

The development of recreational sports fisheries in the Pacific

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It is late December 2012, and I am in the Poingam region at the very northern tip of New Caledonia. I am here at the bequest of Michel Blanc, Fisheries Development Adviser with the Secretariat of the Pacific Community (SPC). This trip is the first practical step that Michel and I will take to assist and support the establishment of a recreational sports fishing operation in the area. We will be working with local Kanak guide Benjamin (Ben) Dahma, who is a well-respected local man and experienced fisherman. Ben wishes to develop a guided bone fishing operation that caters to anglers visiting the region, and it is our job to help him realise that goal.

It is *Albula glossodonta* that we will be chasing, the short-jawed, or round-jawed bonefish. *Glossodonta* is perhaps the most widespread of all *Albula* species in the Indo-Pacific. It is a highly regarded sports fish species that fly-fishermen travel all over the world to catch, and we hope they will travel to Poingam.

Over the course of our 10-day trip much time was spent teaching Ben the multitude of things he will need to know as a commercial bonefish guide. Angler etiquette, basic English, various aspects of hospitality, first aid, knot tying, fly casting and fly tying are some of the many topics covered.

The grass in front of our bungalow is littered with coconuts, and this area is our classroom as we practice “out on the flats”, with the coconuts playing the part of the bonefish that our imaginary clients have come to catch. There is much role-playing, and we take turns as Ben practices calling out the location and distance of our coconut bonefish and the direction in which there they are swimming.

“Bonefish! 3 o’clock, 20 meters going left to right!” This is the catch cry of the seasoned bonefish guide, and in order to deliver results for clients, Ben’s ability to spot and call the location of a cruising bonefish to an



Albula glossodonta, short-jawed bonefish.

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Ben (right) enjoys learning how to tie his own flies — an important skill in an area without a tackle shop.

expectant client will be one of the most important skills he learns and hones.

Our 10 days together come to a close all too soon and we leave Ben to get on with the job of buying and setting up a boat for fly- and cast-fishing, as well as making a start on establishing his operation. Michel and I will return in 14 months time.

Sport fishing on the fly

Sport fishing using simple flyfishing gear is a form of recreational fishing where the primary reward is the challenge of finding and catching fish rather than the culinary or financial value of the fish's flesh.

“Catch and release” is practiced by most flyfishermen, with the target species usually safely released once successfully caught. Most practitioners employ techniques that will cause as little damage and stress to the fish as possible. Barbless hooks are common, fish handling is kept to a minimum, and “overplaying” fish is avoided as much as possible.

Bonefish feed on benthic worms, fry, crustaceans, and molluscs. Ledges, drop-offs, and clean, healthy seagrass beds yield abundant small prey such as crabs and shrimp.

Bonefish are often seen following stingrays to catch the small animals that the rays root out from the sand.

Interestingly, bonefish can tolerate oxygen poor water by inhaling air into a lung-like air bladder.

New Caledonia as a bonefishing destination

New Caledonia has the largest coral reef lagoon in the world, and it is dotted with many small islands, each surrounded by soft, white sand beaches and coral reefs. In 2008, the United Nations Educational, Scientific and Cultural Organization listed 15,000 square kilometres of the lagoon as a World Heritage Site.

Over 40,000 hectares of the lagoon's reefs and islands are designated as special marine reserves. Locals and visitors alike find easy access to just about every kind of water sport imaginable.

The lagoon is of exceptional natural beauty. It features a great diversity of coral and fish species, and a wide range of habitats from mangroves to seagrass beds with the world's most diverse concentration of reef structures.

New Caledonia's lagoon contains intact ecosystems that host healthy populations of large predators and a diversity of big fish. The lagoon provides habitat to a number of emblematic or threatened marine species such as sea turtles, whales and dugongs (the third largest population in the world are found here).

It is no surprise then that New Caledonia's lagoon is also home to large numbers of some of the most popular gamefish in the world — the bonefish being among them.

My cohort Michel Blanc works within SPC's Division of Fisheries, Aquaculture and Marine Ecosystems (FAME), which promotes many types of sustainable fishing practices throughout the Pacific Islands region. On this field trip Michel acts as facilitator and "cultural attaché", but it is Michel, in his capacity at SPC that has instigated and driven this project.

I am a New Zealander and my French is limited to a few basic phrases. Ben, our trainee guide, has about the same level of English. Fortunately, we have two French interpreters to help us.

Completing our team on this trip is Etienne Picquel of Blue Calédonie Fishing Trips. Well known to gear anglers², Etienne is an impressive character and a master of stand-up tackle for pelagic fish, both large and small. Etienne is responsible for some of the most impressive catches in the South Pacific, and he is an expert skipper and rigger.

My association with SPC, Michel and Etienne began in Aitutaki, Cook Islands, in 2009, where we met during the filming of our bonefish documentary "Itu's Bones". The film documents the development of a recreational bonefish fishery in Aitutaki's lagoon, and the narrative focuses on a young net fisherman who decides to hang up his gill nets in exchange for a flyfishing rod and sets up a guiding business.

SPC was instrumental in supporting the project with training and fisheries advice that led to the creation of what is now a world-class bonefish fishery.

The scenario we now find ourselves involved with in New Caledonia is a surprisingly similar situation.

The importance of recreational fisheries to Pacific Island people

The negative effects of climate change and sea level rise aside, the Pacific Islands face numerous circumstances that will be familiar to many. Commercial investment has generally bought improvements in infrastructure, trade and commerce. However, large offshore commercial fishing operations have also contributed to the decline of fish stocks that have historically been part of the local diet and a revenue earner for local fishermen.

While tourism has experienced an increase in visitor numbers, these operations tend to be foreign-owned employing low-paid, largely unskilled labour, and mostly women. While it's certain that visiting tourists support and contribute to the local economy, larger resorts and hotel operations tend to derive income "in house" as much as possible. Food, drinks, entertainment, tours and even items in gift shops with "Made in China" souvenirs become increasingly self contained, seeing less of a flow-on effect into the hands of local people.

Life is changing rapidly in the Pacific Islands region, and if you are a young person looking for meaningful employment the situation is increasingly challenging.

SPC's core focus is all about improving the lives of Pacific Islanders, and fisheries development plays an important part in this strategy. While the scoping and development of recreational sports fisheries is but a small subset of this work these activities deliver surprisingly large returns for relatively low inputs. The Aitutaki experience has clearly borne this out.



A typical scene from the lagoons surrounding the Poingam area.

² Gear anglers use spinning reels, casting rods and plastic or metal lures with treble hooks, while fly anglers use center pin reels and flies made from fur and feathers carrying a single hook.

The Aitutaki recreational bonefish fishery

In early 2009, the Cook Islands Ministry of Marine Resources launched an initiative to implement a substantial Fisheries Management Plan for the lagoon at Aitutaki, one of the northernmost Cook Islands. A major feature of the proposal was to implement a ban on the use of gill nets to catch bonefish within the lagoon and surrounding reef system.

Over a period of 20 years a small group of local fisherman became adept at gill netting bonefish. Although evidence was largely anecdotal, it was apparent that fish stocks were rapidly declining and with no legislation or management plan in place, any efforts towards conserving the resource had proven ineffective.



Itu Davey, standing high on his boat, looking for bonefish, the “ghost of the flats”.

In order to encourage local fisherman to conserve and better manage bonefish it was clear that alternative means to derive an income would need to be developed and made available.

Inspired by the success of the recreational bonefish industry on Christmas Island in Kiribati, it was envisioned that Aitutaki fishermen could be retrained and assisted to work in recreational fishing and charter businesses that cater to visiting tourists.

Led by SPC and the Ministry of Marine Resources, and supported by the Cook Islands Government, a major project was launched that would eventually assist in getting a comprehensive fisheries management Plan passed into legislation in 2011.

With many stakeholder and local community consultations, the negotiation and the eventual implementation

of the Aitutaki Lagoon Management plan was a complex and lengthy process.

SPC’s assistance was requested in order to provide expert advice and training in fisheries management and to facilitate and run a two-week-long training workshop for prospective fishing guides in June 2010.

The workshop was comprehensive, providing training in small boat operation and maintenance, fishing methods, fish handling, tackle and equipment maintenance, first aid, and VHF radio operation.

While the number of workshop participants that actually went on to establish small businesses was relatively small, the operators that took the opportunity have delivered startling results.

One such participant was Itu Davey, the focus of the aforementioned documentary. Prior to the introduction of the Fisheries Management Plan and delivery of the training workshop, Itu and his family were the main protagonists, indiscriminately gill netting in the lagoon, with large numbers of bonefish being harvested from fragile spawning and aggregation areas.

Prior to 2009, Itu was selling a string of five bonefish at the local market for around NZD 25. It is important to note that although bonefish were regarded as a delicacy by older people on the island, bonefish were not a core food species for most local people.

Today, Itu Davey’s recreational catch-and-release bonefishing operation runs three skiffs, with another inshore and offshore boat currently being built. The operation directly employs five men, and Itu’s wife, manages bookings and accounting. The operation is extremely successful. Itu’s small bonefishing operation sees many hundreds of thousands of dollars in offshore revenue delivered to the island each year. This revenue is shared by many businesses on Aitutaki and the overall benefits have been substantial.

Flyfishing anglers tend to stay in cheaper “mom-and-pop” accommodations, buy local produce that is grown and prepared by local people, and buy locally made souvenirs. And, the guide they come to fish with relies heavily on local businesses — everything from the cousin who is a small engine mechanic, to the aunty who bakes the local bread. In short, grassroots businesses involved in recreational angling do a great job of supporting local people and business, putting dollars directly into local economies.

The overall benefits derived from the development of the Aitutaki recreational sports fisheries clearly shows that if run and managed by local people, guiding operations certainly tick all the boxes and conform to what is an ideal small business model.

Advantages of recreational sports operations

The benefits and advantages of a recreational sport fishing industry include the following.

- Direct, well-paid, skilled employment for local fishermen who are becoming increasingly constrained in their subsistence or commercial fishing operations.
- Experienced fishermen can leverage their existing knowledge and experience by switching over to guiding activities.
- Revenue goes directly into the hands of local people.
- Smaller businesses are both environmentally and commercially more sustainable than larger ones.
- Control and management of fisheries is placed where it belongs: in the hands of local villages and tribes.
- Gamefishing operations tend to be catch-and-release, particularly with regard to fly fishing-based operations.
- The effective value of a live fish is many times higher than if harvested for food.
- “Catch-and-release” recreational fisheries promote a preservation attitude toward fisheries resources in general. These operations offer a sustainable alternative compared with the more traditional fishing approach, which sees large quantities of low-value fish being harvested commercially.

Challenges

There are a number of challenges relating to development work in the Cook Islands and New Caledonia. Some of these will be resolved in initial scoping work, while others require ongoing attention.

- Getting universal “buy in” and support from stakeholders, operators and local people can be a complex, political and lengthy process.
- To date, little in the way of data has been available on which to quantify and measure the state and health of coastal fisheries prior to establishing a sports fishing operation. This is an important requirement for informed resource management.
- Surveying and identifying spawning and aggregation areas are required in order to implement effective management and licensing systems. This was done in the Cook Islands and has had positive results.

- Angler and guide licensing can be used as effective survey and management tools. Simple and easily implemented systems need to be developed and implemented.
- Revenue from licensing can be used to assist with ongoing management and monitoring.
- A percentage of licensing revenue can be used as reparation for the *de facto* commercialisation of fisheries and delivered back to communities for “good works” projects, thus ensuring wider community support and acceptance.
- Monitoring, regulation and enforcement remains a challenge. Experience shows that local authorities tasked with enforcement find it challenging to cite or reprimand local people who are often relatives and/or family members. Effective monitoring and enforcement of regulations must be carried out by impartial third parties from outside the region.

New Caledonia revisited

Michel, Etienne and I returned to New Caledonia in early March 2014. The purpose of this trip was to capture promotional media, check on Ben’s operation, and better understand how best to support these types of initiatives going forward.

We took photographs and gathered material for articles that will be used as promotional materials by various stakeholders, such as New Caledonia’s tourism agencies and associated operators. Included on the agenda is a feature article for an Australasian fly fishing magazine, and additional pictures placed on fishing-related websites, blogs and social media.

In addition to photographs, we shot a considerable amount of video because one of the main deliverables of the trip is to produce two short promotional video clips. These clips will be delivered to SPC and tourism agencies in New Caledonia, and made available to local tourism operators who wish to promote the region on their websites.

This promotional activity is a vital element for the successful development of the activity, intended to help raise awareness of Ben’s operation and the desirability of northern New Caledonia as a prime destination for anglers.

Promotional and awareness activity and marketing are vital and easily overlooked aspects of initiatives such as this one. For without promotion, paying customers will not come if they are not aware of what Ben and the region has to offer. And that, will be the measure of his success.



Success! Ben assists his client with landing and releasing a bonefish.

Moving forward

Based on the experience with the Aitutaki and New Caledonia projects, it is clear that the development of recreational sports fisheries will afford multiple and broad-ranging benefits to communities and businesses.

Given time, and with sufficient promotion, financial benefits can be substantial, environmental benefits many, and social impacts huge.

While neither project is without ongoing challenges, progress is very encouraging.

For what are comparatively low inputs (as compared with many development projects), the successful establishment of a sustainable sports fishery provides multiple benefits across a broad range of stakeholders.

These types of projects fit well within Island communities and hold the promise of many more profitable, long-term and sustainable businesses for Pacific Islanders.

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