## PART I: SYNTHESES OF NATIONAL REPORTS – DISCUSSIONS AND DECISIONS OF THE MEETING

#### **BACKGROUND AND OBJECTIVES**

1. The second meeting of the WECAFC ad hoc working group on the development of sustainable development of moored fish aggregating device (FAD) fishing, in the Lesser Antilles was convened to continue subregional exchanges on practices and experiences in the management and exploitation of the large pelagic fish and interacting species.

2. This second meeting of the WECAFC ad hoc working group and the training activity was cosponsored by the "Institut français de recherche pour l'exploitation de la mer" (IFREMER) and hosted by the "Institut régional de pêche et marine" (IRPM) at the Hotel de Petite Anse, Bouillante, Guadeloupe, French West Indies, 5 to 10 July 2004.

3. The sponsors of the meeting were: The Regional Council of Guadeloupe and the French State (Regional cooperation funds).

4. The specific objectives of the meeting were:

- to report on and examine the results of agreed national practices of site selection, design, assembly and deployment of FADS;
- to exchange experiences on the various FAD management system in use in the participating countries;
- to review the results of the acoustical and videographic research conducted by IFREMER, around moored FADs in Martinique;
- to discuss and decide on intersessional activities that could deepen subregional cooperation in the development and management of moored FAD fishing; and
- to conduct practical exercises in FAD construction and deployment.

## PARTICIPATION

5. Ten delegates from nine, non-French, member countries of the working group (Antigua and Barbuda, Barbados, Cuba, Curaçao, Dominica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines and Trinidad and Tobago) together with approximately 25 representatives of: the "Préfecture de région de Guadeloupe", the "Conseil régional de la Guadeloupe", the "Conseil Général de la Guadeloupe", "Conseil régional de la Martinique", "Direction régionale des affaires maritimes de la Guadeloupe," "Direction régionale des affaires maritimes de la Martinique", Station IFREMER de Martinique, Centre IFREMER de Brest, the "Comité régional des pêches", "Institut régional de pêche et de marine" (IRPM), European Community, observers from the "Association des Pêches du Sud Basse-Terre" (APSBT) and Japan International Cooperation Agency (JICA) attended the sessions. Twelve fishers from seven member countries also participated in the FAD training, after the formal meeting sessions (see the lists of participants in Annex I, A and B).

## **OPENING CEREMONY**

6. The participants were welcomed to Guadeloupe by Mr Gérard Théobald, President of "L'Institut régional de pêche et de marine" (IRPM), Mr Hilaire Brudey, President of the fisheries department of the Regional Council of Guadeloupe and Mr Jean Pascal Devis, representing the French State.

7. They congratulated the partners in the project: IFREMER, IRPM and FAO and thanked them for being the driving forces behind the organization of the working group. They pointed out that it was with great pleasure that the "Conseil régional de la Guadeloupe" supported this project which also had the backing of the French State as they firmly believed that all our regions had to gain from an ambitious policy of regional cooperation. The President of the fisheries department of the Regional Council suggested that the French overseas "départements" have physical, economic and social characteristics which distinguish them from mainland France but bring them closer to the other islands of the Caribbean.

The President of IRPM also pointed out that the Regional authority was conscious of the importance of fisheries research in the Caribbean and believed that the creation of a network for sustainable fisheries development as an essential element of social cohesion. He hoped this project would serve as an example for relations to be developed in other areas.

8. The FAO Fishery Officer thanked the hosts for their welcoming sentiments and hospitality and joined in welcoming the participants on behalf of the FAO and the WECAFC secretariat.

# SYNTHESIS OF PRESENTATIONS AND DISCUSSIONS

9. The following summarizes the presentations of the plenary sessions. The full presentations appear in the "Supplement" of this report.

## Technology of FADs: Site selection, design, materials assembly and anchoring

10. The working group received a number of national reports that revealed the diversity of strategies that countries used in designing FADs, choosing mooring sites and anchoring FADs. One country reported strong currents and crowded shipping lanes that made the establishment moored FADs very difficult. Other countries reported establishing both shallow and deep-water FAD units that were either simple and inexpensive or complex and relatively expensive. The reports also revealed an evolution of FAD buoys from single to double heads and a movement from shallow to deeper water, offshore, mooring requiring more durable anchor systems. While the improvements in FAD durability were noted, concerns were expressed over the decrease in fisher safety when they operate offshore in small vessels and also about their capacity to maintain the quality of their catches on longer fishing trips. There was a demonstration of the capabilities the IFREMER "FAD-software" using characteristic information of the components of the various FAD designs from the French Antilles and the rest of the Lesser Antilles (by JICA and others).

## Management systems of FADs and their impacts on fishing

11. There were a number of presentations on FAD management practices that reflected state management, collective management at the community level and no management at all. In the ensuing discussions, this diversity in management practices (or lack of them) emerged as an issue that can affect not only the national monitoring of FAD fishing but also regional cooperation initiatives negatively. Many participants referred specifically to the actual (or potential) disorder that unregulated FAD deployment has (can) created in the monitoring of FAD fishing, fishing disputes, fisher safety-at-sea, accidents involving non-fishing vessels and on the economic sustainability of FAD fishing. A consensus, on the need for some form of management, emerged from the discussions on FAD management practices.

## Pelagic resources aggregated around moored FADs and their exploitation

One of the most interesting presentations during the meeting was the results of the acoustical and 12. videographic research done by an IFREMER (Martinique station) team. It was an intersessional activity that contributed significantly to the body of knowledge on the assessment of environment (especially the fish resources) surrounding moored FADs in the Lesser Antilles. The results indicated that there was a high temporal variability in the shallow schooling fish in a 0.2 nautical miles around the FADs in Martinique. It was also noted that the largest aggregation (about 95%) of around the FADs occurred in depths of 50 to 150 meters and consisted of blackfin, yellowfin and skipjack tunas (>50 centimeters, fork length). Several participants expressed surprise and optimism after hearing that the landings from these aggregated fish populations contained very few specimens of blackfin tunas, in Martinique. This observation suggested that there is under-exploitation of a large proportion of the aggregated pelagic fishes when using the drifting longline fishing technique which is currently dominant around moored FADs. It was suggested that the research results should be communicated to subregional fishers with aim of encouraging more use of deep trolling techniques to target that mid-water schooling tuna resource.

# Identification of socio-economic and demographic issues and opportunities in FAD fishing

Maximization of the Exploitation the fish Resources around FADs in Guadeloupe: Catch and Profitability Analysis

13. IRPM made presentations on a "Social and Economic evaluation of FAD fishing in Guadeloupe" and on its "Boat Construction Training Programmes". It was noted that profitability of FAD fishing activities in Guadeloupe has declined since fishers opted to deploy FADs further off-shore, ostensibly to evade competition and to avoid increasing the density of FADs deployed near-shore. There was a corresponding need to increase the power of the engines on the existing fishing vessels; relative those developments, important issues such as fisher accommodation, vessel stability, working and storage space and operating costs were highlighted as some of the reasons underlying the Boat Construction Training Programme. It was noted that while the IRPM designs will comply with French National standards for small vessels they had to be mindful of fishers' needs and financial means. The current practice where French Antillean fishers continue to exceed the statutory operating limits for small vessels was also discussed.

# Spatial distribution of FADs around Martinique and their effects on fishing

14. The density of FADs on the Atlantic side of Martinique is more than twice those on the Caribbean side. Although the average fishing effort on both sides is similar, landings are greater from the Atlantic side, suggesting that the current FAD density may not be having a negative effect as yet. When fuel consumption was considered the differences began to diminish. After further consideration of the findings of the IFREMER acoustical research activities questions on the issue of the under-exploited mid-water aggregations re-emerged in the discussions as a potentially cost-effective opportunity for increasing the catch per unit effort on the Caribbean side of Martinique.

# Presentation of the INTERREG III-Section B: International Cooperation Project for the Caribbean

15. The meeting received presentations from the Mission of the European Union for Regional Cooperation in Guadeloupe. The INTERREG III – Section B initiative has funding on the availability for international cooperation. The modalities and eligibility requirements for accessing the facility were discussed. The initiative can be accessed to support regional activities in partnership between recipient-organizations such as: the Association of Caribbean States (ACS), the Caribbean Community (CARICOM) and the Organization of Eastern Caribbean States (OECS) and any of the three Regional Councils in Martinique, Guadeloupe or Guiana. The working group was assured that French Regional Cooperation funding for sustainable fisheries development was also accessible for advancing its subregional activities.

# The Way Forward: Proposals for intersessional action

- 16. The meeting agreed to pursue the following intersessional activities:
- Continue assessing/investigating other FAD designs in the sub-region and continue exchange of information and experiences among the members of the working group;
- Continue subregional interaction and exchanges between countries and agencies (IFREMER, IRPM, JICA) on the monitoring, assessment and improvements of FAD designs;
- Continue to promote the collection and reporting of FAD specific catch and effort data among the fishers throughout the sub-region, using harmonized collection and reporting methods wherever possible;
- Encourage co-operation among subregional institutions working to improve the onboard fish preservation capabilities and fisher safety of fishing vessels in the sub-region (e.g. IRPM and SJPP) and
- Attempt to access French Regional Cooperation (FCR) and/or INTERREG III funding to establish pilot FAD development and deployment activities in the English-speaking Lesser Antilles countries. IFREMER offered to coordinate the preparation of the proposal for circulation among the members of the working group for their possible endorsement and before its submission to FCR/INTERREG.

# Time and place of the next meeting

17. It was agreed that the decision on the next meeting would be deferred until some definite decisions were made on the implementation of the main proposal for intersessional action: "The regional cooperation FAD development" among member countries of the working group.

## Appendix

## IRPM-FAO FAD Training Workshop for Fishers of the Lesser Antilles, 12–23 July 2004

The objective of the training activities was to make the information generated by the WECAFC FAD Working Group on the Development of Sustainable FAD Fishing available to the stakeholders who are directly associated with fishing activities around moored FADs.

The trainees included six fishers and six fisheries extension officers from Antigua and Barbuda, the Commonwealth of Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines and Trinidad and Tobago.

The training was delivered following a multidisciplinary approach that is similar to the mode of operation of the FAD working group. This approach included presentations of general information, in video, graphical and practical formats, on how FADs works, and how to construct, deploy and maintain a FAD. The trainees were also introduced to the basic biology of the pelagic species targeted around FADs and the reasons why catches must be monitored and managed.

During the practical sessions the trainees assembled an improved version of the double-headed FAD (POLKA) which was introduced during the first meeting of the working group (2001). Guadeloupian fishers also took them to on a demonstration launching of the FAD on fishing trips (over a three-day period). Although the catches were not significant, fishers expressed satisfaction with the experience of participating in the application of the techniques used to target the deeper-occurring large pelagic resources around the FADs.

The first draft of a proposal (in French) to access French Cooperation funding facility to establish pilot FAD activities in other parts of the sub-region was discussed by the fishers and fisheries extension participants. It was agreed that an English version will be prepared for circulation and possible endorsement by the respective fisheries authorities in the participating countries.

# ANNEX I: MEETING AGENDA

Monday 5 July 2004		
8:30–9:00	Registration of participants	
9:00–9:45	Opening of meeting	
9:45-10:00	Review and adoption of the agenda	
10:00-10:15	BREAK	
10:15–12:30	Details of the site selection criterions, designs, choice of mater used, assembly and anchoring of FADs in the Lesser Anti (Animators/moderators: A. Lebeau & G. van Buurt)	
	Brief national updates on the types of moored FADs currently u in the Lesser Antilles, including their performance (behavior maintenance and lifespan; (20 minutes/National report inclusive discussion)	ur),
12:30-14:00	LUNCH	
14:00–16:00	Presentation on the general oceanographic (prevailing curre and wind regimes) conditions of the Lesser Antilles	ents
	A demonstration of the uses and capabilities of the "FAD" softw by inputting characteristics (e.g. design, material, depth cur speed and assembly) of the various FAD designs (types) conditions summarized from the national presentations to sl theoretical advantages and disadvantages.	rent and
16:00–16:15	BREAK	
16:15–17:00	Continued demonstration of the "FAD" software	
Tuesday 6 July 2004		
9:00–10:00	Management Systems of FADs and their impact on fishir Selected case studies/National reports from:	ıg -
	Curacao	
	Dominica	
	Guadeloupe	
	Martinique	
	Saint Lucia	
10:00-10:15	BREAK	
10:15–12:30	Case studies/National reports continued	
	Presentations and discussions - no more than 40 minutes each)	
12:30-14:00	LUNCH	
14:00-15:00	Synthesis of the presentations on moored FAD managem systems	ent
15:00-16:00	Discussion of synthesis of the presentations on moored F management systems	AD

BREAK

16:00-16:15

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16:15–17:00	Synthesis highlighting the diversity of the management practices and their advantages and disadvantages for sustainable fishing around moored FADs in the Lesser Antilles
Wednesday 7 July 2004	
09:00-10:15	Pelagic resources aggregated around the moored FAD and their exploitation
	Presentation of the results of the research programme to enhance the knowledge on fish aggregations/A review of the assessment of pelagic fish resources around moored FADS in the French Antilles (the acoustic studies by IFREMER)
10:15–10:30	BREAK
10:30-12:30	Other comparative assessments/reviews from other areas including the Caribbean area (to be decided in consultation with country representatives)
12:30–14:00	LUNCH
14:00–16:00	Pelagic resources continued
Thursday 8 July 2004	
09:00–10:15	Presentation on the IRPM/FAO training module: Sustainable "development of fisheries associated with moored FADs" documents
10:15-10:30	BREAK
10:30-12:30	Review of the discussions from previous sessions;
	Draft recommendations for intercessional activities to advance subregional cooperation in sustainably managing fishing on moored FADs
12:30-14:00	LUNCH
14:00-17:00	Ongoing/Recently concluded projects/Programmes of relevance to sustainable moored FAD fishing
	Synthesis of the objectives, results and conclusions/ recommendations of the following projects:
	Different funds available (international, European, national) for such projects
	Participants to begin discussions aimed at elaborating the most appropriate methods of: evaluating the fisheries associated with moored FADs in the sub-region and how to strengthen cooperation in research and management of moored FAD fisheries
Friday 9 July 2004	Synthesis session for fishers and decision-makers: summary of the sessions by the animators
9:00–9:30	Sites of establishment and design of the anchored FAD
9:30-10:00	FAD management systems and their impact on fishing
10:00-10:30	Pelagic resources aggregated around the anchored FAD and their exploitation

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10:30–11:00	Presentation of current pelagic fisheries research and training programs in the Lesser Antilles (including training on FAD)
11:00–12:30	Finalization of recommendations
	Any other business
	Date and time of next meeting
	Closure of Meeting.
12:30-14:00	LUNCH
14:00-17:00	Visit to IRPM and APSBT – Social events
Saturday 10 July 2004	
8:00-15:00	Fishing trip around moored FADs with professional fishers

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