



*Secretariat of the  
Pacific Community*  
**MARINE RESOURCES DIVISION**

# Fisheries Education and TRAINING

*Number 24 — August 2006*

**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

Welcome to a very informative issue of your SIG bulletin on Fisheries Education and Training.

First, you will learn about the merging of two sections of the Coastal Fisheries Programme (CFP). After the Fifth Heads of Fisheries Meeting endorsed the new CFP Strategic Plan, two sections with a common focus (the Training and Development Sections) were amalgamated to form the Nearshore Fisheries Development and Training Section.

In this issue, the focus is on fishing vessel safety and the likely impacts of the Torremolinos Protocol and STCW-F Convention on the Pacific Islands. Obviously, the introduction of relevant standards for vessel safety and crew training can only provide a safer working environment, wider employment options, and a more sustainable livelihood for fishing vessel personnel. However, the change will have cost implications that need to be considered and carefully assessed.

This issue also provides lively reports on the Section's most recent activities and on the other activities of the Nearshore Development and Training Section.

As usual, you will read about courses, workshops or new programmes available from training institutions in our region. For example, on page 15 there is information about the development of new programmes in sustainable fisheries at the University of the South Pacific.

Finally, we look forward to receiving your comments, and contributions for the next issue.

Happy reading!

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# FEATURES



## Merging of two sections at the Coastal Fisheries Programme

Assisting SPC members in their commitment to apply the Ecosystem Approach to Fisheries (EAF) to coastal fisheries and aquaculture by 2010.

At the Fifth Heads of Fisheries meeting, the above statement was endorsed as the main overall objective of the Coastal Fisheries Programme (CFP) Strategic Plan for 2006-2009. Within CFP, the new focus on EAF, like the application of EAF itself, requires its different sections to work together in a more coordinated fashion.

Lindsay Chapman, a CFP staff member, was appointed Manager of the programme in October 2005 to provide integrative programme leadership. After the Heads of Fisheries endorsed the new CFP Strategic Plan, two sections with an existing common focus (the Training and Development Sections) were amalgamated to form the Nearshore Fisheries Development and Training Section. This merged section will address objective 3 of the Strategic Plan:

Assisting governments and administrations in the development of domestic nearshore commercial fisheries within a sustainable context.

It is expected that this rearrangement, together with the implementation of EAF, will promote a more holistic way of assessing and addressing the needs of SPC member countries and territories in coastal fisheries and aquaculture.

The Nearshore Fisheries Development and Training Section consists of:

- a Project Assistant - Christine Bury
- two Fisheries Development Officers - William Sokimi and Steve Beverly
- one Fisheries Development Officer (DEVFISH project) - Jonathan Manieva
- one Fisheries Training Adviser - Terii Luciani
- one Nearshore Fisheries Development and Training Adviser - Michel Blanc



## Tools for improved fishing vessel safety: The Torremolinos Protocol and the STCW-F Convention

It is a well-known fact that fishing is one of the most dangerous occupations in the world. The following statistics from the International Labour Organization (ILO), the International Maritime Organization (IMO) and the Food and Agriculture Organization of the United Nations (FAO) clearly demonstrate the extent of the safety problem in the global fishing industry.

- Each year there is an average of 24,000 fatalities and 24 million non-fatal accidents (non-fatal injuries are grossly under-reported according to the ILO).
- While fishing represents less than 1% of occupations worldwide, 7% of all worker fatalities occur in the fishing industry.
- The fishing fatality rate is estimated at 80 deaths/100,000 individuals per annum, which is 79 times higher than the overall occupational fatality rate.

The community nature of much of the world's fishing activities, and the potentially devastating impact that high injury and fatality rates can have on fishing communities, is demonstrated by another set of statistics.

- In 1995, the total world fishing fleet (of all types) was about 3.8 million vessels.
- About 15 million people are employed aboard fishing vessels and about 98% of these people work on vessels less than 24 m in length.
- Most of the world's fishing fleet comprises boats that operate in artisanal fisheries.

According to the IMO, 80% of accidents are caused by human error and most of these errors can at some point be attributed to management deficiencies that create pre-conditions for accidents. Personnel must be effectively managed to ensure that they have appropriate training and that they work in accordance with relevant labour laws and agreed on conditions. The proce-

dures, methods and systems used on fishing vessels must be properly managed to ensure that they work effectively and efficiently and produce the required outcomes. Finally, the mechanical components involved (hull, machinery, fishing gear, etc.) must also be managed to ensure that they are properly maintained and perform in accordance with their designed capacity.

The solutions for improving fishing vessel safety are thus straightforward: seaworthy vessels, well-trained and competent crews, and safety-oriented management. Seaworthy boats are of critical importance, but it is necessary to have standards for their design and construction, as well as for the vessel equipment and outfitting. Along with these standards there must also be standards for maintenance and inspection; in other words, a regulatory system designed to oversee the fundamentals of safe operations. The standards must be universally adopted and this requires some sort of international binding agreement. The Torremolinos Convention and its 1993 Protocol provide the necessary framework.

Just as important as the standards for the vessels, there must be standards for the crew, their training, qualifications and work methods. Because fishing is an industry that operates in open seas, interacts with other maritime industries, and is global in operation, it is also important that common crew training standards be used, particularly when it comes to qualification and certification. Those standards must be universally adopted and recognised and the only way to do this is through the framework of an international convention. This is the purpose of the Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel, 1995 (STCW-F Convention).

### **The 1977 Torremolinos Convention and its 1993 Protocol**

The safety of fishing vessels has been a matter of concern to IMO since it came into existence. In 1977, the first ever international conference on the safety of fishing vessels was held in Torremolinos, Spain. The conference adopted the Torremolinos Convention (1977), which established a safety regime for fishing vessels of more than 24 metres. The Convention looked at construction standards and some safety related equipment for fishing vessels in a similar way that the Safety of Life at Sea (SOLAS) Convention does for cargo and passenger vessels. Found too stringent by the major fishing nations, however, the Convention was never ratified.

In 1993, a Protocol to the Convention was adopted (Torremolinos Protocol). The Protocol updates and amends the 1977 Convention taking into account technological evolution and the need to take a pragmatic approach to encourage ratification of the Convention. The safety provisions of the Protocol cover construction, stability, machineries, fire protection, protection of crew, life saving equipment, emergency procedures, radio communications, navigation equipment, vessel certification and port state control. Some of the provisions are restricted to fishing vessels of more than 45 m. To date, six states have ratified the Protocol (15 are required for its entry into force).

### **The 1995 STCW-F Convention**

The STCW-F Convention complements the Torremolinos Protocol by setting the regulatory framework for the training and certification of fishing vessel personnel. STCW-F is the "sister" Convention to the 1978 STCW Convention (training and certification of seafarers), as amended in 1995, with similar provisions.

The STCW-F Convention addresses the training and certification standards for skippers and watchkeepers on fishing vessels of more than 24 m, for engineers on vessels producing more than 750kW, and for crew in charge of radio communications. It also requires basic (pre-sea) safety training for all fishing vessel personnel. The Convention embraces the concept of competency-based training. It does not deal with manning levels. Six states have so far ratified the STWC-F Convention (15 are required).

### **Document for Guidance on Training and Certification of Fishing Vessel Personnel**

First published in 1985, and thoroughly revised in 2001, the Document combines the conventions and recommendations adopted by ILO and IMO with the wide practical experience of FAO in the field of fishermen's training.

The Document is aligned with the provisions of the STCW-F Convention. It provides guidance to set the framework for a training system for fishing vessel personnel appropriate to the size and nature of the fishery (all sizes of fishing vessels are covered). The Document addresses issues such as the methods of training and assessment (competency-based training is promoted), the content and duration of training pro-

grammes, the competences to be assessed, and the required experience and qualification for tutors. There is a strong emphasis on sustainability (FAO Code of Conduct), fatigue management, and the active involvement of all parties in training development.

The above instruments were promoted at a regional seminar in late March, in Suva, Fiji, as part of an initiative from the IMO to urge member governments to consider accepting the 1993 Torremolinos Protocol and the 1995 STCW-F Convention. This was the eighth in a series of nine regional seminars run by Milhar Fuazudeen (IMO Technical Officer) and David Harrod (Maritime Safety Consultant). Participants included 10 maritime administrators, 8 training providers, 3 fisheries administrators and 2 fishing operators as well as staff from both SPC maritime and SPC fisheries programmes.

With regards to the likely impacts of Torremolinos and STCW-F on Pacific Islands, several important points were made at the seminar.

- The Pacific Islands region is well ahead of other regions in that it already has training and certification standards for fishing vessel personnel: a common certification structure for trading and fishing vessels was developed by SPC's Regional Maritime Programme in the mid-1990s through a consultation process involving heads of marine departments and training institutions. It is monitored on an ongoing basis through a sub-committee of the Pacific Islands Maritime Association (PacMa) (latest version is available from SPC's Regional Maritime Programme).
- Training institutions in the region are already familiar with the concept of competency-based training, and a number of model training programmes for fishing vessel personnel are available and being used throughout the region (e.g. SPC's safety certificate and SPC/Pacific Island Qualified Fishing Deckhand certificate). The pre-sea induction training system used in Papua New Guinea for new vessel crew is also relevant as it is aligned with the requirements of STCW-F for basic pre-sea safety training for all fishing vessel personnel.
- While the Protocol and Convention apply to large fishing vessels (i.e. > 24 m), which are very few in Pacific Island countries (PICs), the application of these instruments is flexible. It is possible for national laws to extend the applica-

bility of Torremolinos and STCW-F to smaller classes of vessels.

- National administrations and the regional fishing industry need to be aware of and familiar with the provisions of these international instruments and to prepare for their entry into force. The current status of requirements and standards in the region means that the effective implementation of the Protocol and Convention would not be too difficult.
- Due to the current limited number of missing signatories, PICs, by ratifying the instruments, may drive their entry into force.
- SPC's Regional Maritime and Fisheries Programmes can underpin a regional mechanism and be the focal agencies in assisting countries with the implementation of the Protocol and Convention.

SPC shares the opinion of the IMO that implementing the 1993 Torremolinos Protocol and the 1995 STCW-F Convention will significantly improve the safety record of the fishing industry and contribute to the prevention of loss of lives onboard fishing vessels.

Obviously, the introduction of relevant standards for vessel safety and crew training can only provide a safer working environment, improved safety, wider employment options, and sustainability of livelihood to fishing vessel personnel. However, the change will have a cost, not only for fishing vessel operators (upgrading of safety systems), but also for training institutions (wider application of competency-based training and assessment) and maritime administrations (certification and surveys). These cost implications need to be considered and carefully assessed: SPC and the Forum Fisheries Agency (FFA), through the European Union-funded DEVFISH project, will soon undertake a regional study on this issue, the results of which will be widely distributed to fisheries and maritime stakeholders.

For more information, contact:

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# AROUND THE TRAINING AND EDUCATION CENTRES

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## Pacific Marine Educators Conference 15-20 January 2007, Suva, Fiji

Marine educators from throughout the Pacific will gather from 15-20 January 2007, in Suva, Fiji, to share resources and build a network aimed at ensuring the health of the ocean. Those educators who are unable to travel to Fiji can participate through web conferencing.

The decision to hold this Pacific Marine Educators Conference is an outcome of the One Ocean Marine Forum, held in July 2005 at Kahului, Maui, Hawaii. This meeting focused on building an international network of marine educators. The upcoming conference will further that goal by piloting the Pacific.

Pacific Islands provide an early warning of problems, changes and issues facing our ocean. These small, sensitive and fragile islands experience the interplay of issues such as sustainability, stewardship and climate change, showing in microcosm how this interplay may affect the world as a whole.

Marine educators - in the widest sense - are invited to participate in this conference focused on the Pacific.

The conference will be held at the University of the South Pacific. It is sponsored by local, regional and international organisations, including the Marine Sector Working Group, Council of Regional Organisations of the Pacific.

The conference organising committee includes representatives from the Western Pacific Regional Fishery Management Council (USA), University of the South Pacific (Fiji), Foundation of the Peoples

of the South Pacific International (Fiji), Marine Education Society of Australasia (Australia), National Marine Educators Association (USA), Ocean Futures Society, University of Hawaii (USA), Howard County Public School System (USA), Hatfield Marine Science Center, Oregon State University (USA), Kamehameha Schools (USA) and College of Exploration (USA).

For more information or to provide suggestions to the organising committee, please contact one of the following:

- Harry Breidahl (Australia) at [nautilused@optusnet.com.au](mailto:nautilused@optusnet.com.au)
- Sylvia Spalding (USA) at [info.wpcouncil@noaa.gov](mailto:info.wpcouncil@noaa.gov)
- Joeli Veitayaki (Fiji) at [veitayaki\\_j@usp.ac.fj](mailto:veitayaki_j@usp.ac.fj)

Sponsors are needed to help send participants from developing and underdeveloped countries to the conference and to provide web conferencing sites outside Fiji.



## Personal report - funded training at PNG Maritime College

It is the dream of everyone to move on in life and achieve success through whatever aims and goals we have. The dream is the same whether it is about shore-based work or about work in the maritime sector on vessels trading nationally or internationally.

The only difference with doing seetime and training in the maritime sector is that once you are due for training, you have to attend it or you'll get left behind if you delay too long.

In Solomon Islands, where I come from, it is quite hard to secure employment on larger gross tonnage vessels because there isn't any such registered vessel in Hon-

ia. I've tried it and just waited for seven months. Knowing that getting my seetime was important, I then applied to National Fisheries Development Ltd (NFD). After nine years I am still working with NFD on one of its vessels, Purse Seine, both nationally and internationally.

Furthermore, it is difficult to obtain a scholarship given by aid donors through the government because there are other employment areas that the government of my country considers more important than this field of work. I hope this situation will change soon as we are an island nation with an urgent need to fill a vacuum in the maritime industry in the near future and to



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develop the national Maritime College to train all Solomon Islanders working in the maritime industry.

Getting further training abroad seemed too hard as the fees are out of my reach. That was the point that I thought my career would end in this field. However, with the help of SPC and NFD, which also accepted me on one of the short courses back in 2000, I have been able to attend and upgrade my certificate to OOW / Mate 3 at Papua New Guinea Maritime College this year.

PNG Maritime College, situated in the heart of Madang Harbour, has international students from Solomon Islands, Vanuatu and East Timor and national students from the shipping industry within PNG. In between studying for their main maritime qualification, a maximum of 200 students take short courses such as Fire Fighting (Basic and Advance), Sea Survival (Basic and Advance), First Aid (Basic and Advance and Ship Master's Medical Care), ISPS, Tanker Safety (Basic and Advance), GMDSS (ROC and GOC). A total of around 600 students attend the college each year.

On arrival in Madang, I found it challenging as it was my first time to attend a full-time course abroad. With

the good hospitality of national students and staff (both national and international alike), though, I soon felt at home. I was surprised by the availability of facilities compared to what I had experienced before and I tried my best to make full use of them. Most impressive of all was the Nautical Studies Ship Simulator training facility - something new for me and an amazing experience when I know that I am actually ashore. It is like keeping a bridge watch on a ship in Singapore's Malacca Strait for four hours and then walking out back to Madang. The subject was professionally taught using a perfect world-class competency base training facility.

The course was challenging as we progressed into it more deeply each day. Even though I was the only one with experience as a fisherman in the class, believe me, it was not easy. Our syllabus was mostly done practically on merchant navy vessels. With the help of the staff and more time put into studying, I passed all my exams for the first part of the year. There is still a lot to do and learn for the remaining part of the year, including the oral exams.

I believe that everything we want comes from hard work, discipline, dedication and personal commitment but, most importantly, financial support really counts. Without this financial support, I wouldn't be able to continue in my further studies. I would like to thank the SPC training scheme and NFD for supporting me financially and I hope this support will continue not only for me but also for others who wish to continue their studies in the future. Last but not the least, I would like to thank the Papua New Guinea Maritime College for accepting me to study there this year and would recommend this college to any seafarer thinking of furthering their maritime education.

**Junior P. Delaiverata**



## Vanuatu Maritime College looks back at 2005

### Domestic shipping programmes at VMC, 2005

The year 2005 was relatively quiet for the Vanuatu Maritime College (VMC). The college was open for business 50 weeks of the year, with an emphasis on training Vanuatu seafarers for the domestic industry and rural fishers. For 48 of those weeks, starting on 17 January and ending on 16 December, students were on campus and training programmes were underway.

### Training

During the year a wide range of programmes was offered to meet the needs of students from domestic shipping, as shown in the table below.

Programme topic	Number run	Length	Number of students
Safety Certificate	9	2 weeks	113
Preparatory Skills	3	2 weeks	32
Pre-Sea Rating	2	12 weeks	14
Master <20 Gross Tonnes	2	4 weeks	20
Master <200 Gross Tonnes	2	10 weeks	12
Master <500 Gross Tonnes	1	10 weeks	3
Engineer <300 Kilowatts	1	10 weeks	9
Restricted Radio Operator	3	4 days	21
Advanced Fire Fire-fighting	1	5 days	14
Proficiency in Survival Craft	1	5 days	16
Medical First Aid	1	5 days	19

This was the first year in which the college offered Pre-Sea Rating training, which is designed for Year 10 school leavers wishing to enter the domestic industry. During the 12 weeks of the course, the students live at VMC under strict discipline. The curriculum covers safety at sea and introduces catering, nautical and engineering activities. Most of the trainees on the 2005 programme have now found employment.

There was substantial interest in Rural Fishing training in 2005, following the Government's declaration of 2004 as the Year of Fisheries. Courses were held at six sites in Malampa Province, one in Penama Province, two in Sanma Province and three in Shefa Province, for a total of 352 male and female students. In 2006 these courses are again in great demand.

Worldwide, there is a shortage of both deck and engineering officers. In 2005, as in the two previous years, the Australian Agency for International Development (AusAID) provided two special scholarships,

administered by VMC, to cover the four years of training required for officer cadets to become qualified as junior officers on foreign-going vessels.

The 2003 engineer cadet spent 2005 doing seetime aboard a vessel based in Papua New Guinea. The deck cadet, after some difficulty obtaining seetime, was taken aboard a vessel based in Cairns, Australia towards the end of the year. There were good reports on the performance of both cadets at sea.

Of the three cadets taken on in 2004, the deck cadet performed well at PNG Maritime College and then returned to Vanuatu in mid 2005. Contrary to his hopes, he was not taken on for the delivery voyage for either of the two Chinese-funded vessels, so he now urgently needs to do seetime on an overseas ship. The AusAID-funded engineer cadet, after spending the first part of the year doing seetime, entered PNG Maritime College at the end of May for 12 months of study. The other engineer cadet, funded by VMC,

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decided not to continue his studies after the 2005 annual holidays; his scholarship has been terminated. Two new cadets entered VMC in March 2005 for 12 weeks of training. On completion of their programmes, they began seetime on domestic vessels. They will both go on to PNG Maritime College in 2006.

For the first time since the introduction of training in general-purpose ratings for overseas vessels in 2002, this course was not offered. This decision was made because students on the course in previous years experienced considerable difficulty in finding employment.

Other courses held in 2005 are listed in the following table.



*Ambrym fishers learn about outboards*

### Other VMC courses, 2005

Programme topic	Number run	Length	Number of students
Fire & Survival Training for patrol boat RVS Tukoro	1	3 days	18
Training for Port Security Officers	1	4 days	4
Community Cooking	1	1 week	11



*Euphrosyne II, VMC's largest vessel*



### Quest for international employment

In an effort to promote Vanuatu seafarers to a wide audience, the Chief Executive Officer travelled to Riga, Latvia in May to attend the Lloyds Ship Management European Manning and Training Conference. The conference raised many issues affecting seafarers worldwide, including terms and conditions of employment and the shortage of trained officers. Although no firm offers of employment were made, some company representatives showed interest in receiving more information on Vanuatu seafarers. The Chief Executive Officer's attendance at this conference received generous financial support from the European Commission, which paid the full cost of air fares and promotional literature as well as contributing towards per diem costs.

On 22 September, VMC organised and conducted a one-day Workshop on Training and Employment for ni-Vanuatu Seafarers in Port Vila. Participants identified a number of recommendations to assist seafarers to find employment and agreed that these should be submitted to the Council of Ministers. The necessary documentation was prepared and the outcome from the submission is awaited.

**International Ship and Port Facility Security Code**  
As in 2004, the Chief Executive Officer provided advice and assistance in port security matters, in particular those related to the proper implementation of the Port Security Plans for Port Vila and Luganville. He also attended all meetings of the Port Security Committee, chaired by the Director-General of Infrastructure & Public Utilities. A small grant for activities related to the International Ship and Port Facility Security (ISPS) Code was provided by AusAID and administered by VMC. The Office Manager was one of an international team of auditors that conducted the first security audit of the port of Luganville.

### STCW audit

It is a requirement of the International Maritime Organisation (IMO) that training institutions in countries on the so-called "White List" be audited against the standards laid down in the Convention on Standards of Training, Certification and Watch-keeping (STCW). An STCW audit of the college was conducted in April 2005 and the results communicated to IMO.

### Human resources

The Chief Executive Officer, Capt. K.J. Barnett, will not be renewing his contract; instead he will leave VMC after the contract's completion at the end of August 2006. He will be replaced by Capt. John Lloyd from the United Kingdom.

A New Zealand volunteer, who joined the college staff in 2003 as Nautical Instructor, completed his term of service in June 2005. Another volunteer from New Zealand, Peter Petherbridge, joined the staff in March 2006. The position of Senior Engineering Instructor was filled for most of the year (until September 2005) by an experienced Australian engineer funded through Australia's Pacific Technical Assistance Facility.

### Vessels

The vessel used for rural fishing training, Etelis, was slipped in June 2005 for routine maintenance and annual inspection. Evolan, which is used for practical navigation, seamanship and engineering training, went up on the slipway at the end of the year, in preparation for thorough maintenance early in the new year. At the end of 2005, the small outboard-powered vessel Emm Nao, built with guidance from the Ecole des Métiers de la Mer in New Caledonia and funded by SPC, was still awaiting construction of a suitable trailer. This has now been built and Emm Nao successfully took to the water in May 2006.

The exercise of refurbishing Euphrosyne II, VMC's largest vessel, began to gather momentum at the end of 2005. In 2006 Santo will be the site of a major biodiversity survey by an international group of scientists, for which the two main partners are the French Muséum d'Histoire Naturelle and Pro-Natura Inc. The marine component of the survey will be based at the college. Pro-Natura Inc. has agreed to contribute funds for the refurbishment of Euphrosyne, work began in December and the vessel will shortly be slipped.



*VMC small outboard-powered vessel Emm Nao ready to go*

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### Regional cooperation and staff development

Throughout 2005 VMC continued to work closely with the SPC Fisheries Training Section (FTS), based in Noumea, New Caledonia and the SPC Regional Maritime Programme (RMP), based in Suva, Fiji.

FTS supported rural fishing training by providing a grant that VMC could use to keep course fees at a token level. Due to another FTS grant, the Office Manager received training in creating and launching the college website.

From 13 to 30 June VMC hosted a Training of Trainers course in small fishing business management ("Start Your Fishing Business"). This course was part of a project implemented by SPC in collaboration with training institutions in PNG, with funding support from the Commonwealth Secretariat. Attending the course were five participants from Solomon Islands and twelve from Vanuatu, representing the Chamber of Commerce, the Cooperatives Department, the Fisheries Department, VANWODS and VMC.

In order to be accredited as trainers by the IMO, the Training of Trainers course participants then had to organise and run a training workshop for local fishers, overseen by a Master Trainer from PNG. The two VMC instructors were among the resource people teaching a course for 16 fishers from Sanma Province, held at the college from 19 to 30 September.

RMP again lent its portable ship-handling simulator to VMC for use in training shipmasters and deck

watch ratings. Other activities funded by RMP included the attendance of various staff members at the following meetings:

- Chief Executive Officer - Audit Sub-Committee, Suva, Fiji in January;
- Office Manager - founding meeting of the Pacific Women in Maritime Association, Suva, Fiji in February;
- Senior Engineering Instructor - Survey Sub-Committee, Suva, Fiji in March;
- Chief Executive Office - Pacific Islands Maritime Association (PacMA) annual meeting, Nadi, Fiji in March; and
- Chief Executive Officer and Senior Nautical Instructor - Moderators, Examiners and Lecturers Sub-Committee, Auckland, New Zealand in August.

The Chief Executive Officer attended a meeting of the Marine Accident Investigators International Forum in Port Vila from 29 August to 2 September, where he presented a paper on the role of training in the prevention of accidents at sea. His attendance, along with that of other PacMA Executive Committee members, was funded by RMP.

RMP also organised and funded staff development as follows:

- Chief Executive Officer and Office Manager - Maritime Security Auditors Course, VMC, 30 and 31 March;
- Engineering Instructor and Fitter/Mechanic - Certificate IV in Workplace Training and Assessment, Suva, Fiji, 18-29 July; and
- Senior Engineering Instructor - Advanced Shipmasters Medical Course, Suva, Fiji, 26-30 September.



### *First prize!*

*On a lighter note, VMC won first prize at the Luganville independence celebrations for its float LV Jubilee. It also took part in the Queen's Baton Relay in October.*

### Innovative training the way forward for fisheries

Bay of Plenty Polytechnic, Tauranga, New Zealand, has provided training in fisheries management and in the seafood, maritime, and aquaculture sectors since 1992.

The polytechnic takes an innovative approach to developing and delivering training in the most suitable format, whether it be on-the-job training, distance learning or studying at its campus in Tauranga. Some of its programmes are firsts for New Zealand, offering training in issues relating to Maori customary fishing and training at sea. They include the National Certificate in Customary Fishing Level 3 and two national certificate programmes that are delivered onboard deep-sea trawlers at sea. Previously, no other training institution in New Zealand has had the capacity to deliver fisheries training at sea.

In partnership with one of New Zealand's largest fishing companies, Talleys Fisheries Limited, Nelson Division, the Bay of Plenty Polytechnic initiated a programme in which employees get on-the-job training at sea on 45-50 day trips. On completion of the programme, successful employees gain either the National Certificate in Seafood Processing Level 2 or the National Certificate in Seafood Vessel Operations [Nautical Skills] Level 3, depending on which one they have enrolled in.

Andrea Wilkinson, Human Resources/Training Manager for Talleys Fisheries, says, "The training has improved the thinking of our employees at work. During work breaks they have their resource folders out studying now, rather than sitting around talking. At the end of each trip our employees want to gain further skills, so for us this has been a real success story."

Another programme that has proven to be extremely valuable is the National Certificate in Customary Fishing Level 3, which is delivered off campus at marae (Maori meeting places) around the country. The polytechnic owns the programme and works in partnership with a local company, Manaaki Moana Limited, which has developed resources and delivers the training using experienced roving trainers. Members of local iwi (Maori tribes) receive training in customary legislation, development of fisheries policies, fisheries management tools based on regulations, and compliance issues.

"This is the best thing since sliced bread," said Graeme Morrell, Takiwa representative of Ngapuhi ki Whanga-

rei too Te Runanga o Ngapuhi. "Iwi have been looking for this for a long time and we're pleased with the opportunities that the Bay of Plenty Polytechnic and Manaaki Moana have given our people."

As well as offering various modes of training, the polytechnic is able to deliver training in other countries. For example, it is currently negotiating a three-month staff exchange and professional development fellowship with Tonga, commencing in early 2007.

Other programmes available from the Bay of Plenty Polytechnic include:

- National Certificate in Seafood [Strand] Aquaculture Level 4 - includes modules in Microbiology & Chemistry, Aquaculture Legislation, Aquatic Health, Seafood Biology & Hatchery Techniques, and Aquaculture Repair & Maintenance.
- Diploma in Fisheries Management Level 6 - a two-year, sixteen-module programme covering a wide range of topics including Marine Science & Ecology, Marine Invertebrates, Seafood Research Projects, Fisheries Management Plans, Issues & Perspectives, and Management & Leadership.
- New Zealand Off-Shore Master - a statutory maritime qualification that enables the captain to fish a 50 m vessel up to 200 miles off the coast.
- Inshore Launchmaster
- Pre-sea training programme for new entrants into the seafood industry
- Advanced Deckhand Fishing endorsement qualification. This programme has also been delivered at sea onboard a large purse-seine vessel in the Pacific by one of our tutors, with crew from Kiribati, Palau, Samoa, Solomon Islands and Croatia.

Contact the Bay of Plenty Polytechnic:

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## Training needs assessments in Polynesia and Papua New Guinea

During the reporting period, the Nearshore Fisheries Development and Training Section has been involved in two important studies of fisheries-related training needs in the region.

### Business planning and management in Polynesia

Following the successful introduction in Papua New Guinea (PNG) of a fisheries version of the International Labour Organization (ILO) training programme, Start and Improve Your Business (SIYB), SPC, with funding support from the Commonwealth Secretariat, has coordinated the introduction of the same training programme in Vanuatu and the Solomon Islands.

This project consisted of a training of trainers (TOT) course at Santo in June 2005, a series of in-country courses in both countries, and the official accreditation by the ILO of several trainers in each country. This training programme (Start Your Fishing Business - SYFB), which is now available through several institutions in each country, is aimed at developing fishing business planning and management skills amongst prospective or existing entrepreneurs.

A review of the programme by the Commonwealth Secretariat and SPC resulted in an interest to ascertain the relevancy of the training programme for Polynesian countries. As an initial step, a training needs assessment and feasibility study in relation to the introduction of this SYFB program was conducted in May 2005. The consultant contracted by SPC (Hugh Walton from the company Gillett, Preston and Associates) travelled to Tonga, Samoa and the Cook Islands in May 2006 to interview stakeholders involved or interested in small business management training. The study report was subsequently produced and distributed to relevant institutions in the three countries as well as in Niue and Kiribati, which had previously indicated an interest to participate in the programme.

The focus of the current SYFB training programme is on small-scale fisheries businesses, which is relevant to Melanesian countries where it is generally agreed that fisheries development is still possible in most coastal areas. However, it is apparent from the recent study that the challenges facing rural

communities in Tonga, Samoa and the Cook Islands are very different from those in PNG or Vanuatu. In the Polynesian countries, there is very limited scope for increasing fishing effort in inshore areas and this is reflected in the current focus on the conservation and management of reefs and inshore resources. Nevertheless, there was a general consensus in the countries surveyed that a modified fisheries SIYB programme could support the development of small-scale businesses in the marine sector, provided the focus of the programme is on the use and promotion of "non-fishing" business models, and thus fits into the current conservation and management initiatives of local institutions.

The study further recommended the following general themes for the SIYB training programme in Polynesia.

- The inclusion of a resource management component to the programme;
- A focus on improving the efficiency of existing inshore fisheries operators (through improved business skills or value-adding to seafood products, not through catching more fish!);
- A shift in focus from fishing businesses to businesses based on marine resources in a broader sense such as eco- and adventure-tourism, sport fishing, and other alternative income opportunities;
- In the case of the Cook Islands, a specific programme for pearl farm operators.

The programme model developed for Vanuatu and the Solomon Islands (TOT course for participants from all countries followed by in-country courses) appeared to be well suited to the needs of the countries surveyed. The study report further recommended the PNG Master Trainers used for the Vanuatu/Solomon Islands project should deliver the TOT course and provide support for the subsequent in-country programmes. Samoa was suggested as a suitable venue for the delivery of the TOT course.

Following this Training Needs Analysis, the Commonwealth Secretariat and SPC agreed to facilitate the introduction of the SIYB training programme in Polynesia. The Nearshore Fisheries Development and Training Section will have a coordinating role for the TOT course, which is scheduled for the first



quarter of 2007. The selection of participants will be undertaken in collaboration with the fisheries administrations and relevant business-support institutions in each country.

### Training needs assessment of PNG fisheries sector

In June, SPC's Nearshore Fisheries Development and Training Adviser travelled to PNG to participate in a training needs analysis (TNA) of the PNG fisheries sector. This work was done in collaboration with two fisheries consultants, Hugh Walton (Gillett, Preston and Associates) and Grant Carnie (Australian Fisheries Academy).

The TNA was commissioned by the Board of the National Fisheries Authority (NFA), as part of deliberations concerning the potential development of a diploma and degree programme at the University of Vudal (Rabaul) and the National Fisheries College (Kavieng). The terms of reference for this detailed sectoral training needs and cost-benefit analysis, required the study team to give consideration to the:

- development of the diploma and degree programme with the University of Vudal and NFC,
- needs of fishing companies and shore-based processing facilities,
- potential training needs associated with aquaculture development,

- operation of existing NFC courses in Commercial Fisheries and Post Harvest Fisheries,
- needs of the artisanal sector, and
- inclusion of a regional perspective in the analysis.

The study included consultations with national and provincial governments, provincial fisheries administrations, commercial and industrial fishing operators, operators of large and medium sized processing facilities, NGOs and community representatives, and training providers. The report was formulated on the basis of stakeholder consultations in Port Moresby and selected provincial locations. Despite the limited time-frame available for the TNA, the study team members made visits to Wewak, Madang, Lae, Kavieng and Rabaul, in addition to attending meetings and interviews previously conducted in Port Moresby.

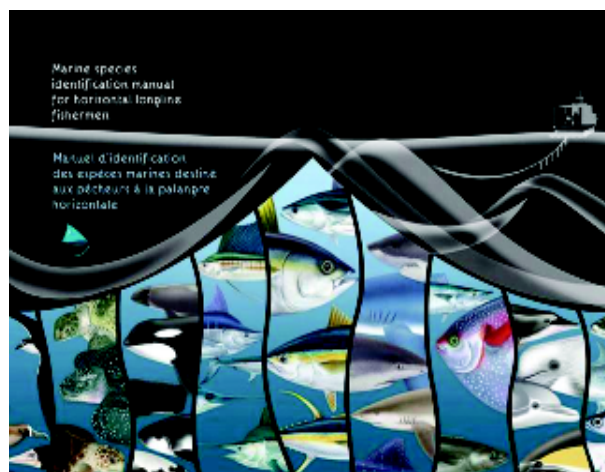
A preliminary report was drafted by the study team during meetings in Kavieng, and finalized through email correspondence. The finalized draft report has since been presented for consideration to the NFA Board.

### Identification tool for horizontal longline fishermen distributed

After some unexpected pre-production delays, the "Marine species identification manual for horizontal longline fishermen" is now available. Over 3000 copies of the manual have been distributed another 2800 copies will be kept at SPC Noumea for future use.

This bilingual manual (French and English) covers the main species likely to be caught or interacting with horizontal longlines in the Pacific, plus some species that are uncommon. The final section of the manual covers species of special interest, including sea turtles, toothed whales and dolphins, and seabirds. For the main species, there is a colour picture of the species plus a line diagram with common identifying features marked. For each species, the scientific name is given, as well as the FAO species identification code for reporting purposes, and the common name in English, French, Japanese and Hawaiian for marketing purposes. Staff of SPC's Coastal Fisheries Pro-

gramme are now working on a second manual that will cover deep-water snappers and associated species that are caught from 100-400-m depths. This manual is expected to be available in 2007.





### Other activities of the Nearshore Development and Training Section

- A refresher SYFB training of trainers (TOT) course was conducted at Santo, in July. The course, conducted by two Master Trainers from PNG, was attended by 2 Solomon Islands and 11 Vanuatu trainers. By successfully completing the TOT process, the participants are now officially recognized as national trainers under the International Labour Organization (ILO) certification framework. The refresher courses also marks the completion of SPC's and the Commonwealth Secretariat's assistance to Vanuatu and the Solomon Islands in the area of small fishing business management. The onus is now on local institutions and trainers to market and deliver the SYFB training programme in-country
- The third regional course on vessel operations management and electronic aids for commercial fishing skippers will be delivered at the New Zealand School of Fisheries, at Nelson, from October 2-13, 2006. The course will be similar to that of the two previous courses with a combination of classroom-based sessions, presentations on specific topics by relevant guest speakers from the Nelson-based fishing industry, and field visits. The course will be jointly sponsored by the governments of Australia, France and New Zealand and the European Union through the DEVFISH project. While primarily targeting the private sector, the course is also open to skippers from national fisheries administrations, provided the vessels they operate have a clear training mandate. The selection of course participants will be undertaken by SPC's Nearshore Fisheries Development and Training Section in August.
- A video-DVD to promote at-sea tuna loining and freezing operations has been produced by SPC's Nearshore Fisheries Development and Training Section staff. The video-DVD will be available for distribution by the end of August 2006...hopefully in time for a meeting of tuna industry stakeholders in the Cook Islands.



# NEWS FROM USP

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## Development of new programmes in sustainable fisheries at the University of the South Pacific (USP)

New programmes in fisheries are being developed at USP in response to a regional demand for training in applied sustainable fisheries. The new programmes are collaborative (with SPC), interdisciplinary (fisheries science, social science), include a mix of theoretical and practical studies, are flexible in learning modes, allow either generalization or specialization, and facilitate professional development in fisheries in Pacific Island countries (PICs)

The proposed new programmes focus on issues such as fisheries sustainability and management in PICs, and integrates fisheries sciences with socioeconomic studies and practical or applied studies with theoretical knowledge.

The programmes will be offered as certificate (one year, equivalent to the SPC/Nelson Marlborough Institute of Technology (NMIT) Fisheries Officer course), diploma (two years, equivalent to USP's former Diploma of Tropical Fisheries), and degree (three years) in sustainable management. The first year will replace the existing SPC/NMIT course, and will be offered in collaboration with SPC (and NMIT if funds are available).

The cross-crediting and incremental learning approach facilitates professional development in fisheries departments in the region. Candidates with the SPC/NMIT Fisheries Officers certificate can

progress directly to second year (diploma). USP's distance and flexible learning programmes enables all certificate and diploma courses to be undertaken in the major home countries. The wide choice of courses enables generalization or specialization in areas such as food technology, economics, extension, research, and/or policy and management.

In particular, the first year of studies provides basic understanding and core competencies, and integrates practical and theoretical subjects. It can be offered as the first of three years for the degree for continuing students, or as a stand-alone certificate suitable for fisheries assistants. It is designed to be generally equivalent to the SPC/NMIT Fisheries Officers certificate, the content of which, reviewed and modified in 2003, is still relevant to the training needs of junior fisheries officers.

SPC will continue to offer a four-week course combining the observer programme and the practical fishing components of the SPC/NMIT Fisheries Officers course. This course will be held on a regular basis (annual or biannual), at a national training institution. Attendance to the course will be restricted to staff of fisheries departments (graduates from USP certificate or diploma in sustainable fisheries as well as other fisheries officers requiring refresher training in those two areas).



# SPC Sea Safety Resource Materials

## Course and workshop materials

- FAD Fishing Skills Workshop, Teaching Modules
- Module 2 : Safety at Sea and Small Boat FAD Fishing
- Kit of teaching materials for a two-week Pre-Sea Safety and Fishing course (screening of potential crew of longliners and purse-seiners)
- Basic sea Safety Certificate (Learner's Guide, Trainer's Guide, Overhead Transparencies)
- Restricted Class 6 Master/Engineer Certificate (Learner's and Trainer's Guides for modules SPC 021B – Nautical Knowledge-, SPC 022B – Diesel Engineering, and SPC 022C- Outboard Motors)

## Manual for crew members

- Safety Aboard Fishing Vessels (A practical Guide for Crew Members)

## Public awareness materials

- 5 posters
- Logo sticker "Think Safety at Sea"
- A4-size sticker "Small Boat Safety Check-list"
- Laminated card "Small Boat Safety Check-List/ Five Minutes Which Can Save Your Life"
- 8 TV clips "Boat Safety Tips"
- Audio-tape programme on sea safety

## Video Tapes (in either PAL, NTSC or SECAM systems)

- 'Better Safe than Sorry'
- 'Survival at Sea - A Kiribati Tale'
- 'Rambo Goes Deep sea'

## Safety Management Systems

- Safety Management Systems for vessels under 500GT (leaflet)
- Getting the best of your Safety Management System (leaflet)
- Model Safe Operational Plan (SMS for small outboard-powered commercial vessel)
- Model Safety Management Manual and Logbook (SMS for medium-to-large size longliner)

Some of the materials listed below can be downloaded from the SPC website at:  
[http://www.spc.int/coastfish/Sections/training/Training%20material/Training\\_material.htm](http://www.spc.int/coastfish/Sections/training/Training%20material/Training_material.htm)

These materials can also be ordered directly from the Fisheries Training Section - SPC  
PO Box D5  
98848 Noumea  
New Caledonia



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.