

Responsible shrimp farming in Madagascar

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A relatively young sector, born in 1987 from a United Nations Development Programme (UNDP)/FAO/Government of Malagasy pilot project, the industrial marine shrimp aquaculture in Madagascar has grown at an impressive speed from an initial production of 406 mt in 1994 to an estimated 7 090 mt in 2002. This represents approximately 46% of total shrimp export earnings in 2001. Currently comprising seven industrial farms and one artisanal farm, the sector has made its mark by producing high-quality shrimp using locally harvested juveniles of the giant tiger prawn, *Penaeus mondon*.

With the expectation of continued growth in both the industrial and artisanal sectors and an appreciation of the potential risks of uncontrolled or unmanaged growth, the Aquaculture Department of the Malagasy Ministry of Fisheries (MOF) and the Industrial Shrimp Culture and Fishing Association (GAPCM) organized the "International Conference on Sustainable Shrimp Aquaculture", held from 3-5 December 2003 in Antananarivo, Madagascar.¹ The goals of the conference included a discussion on the development of Malagasy shrimp aquaculture, its place in a global context and the latest available technologies (feeds, genetic research etc.). In addition, the conference organizers hoped to inform the participants and instigate discussion on the risks of diseases associated with shrimp aquaculture and its potential effects on the environment. Approximately 200 individuals from government bodies, the private sector, and academia attended the conference, which was organized into various disciplines.

SUMMARY RECOMMENDATIONS

The Conference concluded with a number of recommendations revolving around a central theme of protecting this "pink gold", one of the principal sources of export earnings for the country, benefiting from a currently disease-free and relatively pristine environment.² Specifically, the attendees recommended:

- A concerted effort on the part of the administration, researchers and industry for the management and sustainable development of shrimp aquaculture, including participation by regional and international bodies such as GAPCM and the Global Aquaculture Alliance (GAA).
- Implementing, as quickly as possible, an emergency plan of sanitary protection (surveillance, detection and control) against viral and other maladies, including:
 - Producing inputs locally or identifying secure sources for them,
 - Encouraging certification and traceability for all farms,
 - Promoting a regional approach to sanitary protection, and
 - Government capacity building.
- Developing the artisanal/smallscale/family shrimp aquaculture sector, by benefiting from international experiences and in collaboration with the industrial sector.
- Evaluating the economic and technical potential for smallscale aquaculture development.
- Providing technical assistance at all levels of commercialization.
- Considering the idea of satellite farms surrounding the industrial farms.
- Adopting regulations concerning smallscale aquaculture in which sanitary and other standards are maintained at the industrial-sector level.

- Completing the current Aquaculture Management Plan to include the smallscale sector.
- Developing the Malagasy shrimp aquaculture sector in general.
- Defining a National Shrimp Aquaculture Development Plan.
- Adopting the Code of Conduct, the Management Plan and the Law of Responsible Shrimp Aquaculture.
- Creating a Malagasy label to benefit from product and price differentiation (Malagasy farmed shrimp, the majority of which are *P. monodon*, are large (25-33 g) and attractive).
- Studying the world shrimp market, including developments in shrimp aquaculture (e.g. in China).
- Expanding the industrial sector (aquaculture production is estimated to reach approximately 8 000 mt from 2 150 ha of farms by the end of 2003. Additional farm sites have been identified and zoned, with the goal of attaining the potential 15 000 ha of basins).

These recommendations contain multiple and potentially conflicting objectives (e.g. creating a Malagasy label and promoting artisanal aquaculture); therefore, special care must be taken in any efforts by FAO or otherwise, whether relating to the smallscale or industrial sectors, to foresee the possible secondary effects of any management decisions.

¹ Information on this conference and GAPCM is available at

<http://www.madagascar-contacts.com/gapcm>.

² A recent book worthy of note is *La ruée vers l'or rose: Regards croisés sur la pêche crevette traditionnelle à Madagascar*. Goedefroit, Chaboud, and Breton (eds.); PARIS, IRD EDITIONS, 2002.

NEW ADDITION TO AQUACULTURE GROUP



Cecile Brugere joined the Development Planning Service (FIPP) of the Fisheries Policy and Planning Division (FIP) on 22 September 2003 as Fishery Planning Analyst (Aquaculture Economics). Ms Brugere has obtained her PhD in Agricultural Economics at Newcastle University in late 2002 after having obtained a Masters degree in Ecological Economics at Edinburgh University in 1996 and a Business Management Certificate in Bordeaux, France. She worked as a biological surveyor for a Scottish charity before starting as a Research Assistant (aquaculture socio-economics) at the Institute of Aquaculture in Stirling in 1998. During this post, she spent some time in Bangladesh studying community and gender impacts of small-scale cage aquaculture development. A large component of her PhD dealt with the integration of poverty-focused aquaculture in irrigation systems, for which she undertook micro-economic and livelihood investigations as part of her field work in southern India and Sri Lanka. Previous studies led her to investigate

issues surrounding the participation of women in aquaculture in Thailand, Malaysia and Indonesia. She is the co-author of five peer-reviewed papers and has written a number of other reports and articles on aquaculture. Her interests lie mainly in integrated approaches to aquaculture development and in the measurement of its social and economic benefits (improved livelihoods, poverty alleviation, gender relations and resource allocation).

In FIPP, Ms Brugere joins the aquaculture team composed of Nathanael Hishamunda and Raymon van Anrooy. This team works very closely with FIRI. Her role will be to work towards the incorporation of economic analysis in the development and application of policies and strategies aimed at ensuring sustained livelihoods for all beneficiaries of aquaculture. She can be contacted by telephone at +39 06 570 54410 or by email at cecile.brugere@fao.org.