent by several development NGOs (CCFD, ICSF, Entraide et Fraternité, etc.) to the Malagasy and European authorities.

**T**he first step was to get to know the traditional sector. In May 1998, at the time of renewal of the Fifth Fishing Agreement between the EU and Madagascar, a series of exchanges were initiated between Malagasy and European NGOs. These focused on the recognition of traditional fisheries in Madagascar.

Several meetings were then organized with traditional fishing communities in the regions of Mahajanga, Toliary and Toamasina. Fishermen were informed about the existence of the Fishing Agreement, and about the articles of special relevance to their sector (which included a budget line for traditional fisheries and also for surveillance, monitoring, etc.).

There were also discussions about the activities of European companies in the industrial shrimp fisheries sector, which were seen as a threat to the traditional fisheries sector. Fishermen from the west coast were a special focus of the debate. Meetings were also held with official representatives (Malagasy political authorities, FAO, EU, etc.). A press campaign was subsequently organized to create a debate on the contents and implementation of the Fishing Agreement. This concluded with a press conference organized on 15 May 1998, entitled *For a Fishing Agreement Consistent with Sustainable Development*.

One of the key lessons arising from this initial step was an understanding that for actions to be more effective, it is necessary for the fishermen themselves “to be aware, first of all, of their rights and duties”. In other words, fishworkers must realize that while they are the ones mainly affected, they are also principally responsible for the actions to be undertaken towards improving their lot. Up to that point, all major information exchanges and decisions had been made by actors from

outside the sector (international NGOs and other organizations, government officials, etc.).

It was this principle that formed the basis of a new collaboration between Malagasy and European NGOs, with the strategic objective of achieving recognition for the Malagasy traditional fishing sector. As a short-term measure, a workshop on the *Future of Traditional Fisheries* was organized to bring together traditional fisheries representatives from the entire country. The motivation and organizational strategy for preparing the workshop were influenced, to a large extent, by a training programme organized by ICSF in Ghana in August 1998 (see *An African Briefing*, SAMUDRA Report No 21). Two members of the Malagasy NGO platform were invited to this workshop on *Social Analysis and Organizational Strategies*. Their participation was to have a major influence on future approaches of NGOs to fishing community development in Madagascar.

The aspects that particularly influenced the Malagasy participants were the discussions around the various approaches to development (i.e. modern and traditional). These included the transmission of knowledge; choice of technology (boats, fishing gear and processing); and social control (resource management and division of labour between men and women).

For the Malagasies, one of the key messages from the Ghana workshop was expressed by the women processors of the National Collective of Artisanal Fishworkers (CNPS) of Senegal: “The partners of fishworkers can only be other fishworkers! European NGOs or those from other countries can only help us by supporting these partnerships.”

#### Questionnaire

Following the Ghana workshop, a questionnaire was drawn up to help understand different aspects of the lives of traditional fishing communities, the basis of their social structure and how it had evolved over the last few decades. Based on this questionnaire, which was translated into Malagasy, a series of field studies were conducted in 10 localities



representative of traditional fisheries: Nosy Be, Ankazomborona, Majunga, Maintirano, Morondava, Tulear, Fort-Dauphin, Farafangana, Manakara, Marosiky, Vatmandry, Toamasina, Soanierana-Ivongo (Manakatafana) and Sainte Marie.

**F**ollowing the programme of field visits, a meeting was held in Majunga in May 1999 to bring together delegates, both men and women, from these localities to discuss their future. For many of them, this provided a first opportunity to interact with representatives of Malagasy authorities. Several high-ranking officials and experienced technicians were present.

A “Fishworkers’ Recommendation” setting out 20 specific points was issued by the participants and presented to the official delegates. The main points included issues of: ownership of equipment and boats; production, processing, and preservation; trade and markets; roles and responsibilities of women (in fish trade and collection of products); the need for fishermen themselves to take charge of decision-making in their own sector.

The issue of the two-mile traditional fishing zone was raised as a matter of particular concern. This, it was felt, had to be addressed as a priority, as the Malagasy government was in the process of developing a decree on “utilization and access rights in the two-mile zone”. In addition to being the zone where most traditional fishing activities take place, it is also here that most disputes with the industrial shrimp fisheries sector occur.

The second step was to define the rights and responsibilities of the traditional fishing sector. The issue of the two-mile zone was taken up by the NGOs not only because of the demands of the fishermen, but also because it was seen as important to influence the fisheries policy debate in Madagascar (particularly the government decree on the two-mile zone). As a result, a collaboration was established between local and international NGOs. Such collaboration was necessary to investigate the relevance of reserving a fishing zone for traditional fisheries in Madagascar (to clarify the two-mile zone issue). These

investigations were carried out in Madagascar as part of a wider study being conducted by ICSF to analyze whether legally reserving a zone for traditional fisheries was a useful tool for fishery management, and, in particular, to determine whether such a zone promotes sustainability (by restricting access to fishery resources), and whether it protects the rights of coastal communities dependent on small-scale and traditional fishing practices to life, livelihoods and food — rights recognized in the FAO Code of Conduct for Responsible Fisheries (Article 6.18).

The following approach was adopted for the study:

A questionnaire was drawn up and fishermen were contacted by mail in May/June 2000. They were sent a series of documents to help prepare for their participation in the study. Local interviewers visited eight major traditional fisheries sites in June/July 2000: Nosy-Be, Mahajanga, Maintirano, Toliary, Manakara/Farafangana, Vatmandry, Toamasina and Manakatafana.

Twenty-eight local associations were interviewed, 1,650 fishermen contacted and the estimated number of active fishermen in these fishing sites was put at more than 10,000. The findings of these studies were set out in two documents (a region-wise document and a general document) and transmitted to the fishermen delegates at these eight sites (two per site) for discussion during the meeting that was to take place between 25 and 28 August 2000.

A meeting was then organized in Toamasina for 20 traditional fishermen delegates whose communities had been involved in the study. Local and international NGO resource persons (from COMM, ICSF and CFFA) participated. The aim was to validate, analyze and share the findings of the study. The main issues arising from the discussion included:

- how to define the sector;
- who is considered a traditional fisherman; and





- what criteria are recognized by the fishermen themselves to qualify to be a traditional fisherman.

**T**he majority of fishworkers interviewed came from fishing families. All the traditional fishermen answered that fishing was their main activity or source of livelihood.

The use of special fishing gear, observance of family traditions, restrictions and taboos were also referred to in the study as elements that were common to all traditional fishermen.

A key issue for the sector was vulnerability, relating to:

- traditional fishing gear and boats, bad weather and collisions (especially with industrial fishing boats);
- traditional fishing communities, faced with competition from other activities (like industrial aquaculture and different types of pollution in the coastal area); and
- fishery resources on which traditional fishermen depend: if the coastal area becomes overexploited, the very survival of coastal families and communities is threatened.

Given this vulnerability and the fact that traditional fisheries plays a key role in the development of the country (in terms of employment and the protein it provides to Malagasy families and communities living along the coast), it is important to protect the activities of this sector.

Also of significance is the need to get the sector formally recognized by the public authorities in terms of the nature of representation at national level, and the kind of actions the public authorities should undertake (as in operations relating to census, taxation, subsidies, etc.).

The participants underscored the problem of recognition of traditional fisheries by the administrative and political authorities. The meeting was informed that, in many countries, recognition of the small-scale fisheries sector had resulted in a certain amount of formalization at the administrative level. But fisheries policies do not recognize traditional fisheries or do so inadequately.

The administrative representatives who were present explained that formalization of the sector was extremely difficult due to ignorance about the sector and due to the fishermen's distrust of the authorities. They also pointed out that formalization could have a negative impact on their activities (through red tape, taxes, etc.).

## Two Controversial Miles

In Madagascar, the issue of the two-mile zone has become highly controversial. The first official references to the zone would seem to come from a decree of 5 June 1922 which stipulates (Article 10) that "...the use of...trawls for fishing all fish species is only authorized at a distance of two (nautical) miles from the coast..." The industrial shrimp trawlers assert that the legal basis of this is questionable, as a 1971 decree overturns this ruling by stating that "...by derogation to Article 10 of the decree of 5 June 1922, trawler fishing licences may authorize their holders to fish for prawns in the two-mile zone..." They also argue that fishing is not profitable unless they are allowed to fish in this zone. Furthermore, they dispute the legal definition of coast, and question where the baselines should be drawn from which the two miles should be measured.

**H**owever, it is worth noting that the representatives of the national authorities present acknowledged that "traditional fisheries exist", that they "help earn foreign exchange for the country", and that "they play an important role in the fight against poverty". The Deputy Mayor of Toamasina said that "improving the living and working conditions of the traditional fishermen should be a priority."

Any recognition of the rights of fishworkers had to be reflected in the protection given to the traditional fisheries zones. The fishermen present reasserted their property rights in the traditional fishing zones as well as to the resources found in them. Consequently, they wanted their rights of access to be recognized and protected. They also wanted to be involved in the management of their coastal zones and their resources in order to ensure sustainability of stocks and to fight against coastal pollution.

The third step involved recognizing the rights of traditional fishing communities. After the Tamatave meeting, several developments took place. Madagascar has recently completed all the necessary internal procedures to ratify the United Nations Convention on the Law of the Sea (UNCLOS). However, there is a difference between "ratification" by a parliament under internal law and ratification under

international law, which means the deposit of the instrument of ratification with the depository (here, the Secretary-General of the UN).

It is also hoped that with the ratification of UNCLOS, the communities of traditional fishermen would be in a stronger position to defend their rights of access to the two-mile zone.

During the French Presidency of the EU from June to December 2000, a campaign was launched through the offices of the French NGO, Agir Ici. This questioned the use of French and EU public funds for development of industrial fishing in Madagascar, and was aimed directly at the French Ministry responsible for Development Co-operation and the European Commission. Eleven thousand people sent letters to the French and EU authorities. This precipitated the French industrial fishing sector in Madagascar to demonstrate publicly that they were taking the local traditional fishing sector into consideration. The ZAC proposal (which the French NGO CEASM was contracted to produce) was their response.

Felix Randrianasoavina, Executive Secretary of COMM, says, "Engaging in a debate with the industrial fisheries sector, as things stand today, could entrap the genuine traditional fishermen. They have already come a long way together in their struggles. They want to get their due recognition. We must respect their struggles, try to listen to them and be patient, even if they are not yet ready to tell us anything because, perhaps, it is not that the fishermen are slow but that we want to run too fast."

This article was written by Brian O'Riordan (briano@skypro.be), Secretary, ICSF Brussels office

## Pink gold, muddy waters

**A neglect of its traditional fisheries sector could spell jeopardy for Madagascar**

Looked at in terms of its resources, Madagascar is a rich country, with its spices, precious stones and rich fish stocks. Yet, more than half of Malagasies are living below the poverty line, with declining per capita incomes. In recent years, this increased poverty and hunger has encouraged a reverse migration from urban areas, such as Tananarive, to traditional fishing communities. Up to 100,000 Malagasies, men and women, are employed in the traditional fisheries sector, and the numbers are growing. The traditional fisheries sector provides not only employment but also a source of protein to coastal communities, with 70 per cent of the fish protein consumed in Madagascar derived from the sector.

However, the role of the fisheries sector in meeting the protein needs of an increasingly impoverished Malagasy population could be even greater, if the underdeveloped nature of Madagascar's transport and public utilities infrastructure (poor or non-existent road links, the absence of electricity and hence cold storage facilities, etc.) did not effectively isolate coastal fishing communities from inland markets. This lack of economic integration keeps national fish consumption down to below 7.5 kg per capita per annum. This effectively limits the scope for the development of the traditional fisheries sector, which primarily serves the underdeveloped national market.

Were these infrastructural constraints to be addressed, a national market for cheap fish protein could be developed. This would give a major stimulus to the traditional fisheries sector, generating employment and increased cash incomes for an expanding sector. This would, however, require substantial investments

to overcome the physical and economic isolation of traditional coastal fishing communities.

While the traditional sector accounts for 50 per cent of the national fish catch, this largely consists of small pelagic and spiny lobsters. Access to the commercially high-value tuna and shrimp resources are largely closed to the traditional fisherfolk. EU-based fisheries operators, however, are strongly represented in these sectors.

Since 1986, the EU has concluded five fisheries agreements with Madagascar. Initially, these agreements secured access to both the shrimp and tuna fisheries. At the end of the 1980s, however, access for EU vessels to the shrimp fishery under the fisheries agreement was discontinued. Since then, the EU-Madagascar fisheries agreement has been exclusively a tuna agreement.

The agreement has, however, provided access for an increasing number of EU tuna vessels. Under the latest agreement, which runs from May 1998 until 2001, access is provided to 75 tuna purse-seiners and long-liners, up from 58 under the previous agreement and 27 under the initial fisheries agreement. This tuna agreement, along with similar agreements with the Comoros, Seychelles and Mauritius, provides EU tuna vessels with access to the entire Indian Ocean tuna fishery.

### **Discrimination**

Malagasy seafarers often face a hard time on EU tuna vessels. Discrimination is rampant, with unequal salaries and contractual conditions. Malagasy seafarers can find themselves dumped in strange lands at the end of their contracts, with no rights of repatriation. Since 1995, with the assistance of the Coalition for Fair



Fisheries Agreements (CFFA) and CFDT (a French maritime trade union), the issue of Malagasy seafarers' rights has been raised with French boatowners.

**T**o date, however, they have denied being the employers of the Malagasy seafarers. Against this background, a round-table discussion is planned to: clarify the responsibilities of employers; elaborate on collective bargaining rights; and discuss the possible inclusion of a code of fair practice for workers on board EU vessels in future fisheries agreements.

Under the current fisheries agreement, 175,000 euros have been allocated to the Maritime Institute in Madagascar for the training of seafarers, so they can obtain the internationally recognized qualification. Unfortunately, this still requires a sizeable 'own contribution' from seafarers and, hence, remains unaffordable. A further 125,000 euros were allocated to the traditional fisheries sector.

To date, however, as far as the fishermen can tell, these funds have not been used in their sector. In addition, in recent negotiations, the EU representative expressed the wish to preserve the coastal zone for traditional fishermen. Local fishworkers would like to see the 10-mile exclusion zone established for tuna vessels applied to the shrimp fishery as well.

Madagascar benefits from this agreement in two main ways: through the financial compensation paid directly to the government and through the tuna processing plant established at Diego Suares. In the latest agreement, financial compensation paid out totalled 2,280,000 euros, with 60 per cent being deployed in the fisheries sector in support of research, training, monitoring and control. However, only around 5.5 per cent has been allocated to the development of the traditional fisheries sector. Since 1992, the unit value of tuna exports has doubled, with tuna increasingly being exported in the processed form.

The ending of EU access to the shrimp fishery under the EU-Madagascar fisheries agreement did not result in the withdrawal of European enterprises from the Malagasy shrimp fishery. Indeed, European enterprises continue to be heavily involved in what is the most commercially important component of the Malagasy fishery, the 'pink gold', namely, the shrimp sector.

**Joint ventures**

While fisheries agreement access for shrimp has ended, EU vessels continue to operate in the Malagasy shrimp fishery within the framework of joint ventures, occasionally with financial aid from the EU's Financial Instrument for Fisheries Guidance (FIFG). EU and member States' aid has also been extended to European

companies moving into shrimp aquaculture. This European corporate involvement in the Malagasy shrimp fishery is, however, often complex, with commercial deals being struck with Japanese importers and sister companies from Europe, everything being tied together in a complex web of cross-holdings. All in all, however, European enterprises still play a dominant role.

**W**hile European investments in the shrimp fishery do not generate much direct competition for resources with the traditional fisheries sector, they do generate competition for priority access to the coastal fishing zone, while threatening the sustainability of the coastal marine ecosystem.

Malagasy law restricts access to fishing in the two-mile coastal zone exclusively to non-motorized activities, or, in other words, exclusively for traditional fishing activities. This means that industrial shrimp trawlers are legally prohibited from fishing there. However, the reality is that these trawlers commonly fish illegally within this exclusion zone. Indeed, figures for 1998 show that more than two-thirds of the industrial shrimp trawler catches were made within this two-mile zone.

The Malagasy Shrimp Boatowners Group (Groupement des Armateurs à la Pêche Crevetière de Madagascar—GAPCM), argues that respecting the two-mile exclusion zone imposed on shrimp trawlers would make exploiting the shrimp fishery uneconomic. Indeed, it has gone so far as to suggest that “for strategic and foreign policy reasons, it would not be appropriate to apply international Law of the Sea in Malagasy fisheries rules.”

This flagrant disregard for regulations safeguarding the two-mile coastal zone for traditional fisherfolk has resulted in some serious consequences for the traditional fisheries sector:

- pollution of the sea from the dumping of by-catches;
- destruction of fishing gear on which the traditional fishing

sector depends for its non-shrimp catches;

- direct conflicts with some traditional fishermen fishing for shrimp; and
- increased pressure on non-target species in general, with seven tonnes of dead by-catch often being dumped at sea for every tonne of live shrimp caught.

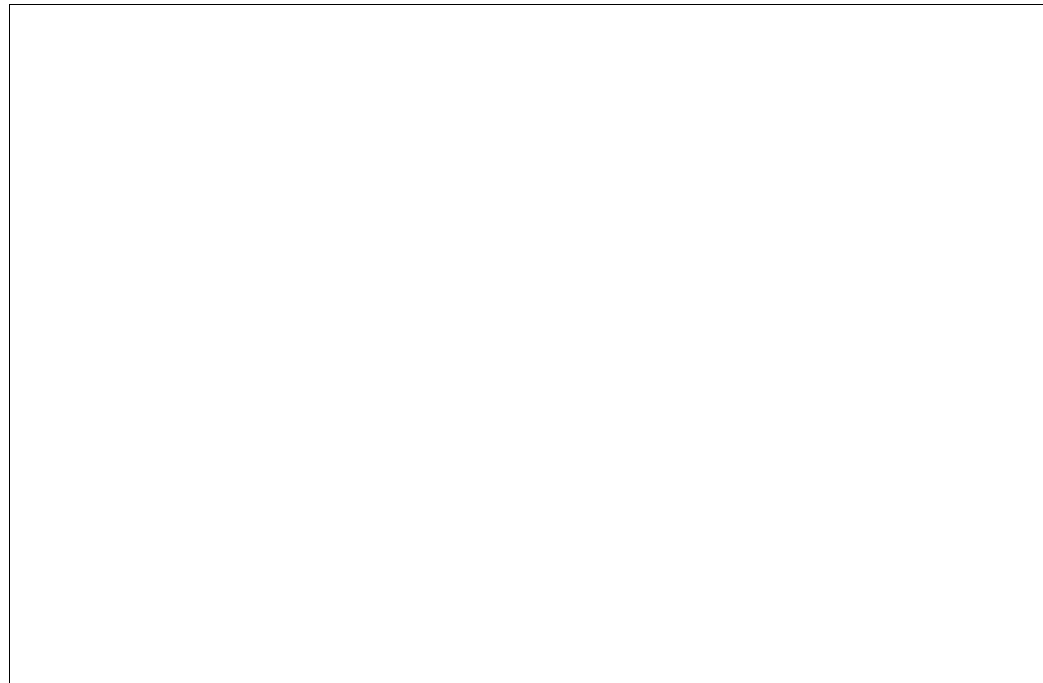
This situation of conflict with, and undermining of, traditional fishing activities seems likely to intensify, for, as shrimp stocks decrease, industrial fishing pressure within the two-mile exclusion zone is likely to increase. Indeed, the GAPCM is strongly pressuring the Malagasy government to ‘regularize’ the ‘illegal’ situation by lifting the current two-mile exclusion zone.

Currently, the development of the traditional sector is seriously constrained by the lack of access to the domestic market. Malagasies have seen their per capita GDP decline from US\$480 in 1976 to US\$200 in 2000. They have seen absolute levels of hunger and malnutrition increase. Concentrating on programmes to expand the traditional fisheries sector to meet the growing food needs of an increasingly impoverished population would appear an obvious priority.

However, between 1985 and 1995, of the 17.8 million ECU in EU funds made available to projects in the fisheries sector, less than one per cent was dedicated to the traditional fisheries sector. As much as 67 per cent went to aquaculture projects, and a further 13 per cent to a rice-cum-fish project designed to enhance rural food security.

#### **Shrimp fishery**

While the traditional sector mainly fishes for low-value species for the currently limited local market, in recent years, traditional fishermen have begun to move into the shrimp fishery. In 1998, around 2,000 tonnes of shrimp—20 per cent of the official catches—were caught by traditional fishermen, although this was mainly for local consumption. In addition to poor infrastructure, a major constraint for the traditional sector is its inability to



meet the quality standards of the export-orientated shrimp market.

**U**nfortunately, the initiatives made so far by the traditional sector to exploit commercial shrimp resources have only linked them to a network of collectors who supply export houses. Yet they gain little, due to price fixing, problems of preserving the catch and the exploitative practices of the collectors.

Currently, for every 100 tonnes of shrimp caught by the industrial sector, only 42 jobs are created, while for every 100 tonnes of shrimp produced in the aquaculture sector, 44 jobs are created. In contrast, for every 100 tonnes of shrimp caught by the traditional sector, 230 jobs are created. Clearly, therefore, expanding the role of the traditional sector in the shrimp fishery, while involving comparatively little investment, will offer tremendous scope for alleviating poverty in Madagascar.

This article has been written by Béatrice Gorez of CFFA, Brussels (email: gilletp@skypro.be)

## Scars of labour

**Ill-treated aboard foreign shipping vessels, Malagasy fishermen are organizing to fight back**

**M**adagascar's fisheries resources are estimated at 500,000 tonnes, of which 320,000 tonnes come from the marine sector. Production from both sea and fresh-water sources barely touches 100,000 tonnes. Potentially, the catch could easily triple.

In the artisanal sector, 42,556 persons are engaged in fishing, while 3,500 work in industrial fishing. These sectors produce 84,426 tonnes and 12,277 tonnes respectively each year. In monetary terms, production has risen to 188 billion FMG, a value addition of 173 billion FMG, which represents 4.8 per cent of the national GDP.

Exports of fisheries products have brought in 68 billion FMG. Since the collapse in the price of traditional raw materials like coffee and clove, fish products are quickly and profitably substituting them on the world markets.

Realizing the increasing importance of this sector, government officers are organizing meetings and seminars, as well as signing agreements and treaties. However, this is being done by excluding fishermen, those who are truly affected.

Shrimp fishing dominates the industrial fishing, which also includes tuna fishing and aquaculture at an experimental level.

Shrimp production is entirely tuned towards exports and this sector is on the way to becoming the main source of foreign exchange for Madagascar.

Shrimp fishing is dominated by foreign companies, Malagasy companies being controlled by the majority equity of Japanese, French, Indian and Pakistani companies. The crew of the boats are mixed (Malagasy and expatriates).

Sometimes, they are entirely Malagasy, as, for example, on the boats of Refrigepeche.

In July 1992, Madagascar renewed the fishing agreements with the EU, which authorize ships of the EU to fish in Malagasy territorial waters. The first accords were signed with Japan in 1971. The EU accords started only in 1986, with an agreement which since then has been renewed every three years, the last ending its term in 1995. The financial component of the accord amounts to 1.35 million ECU—payable in three parts—for a catch volume of 9,000 tonnes per year of tuna.

The fishing zone is located beyond two nautical miles, but the Malagasy port has neither the qualitative nor quantitative means to ensure compliance with this measure. The residents on the coast have often protested against big ships fishing close to the coastline and spreading nauseating odours from the refuse and catch thrown on to the coast.

"Other than economic waste, these disposals cause degradation of the beaches and lead to protests by coastal residents and traditional fishermen", recognizes an official ministerial document on fishing.

### **Royalty payments**

The annual catch volume of 9,000 tonnes involves the payment of royalties. This measure is applied with great difficulty. Fishing companies employ several collection ships and the practice of transfer of catch at sea is quite current. Only ships, which disembark at the Malagasy port, declare the quantity of their catch.

Only if the Malagasy government has the real political will to ensure that it is respected does this measure make sense.



**I**n Madagascar today, overfishing no longer constitutes a mere risk—it is a reality. Since the means of control can never be efficient, the depletion of resources is patent.

The creation of a scientific research programme to improve knowledge on migratory species is inscribed in the protocol of the accord with the EU. The EU contributes up to 375,000 ECUs to this effort.

However, since the agreements were signed, the royalties have never been used for the development of fisheries. The benefits from this new accord are quite meagre, compared to the products and the profits the ships get from Malagasy waters.

It should be emphasized that the fishing licences of 1989 should bring 2.13 billion FMG (US \$1.3 million). However, the amount actually received is 245.5 million FMG. The difference is because there was no transfer carried out under the heads 'Financial Compensation' and 'Scientific Programme', as the ministerial document on fishing once again states. Obviously, the Malagasy side has trouble getting these accords respected.

Further, study results remain classified and their diffusion is especially restricted by the deficiencies in the means of communication. For the 50,000 artisanal

fishermen, the effects of the accord are practically nil. The veritable question remains: for whom is the protocol of agreement meant?

Apart from the ships of the EU, the Malagasy waters are attracting more and more foreign fleets. The new arrivals are eight South African ships and an equal number of Spanish ships, as well as Indonesian and Taiwanese ships.

As a result of being unable to implement a national policy for fisheries development the Malagasy government is adopting the easy solution of giving fishing licences to foreign vessels. The purely commercial character of the accord and the need for foreign exchange force a level of secrecy.

From 11 to 12 June 1992, the Ministry of Animal Husbandry and Fisheries Resources organized a round table conference with funding agencies on the programme of development of fisheries and aquaculture. Up to 95 per cent of the funding, evaluated at US\$10 million, was accepted.

#### **Promise of funding**

Among the projects, which received promise of funding, is the pilot project of the FAO, for which the fishing project is the implementation agency. During this meeting, the Japanese Embassy gave an order to allocate Japanese funds for the

east coast component of the pilot project. Notwithstanding the official declaration of the suspension of the implementation of accords with Taiwan, the presence of the Taiwanese delegation among the funding agencies was very noticeable.

**I**n the area of tuna fishing, under the framework of the Indian Ocean Commission, a regional Tuna Project has been set up to promote tuna exploitation in each member country, namely, Comoro Islands, Madagascar, Mauritius, the Reunion Islands and Seychelles. For the east coast, the pilot project is sought to be associated with the implementation of the devices for fish aggregation.

In collaboration with the Japanese Institute of Research of Marine Resources (JAMARC), a study of tuna migration in the Indian Ocean has been started. The project to establish an organization of tuna-producing countries—owners of the resources—initiated by the Seychelles, will allow the adoption of a common strategy for migratory tuna resources. The processing company, Fish and Cold of the Indian Ocean at Artsirana, will preserve and treat 50,000 tonnes per year of tuna.

The Malagasy Maritime Code has been in effect since June 1960, the time of independence. Chapter III on fishermen deals with the maritime appointment contract. This anachronistic text enables shipowners to skirt the law, with economic crises and unemployment aiding brazen violations. Two specific and recent cases at Mahajanga and Toamasina corroborate this. It seems all the more unsolvable, given the dubious role of the maritime administration.

In the Mahajanga case, each company has a maiming agency in charge of recruiting the navigation personnel. The agency executes a promise or bond of embarkation, which enables the maritime district authorities to obtain the professional passbook of the fisherman.

But, in reality, because of galloping unemployment, vacancies are expensive and the manning captain only takes on the fishermen in return for high amounts. On several occasions, officers of Mahajanga had to advance money to the fishermen to

bribe the captain to be able to work. The officers had little choice, faced with the need to feed corruption to enable the fisherman to work to feed his family after a long period of unemployment.

To measure the extent of such havoc, it is enough to refer to the reconstitution in June 1991 of the association IVIA (Iray Vatsy Iray Aina). The seamen and fishermen in difficulty, thinking that IVIA would be a trade union, became members en masse—372 in 1991, of whom 80 per cent were unemployed. In order not to disappoint the expectation of these people, IVIA organized itself as an agency for maritime employment. The seamen and fishermen themselves took the decision to reserve the first boats, which would arrive, for those who were long unemployed.

Different committees (for training, information, finance and social/health) were set up so that the fishermen felt useful and had responsibilities. Strengthened by this dynamism and solidarity, they found boarding on different ships. Better still, the company KALETA even refused the offers of boarding of the maritime district agencies to admit only the list of fishermen proposed. This can also be explained by the neutrality of the authorities, the company being assured of taking on fishermen who were not indebted to the recruitment agents.

Since 1990, the Mauritius company, Sea Falcon, has operated in Mahajanga. On the one hand, it recruited Malagasy fishermen on presentation of their identity cards, without either a contract or written document, to work on the Mauritian shelf.

#### **Mother-boats**

On the other hand, two of its mother-boats, *Star Hope* and *Faki*, equipped with motors or Doris launches, fished in Malagasy waters. The entire production was destined for export.

Mistreated and reduced to a clandestine status, the Malagasy fishermen were at the mercy of the company. During stopovers in Mauritius, they were holed up on the boats and drinking water, electricity and food rationed or cut off. Compared to their Mauritian counterparts, they were

underpaid. Worse, some of the pay-slips of the Malagasy officers indicate flagrant swindling of the company—deduction of exorbitant social expenses, while the fishermen did not receive any social security. The only recourse for the Malagasy fishermen was repatriation as soon as possible to Madagascar.

**T**he seamen and fishermen from the Mahajanga region mobilized to try and break this logic. According to a February 1992 report of the Apostolate of the Sea, “What is well known movement, which arose on the occasion of the Gasikara affair and which thereafter developed.”

Sudden awareness was expressed concerning the need for an urgent increase of salaries, taking into account the present cost of living. Protests also arose about the conditions of employment on

certain points not adhered to in the Maritime Code. There was also a very strong call to re-work and update the Code, especially on social security matters, with clarifications on appointment contracts, rate of remuneration, overtime, rest and leave, etc.

There were also strikes by the navigation crew of CMN (Malagasy Navigation Company) and, in end June 1991, by the fishermen of Refrigepeche East. At the same time, there was a strike by port workers of Tamatave.

In January 1992, just before departing for fishing, 900 seamen of Somapeche struck work to obtain increase in salaries. Following this urgent action, the basic salary of an ordinary sailor rose from 38,250 FMG (107 French Franc) to 70,000 FMG (194 French Franc), an 84 per cent increase.

In the Sea Falcon case at Toamasina, around 300 seamen, 200 of whom were

Malagasy fishermen, were recruited by the Mauritian company for its four ships at Toamasina.

The company proceeded to enroll candidates whose antecedents had been disfavoured. This was brought to light by the fishermen of Mahajanga through

- televised communications
- agreement between associations, trade unions, maritime administration and owners
- written contracts countersigned by the maritime administration between fishermen and owners, a first for the Malagasy fishermen
- drawing up a basic list for every loading of seamen and fishermen, to be put up at the maritime district and to be reviewed and signed regularly by the seamen and fishermen's organizations.

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*There was also a very strong call to rework and update the Maritime Code, especially on social security matters, with clarifications on appointment contracts, remuneration, overtime, rest and leave...*

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The shipowner asked a Malagasy lawyer to draw up contracts for the categories of persons to be on the ship. That was a

manoeuvre to avoid Mauritian conditions and to seek refuge behind a contract under Malagasy legislation, particularly with regard to remunerations.

Approximately 260 seamen and fishermen effectively boarded and the four ships returned on 23 June 1992.

**Different mandate**

It is not the Sea Apostolate's mandate to encourage or stop fishermen and seamen from embarking on ships. The organization's role is limited to negotiating written conditions, which give maritime workers a choice.

But the operation was too quick for the different parties to be able to pretend to have mastered it. Clearly, the following unstated and shadowy areas will be

exploited by the shipowner to swindle the fishermen:

- the real catch not allowed to surpass the price limit of 250 FMG/kg.
- 45 to 90 days at sea, when the fishermen had in fact embarked between 13 to 55 days
- 10 kg. of fish offered free after arrival reduced to five kg.

**I**nformation meetings were held by the fishermen on their return. This first wave of embarkment was blotched with irregularities, which the fishermen did not fail to denounce in their reports transmitted at different instances.

Dozens of persons not enrolled on the basic list and never having been at sea were appointed. The complicity of the owner and the district authorities was denounced by seafarers' organizations.

It was the subject of meetings held at the district. An extract from a letter dated 6 August 1992 from the Apostolate of the Sea of Mahajanga sheds more light on this subject: "They took on new persons to complete their staff because 17 fishermen were sacked for sabotage and threatening Mauritian seamen with knives. These 17 persons were unable to stand their seasickness, they were incapable of fishing, and among them were a butcher and a vegetable seller, who had never set foot on a boat".

The fishermen were constrained to live in intolerable living conditions—no spoons, no sheets, bug- and cockroach-infested rooms, bad food, mouldy cigarettes, inappropriate work clothes. Work and security conditions were precarious—no safety life jacket, no sails or life-saving-flares.

On board, the contracted oyster fisherman often becomes the refrigerator boy or sailor asked to paint the boat, while fishermen are made oyster-catchers without receiving corresponding salaries. The fishermen feel cheated in the weighing of fish, which they were not authorized to assist in. Sometimes, salaries are deferred by several days

instead of being paid immediately on disembarkment.

The maritime workers' organizations set up a common committee comprising trade unions, namely, AMUMATO (Friendly Society of Seamen and Occasional Workers) and STMCM (Trade Union of Christian Malagasy Maritime Workers), and associations, namely, FIRASANKINA NO HERY and FIRAM (Fikambanan'ny Tanora Mpanjono)

Unfortunately, the solidarity displayed by the people of Toamasina was used by the company to weaken the movement. Embarkment was made exclusively for Mahajanga fishermen (with a mass delivered by the Apostolate of this locality on board!). The company blamed the fishermen's organizations for successive delays in embarkment, disowning its own responsibility.

Associations in the pay of the owner were also formed and, through radio and TV communiques, they declared themselves to be the only representatives of seamen and fishermen. There has also been falsification of contracts already signed between the owner and fishermen's organizations. But the fishermen of Toamasina held off from June to November 1992—nearly five months without work. The first embarkment on the basis of the new contract started only on 8 November.

#### **Need for recovery**

Madagascar is going through a turning point in its general policies. Though a sure prognosis is not possible, it is certain that the poverty of the Malagasy people will only worsen. Therefore, there is an absolute necessity for a national economic recovery and for external aid. **3**

This article by Jean-Baptiste Rakotoniaina of the Fisheries Project Toamasina, Madagascar, was translated by Malavika Shivakumar