

## NEARSHORE FISHERIES DEVELOPMENT AND TRAINING SECTION

### Feasibility study of sport fishing development in Cook Islands

A feasibility study on developing a sport fishing enterprise in Rarotonga and Aitutaki was undertaken by SPC's Nearshore Fisheries Development and Training Section in response to a technical assistance request from the Cook Islands Ministry of Marine Resources (MMR). Consultant Etienne Picquel, accompanied by SPC's Nearshore Fisheries Development and Training Adviser, Michel Blanc, travelled to Cook Islands for two weeks from 14–27 April 2009. Logistical support (travel, boats, meetings with local people) was organised by MMR on Rarotonga and Aitutaki.

The fishery resource observed during fishing trips (5 trips on Rarotonga and 11 on Aitutaki), the state of the tourism infrastructure (including hotels), and the commitment to development expressed by all political leaders and fishery officers and operators, offer promising prospects for the diversification (in Rarotonga) and development (on Aitutaki) of sustainable sport fishing in Cook Islands.

A number of suggestions and a budgeted action plan, including relevant training activities and resource management prospects, have been put forward. Technical and financial support for local fishing guides will be required initially until this sector becomes operational on a self-supporting basis. The sustainable establishment of the sport fishing sector in Cook Islands will be made easier if active cooperation between fishers, MMR, the Cook Islands Tourism Corporation, and local governments takes place as early as possible as part of the development process.

The suggested action plan revolves around diversify-

ing sport fishing activities on Rarotonga and developing a number of activities on Aitutaki, including fly fishing for bonefish. This highly specialised activity, with its potential for generating considerable income and creating jobs, will require a resource assessment, a management plan, and some specific marketing work.

The potential for developing sport fishing destinations appears strong in the Pacific. While the presence of fish is obviously an important factor, there are other key prerequisites to establishing sport fishing operations. International and domestic transport to fishing grounds, suitable (and if possible) varied accommodation, safe and comfortable boats, and skilled and trained fishing guides need to be in place before any sport fishing destination can be promoted overseas. Sport fishing is already practised in a number of Pacific Island countries and territories but existing charters are

primarily for big game fishing trips out of urban centres. Other sport fishing techniques (casting, jigging, fly fishing) are still under-utilised in the region and, with the notable exception of Christmas Island, sport fishing tourism in remote or small islands is in the very early stages. If successful, this sport fishing development project in Cook Islands could become a model for other Pacific Islands to follow.

#### THE SPORT FISHING RESOURCE

Despite the brevity of the study, the main features of the natural resources of interest to sport fishing were identified: 1) In a small lagoon on the southeastern side of Rarotonga (Muri Lagoon) were a good number of small-to-medium size fish that could either be spotted or caught using ultra-light casting gear and tackle (island, brassy and bluefish trevallies, goatfish); 2) A barrier reef with several narrow passages and "points" that, according to MMR staff and local



Satellite view of Rarotonga (Image: SOPAC).

fishers, can be very good fishing areas; and 3) An ongoing FAD programme with five FADs deployed and sporadically very productive (yellowfin tuna and wahoo).

Aitutaki on the other hand offers: 1) a large lagoon with several ecosystems (mangrove, sandy areas, coral heads, "motus", "flats") and numerous fish; good catches of small-to-medium size cods, brassy and bluefin trevallies and snappers were caught using ultra-light and light casting gear and tackle; 2) a long barrier reef with several narrow passages and three main "corners" where good fishing occurred using medium and heavy casting tackle (bluefin and giant trevally, emperor) and jigging gear (dogtooth tuna, including several strikes of "monster" ones but none were landed); 3) an ongoing FAD programme with five FADs deployed and sporadically very productive (yellowfin tuna and wahoo).

At the time of the study, bonefish fishing was the main topic of discussion on Aitutaki, with

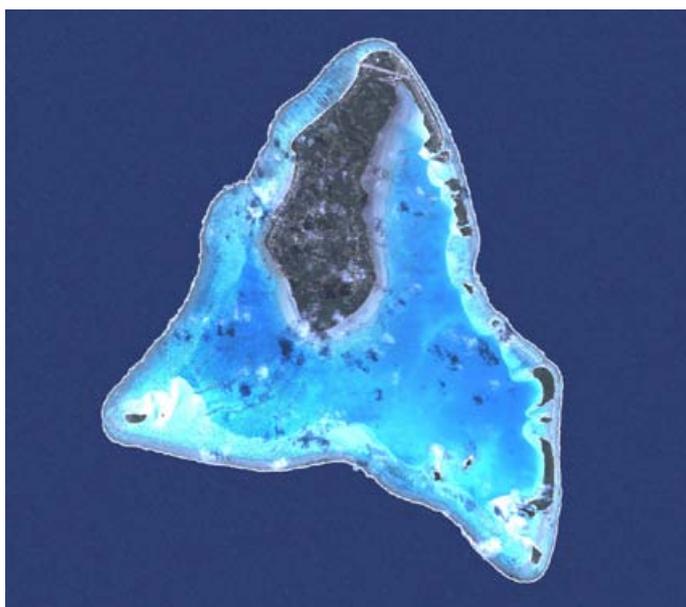
a strong will to develop a tourism-oriented fly-fishing industry. Most of the people we met were critical of net-fishing for bonefish when this does not follow local bylaws limiting net length and mesh sizes and when it targets spawning aggregations (reports were made of "thousands" of bonefish caught in one trip and ending up as pig feed). There were two schools of thought among local decision-makers and policy-makers: one is in favour of a ban on net fishing and net imports on the island, the other prefers to raise awareness among net fishermen and if possible make them change occupations to become fly-fishing guides. Two exploratory trips were made on the flats and several bonefish could be spotted. Pictures of fly-fishermen with large specimens (5 kg +) were seen in one local restaurant. The largest bonefish aggregations are reported to occur between August and December.

#### SOCIOECONOMIC AND ENVIRONMENTAL CONTEXT

The socioeconomic context seems conducive for sport fish-

ing development in both Rarotonga and Aitutaki due to the following.

- A well-developed tourism sector with an overarching body (Cook Island Tourism Corporation) willing to diversify the range of activities available to visitors.
- Easy access to both Rarotonga and Aitutaki (direct flights from Auckland, New Zealand and Los Angeles, USA (and soon Hawaii), four daily flights between the two islands).
- A wide range of options for quality accommodation from five star hotels to motels, guest houses and backpackers quarters.
- The "exoticism" of Cook Islands and the tradition of kindness and hospitality of its population.
- A "nucleus" of sport fishing operators that are well-established (Rarotonga) or new (Aitutaki).
- Some charters boats suitable for offshore big game fishing, mainly around FADs.
- A unanimous will among all fisheries and tourism stakeholders to develop tourism-oriented sport fishing (i.e. MMR, local politicians, fishing industry, charter operators, small-scale fishers, hotel managers).
- One only minister for both the tourism and fishing sectors.
- The involvement and efficiency of MMR and its excellent working relationship with fishers in Rarotonga and Aitutaki.
- A nascent Rarotonga Fishing Club whose President is an ex-staff member of MMR and himself a big game fishing operator.
- A fishery resource that appear limited, especially in Rarotonga, but sufficient for introducing modern sport fishing methods.
- An "icon" fish (bonefish) in Aitutaki, which could gener-



Satellite view of Aitutaki (Image: SOPAC).

ate dedicated, international, sport fishing tourism similar to that of Christmas Island.

- The presence of ciguatera in both Rarotonga and Aitutaki, which limits subsistence and commercial fishing of reef fish species and thus benefits this resource.

However, some potential constraints to developing sport fishing operations are the following.

- Specialised sport fishing gear and tackle does not exist in the Cooks and would have to be imported.
- The majority of existing charter boats seem unsuitable for “casting” and “jigging” methods; the safest and most comfortable boats for these fishing methods are open-decked boats with a central console.
- Suitable fishing areas are limited in size in Rarotonga, which will mean a limit on the number of charter operators specialising in casting and jigging methods, and the strict applica-

tion of the “catch-and-release” principle.

- Some potential conflicts between the different users of the bonefish resource in Aitutaki: net fishermen, fly-fishing guides, operators of lagoon-based activities (glass-bottom boat, snorkelling, etc.).

Based on the above context and discussions with stakeholders, the following options for sport fishing development have been put forward.

In Rarotonga, where the big game fishing sector appears sustainable and sufficiently developed, and where fishing zones are limited, it seems possible to diversify sport fishing by introducing casting and jigging techniques. Small charter operators could take tourists casting and jigging on the barrier reef when FAD fishing is quiet. In addition, Muri Lagoon could easily support some ultra-light casting activity provided the number of operations is limited, captured fish are released, and some arrangements are made to allow

sport fishing by tourists in the “raui” (a traditional closure on a resource). Fishing from the beach or using kayaks is possible in Muri Lagoon.

In Aitutaki, a real sport fishing development could occur based on more abundant and varied resources than in Rarotonga. Several “products” have been identified with two potential iconic fish species: the bonefish and the dogtooth tuna. Both fish, especially the former, may possibly attract fishing enthusiasts from the Pacific Rim and possibly Europe, and doing so would generate substantial benefits for the local community. However, prior to marketing Aitutaki as a fly-fishing destination, a thorough evaluation of the bonefish resource and a participatory management plan for the fishery need to be carried out.

Action plans for developing both casting and jigging operations and for bonefish fly-fishing products were subsequently proposed to MMR.



Consultant Etienne Picquel with a good size dogtooth tuna caught on a jig in Aitutaki.



Pepe Pepe (mayor of Hollywood, Aitutaki) and Etienne with a bluefin trevally caught jigging.

Richard Story (MMR) and Etienne with a nice giant trevally caught jigging and ready to be released.



## **ACTION PLAN FOR BONEFISH FLY-FISHING IN AITUTAKI**

### **1. Resource assessment and bonefish management plan**

This would be conducted jointly by MMR and SPC, with inputs from local fishers and one bonefish fly-fishing expert or tour operator. The study will identify the best fishing areas and seasons and the number of potential guides needed. The management plan will, among other things, revise existing bylaws in relation to bonefish fishing and clarify the role of other users of the lagoon (tourism service providers).

### **2. Training local fly-fishing guides**

This would be undertaken as part of 1 above. A limited number of potential guides (three to four) will need to be identified beforehand by the local government, preferably among the group of net fishermen.

### **3. Coordination and monitoring bonefish fishing**

If the activity develops, an association of bonefish fly-fishing guides could be established, with an Executive Officer position. The Executive Officer would be tasked with coordinating bookings and liaising between clients or tour operators and local service providers (hotels, guides). It is also advised that one person be identified, preferably amongst the local government, to monitor the fishing activity and ensure the rules of the management plan are adhered to.

### **4. Marketing Aitutaki as a bonefish destination**

International tour operators specialising in bonefish fly-fishing will be invited to Aitutaki to "test" the resource, the quality and range of hotels, and the skills of the local guides. The Cook Islands Tourism Corpo-

ration might be in a position to facilitate such visits. The fly-fishing guides association will also need to be equipped with a website so as to market the Aitutaki bonefish directly.

## **ACTION PLAN FOR CASTING AND JIGGING IN RAROTONGA AND AITUTAKI**

### **1. Multidisciplinary training for casting and jigging charter operators**

This training aims at preparing prospective guides for commercial sport fishing activity in the tourism sector. One component or module would include training in first aid, hospitality and tourism, small business management, and sea safety. MMR would have to coordinate the development of this module with relevant training institutions in Rarotonga. In addition to this generic training, a second module would cover the specific technical skills involved in casting and jigging fishing methods. The training, delivered by a professional fishing guide, would include fishing gear, tackle and maintenance, preparing for a fishing trip with customers, as well as several fishing trips using those methods and catch-and-release principles. Trainees will be selected by MMR based on their professional experience, motivation and skills. While this fishing module could be delivered in both Rarotonga and Aitutaki, it seems preferable and cheaper to initially run the training at one location, with participants from both islands. It is also suggested to limit the number of participants to six (three from each island).

### **2. Demonstration casting and jigging gear and tackle**

Given the total absence (and high cost) of casting and jigging gear and tackle in Rarotonga, it is suggested that MMR acquire a few sets of rods, reels and lures that will be rented on a daily

basis to those local guides who received training (as described above). Once familiar with the fishing gear and associated fishing methods, local guides will be in better position to purchase their own fishing equipment. Casting and jigging gear and tackle comes in a wide range of brands, qualities and costs. For demonstration purposes however, it is suggested that medium to high quality, durable rods and reels be acquired. Some examples of gear sets and accessories with model names and prices were provided to MMR.

### **3. Upgrading of charter fishing boats**

While the largest big game charter boats appeared adequately equipped with electronic and safety equipment, some of the smallest charter vessels (of the "potimara" type) would need to acquire additional safety equipment. In addition, jigging is greatly facilitated by using an echo sounder, which not all operators have onboard their vessels. The purchase of fighting belts, gloves and rod-holders is necessary for the smallest charter vessels. This cost of upgrading vessels will differ for each charter operator.

### **4. Communication network and monitoring of casting and jigging activity**

It is proposed to establish a communication network among the various groups concerned by sport fishing development (hotels, Cook Islands Tourism Corporation, Rarotonga Fishing Club, fishing guides and MMR). This communication network may take the form of an Internet-based sport fishing discussion group, through which news and information of interest could be dispatched.

At Aitutaki, if casting and jigging methods take off, MMR via the Aitutaki Marine Research Centre, could advise lo-

cal guides and monitor their activity as it already does with commercial tuna fishers. To that effect, it is proposed to attach for a short period one MMR staff to a commercial sport fishing venture in the region.

**5. Promotion and marketing of casting and jigging sport fishing**

Unlike bonefish fly-fishing, which may attract visitors as far away as Europe, casting and jigging will likely be of interest to sport fishers from countries with existing tourism links with the Cook Islands (e.g. Zealand, Australia and, to a lesser extent, the US west coast). Once local guides have been trained and equipped, promotion of the Cook Islands as a fishing destination will be done in the same manner as for bonefish fly-fishing, by inviting sport fishing tour operators. Promotion and bookings will also be possible using Internet and websites of interested hotels and of (some) charter operators. The contrast-

ed destinations and fishing in Aitutaki and Rarotonga would make it possible to market “fishing packages” that could include trolling around FADs, ultralight tackle casting at Muri Lagoon, jigging for black trevalies in Rarotonga, lagoon light casting, outer reef casting and heavy tackle jigging for “giant” dogtooth in Aitutaki.

**CONCLUSION**

The desire to develop Cook Islands as a sport fishing destination is shared by most people in Rarotonga and Aitutaki. The socioeconomic context appears conducive and fishing trials suggest that the resource is sufficient enough to diversify (in Rarotonga) or develop (in Aitutaki) sport fishing for specialist anglers and the average tourist.

The limited fishing areas in Rarotonga imply a precautionary and gradual approach with a controlled fishing effort, a small number of guides, and the application of catch-and-release

principles. The potential for development appears higher in Aitutaki due to a smaller population and a larger lagoon. The dogtooth tuna and the bonefish are the possible iconic fish for this destination. The willingness to develop a bonefish fly-fishing industry is high on the island but preliminary actions are required, including a detailed resource survey, a participatory management plan, and some training for prospective local guides.

To achieve this ambitious development plan, MMR will need to secure financial resources and it will need to work closely with the tourism sector and the local fishing community. SPC’s Coastal Fisheries Programme will continue to provide technical assistance to MMR as required, in order for the Cook Islands to be a model of sport fishing development that other interested Pacific Island countries can learn from.



Pepe Pepe in full action while casting outside the lagoon of Aitutaki.



Etienne, ultra-light casting in Muri lagoon, Rarotonga.