

includes news from the industry and a report on the SPC regional pearl meeting (Fiji, December 2005) as well as articles on the progress of pearling in the Pacific region: Cook Islands and Pohnpei, and in Tanzania, East Africa.

The *Pearl Oyster Bulletin* will aim at being published twice yearly and will mostly comprise research articles, reports from research groups or from the industry, as well as reports from member countries.

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## ■ NEARSHORE FISHERIES DEVELOPMENT AND TRAINING SECTION

### SPC assistance to New Caledonia-based tuna longline fishing company

Fisheries Development Officers Steve Beverly and William Sokimi began a medium-term project assisting a New Caledonia-based longline fishing company, Navimon, during the first quarter of 2007. The project began in February and will continue into June 2007, or until most of the company's eight boats and captains have had a chance to benefit from SPC's assistance. A Fisheries Development Officer will accompany the captain and crew of each boat on a regular longline fishing trip to observe standard operating practices with the view of offering recommendations for changes that could increase catch and fish quality and, thus, profitability of the operation.

Navimon has a fleet of eight longline boats (Fig. 1) that were built in either France or French Polynesia. All of the boats have the same general particulars and all have practically the same complement of gear, electronics and safety appliances. What follows are lists detailing boat particulars, fishing gear, wheelhouse electronics, and safety appliances on Navimon's boats.

#### Particulars

- Built by Chantiers Piriou, Concarneau, France 1999
- Steel stern house longliner
- LOA – 20.7 m
- LWL – 18.75 m
- Beam – 6.9 m
- Molded depth – 3.6 m
- Draft – 2.6 m
- Fuel capacity – 24 m<sup>3</sup>
- FW capacity – 12 m<sup>3</sup>
- Main fish hold (ice, 0°C) – 55 m<sup>3</sup>
- Freezer capacity (-20°C) – 20 m<sup>3</sup>
- Main engine – 450 CV
- Crew complement – 7

#### Fishing gear

- Lindgren-Pitman longline reel with 35 nm of 3.5 mm monofilament mainline.
- LS-4 line setter with 100 cm circumference drive wheel. This makes line speed easy to calculate: RPM/31 = speed in kt.
- Floats are 36 cm hard plastic longline floats.
- Floatlines are attached to floats – 12 m long, 6.4 mm black tarred line.
- Branchlines are 18 m of 2.0 mm monofilament with 3.6 Japan tuna hook w/ring

(90%) or 16/0 tuna circle hook (10%). There are no swivels except on the snaps. 10% have 30 cm of SS wire leader with eye-to-eye connection. There are approximately 1980 brachlines.

- There are 4 Sel Call radio buoys.

#### Wheelhouse electronics

- Furuno FCV-291 echo sounder
- Furuno FR-7062 radar
- Furuno FAP-300 autopilot
- Furuno GP-1810 GPS plotter
- Furuno GPS-WAAS GPS
- Furuno FM-8500 VHF radio
- Furuno FM-3510 VHF radio
- Furuno FS-1862-15 SSB radio
- Furuno FAX-207 Weather Fax Receiver
- Linemaster longline controller
- PC with MaxSea plotter software
- CapSat transceiver TT-3022-D VMS system
- Thrane and Thrane INMARSAT system
- Taiyo ADDF-TD-L1100 radio direction finder
- Sel Call SVC-STI buoy caller
- SST monitor

### Safety appliances

- Two liferafts with Hammar bolts
- Lifering with light (on wheelhouse bulkhead)
- Lifering (on main deck)
- EPIRB with Hammar bolt (on wheelhouse roof)
- Radar transponder
- SMDSS radios
- Flares, rockets
- Life jackets

On each boat there are fire extinguishers in every compartment, including the engine room, wheelhouse, galley, and crews' quarters. There is an automatic CO<sub>2</sub> system in the engine room, and there is a fire alarm monitor panel in the engine room. All compartments have an alarm.

The work plan devised for this project was to have Steve or William participate in a standard longline trip of about 15 days on each boat, during which the longline would be set and hauled 8 to 10 times. Their task is to observe normal fishing practices and then offer suggestions on possible ways for improving operations. At the conclusion of each trip, a debriefing session with SPC, Navimon's management, and the captain of the boat in question, will be held at Navimon headquarters. At the conclusion of the entire project a comprehensive report will be provided, detailing the findings and recommendations of the Nearshore Fisheries Development and Training Section. Observations regarding the following categories were made and noted.

- Boat
- Fishing equipment and gear
- Searching for fish
- Fishing operations
- Fish handling
- Catch and effort
- Captain and crew
- Ecosystem approach to fishing
- Other issues (miscellaneous)

Among other techniques, the captains were introduced to the use of remote sensing charts for finding likely fishing areas. Charts for New Caledonia's EEZ, showing sea surface height (SSH), sea surface temperature (SST), and current speed and direction, can be downloaded free from the Naval Laboratory Ocean Modelling (NLOM 32 Degree Page) website from the USA ([http://www7320.nrlssc.navy.mil/global\\_nlom32/nou.html](http://www7320.nrlssc.navy.mil/global_nlom32/nou.html)).

Temperature depth recorders (TDRs) were used to monitor depths of sets during all fishing operations. Depth reached by the deepest hooks in a basket is important to know when targeting different species. For example, bigeye tuna (*Thunnus obesus*) are usually found in much deeper water than are yellowfin tuna (*T. albacares*), while albacore tuna (*T. alalunga*) are found somewhere between the other two.

Most longline fishermen have learned some techniques for getting their line to sink to a certain depth but most times there is considerable guesswork and without the use of TDRs it is difficult, if not impossible, to know

the actual depth. Even when careful calculations based on line setter speed and boat speed are carried out, the actual depth is not really known. Another important factor is to have some way of determining the speed of the line being deployed from the line setter.

Not only will the distance between hooks be known but, in correlation with boat speed, line setter speed will determine the estimated depth that the line will settle at, notwithstanding environmental conditions. Often hand-held tachometers are used or the manual method of gathering the line to determine distance between hooks can also be used. Now, however, many line setters have a gauge to show line speed, or the speed can be read in the wheelhouse using equipment such as a Linemaster line controller, which works through a sensor attached to the line setter, which is calibrated to read the rotation speed of the line setter drive wheel.

Environmental conditions such as currents cause the line to settle at depths that don't correspond to calculations. Navimon's captains were shown techniques to



**Figure 1: Navimon fleet at Fisherman's Wharf in Nouville, New Caledonia.**

calculate theoretical depth. One method uses a hand-held tachometer to find the speed of the line setter drive wheel, and then calculates the speed of the line being thrown by the line setter if the vessel isn't equipped with a Linemaster line controller. Dividing this speed into the boat's speed gives a figure called the sagging ratio, or SR. Knowing the SR and the number of hooks in a basket allows the captain to calculate the depth of the deepest hooks in a basket.

At the end of March 2007, three trips had been made by William and Steve. In February Steve made a trip on F/V *Katia*, and in March he made a trip on F/V *Keitre*. William made a trip in April on F/V *Lanasera*. The results of those trips are briefly described as follows.

F/V *Katia* made eight sets fishing to the west of La Grande Terre (the big island of New Caledonia). A total of 349 saleable fish (mostly albacore) with an estimated weight of 6,050 kg were caught on 16,470 hooks. The catch per unit of effort (CPUE) for this trip was 2.1 fish per 100 hooks or 37 kg per 100 hooks. Calculated depth for the parameters used on all sets was 315 m. Actual depths according to TDR data, however, ranged from 175–185 m. This depth range also corresponds closely to where albacore tuna are found and this was the main species being sought on this trip.

F/V *Keitre* made seven sets fishing on the east coast of La Grande Terre and around the Loyalty Islands of Ouvéa and Lifou. A total of 12,700 hooks were set during the seven sets (average set was about 1800 hooks), catching 219 fish with an estimated weight of 3,850 kg. The CPUE for this trip was 1.72 fish per 100 hooks or 30.3 kg per 100 hooks. Calculated depth for the deepest hooks on F/V

*Keitre*'s sets was 330 m but actual depths based on TDRs ranged from 200–240 m. Yellowfin tuna and wahoo (*Acanthocybium solandri*) were caught on the hooks nearest the floats, while albacore tuna were caught on hooks 5 to 12 and bigeye tuna were caught on hooks 12 to 15. The boat was targeting a mixed fish species because the boat planned to unload at the new fresh processing facility (La Pêcheries de Lifou) on Lifou. The range of depths was suitable for mixed target species.

F/V *Lanasera* made 12 sets. Two sets were made northwest of New Caledonia while the other 10 sets were done on the east coast of La Grande Terre and northwest of the Loyalty Islands. A total of 22,800 hooks were deployed averaging 1900 hooks per set. The total catch was 233 fish with an estimated weight of 4804 kg. The estimated CPUE for this trip was 1.02 fish per 100 hooks or 21 kg per 100 hooks. Using the skipper's normal setting parameters, the calculated depth for the deepest hooks was 297 m. The range of depths actually reached, as determined by TDR data for the normal sets, was 165–224 m. The calculated depth for the deeper setting parameters using 340 RPM on the line setter was 443 m. The actual settling depth for the deepest hook on these sets ranged from 445–646 m.

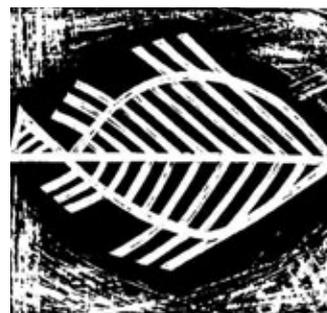
The overall catch on F/V *Lanasera* comprised 38.7% albacore tuna, 34.9% yellowfin tuna, 7.2% bigeye tuna, 9.8% mahi mahi (*Coryphaena hippurus*), 4.3% wahoo, 2.6% blue marlin (*Makaira nigricans*), 1.7% opah (*Lampris guttatus*), 0.4% swordfish (*Xiphias gladius*), and 0.4% sailfish (*Istiophorus platypterus*).

On all trips the captains were given advice on searching for fish using remote sensing data and other more traditional methods, such as following the

2000 m and 3000 m depth contours on the navigation charts, talking to other boat captains, watching for birds, and monitoring temperature on the wheelhouse SST monitor (i.e. searching for thermal fronts). Crews were also given advice on ways to improve fish handling and icing. When all trips have been completed in June, William and Steve will write a comprehensive report detailing all recommendations so that the Navimon fleet can improve their profitability.

In March, Steve conducted a sashimi tuna-handling workshop for captains and crew of Pêcheries de Nouvelle-Calédonie (PNC) in the Northern Province of New Caledonia (Fig. 2). PNC has a fleet of eight aluminium longliners that operate out of Pandop Harbour in Koumac (Fig. 3).

All of their fish is processed at Pêcheries du Nord's processing facility at Pandop Harbour. Fish are graded as either A grade or B grade soon after being unloaded from the boats. Captains and crews are paid based on fish grade. An A grade fish earns more for the boat than does a B grade or a reject fish. This fact was impressed on the captains and crew as they learned the fine points of fish handling to ensure that they land more A grade fish and, thus, get more in their pay packets. Copies of SPC's manual, On-board handling of sashimi grade tuna, were given to each workshop participant.





**Figure 2 (left): Fish handling workshop at Pandop Harbour.**

**Figure 3 (right): One of PNC's longline boats, F/V Karaavha 8, at Pandop Harbour.**

### Minimising sea turtle mortality from interactions from longline fishing gear

A project, sponsored by the US NOAA Fisheries' Pacific Islands Regional Office in Honolulu (PIRO), was undertaken in New Caledonia during March 2007 to heighten awareness of appropriate measures to take in order to minimize sea turtle mortality from interactions with longline fishing gear. The project included the development of turtle bycatch awareness and instructional materials, followed by a series of workshops, including one at SPC that included participation from the staff of the SPC Nearshore Fisheries Development and Training Section and that of New Caledonia's Marine Marchande<sup>1</sup>. Additional workshops were undertaken with captains and crews of the New Caledonia tuna longline fishing industry in the tuna longline ports at Noumea and Koumac.

The project's activities in New Caledonia are part of a greater effort by PIRO to heighten awareness of sea turtle bycatch mitigation, and to introduce mortality reduction techniques to several countries with domestic-based longline fish-

eries in the Western and Central Pacific Ocean. Similar PIRO-supported projects have been undertaken in Indonesia and several Pacific Island countries, including Papua New Guinea, Federated States of Micronesia, Marshall Islands, and Palau. Although basic elements addressing turtle bycatch are similar for each country, the projects have been developed to address the specific needs of the country concerned. For example, in some countries longline activities are undertaken by foreign fleets so awareness materials need to target the activities of those vessels and should be produced in the relevant languages. In New Caledonia, longlining is undertaken by purely domestic companies using national crews, which affords more ongoing contact with the crews, and creates opportunities for follow-up activities.

The project in New Caledonia was undertaken by Kona, Hawaii-based fisheries consultant Mike A. McCoy of Gillett, Preston and Associates. He was assisted by the staff of the

Nearshore Fisheries Development and Training Section and that of Marine Marchande, which coordinated the project's contacts with the fishing industry.

Initial impetus for the project came from several directions. During 2003–2004 NOAA fisheries scientists undertook activities in Papua New Guinea to track the migrations of leatherback sea turtles, *Dermochelys coriacea*, through satellite telemetry. Since migratory tracks from several leatherback turtles transiting the New Caledonia exclusive economic zone (EEZ) indicated the cessation of transmissions from ocean areas to the north and east of the main island, it was considered important that longline fishing operators in New Caledonia be made aware of these tagging activities and migratory patterns. The project also offered an opportunity to collect any anecdotal information on sea turtle interactions, in particular those with leatherbacks.

A second reason to highlight turtle bycatch mortality mitiga-

<sup>1</sup> The Service de la Marine Marchande et des Pêches: the government fisheries management agency in charge of commercial fisheries in New Caledonia.

tion was to encourage New Caledonia to increase its efforts at placing onboard fishery observers on its domestic tuna longline fleet. Observers can play an important role in raising awareness of means to reduce potential sea turtle mortality if interactions with sea turtles occur with longline fishing gear. Observers are also a critical component in the collection of data on fishery interactions with sea turtles.

The project was given additional momentum when fishery regulations regarding sea turtles were promulgated at the provincial level in New Caledonia during 2006. These regulations prohibit the capture of turtles by residents of New Caledonia within provincial (i.e. lagoon and nearshore) waters except when prior approval for cultural use has been obtained. Subsequently, new regulations addressing sea turtles that are

captured incidentally by commercial fishing vessels in national waters are being formulated and are expected to be promulgated by the New Caledonia government in the near future. The project was thus timely in highlighting possible responses at sea to sea turtle interaction with fishing gear, and sensitizing the industry to the overall subject.

The major objectives of the project were to:

- 1) heighten awareness of sea turtle interactions with fishing gear by familiarizing commercial fishing operators in New Caledonia and fishery observers and staff of Marine Marchande with techniques of handling sea turtles caught incidentally by fishing operations,
- 2) provide appropriate equipment and instructions to the

fishing industry on how to address specific sea turtle interactions with commercial fishing gear,

- 3) collect baseline data on interactions between sea turtles and tuna fish gear in New Caledonia,
- 4) integrate appropriate topics on sea turtle interactions with commercial fishing into ongoing work programmes of Marine Marchande and the SPC Training Section, and
- 5) enhance cooperation among the different government and non-governmental organisations involved in fisheries management and turtle conservation, locally and regionally.

The project directed its activities towards the following primary target audiences:

- Fishery observers and relevant staff of Marine Marchande;
- Operators and crew of domestic-based longline vessels in New Caledonia;
- Staff of L'École Des Métiers de la Mer, a tertiary training institution in Noumea that provides instruction in marine-related occupations including commercial fishing;
- Staff of the three provincial government departments in charge of inshore natural resources management and development; and
- Certain staff of the SPC Marine Resources Division who are active in support and analyses of pelagic fisheries in the WCPO.



**A Navimon crew member practices the turtle dehooking technique**

In addition to the above, two locally based environmental non-governmental organisations active in turtle conservation activities in New Caledonia — Worldwide Fund for Nature, New Caledonia (WWF) and the Association pour la Sauvegarde de la Nature Neo-Calédonienne — were advised of the project's activities and given a briefing at its conclusion. The Director of the Noumea Aquarium also participated in the briefing as the aquarium is currently undertaking several turtle projects, including placement of satellite transmitters and subsequent tracking of turtles in New Caledonia.

Workshops with the fishing industry resulted in the gathering of anecdotal information that suggests a low level of interactions between sea turtles and tuna longlining in New Caledonia. From discussions with captains and crews, it appears that when turtles are caught incidentally by longline operations, it occurs mainly with loggerheads (*Caretta caretta*). In only one instance did a captain acknowledge catching (entangling) a leatherback during fishing operations. Some captains mentioned catching four to five turtles over a multi-year span. One captain said he caught three turtles during 2006, but most captains indicated that interactions were rare.

The project successfully attained its objectives, due in great part to the cooperation and participation of the New Caledonia longline fishing industry. This project can serve as a foundation on which future turtle bycatch awareness activities can be undertaken by Marine Marchande at the national level, and by the SPC Training Section through training institutions at the regional level.

Some near-instant gratification was received by the project when Charles Cuewapuru, an observer with Marine Marchande was at sea on the Noumea-based F/V *Sidina* following attendance at one of the workshops. During his voyage, the vessel encountered a small (37 cm carapace length) green turtle

entangled in fishing gear. The turtle appeared very weak, so the observer and crew used skills described in the workshops to bring the turtle onboard, untangle the line, and resuscitate it. They raised its hind quarters, covered the turtle with a wet towel, and periodically checked if had regained consciousness. According to the observer, after about two hours, the turtle did regain consciousness and began moving its flippers. At the conclusion of the haul the skipper stopped the vessel and the turtle was returned to the water where it quickly swam away. Charles notes that this was the first turtle he has encountered in six years of observing on longliners in New Caledonia.



*Caretta caretta*

### Fisheries Development Officer visits Port Moresby, PNG to look at the domestic longline fishery and to deploy FADs

Fisheries Development Officer (FDO), Steve Beverly, spent two months in PNG recently, first looking at the domestic longline fishery in order to advise on improvements to increase profitability and sustainability; and, second, to rig and deploy six FADs for artisanal and sports fishermen.

#### PNG's domestic longline fishery

The objectives of the longline portion of the FDO's visit to PNG were to:

- meet with longline fishery operators to identify and

- document current fishing and catch handling practices;
- undertake fishing trips to observe current fishing techniques and onboard handling methods to determine possible improvements; and
- observe unloading of catch and immediate post-dis-

charge handling and processing practices to determine possible improvements that could be made at that stage of the product handling chain.

Three longline companies were looked at: Sanko Bussan PNG, Fare Well Investment, and

Latitude 8. Between them they operate a fleet of around 30 tuna longliners. In addition, Sanko Bussan PNG operates a processing plant that grades and packs fresh fish for export and produces value-added tuna products for export. Fare Well Investment does its own grading and marketing but uses Sanko Bussan PNG for all processing and packing. Latitude 8 has a processing plant that grades and packs all Latitude 8 tuna for export.

These three companies had been experiencing losses and were having difficulties operating profitably due to a number of factors, including rising fuel and airfreight costs, decreasing market value for export fish, and decreasing catch rates. Several boats were looked at in this brief study, including boats from each company. Off-loading and processing was also viewed from all three companies.

However, the FDO went only on one fishing trip and that was with a Latitude 8 boat. A number of problems were identified with the vessel and this information has been passed on in a formal report. None of the problems related to fishing practices. It turns out that catch rates have started to improve in PNG. On the trip that the FDO made in October the boat set a total of 16,000 hooks during a 14-day fishing trip averaging 2000 hooks per set and catching 181 saleable fish weighing 5850 kg. The nominal CPUE was 1.13 fish per 100 hooks or 36.5 kg per 100 hooks. The catch was dominated by large yellowfin tuna (> 40 kg). Fish handling, off-load-

ing, grading, processing, and packing were all carried out according to industry norms. In spite of this relatively good catch of mostly high-grade tuna that was handled and processed very well, the trip resulted in a net loss for the company.

The reasons outlined above (high fuel costs, etc.) contributed to the loss from this trip, but another contributing factor was the boat itself. Older second-hand Asian boats can be bargains but the best option is to re-power them before putting them into service. Vessels over

20 years old have large large engines that use a lot of fuel (these boats were made at a time when fuel costs were half of what they are today). Re-powering with a more fuel-efficient engine would have made this boat more viable. The general condition of the boat also contributed to the loss. Only one of several refrigerated sea water (RSW) fish holds was operational. The boat had to return to port after only eight sets when the one hold was full. If all of the holds were working, then 14–16 sets could be made in a single trip, cutting back on



**Top: Fare Well Investment's F/V *Crystal 102* at the Main Wharf in Port Moresby.**

**Bottom: Frozen tuna quarter loins at Sanko Bussan's processing plant.**

operating expenses. Most of the other boats viewed by the FDO were in top condition, including Fare Well Investment's F/V *Crystal 102* (Fig. 1).

Airfreight availability and cost have always been a problem for PNG longline fisheries. The cost of air freighting fresh tuna to foreign markets is often equal to half the total revenue from fish sales, and cargo space is often hard to find. One way to avoid the dependency on airfreight is to produce frozen value-added products that can be exported by sea freight. One option to be

considered is producing value-added products onboard vessels. In order to do this, however, new vessels would be needed for the fishery. Value adding is already being done on shore in PNG, with fish produced by the domestic longline fleet. Sanko Bussan PNG was producing a variety of products, including frozen tuna quarter loins (Fig. 2) and frozen wahoo steaks that were being exported to markets in the European Union.

The fish are coming back to PNG's southern waters, but operating costs will probably continue

to rise. Older Asian boats in the domestic fleet probably won't survive but the better boats have a good chance of meeting the challenge if they continue with the trend of moving away from the dependency on airfreight. Frozen value-added products are likely to replace fresh frozen exports in the coming years in the domestic longline fishery in PNG. Any acquisitions of new boats should steer towards fuel-efficient boats capable of staying at sea for months and of producing frozen value-added products onboard.



## DEVFISH Project update

*The Development of Tuna Fisheries in the Pacific ACP Countries (DEVFISH) Project has been progressing through its planned activities in the second year of this four-year project.*

### Work with private sector/associations

One of the project's components is to assist beneficiary countries in improving their national policies for and national institutional arrangements with private sector tuna fishery development. This is done by providing support aimed at strengthening national consultative processes and national representation of private interests involved in tuna fisheries policies and development.

This process involves identification of appropriate private sector interest groups through consultations with the national fisheries authorities.

In instances where there was no formalized establishment of such interest groups and desire was registered, support was provided through:

- Constitution /articles of association guides

- Registration fee to appropriate government office
- Provision of templates for business /work plan development

Since the commencement of the project, seven countries have requested project support and this has been provided or is in the process of being provided.

The second phase of the project's assistance in this component — especially designed for newly established associations — is developing and expanding individual business and/or work plans so that they include links to relevant national and regional support programmes and schemes.

The project's profiling survey of associations, done through questionnaires given at various industry workshops, supports the findings of a previous FFA/SPC-sponsored study (Walton, H. 2001. National Fisheries Association Study. A report prepared for the Forum Secretariat and the Forum Fisheries Agency), which found that one factor recognised to have caused the downfall and lack of effectiveness of associations is their

reliance on voluntary input, which compromises the individuals' own business aspirations and takes time and effort away from their own work.

To build capacity at the association level to undertake and pursue these initiatives and interests, the project is supporting association staff for a trial period of 6–12-months. One of their primary responsibilities, in addition to administrative tasks and following up on outstanding association business, is pursuing opportunities to secure funding for sustaining positions and funding other identified activities after the DEVFISH sponsorship lapses.

DEVFISH is liaising with potential regional programmes and schemes to build support for DEVFISH's objectives. One potential area currently under discussion as this article goes to press is facilitation of support staff capacity development in proposal write-up and identification of a potential list of support schemes available through regional agencies.

To date the project has sponsored support staff in five asso-

ciations that have requested such assistance; a few more have expressed interest, and are in discussions with the project officer to finalize prerequisite requirements before support is provided.

Assistance provided within this component also includes support to facilitate a dialogue

between private sector interests and the government.

There are a few other forms of association support that the DEVFISH project is providing to tuna fishing associations in Pacific-ACP countries.

The project has limited funds available for small projects in

each of the participating countries, which can be accessed by a national coordinating committee.

Detail reports and work program/activities of the DEVFISH project can be viewed on [www.ffa.int/DEVFISH](http://www.ffa.int/DEVFISH).



## FISHERIES MANAGEMENT SECTION

### Coastal Fisheries Management Programme in the Solomon Islands

*(This contribution is dedicated to Ms Ethel Sigimanu – former Permanent Secretary for the Ministry of Fisheries and Marine Resources)*

In an effort to manage the country's coastal fisheries resources, the Solomon Islands Ministry of Fisheries and Marine Resources (MFMR) has developed and implemented a community-based fisheries management programme (CBFMP) with assistance from SPC's Coastal Fisheries Management Section.

A model CBFMP was developed by SPC staff and approved of by MFMR as an approach for developing community fisheries management plans. The model takes into account the Solomon Islands' cultural complexity and traditional systems, its various forms of governance (community, provincial and national), and systems of tenure and resource ownership.

In recognition of the importance of managing coastal fisheries, the Koilovala community, through their village Chief Mr Godfrey Tivahorua and Chairman Mr John Liva, requested MFMR's assistance in developing and establishing a fisheries management programme for their community. MFMR responded with the development of a CBFMP for the village and neighbouring

communities. The fisheries management plan will obligate communities to take actions to manage their fishery resources and marine environment, and obligates MFMR to provide technical services that support community actions.

#### Koilovala community

Koilovala village is situated along the southern coast of Small Ngella (Ngella Pile) in the Florida Islands, Central Islands Province. The village gets its name from *koilo*, a native plant (known scientifically as

*Callophyllum* spp.) and *vala* meaning 'across' in the native dialect. The village's population is around 400: 150 adult men and women, and the remaining being children and youth. Those that migrated to live and work in Honiara or other provinces are estimated to be in the range of 50–100 people.

The majority of people in the community are actively involved in fishing. The main fishing methods used by men are hook-and-line, drop-lining, trolling, and spearfishing, while women are more involved in



The CBFMP team on their way back to Honiara: Carlos Haikau (front), and from left to right Peter Rex, Lionel Luda, John Leqata.