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I N F O R M A T I O N B U L L E T I N



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NOTE FROM THE EDITOR

In this latest issue of our SIG bulletin on Fisheries Education and Training, you will find varied and informative articles and course calendars.

Firstly, SPC Fisheries Development Officer, William Sokimi, shares with us his recent experiences onboard a pole-and-liner, giving some interesting training and safety insights.

Then there are the 2007 training calendars for a couple of key institutions in the region: the Vanuatu Maritime College and the New Zealand School of Fisheries, two prime contributors to this bulletin. Kelvin Kalo (VMC instructor) reports on his recent SPC-funded training attachment in Nelson, and two interesting short-course in fisheries management are advertised on behalf of Wageningen International in the Netherlands.

The bulletin concludes with news on some of the recent initiatives of the SPC Nearshore Fisheries Development and Training Section.

I hope you will enjoy this 25th Fisheries Education and Training bulletin and look forward to an increase in regional contributions for the coming issues.

Happy reading!

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FEATURES



Onboard training of Soltai pole-and-line crew for the PNG tuna tagging project

Safety survey

A tuna tagging project in Papua New Guinea required upgrading the fishing vessel Soltai 6 in Noro, Solomon Islands. Improve-ments included a full makeover of the wheelhouse, galley, accommodation area, a top overhaul of engine room machinery, and an upgrade of the wheelhouse electronics. An office unit was built and placed on the aft bridge deck to provide a working space for scientists to carry out tuna tagging data compilation and processing; a flat platform was also built to house the vessel's aluminium work dinghy.

SPC's Fisheries Development Officer was requested to provide advice to the vessel's officers regarding appropriate actions to be taken in order to have proper equipment and safety measures in place for a ship safety survey.

Safety and comfort were foremost considerations throughout the renovation, but proved to be a challenge to implement on a 28-m vessel that is required to accommodate 29 personnel and five scientists. The SOLTAI Company, however, has a shore-based operation (including a Japanese supervisor) that is set up to undertake such tasks, and has tradesmen that are quite proficient in carrying out the renovations. The main difficulty turned out to be the time frame in which to complete all tasks.

Safety and sea survival upgrades were also made at the same time because of the institutionalised regulations that govern equipment and requirements for safety standards of a vessel the size of the Soltai 6 on international voyages.

These safety regulations focus on:

- the manning structure of the vessel to ensure that appropriately qualified personnel are in place to carry out safe watch keeping and ship handling requirements;
- the safety equipment survey to ensure that the vessel is appropriately equipped with fire fighting equipment and sea survival gear to counter disasters such as fires, flooding, and sinking;
- sea survival compliance to ensure that appropriate life saving equipment is onboard in case the crew needs to abandon ship;
- navigation and bridge equipment conducive to the vessel's operations as well as to provide the best possible means of ensuring safe navigation and fishing operations;
- medical supplies consistent with the manning structure and class of vessel;
- engine room condition with special attention to the operational conditions of the main engine, gear box, auxiliaries, generators, bilge pumps, bilge valves, bilge alarms, valves in the fire main systems, and piping arrangements; and
- the condition of the ship's hull, casings, superstructure, hatch coaming, companionways and bulwarks.

All tasks were addressed simultaneously, but systematically. The primary aim was to lay out a plan of action so that work could progress without having to repeat jobs or get in the way of other work being carried out. Fortunately, the Japanese supervisor had good onsite management skills and was able to direct operations effectively.

The main concern for SPC's Fisheries Development Officer was ensuring that the appropriate equipment listed in the Solomon Islands marine survey form was in place onboard before the marine survey actually took place. Attention was given to making certain that the appropriate fire extinguishers were installed in the correct compartments (i.e. CO2 fire extinguishers were installed in enclosed compartments, dry powder extinguishers near electrical areas, and foam extinguishers in the engine room). The bridge electronics equipment was tested, including compiling the necessary Mercator charts to cover all the areas that would be frequented by the vessel during the tuna tagging project. Special attention was given to acquiring the large-scale charts to cover the baiting grounds as well as the small-scale regional charts for transitory travel. The vessel had to be

equipped with a country of registry flag (flown on the aft mast of the vessel), the flag of the country(s) to be visited (flown on the port wing of the top mast), as well as all alphabet and signalling flags (flown on the starboard wing of the top mast) listed under the international code of signals. The vessel's name and port of registry had to be stencilled onto liferings and liferafts, and two liferafts - capable of holding 25 persons each - were installed to provide for the full ship's complement.

Three days before the end of the renovations, two marine surveyors from the Solomon Islands marine department began carrying out the final examinations. The engine room survey concluded satisfactorily after the first survey day, with only minor infringements that were easily rectified. The deck survey, however, had to be conducted progressively with other work being undertaken onboard. But this was successfully completed on the day before departure and the surveyors endorsed the vessel's safety certificate as "fit for international trade".

Port clearance and foreign vessel movement protocol

Although the deck officers, engineers and crew of Soltai 6 were fully competent to "man" the vessels in the fleet, and capable of expediently carrying out successful pole-and-line fishing operations within the Solomon Islands, they lacked experience in conducting fishing operations in foreign waters and were not familiar with foreign vessel movement protocol. This protocol basically involves vessel clearance at port of entry, vessel responsibilities while in foreign waters, and vessel clearance at secondary ports. SPC's Fisheries Development Officer was given the task of briefing the officers on the standard protocol measures to be carried out at each port of entry and each port of call.

The Soltai 6's first port of entry in Papua New Guinea was Rabaul. At least 24 hours prior to arrival, the captain of Soltai 6 was coached in how to inform the Rabaul Harbour Master of the vessel's estimated time of arrival (ETA) at the pilot station. The ship's agent was also contacted to arrange for all port clearance formalities, which includes clearance for immigration, customs, health, and quarantine and agriculture, as well as port dues.

Normally a shipping agent at the destination port is engaged well before the vessel arrives. The agent arranges for the vessel's arrival and liaises with the vessel's

skipper and owner (or charterer) on the arrangements being carried out. On arrival at a port of entry, the skipper proceeds directly to the pilot station and informs the port master's office of the vessel's ETA at the pilot station. All foreign vessels are obliged by law to engage a harbour pilot to guide and berth the vessel safely to the arrival port unless special exemption is issued by the port master's office; however, a pilot fee is charged whether there is a pilot on board or not.

On arrival at the pilot station, the ship's officers must ensure that the vessel is flying the flag of the vessel's country of registry on the aft flagstaff, a flag of the country of destination on the port arm of the main flagstaff, a "Q" code yellow flag denoting "my vessel is healthy I request free pratique" on the outside of the starboard arm of the main flagstaff; and a "G" code flag denoting "I require a pilot" on the inside of the starboard arm of the main flagstaff. The G flag is lowered and replaced by an "H" code flag once the pilot has boarded the vessel. The H code flag signals "I have a pilot on board".

At the quarantine clearance station the vessel is boarded by representatives of immigration, customs, port health, and the quarantine section of the agriculture department. Here the skipper goes through the tedious role of filling out forms and signing declarations. He is also briefed on special areas of concern and additional clearance measures that are part of the country's statutory laws. In Papua New Guinea, the laws require that the vessel go through all clearance procedures at its first port of entry in the country; after that, at each port of call within the country, the vessel's skipper must notify the port's local authorities of their arrival and departure.

The SPC Fisheries Development Officer informed the skipper and officers of the Soltai 6 that it would be prudent to know all the necessary details of port clearance before travelling to the country of destination. This would enable the skipper to request the ship's agents at the destination port to forward all the necessary clearance papers well before hand and to have all forms filled out before arriving at the port of entry. The experience at Rabaul served the ship's officers well and contributed to their development as ship's officers.

Specialised navigational skills to transit baiting grounds at any time

The skipper and officers of Soltai 6 were familiar with the baiting grounds in the Solomon Islands because most of them have spent their entire working life in the



Dr. Tony Lewis inserting a tag to a skipjack tuna



Dr. Tony Lewis and the scientist team collecting data from landed tuna



SOLTAI 6 baiting crew scooping live bait from the bait tank for chumming tuna running schools

pole-and-line industry there. However, when discussing baiting grounds in Papua New Guinea, the skipper and chief officer said they would need time to familiarise themselves with the passages to most of these baiting grounds, and so they would prefer the baiting grounds to be visited during daylight hours and to return before dusk. Most of the best baiting grounds are unmarked with navigational aids, beacons or lights.

Being a successful pole-and-line skipper requires good navigational skills that will enable him to transit passages and baiting grounds at any time of the day or night, whether the passages are marked or unmarked. This gives the skipper the advantage of being at the fishing ground at the break of dawn and gives him more fishing time throughout the day if the morning operation isn't successful. Modern technology has given skippers an advantage to achieve this with relevant ease if they know how to use the equipment well. The global positioning satellite system (GPS) and differential GPS are cherished modern equipment that enable the skipper to achieve this but in some cases, the negotiation of passages and course ways to and from the baiting ground requires more precision. A relatively new technology will be a boon to all pole-and-line skippers once it becomes readily available to the industry. This is the electronic chart display and information system (ECDIS), which is a real time navigational system that works off an electronic chart. It provides significant benefits in terms of navigational safety and improved operational efficiency. ECDIS is one of two basic types of electronic chart systems but is the only one that complies with the International Maritime Organization's requirements for Safety at Life at Sea (SOLAS) class vessels. However, to give the Soltai 6's skipper the best options with the equipment he has on board,

SPC's Fisheries Development Officer introduced him and his chief officer to precision navigation using the ship's radar system and matching this with echo sounder and GPS plots.

Before approaching a baiting ground or when navigating through passages with unmarked navigation hazards, the skipper must peruse his chart thoroughly and lay off preset courses and pre-marked curves from clearly identifiable radar targets, such as land points and islands. If there is a target that can give a good curve entry for a passage entrance then this makes it easier to transit, otherwise the skipper must constantly mark his way in and out of the passage using preset position lines or using radar transit targets, if available, in conjunction with a GPS plotting system. In most cases, the passages have good targets that enable a curved entry and departure. This is more precise and safer than following GPS tracks in and out of the passage. Following GPS in and out of a passage is adequate if the passage is wide enough to allow for errors, but if narrower passages are tackled, then following the GPS tracks can pose a problem. However, one of the preparatory stages for using the radar marks is to test the marks out during daylight to adjust for any errors. Once the skipper has set a safe radar mark for transiting the passages, he can confidently manoeuvre his way to the baiting grounds.

During the first four baiting operations, this navigational technique was passed on to the skipper and chief officer until they were confident enough to negotiate new grounds on their own. To date, the skipper of the Soltai 6 has continued to negotiate baiting grounds with ease and has added new baiting grounds to his list.



Completing a 'Bouke-ami' baiting operation for entrapping live baitfish



SOLTAI 6 crew in action poling tuna for the tagging team

AROUND THE TRAINING AND EDUCATION CENTRES

Vanuatu Maritime College : 2007 training calendar

Safety Certificate:	2 weeks starting -	22/01/2007 19/03/2007 14/05/2007 09/07/2007 20/08/2007 01/10/2007 03/12/2007
Safety Certificate Revalidation:	1 week starting -	19/02/2007 16/04/2007 28/05/2007 06/08/2007 24/09/2007 15/10/2007
Revalidation for Masters & Engineers:	1 week starting -	12/02/2007 04/06/2007 17/09/2007
Pre-sea Rating Training for Domestic Ships:	12 weeks starting -	12/03/2007 13/08/2007
Safety Training for Fishers:	3 weeks starting -	As requested & subject to availability
Preparatory Skills:	2 weeks starting -	05/02/2007 28/05/2007 22/10/2007
SPC Fisheries Officers Course:	4 weeks starting -	01/10/2007
*Master <20 GT:	4 weeks starting -	19/02/2007 11/06/2007 05/11/2007
*Master <200 or 500 GT:	10 weeks starting -	11/06/2007
Marine Radio Communications:	4 days -	19/03/2007 03/09/2007 17/12/2007
*Engineer <75kW:	4 weeks starting -	19/02/2007 11/06/2007 05/11/2007
*Engineer <300 or 500kW:	10 weeks starting -	11/06/2007
Rural Fisheries Training: In consultation with provincial governments & fisheries	2 weeks starting -	19/02/2007 19/03/2007 16/04/2007 14/05/2005 11/06/2005 09/07/2007 06/08/2007 03/09/2007 05/11/2007 26/11/2007

Small Vessel Operators/Water Taxi Operators - to be arranged as needed.

*All students wishing to attend a Masters or an Engineers programme must first successfully complete either a

Preparatory Skills programme or a literacy and numeracy assessment.

All Masters 200GT and Engineers 300kW should hold Advanced Firefighting, Proficiency in Survival Craft certificates and Medical First Aid certificates. All Masters should hold Marine Radio Licences.

Advanced Firefighting 20/08/2007

Medical First Aid 27/08/2007

Proficiency in Survival Craft 10/09/2007

Course dates subject to student/industry demand. Employers/seafarers may contact the college for up-to-date information at any time.

Additional courses in any discipline can be planned subject to demand and capacity restrictions.

Vanuatu Maritime College : training attachment at Nelson

Background

The Vanuatu Maritime College (VMC) is one of the maritime training institutes in the region at which the Secretariat of the Pacific Community (SPC) has contacted various types of training in the past, such as:

- HIV and AIDs - Train the Trainer (1999)
- ISPS Code, Port State Security (2004)
- Start Your Fishing Business (2004 and 2006)
- Regional Fisheries Officer Training (2006)

VMC has a good working relationship with SPC, which conducts or sponsors training that equips trainees with improved knowledge and skills in various fields in the maritime industry. Training has been conducted both at VMC and in neighbouring countries, including:

- Australia
- Federated States of Micronesia
- Fiji Islands
- New Zealand
- Papua New Guinea
- Samoa
- Solomon Islands

Recently the Nelson Marlborough Institute of Technology (NMIT)/New Zealand School of Fisheries organised a special attachment to upgrade the knowledge and skills of the VMC Senior Catering Instructor, Kelvin Talo, on food safety and fish handling. The attachment was fully sponsored by SPC through its Coastal Fisheries Programme.

KELVIN'S REPORT

The purpose of the attachment was to strengthen my capacity to teach and apply the methods learned, both in my catering and hospitality training activities at VMC and in training for other groups, such as:

- fishers;
- staff of food outlets in Luganville town;
- hotel and resort staff; and

- other communities with a role in preparing food for the public.

The two main areas covered during the attachment were food safety and fish quality handling.

Food safety

The food safety notes were based on unit standard NZQA 167 and NZQA 168.

1. NZQA 167 Version 3 covers:

- Personal hygiene
- Preventing cross-contamination
- Time and temperature control

2. NZQA 168 Version 4 covers:

- Hazards
- Bacteria: The Nine Nasties
- Viruses
- Poisoning
- Toxic algal bloom
- Giardia cryptosporidium
- Food allergies
- Spoilage
- Prevention
- HACCP (Hazard Analysis and Critical Control Point)
- Assessment

Complementary notes

- Food safety programme
- Introduction to HACCP

Quality fish handling

1. Maintaining personal hygiene and using hygienic work practices with seafood - 'Unt. Std. 5332'

- Personal hygiene and hygienic work practices
- Techniques for the prevention of food-borne disease in seafood products





Kelvin baits up the long-line with pilchards



Premium longline-caught snapper (Chrysophrys auratus)

2. Cleaning and sanitising plant and equipment in a seafood processing plant - 'Unt. Std. 6212'

- Cleaning and sanitation
- Contamination
- Cleaning and sanitation procedure

3. Fish for food

- Fish quality
- Managing food safety
- Hygiene and sanitation
- Fish processing
- Bibliography
- Appendices

4. Seafood spoilage factors and their control - 'Unt. Std. 5316'

5. Handling seafood products - 'Unt. Std. 5331'

Training aids provided to assist in future training:

- 1 ultraviolet lamp
- 1 glitter bug
- 1 waterproof digital thermometer or food probe
- 1 antibacterial food probe wipes
- 3 swabs (hygiene test)
- 1 packet PH scale measurement (still to come)

The future

Food safety

Food safety training will be included in the VMC Safety Certificate curriculum under the topic of Occupational Health and Safety (OHS), targeting seafarers. It will also target food stalls in Luganville municipality. A talk will be arranged with the Luganville municipality's Health Inspector to enforce this training in Luganville, as more visitors are now coming to the town. It is believed that the number of visitors will continue to

increase; therefore, food safety must be thought of not only for the maritime industry but for the tourism industry as well.

Quality fish handling

The target group will be fishers, in town and also in rural areas. They will be given guidance on how to maintain the quality of their fish from the time the fish is caught to when it is sold. Quality fish handling will improve fishers' knowledge and skills on better care for the fish and this will enable them to maintain good fish quality at all times. The topic can be put together to generate business ideas for those who wish to start their fishing business. I believe there will be a greater chance to assist people to maintain the quality of their product, as retailers.

Strengthening the working relationship between VMC, SPC and NMIT/Nelson School of Fisheries

Possible areas of increased collaboration between the institutions in future:

- Promoting other VMC tutors' attachment to NMIT
- NMIT tutors to deliver special training at VMC
- Joint programme delivery:
- Training of future fishers for the New Zealand market (still under discussion)
- Handling seafood production
- Maritime
- Tourism



NZ Rock Lobster (Jasus edwardsii) in Dave Ashton's holding crate

Train the Trainers workshops for 2007

Food Safety Training of Trainers workshops will be held in Roturua in April and November 2007. Alec Woods of NMIT has recommended that I attend the workshop. It would be good to attend for greater development, but funding will be difficult to secure. However, I would think November would be the best because the extra time will allow me to teach and gain more knowledge on this topic first. The workshop trainer will be Liz Fitchette, who is the Food Safety Coordinator, and also the writer of Learning Guide: Unit Standard NZQA 167 Version 4 and Unit Standard NZQA 168 Version 3.

Conclusion

I would like to thank Teri'ihauroa Luciani and Michel Blanc at SPC Noumea for funding my two-week attachment with NMIT/New Zealand School of Fisheries.

A special word of thanks to tutors Mr Alec Woods (New Zealand School of Fisheries), Mr Serge Crottaz (School of Tourism and Hospitality) and Mrs Cushla Hogarth (Training and Specialist Advice) for the training packages they put together to make the course available and also for the time they spent lecturing.

Kelvin Talo
Instructor
Vanuatu Maritime College



Kelvin at Leigh harbour as Dave Ashton fuels up the longliner

New Zealand School of Fisheries - Nelson Marlborough Institute of Technology: statutory marine certificate programme/courses for 2007

Name	Start date(s)	Length of programme or course
NZ Local Launch Operator (First 2 days of this programme is Workplace First Aid)	25 January 19 April 26 July 1 November	4 weeks + 2 days First Aid if you need it
NZ Inshore Launch Master (First 2 days of this programme is Workplace First Aid)	25 January 19 April 26 July 1 November	5 weeks + 2 days First Aid if you need it
Workplace First Aid	25–26 January 19–20 April 26–27 July 1–2 November	2 days
NZ Offshore Watchkeeper	30 January (Tuesday) 25 June	10 weeks (Does not include First Aid or Survival courses)
NZ Offshore Master	30 January (Tuesday) 25 June	14 weeks (Does not include First Aid or Survival courses)
NZCM–NZOM (Upgrade)	19 March 13 August	7 weeks
NZOM Unlimited Units 6912 and 6913	7 May 1 October	4 weeks
Mate Deep Sea Fishing Vessel	7 February (Wednesday)	23 weeks (includes ancillary courses)
Master Deep Sea Fishing Vessel	12 March	18 weeks (includes ancillary courses)
ADH-F	7 February 23 April 2 July 17 September 19 November	2 weeks + 2 days
Marine Engineer Class 6	19 February 14 May 20 August 26 November	5 days + extra day for your oral examination
Marine Engineer Class 5	20 August	2 weeks
Marine Engineer Class 4	26 March 3 September	9 weeks (includes Engineering Science I paper)
Marine Engineer Class 3	26 March 3 September	14 weeks total (9 weeks + additional 5 weeks for Engineering Science II paper)

Name	Start date	Length of programme or course
Restricted Radar	26 February* 5 March* 21 May* 30 July* 27 August* 3 December*	5 days
Basic Firefighting	20–24 Feb (Tue–Sat)* 31 May–4 June (Thur–Mon) 23–27 July (Mon–Fri)*	5 days
Advanced Firefighting	12–16 Feb (Mon–Fri) 7–11 May (Mon–Fri) 5–9 July (Thur–Mon)* 26–30 Nov (Mon–Fri)	5 days
GMDSS	15 January 26 March 25 June* 29 October	7 days
GRTOC	11 April 13 September	2½ days
Survival Craft Course	7 February 23 April 2 July 17 September 19 November	2 days
Proficiency in Survival Craft	26 February 18 June* 12 November	5 days
STCW 95 Basic Training Course	1 February* 30 April 9 July 13 September* 3 December	7 days

* **Limited places available**

Accommodation facilities are available. Details can be sent on request.

Contact details:

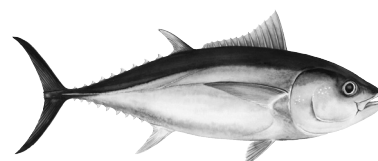
New Zealand School of Fisheries, NMIT, Private Bag 19, Nelson

309 Hardy Street, Nelson

Phone: 64 3 546 2477

Fax: 64 3 546 2456

Email: fisheries@nmit.ac.nz or maritime@nmit.ac.nz



Wageningen International : opportunities for short-term training on fisheries management in 2007

"FISHERIES DATA COLLECTION AND ANALYSIS" and "TOWARDS PARTICIPATORY FISHERIES MANAGEMENT"

Wageningen International, a Netherlands based institute focusing on capacity development and institutional change, will organize 2 short training courses on fisheries management in co-operation with Wageningen University.

The first training course is called "Fisheries data collection and analysis" and will be held in Wageningen, the Netherlands, from October 01 - 19, 2007. This course will focus on the socio-economic and fisheries data and information that is needed for fisheries management. The course is intended especially for staff members of Government departments, institutes and non-governmental organizations that are working on the collection and processing of fish catch & effort data, fisheries statistics and socio-economic information related to fisheries. A limited number of fellowships is available for this course.

The second course is called "Towards participatory fisheries management" and will be held November 19 - December 07, 2007, in Naivasha, Kenya. This course deals with approaches and concepts of fisheries manage-

FISHERIES DATA COLLECTION AND ANALYSIS Wageningen, The Netherlands, October 1 - 19, 2007

Course focus

To manage fisheries, we must have information about fishers, catch and effort, fish stocks, fish processing and trade. Such information forms the basis for policy choices, management plans and evaluations, and must be sufficient, of good quality and up-to-date. However, collecting sufficient data is a costly activity. And the information provided by data cannot be extracted without proper processing, analysis and dissemination. Information about fish stocks is especially difficult to obtain, and thus very costly. Fish are invisible and the stock size and population structure can only be inferred indirectly and with considerable margins of error. In addition, when management is extended to include the whole ecosystem (as in the ecosystem approach to fisheries management) the data set needs to be extended further to make it possible to evaluate the effect of fishing activities on the fish habitat and on

ment, especially fisheries co-management, and with the various tools available to fisheries managers to manage fishing pressure. The course is intended for staff of government departments, agencies and institutes and of non-governmental organizations, including fisher's organizations and academic institutions, with functions such as fisheries policy making, monitoring and implementation of fisheries management and development programmes, research, training and extension.

A limited number of fellowships is available for this course for citizens from a selection of Sub-Saharan countries. See the course fact sheet for the list of eligible countries. The course application forms and more information can be obtained from:

Wageningen International,
P.O. Box 88,
6700 AB Wageningen,
Netherlands.
Tel: +31-317-495 495
Fax: +31-317-494 395
e-mail: training.wi@wur.nl

Course brochures and application forms can also be down-loaded from: www.cdic.wur.nl, click on More Courses, than click in the table on the name of the training course you are interested in.



the non-target components of the aquatic ecosystem. Given the impossibility of obtaining comprehensive information about the fishers and the ecological system, and the limited manpower and means available, a strategic choice has to be made as to the most relevant information and data collection methods.

Aims and objectives

This course focuses on information about fishers, fish stocks and fisheries catch & effort. The course discusses the information needs, the sources of information and the techniques used to obtain it. After the course the participants:

- are able to appraise which information is essential for fisheries management;
- are able to apply some tools and techniques to collect data from various stakeholders;

- are better equipped to process fisheries data and prepare such data for evaluation.

Participants are guided to develop a more analytical attitude towards fisheries data and information.

Training methods

The training course is interactive and makes use of a variety of training methods: lectures and discussions, small group activities, individual assignments, role plays, etc. A period of field work in a Dutch rural setting will give the participants the chance to apply some of the tools they have acquired for collecting information from stakeholders. As far as possible, the analysis of fisheries catch and effort data will be based on digital information (preferably in the form of catch & effort time series) brought by the participants.

Target group

The course is intended for anyone involved in the design of fisheries data collection systems, or in collecting, processing and reporting on fisheries information for management and development purposes. Professionals who may benefit from attending this course include: fisheries managers, researchers employed by Fisheries Departments (both social and fisheries scientists); staff of institutes for research and higher education (universities, colleges, etc); staff of NGOs assigned to research on fishers and fishing communities for development and management purposes.

Who can participate?

Applicants should meet the following requirements:

- Academic degree (BSc or equivalent) in a discipline relevant to fisheries management (i.e. fisheries science, coastal zone management, community developments, biology, extension, social science, economy, etc).
- Competence in the English language.
- At least 3 years of relevant professional experience in: fisheries management or research, higher education in fisheries management, fisheries extension & training, development of coastal or lakeside communities, aquatic resource use issues or closely related subjects.

Programme

One component of the course will focus on tools and techniques for collecting information about and from stakeholders. The skills learned will be practiced during field work in a Dutch rural setting. The other component of the course focuses on the analysis and evaluation of fisheries data.

Partners

This course is organized in cooperation with the Aquaculture & Fisheries Group of Wageningen University.

Certificate

Participants are granted a Certificate of Attendance.

Fees

The tuition fee for the course in Wageningen is • 3200. This amount includes administration fees, lecture materials and excursions.

Accommodation

Participants will be accommodated in the Wageningen International Conference Centre on the basis of full board and lodging. Prices are available upon request. These costs are not included in the tuition fee.

Fellowships

A limited number of fellowships is available for nationals of selected countries at NUFFIC. Candidates who wish to apply for such a fellowship should begin the application procedure as soon as possible by applying for admission to Wageningen International. Upon provisional acceptance, candidates will be informed about the procedure to be followed. Fellowship application deadline: June 1st, 2007.

See also: www.cdic.wur.nl, www.nuffic.nl, www.wur.nl/funding, www.unesco.org/education/studyingabroad/networking/

Studyabroad for other possible sources of financial support.

Wageningen International has no funds for financing participants and regrets it is unable to assist applicants in obtaining sponsorships.

Application

Further information and application forms can be obtained from the address below. The application deadline is September 1, 2007.



TOWARDS PARTICIPATORY FISHERIES MANAGEMENT

FISHERIES CO-MANAGEMENT AND TOOLS

Naivasha, Kenya, November 19 - December 7, 2007

Course focus

This course focuses on fisheries co-management and related management tools. The course presents the perspectives of various science disciplines on fisheries management and evaluates the most common approaches: government-led management, community management and co-management. Although centralized management may work in some large-scale fisheries, it is seldom successful in small-scale fisheries, especially in countries with large fisheries sectors run on limited budgets.

The way forward for such small-scale fisheries lies in decentralisation and a greater role for the resource users in design, implementation and enforcement. During this training course, we analyse cases of fisheries co-management and discuss the implications of choosing for a co-management approach. Under what social and ecological/physical conditions does fisheries co-management have the highest chance of succeeding? What would a process aimed at increasing fishers' participation in management look like?

One of the primary tasks of the fisheries manager is to balance the pressure on the fish stocks and the aquatic habitat that results from exploitation with the carrying capacity of natural populations and ecosystems. In this course, we examine and discuss the toolkit available to the fisheries manager.

Course topics include:

- The perspectives of the biologist, the economist and the social scientist on fisheries management
- Fisheries co-management case studies from different regions and from different types of fisheries
- Conditions for successful fisheries co-management
- The fisheries manager's toolbox for regulating fishing effort
- Conflict management
- Alternative livelihood activities for fishers.

Aims and objectives

The course will give the participants the opportunity to:

- become familiar with various perspectives on fisheries management;
- learn about fisheries co-management concepts, and explore the possibilities, limitations and pre-conditions of co-management;

- become familiar with the tools available to the fisheries manager for controlling fishing effort.

Training methods

The training programme is interactive, and uses case studies to illustrate the effect and impact of different management approaches and practices. Training methods include small group activities, role plays, excursions and individual assignments. Participants are asked to write an individual action plan that shows how they plan to apply the concepts and techniques discussed during the course in their own work situation.

Who can participate?

Applicants should meet the following requirements:

- Academic degree (BSc or equivalent) in a discipline relevant to fisheries management (i.e. coastal zone management, community development, biology, extension, social science, economy, etc).
- Competence in the English language.
- At least 3 years of relevant professional experience in: fisheries management or fisheries research, higher education in fisheries management, fisheries extension & training, development of coastal or lakeside communities, aquatic resource use issues or closely related subjects.

Partners

The course will be organised in cooperation with the Kenyan Wildlife Service Training Institute in Naivasha, Kenya.

Certificate

Participants are granted a Certificate of Attendance.

Fees

The tuition fee for the course is • 2850. This amount includes administration fees, lecture materials and excursions.

Accommodation

Participants will be accommodated at the Training Institute of the Kenyan Wildlife Service in Naivasha on the basis of full board and lodging. Prices are available upon request. These costs are not included in the tuition fee.

Fellowships

A limited number of fellowships is available from the Netherlands Fellowship Programme (NFP) for nationals of following countries: Benin, Burkina Faso, Cape Verde, Eritrea, Ethiopia, Ghana, Guinea-Bissau, Ivory Coast, Kenya, Mali, Mozambique, Namibia, Nigeria,

Rwanda, Senegal, South Africa, Tanzania, Uganda, Zambia, Zimbabwe. Candidates who wish to apply for such a fellowship should begin the application procedure as soon as possible by applying for admission to Wageningen International. Upon provisional acceptance, candidates will be informed about the procedure to be followed. Fellowship application deadline: June 1st, 2007.

See also: www.cdic.wur.nl, www.nuffic.nl, www.wur.nl/funding, www.unesco.org/education/studyingabroad/networking/
Studyabroad for other possible sources of financial support.

Wageningen International has no funds for financing participants and regrets it is unable to assist applicants in obtaining sponsorships.

Application

Further information and application forms can be obtained from the address below. The application deadline is October 19, 2007.





SPC FISHERIES TRAINING ACTIVITIES



Tuna loining workshop and training needs assessment in New Caledonia

Adding value to tuna caught by domestic fishing vessels is increasingly popular in the Pacific. One way of doing this is to prepare chilled or frozen quarter-loins for export to the European Union or USA markets. Last September, New Caledonia called upon the services of the SPC Nearshore Fisheries Development and Training Section to address some training needs in that area that were recently identified following consultations with local tuna processors and exporters. A training strategy was developed by Section staff in collaboration with relevant institutions in Noumea (e.g. Le bureau des Pêches de la Direction du Développement Rural de la province Sud, and the New Caledonia Foreign Investments Office - ADECAL). The strategy included the development of a partnership with seafood processing specialists from the Fare Tautai, a fisheries training institution in Tahiti. Claude Davio, director of Fare Tautai and Patrick Gaboriaud, an experienced fish processor and trainer from a private Tahitian seafood company, came to Noumea in September to assist the local tuna processing industry.

During the first three days of their mission, Claude and Patrick conducted a workshop at the processing plant of the company PESCANNA. Training targeted local

fish cutters and focused on loining methods for albacore tuna, and was aimed at improving the efficiency and safety of local fish cutters. (The first SPC tuna loining workshop was held in Fiji Islands in July 1999 and a comprehensive description of the Tahitian method for quarter-loining albacore tuna can be found in Fisheries Newsletter #90). The fish cutters, quality and process supervisor, and the company manager were all pleased with the high-quality training delivered by the Tahitian tutors at the workshop. It is expected that as an outcome of the workshop, fish cutters will obtain greater yields, thereby increasing the profitability of this tuna processing operation.

After the workshop, Claude and Patrick used the last three days of their trip to carry out a rapid assessment of the training needs of the Noumea-based tuna processing industry.

Various visits to local fish exporters, seafood processors and retailers, as well as meetings with fisheries administrations and training institutions were organised. Among the priority needs identified during this survey was training in tuna handling for vessel crew and the development of a fish cutting course for new entrants into the industry.

Third regional course for fishing vessel skippers held in Nelson

As part of SPC's efforts to promote economically viable Pacific Island fishing enterprises within a sustainable ecosystem context, the Nearshore Fisheries Development and Training Section has recently coordinated the third regional course for commercial fishing skippers in Nelson, New Zealand.

From 9-20 October 2006, 11 fishing vessel skippers were trained on vessel operation management and electronic aids at the New Zealand School of Fisheries of the Nelson Marlborough Institute of Technology (NMIT). The course was funded by SPC and the EU-DEVFISH Project (see section below "2006 Tuna Skippers Course in Nelson" for more detail).

During the first week of the course, SPC Fisheries Development Officer, William Sokimi, was in Nelson to act as a resource person, network with course partic-

ipants, and provide input into course delivery. His extensive background in tuna longlining in the Pacific region significantly helped to enhance the group cohesion. William was replaced by SPC Fisheries Training Adviser, Terii Luciani, for the second week of the course.

Course content and training methodology

The course programme was developed around two general themes, "Fishing Vessel Management" and "Electronic Aids for Fishing Operations".

Fishing Vessel Management covered four subject areas:

- Introduction to Computers (computer keyboard, getting started with Word for Windows, using email and the Internet),

- Vessel Economics (factors affecting vessel profitability),
- Organisation and Planning (vessel turn-around and in-port efficiencies, port infrastructure and vessel maintenance, crew management and training, seafood handling and quality, access to satellite information for fishing), and
- Compliance and Protocols (International maritime law, MARPOL and SOLAS, vessel insurance, skipper's responsibilities, introduction to HACCP principles, vessel safety management systems).

Under the theme Electronic Aids for Fishing, a range of equipment was introduced and practical training was given in their use, based on participants' needs and the time available (ARPA Radar, GPS/Plotter, weather fax and Sea Surface Temperatures, Inmarsat C, EPIRBs, Vessel Monitoring Systems, echo sounders, sonar, etc.).

The course was designed to build on participants' existing skills and assist with areas where individual

participants lack expertise. Because participants were from differing backgrounds and had different levels of knowledge and experiences, the course was operated in a participatory manner and formal lecturing was kept to a minimum. Where appropriate, learning was achieved by sharing experiences and small-group discussions. Some sessions were also conducted by carefully selected guest speakers.

On the last day of the course, trainees were asked to undertake a formal evaluation of the course. Overall, the third regional course was a success. In addition to developing useful professional networks in the New Zealand fishing industry, participants gained many new ideas and knowledge that will help them better manage their fishing vessels and, hopefully, improve their financial profitability.

For more information please contact:
Teriihauroa Luciani
SPC Fisheries Training Adviser (teril@spc.int)



2006 tuna skippers course in Nelson, New Zealand

The third regional course on Vessel Operation Management and Electronic Aids for Commercial Fishing Skippers began with a powhiri, or welcome, at Wakatu marae. The day continued with an orientation tour and an introduction to the computers in the seminar room. William Sokimi (SPC) and Mike Wells, a New Zealand longline skipper with considerable fishing experience in the Pacific, were introduced to the group, comprising ten skippers from eight Pacific Island countries. Luckily the weather held out for the evening welcome barbeque where skippers met the staff from the School of Fisheries.

It was immediately apparent that there was a wide variation in people's familiarity with computers. So, for the remainder of the course, and where applicable, considerable emphasis was placed on the benefits of using this technology to improve fishing performance. Initially this revolved around exercises using the Fishing Profitability software developed by SPC. Tuesday finished with an afternoon discussion led by William and Mike on "Fishing Technology: Challenges and Perspectives", where the experience of these two presenters quickly sharpened people's minds regarding the real issues facing Pacific Island tuna fishermen. Cutting

costs through efficiencies and improving quality were established as key goals.

John Cleal, Managing Director of Fishing Vessel Management Services led the Wednesday morning discussion on vessel management. William and Mike later expanded on this, leading the group in a workshop on "What makes a good skipper?". The afternoon saw a complete change of pace and it was down to the fire station and the Breathing Apparatus Training building for an afternoon refresher on fire prevention and control with Mike Evans. Here the emphasis was on crew familiarity and drills, and the role of the skipper in ensuring crew are ready and capable should a fire break out on board.

No matter how good a fisherman is at catching fish, the job isn't over until the fish is sold for the best price possible on that day. In terms of quality, it's all down hill after the fish comes on board unless everyone involved understands the importance of personal and vessel hygiene, and correct fish handling, processing and care of the catch. Cushla Hogarth took the group through HACCP procedures and the need for documented quality systems. William discussed tuna loin-

ing and the challenges involved, and Grant MacDonald talked about freezing and refrigeration. Once again, MacCure Seafoods welcomed the group to their plant where the group was able to see how this company puts into practice the points that had been covered by Cushla earlier in the day.

John Cleal has had a close involvement with getting the NZ fishing industry owner-operators to adopt FishSafe so he was chosen to lead Friday's discussion on vessel safety management systems. In the following workshop, the skippers that were present were led through the process of putting a hazard identification plan into action on their own vessels. Friday came to a very pleasant close at Solander Fisheries where Paul and James Hufflett hosted lunch. The group then inspected a shipment of chilled mahimahi which had arrived from Fiji earlier that day, before going to the wharf and closely inspecting the longline vessel F/V Daniel Solander.

After such a busy week it was time to get on the water and relax with Martin Holmes on his charter vessel Marie Antoinetta. Unfortunately, the scallops were few and far between so after getting enough for a taste, we returned to Nelson where Viliami Langi and the local Pacific Island community had organised a barbeque.

The final week concentrated on vessel electronics, and participants started off with a look at Sky Eye, a satellite-based weather information system. Tutors Phil Pinniger and Roger Wincer led several familiarisation sessions on standard wheelhouse electronics, with a special emphasis on troubleshooting. On Tuesday morning, we met John Cleal at the port for a practical session on implementing a hazard identification pro-

gramme. Three local fishermen had made their longline vessels available so that the group was able to look over these boats and put their knowledge into practice.

The next day, Mike Wells and Paul Hufflett introduced the Orb Image software and Paul explained how Solander uses it to manage their fleet of longliners based in Suva. Mike pointed out some of the finer points - from the fisherman's point of view - and by the end of the session, all had learned a little more about how satellite-based information systems could help improve fishing efficiency and reduce fuel costs.

With the week drawing to a close it was time to head to Motueka to visit Talley's fisheries processing facility. After the return to Nelson and lunch, tutor Joost Besier talked to the group about Bridge Resource Management from a fishing skipper's point of view. The day was rounded off with the evening farewell function and presentation of certificates by Paul Hufflett.

On Friday morning, Brian Fossett took the group for a sea safety and survival session that included a flare demonstration and discussion on the importance of crew drills before the course wrap up in the afternoon. All the participants felt that the course had been worthwhile, with something for everyone and a good mix of refresher training and new material. It provided an excellent opportunity for companies to showcase some new products and it gave tutors at the School of Fisheries a greater appreciation of some of the issues currently facing fishermen in the Pacific.

Alec Woods
Course Coordinator
New Zealand School of Fisheries



Tour of the FV Daniel Solander



Gearred up for the factory tour

INBRIEF

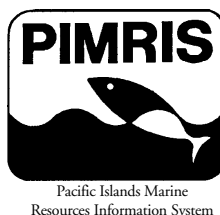
- As part of a two-month assignment in Papua New Guinea (PNG), Fisheries Development Officer (FDO), Steve Beverly, looked at the domestic longline fishery in order to advise on improvements to increase profitability and sustainability. Three longline companies were examined, Sanko Bussan PNG, Fare well Investments, and Latitude 8. Between them they operate a fleet of around 30 tuna longliners. 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. The Fisheries Development Officer, however, only went on one fishing trip. A number of problems were identified with the vessel and this information has been passed on to the National Fisheries Authority in a formal report. 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 on board vessels. In order to do this, however, new vessels would be needed for the fishery.
- In November 2006, Fisheries Development and Training Adviser, Michel Blanc, took part in a joint mission to Tokelau with representatives of SPC and other Council of Regional Organisations in the Pacific (CROP) and UN agencies. The purpose of that visit - a first in the region - was to receive first-hand exposure to the challenges faced by Tokelauan communities. Visits were made to the three atolls of Atafu, Nukunonu and Fakaofu, and to prepare the development of a CROP/UN Joint Strategy of Support for Tokelau for the period 2007-2009. In the area of marine resources, such integrated assistance may cover a number of areas including the management of inshore resources (stock assessments and management advice to follow up on the study undertaken by the Pacific Regional Environment Programme SPREP in 2003), the provision of alternatives to reduce the fishing pressure on inshore resources and the development of a small-scale commercial tuna fisheries sector (establishment of FAD programme, sea safety training and local value-adding). As another follow up to the November mission, it is expected that SPC and the Forum Fisheries Agency (FFA) will jointly undertake in March 2007 a feasibility study of commercial tuna longlining. The Joint Strategy of Support for Tokelau should be presented to the Tokelauan government by April 2007.
- In keeping with the spirit of the Ecosystem Approach to Fisheries, several sections within SPC's Coastal Fisheries Programme are implementing, in close collaboration with the Nauru Fisheries and Marine Resources Authority, an interesting project that may improve the well-being of communities in Nauru. Starting in March 2007 with a four-week canoe building workshop for the Nauru Fisheries and Marine Resources Authority (NFMRA) staff and prospective boat builders, the project will deploy a number of inshore fish aggregating devices (FADs) - several innovative designs will be experimented with - and a series of workshops on safe canoe handling and FAD-associated fishing methods. A professional boat builder will supervise the canoe building workshop (four one-man KIR-7 canoes will be constructed), while SPC Fisheries Development Officer, William Sokimi, will assist NFMRA staff with FAD deployments and follow up FAD fishing skills workshops. Two communities have been identified by NFMRA and the SPC Coastal Fisheries Management Section will be involved in the project as part of their community-based fisheries management plan. NFMRA will monitor the use of the project canoes and inshore FADs in collaboration with the concerned communities. If successful, the canoe/inshore FAD concept will be exported to other coastal communities in Nauru. This project is funded by the government of Taiwan/ROC, the DEVFISH project, and the Near-shore Fisheries Development and Training Section.

- The Nearshore Fisheries Development and Training Section, the Service de la Marine Marchande et des Pêches Maritimes of New Caledonia and turtle expert Mike McCoy will soon be implementing a turtle bycatch mitigation project in New Caledonia. The objectives of the project are 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 the government Service de la Marine Marchande et des Pêches Maritimes with techniques of handling sea turtles caught incidentally to 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 fishing vessels in New Caledonia, 4) integrate appropriate topics in sea turtle interaction with commercial fishing into the ongoing work programmes of Marine Marchande, the École des Métiers de la Mer (local fisheries training institution) and SPC, and 5) enhance cooperation among the different government and non-governmental organisations involved in fisheries management and turtle conservation, locally and regionally. The project will consist of a series of training workshops and meetings in the two ports from which the tuna longline industry operates in New Caledonia: Noumea, in the Southern Province, and Koumac, in the Northern Province. Each workshop will be conducted by the outside consultant, with assistance from SPC personnel. Presentations on the importance of reducing sea turtle interactions and mortality from the standpoint of the commercial fishing industry will be made, and mortality mitigation practices and devices explained. Individual informational meetings will also be held with the staff of Marine Marchande and senior management at the various firms engaged in tuna longline fishing in New Caledonia. A separate workshop will be held for Marine Marchande staff and onboard fishery observers. Observers

will be trained in mortality mitigation techniques, record-keeping, and aspects of fishery management and sea turtle conservation relevant to the topic of sea turtle bycatch. A training syllabus to be used in this and future training in New Caledonia will be produced with assistance from the outside consultant. The project, which is funded by the US National Oceanic and Atmospheric Administration Fisheries' Pacific Islands Regional Office (PIRO), will run from March to April 2007.

- In addition to the above project on turtle bycatch mitigation, the Section's inputs into the New Caledonian fisheries sector also include technical assistance to the domestic tuna longline industry. Early in 2007, Fisheries Development Officer Steve Beverly will make a trip on each vessel owned by Navimon to observe fishing and fish handling practices, provide on-the-job training to vessel skippers, and advise on ways to improve the profitability of the vessel. It is envisaged that the Fisheries Development Officer will undertake a total of five to six two-week-long fishing trips from February to May 2007. Vessel-specific findings will be presented to Navimon's senior management staff immediately after each trip, while the more general recommendations will be included in the end-of-project report. The government of New Caledonia has requested the Nearshore Fisheries Development and Training Section to conduct a training workshop on mid-water fishing methods around FADs for staff of local fisheries institutions. The workshop will be held in Lifou (Loyalty Islands) and is tentatively scheduled in October 2007. Meanwhile, Section staff will assist local authorities with the ordering of fishing gear and bait for the fishing workshop and trials. It is expected that, after the initial workshop, a number of commercial fishermen will continue using the FAD fishing methods (mainly vertical longlining), with their fishing activities and catches monitored by the provincial fisheries administration.

PIMRIS is a joint project of four international organisations concerned with fisheries and marine resource development in the Pacific Islands region. The project is executed by the Secretariat of the Pacific Community (SPC), the South Pacific Forum Fisheries Agency (FFA), the University of the South Pacific's Pacific Information Centre (USP-PIC), and the South Pacific Applied Geoscience Commission (SOPAC). This bulletin is produced by SPC as part of its commitment to PIMRIS. The aim of PIMRIS is to improve the availability



of information on marine resources to users in the region, so as to support their rational development and management. PIMRIS activities include: collection, cataloguing and archiving of technical documents, especially ephemera ("grey literature"); evaluation, repackaging and dissemination of information; provision of literature searches, question-and-answer services and bibliographic support; and assistance with the development of in-country reference collections and databases on marine resources.