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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

You would like to know all about the newly established Vanuatu Maritime College?... Interested to hear what courses are available to Kiribati merchant seamen and fishers?... You are desperately seeking engineering training opportunities for your staff?... You want to know what the SPC Training Section has achieved over the last six months?...

All the above and much more is in the thirteenth issue of our SIG bulletin on Fisheries Education and Training, thanks to all the persons who have sent their written contributions to us.

I recall not-too-distant times when outside contributions were so scarce that putting together our SIG bulletin was a nightmare! Fortunately, this has changed and nowadays we receive articles from the region's training providers and trainees as soon as a call for contributions is circulated.

May this trend continue, for the benefit of those who have an interest in fisheries training issues in the Pacific region.

Michel Blanc

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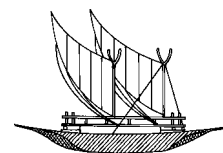
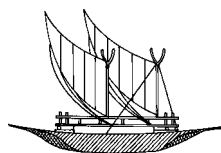
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M a r i n e R e s o u r c e s D i v i s i o n - T r a i n i n g S e c t i o n



FEATURES



A busy year and an exciting future

by Caroline Nalo

Office Manager, Vanuatu Maritime College

Vanuatu Maritime College was founded less than a year ago, but is already bustling with life under the direction of its dynamic Chief Executive Officer, Captain Ken Barnett, who was appointed in February 1999. Captain Barnett is by no means new to the Pacific Islands—he has headed maritime training institutions in Kiribati, Papua New Guinea and Tuvalu and so will be well known to many Island seafarers.

The College is situated in the town of Luganville on Vanuatu's largest island, Santo, and was formerly the Fisheries Training Centre. Its mandate is to 'provide quality training for seafarers and fishers at all levels to improve employment opportunities in the maritime and fishing industries and enhance safety at sea'. However, before any training could be done, the College had to be ready to provide it—and this has involved an immense amount of hard work over the past few months.

First, staff, most of them ni-Vanuatu, had to be recruited. The College team now consists of:

- Consultant Senior Engineering Instructor, Chris Gee—an engineer with plenty of Pacific experience and a familiar figure to those who own and work on Vanuatu inter-island ships;
- Engineering Instructor, August Fred—holds a 300 BHP Marine Engineer's ticket and has had overseas training in Solomon Islands, New Zealand and Finland; worked for the Marine Department and for private firms;
- Volunteer Senior Nautical Instructor, Joseph Dryburgh—an Australian citizen hailing originally from Ireland, with sea experience dating back to the Second World War;
- Catering Instructor, Kelvin Talo—experience as Chief Steward on vessels working internationally, and in hotels;
- Fishing Instructor, Nare Wolu—holds various fishing certificates and a Mate II qualification; worked for the Fisheries Department for 10 years;
- Boat Skipper, Soti William—Grade 5 Master's and other marine certificates; worked as Captain of government ships and was Nautical Instructor and then Head of the Marine Training School;

- Fitter/mechanic, Tom Lorrend—Mechanic 1st Class, 300 BHP Engineering Certificate and Grade 5 Engineering Certificate; worked for the Ports and Marine Department, private companies in Vanuatu and PNG, and the Vanuatu Hydrographic Unit;
- Office Manager, Caroline Nalo—worked for Department of Lands and, as Chief Editor, for SPC; responsible for day-to-day administration and accounting;
- Administrative Assistant, Sharon Bulesali—worked for private firms and for the Vanuatu National Council of Women;
- Groundsman, George Warren—holds a coxswain's certificate and is a good fisherman; responsible for keeping the College grounds and buildings in good order;
- Cook, Walter Coty—worked as cook aboard overseas vessels and in local resorts; seafarers enjoy his cooking;
- Cleaner, Anna Shem—keeps the inside of the College squeaky clean.

Once people were on hand, the College facilities had to be brought up to scratch. From May to November, building teams were hard at work renovating the six staff houses, the three existing classrooms and accommodation for visiting instructors. They also refurbished a large existing building which now contains an engineering workshop and classroom, did up the student dormitories, enlarged the ablutions block and student kitchen, and built a student laundry.

At the same time, staff were busy with the two College vessels. *Etelis* and *Evolan* are now ready to play their part, with *Etelis* to be used for practical fishing instruction in rural villages and *Evolan* for training seafarers. In mid-November, the Council of Ministers approved the addition to the College fleet of the *Euphrosyne*, which in pre-Independence times was used by British Resident Commissioners as a touring vessel. *Euphrosyne* is to be on loan to the College for two years, with the College responsible for repairing and maintaining it. This will provide an excellent opportunity for seamen and engineers to have hands-on experience in ship renovation and seamanship.

Any training institution needs to be well equipped. College staff became a familiar sight at the wharf and airport cargo

sheds as they collected life rafts and life jackets, fire-fighting equipment, distress flares, kitchen equipment, office furniture, computers, engineering tools and many other essential items.

In the meantime, curriculum development proceeded apace. The Vanuatu Maritime College provides take-home notes to all students attending its courses, so that they can refresh their memories and look up essential information when they go back to work. At the moment all course notes are in English, but there are plans afoot to translate them into Bislama as soon as time and funds permit.

Finally, in August, the College was ready to conduct its first safety and survival course—one of six to be held in 1999. Each course takes between 12 and 15 students, this number being small enough for all students to receive individual attention from instructors and to participate fully in practical exercises. As this article went to press, the College was running three courses: a Safety and Survival Course, an Engineering Course on engines of less than 75 kW, and a Master's Course for masters of small ships under 20 tons.

All students successfully completing a course receive a certificate attesting that they have been trained in accordance with the requirements of the 1995 amendments to the International Convention on Standards of Training, Watch-keeping and Certification (STCW '95). These amendments come into force on 1 February 2002 and require that all seafarers be appropriately trained before that date.

Vanuatu is a nation of many islands, and inter-island ships carrying cargo outwards and kava and copra into Santo and Vila are the islands' lifeline. For this reason, the Vanuatu Maritime College is currently giving priority in its training to seafarers serving aboard inter-island ships. And they value the opportunity to receive it. Each day, more seafarers are in the College office completing application forms, while over a shell of kava at night, those who are attending courses can be heard recounting what they have learnt and commenting on the value, especially, of the practical parts of the training. One was even overheard saying 'We have all these life jackets on board, but I had no idea how to use them until yesterday'!

Staff, too, have been given the opportunity for further training. All staff attended a Safety and Survival Course, with two being the first ni-Vanuatu women ever to gain a Safety Certificate. The Fishing Instructor was given three weeks of training at the New Zealand School of Fisheries, with funding provided by SPC. Several of the instructors and the Office Manager attended a course for teachers of HIV/AIDS information, organised and funded by SPC and held at the College, with other participants from Vanuatu and four from Solomon Islands. The Catering Instructor returned in November from a two-month attachment to the Hospitality Section of the

National Institute of Technology in Port Vila. Funds for training and development in 1999 came from two sources: the recurrent budget, funded by the Vanuatu Government through the Departments of Ports & Marine and Fisheries, and the capital budget, funded by a levy on the Vanuatu Shipping Registry.

The year 1999 has been mainly one of 'tidying-up' and preparation. What are the plans for the future? In 2000 the College will continue to concentrate on training of inter-island seafarers (it is believed there are between seven and eight hundred of them), with Safety and Survival Courses running right through the year and increasing emphasis on training in engineering, seamanship and navigation at various levels.

Training for rural fishers will also begin in 2000. Already the College has received a request from Torba Province (the Banks and Torres Islands, probably the most isolated of all Vanuatu communities) for men and women on four different islands to be trained. This type of practical training in their home environment will help villagers to increase their catches both for home consumption and for sale. Modules offered will teach skills in boat repair, engine repair and maintenance and net mending, as well as different fishing techniques.

Further into the future, the College will be embarking upon the exciting challenge of training ni-Vanuatu seafarers for employment as deck, engine-room and catering ratings aboard vessels trading internationally. Interest in this type of training has already been expressed by ship-owners as far afield as Japan and India. Other potential students are the 300 or so ni-Vanuatu fishermen working aboard overseas fishing vessels. Contacts with the Vanuatu Fishermen's Association indicate a sizeable likely demand from its members.

Further development of the College facilities is also planned. A grant has been made available by AusAID for construction of a fire-fighting simulator; construction began in late November. Recently the National Development Commission approved a three-year investment programme. It includes an engine-room simulator, a cargo-handling simulator, dangerous goods storage, additional classrooms, more student accommodation and staff housing, repairs to the College jetty and pontoons, dredging of the channel leading to the College, and buoy moorings and navigation aids. Several donors have already shown interest in the programme. The weather looks set fair for the Vanuatu Maritime College.

For more information please contact:

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*Demonstration of the correct use of pyrotechnics
at the Vanuatu Maritime College*



Fire-fighting practicals



Fish handling workshop in Tanna



*A spare sail is a good alternative means
of propulsion*



Righting a life raft

Product Development Attachment at USP

*by Silika Ngahe
Ministry of Fisheries, Tonga*

In March 1999 a consultant from the Marine Science Project, USP, Fiji, Dr Irene Novaczek, visited Tonga to carry out a study on Needs Assessment and Strategy Development for the Post Harvest Fisheries Development Project. In her report Dr Novaczek recommended that there is a need to train Pacific women in product development. This is because there is an acute shortage of post-harvest fisheries expertise at all levels throughout the region; this is especially true for women. This two-month attachment, from October to December 1999, was set up in collaboration with the Marine Science Project and the Ministry of Fisheries, Tonga, and was made possible with funding from the Government of Canada (Canada South Pacific Ocean Development—CSPOD). The aim of the attachment programme was for women in the Pacific to produce their own product to meet their needs in their own countries.

This product development attachment was on-the-job training and a follow-up to the one-month fisheries training course for Pacific women on Seafood Technology and Business Management held in Nelson, New Zealand in April–May 1999. Unfortunately, only three women from the Pacific region were able to attend this attachment training—two from Tonga (Mosiana 'Alofi and Silika Ngahe) and one from Kiribati (Ann Tokataake). The programme included lectures, videos, and practical sessions on seafood recipes, which we tried out. Recipes were selected mostly from the hand-outs given by the Secretariat of the Pacific Community (SPC) and the Marine Science Post Harvest Project at USP.

The first week of the training programme concentrated mainly on product development. One of the participants, Mosiana 'Alofi, introduced her new recipe for fishburgers using tuna and reef fish meat. A very handy meat mincer was helpful during this demonstration. Most of those who tasted the fishburgers responded favourably. Mosiana left after two weeks while Ann Tokataake and I continued. We experimented with our own products using our own ideas and recipes, such as fishburgers, fish cakes, fish pickle, smoked tuna jerky, smoked kaikoso, salting and drying and fish ball filling with octopus.

During the following weeks we produced one recipe after another. Every time we made a product, we gave a sample to the Marine Science Post Harvest staff and students to taste and make comments. The feedback from them was quite encouraging. From our experiments we found out that we preferred reef fish like emperor, snapper and big eye bream to tuna species because the meat is white, tender and the fat content is low. As well, we learnt that using lean fish is more suitable when the recipe requires butter or oil.

We also joined some of the Marine Science students when they showed the post harvest video and during a lecture on HACCP (Hazard Analysis and Critical Control Point). Much of our time was spent reading teaching materials on how different products are made and this helped us make the abovementioned products.

We also attended the PACEM in Maribus (Peace in the Oceans) XXVII Conference with a half-day workshop for women on Improving Women in Post Harvest Fisheries.

This was a great opportunity for us to share the experiences and skills of women from other countries and was the most exciting and useful time during this conference. It showed how badly women need training in post harvest. Four representatives from Pacific countries each presented a paper on the role of women in fisheries, mainly concerning the role of women in post harvest fisheries. Ms Dorice Reid from Cook Islands chaired this session. We found that the local women who participated in the workshop had some interesting points to make. For example, women are working hard in processing and marketing but are still unrecognised by the government or even their own community; there is a lack of women's involvement in new areas of fishing; and there is a lack of fisheries training provided for women in the region. I suggested that the Marine Science Lab is one of the best places in the Pacific for women to be trained in post harvest, especially in product development.

We were fortunate to have Richard Byer to talk to us about how to make new products. Our thanks go to him for giving his valuable time and sharing his secrets with us, especially concerning value adding to products. He also gave us some important points to remember, such as the need for consistency with our product in four areas: colour, taste, texture and keeping quality.

Conclusion

I am very grateful for the opportunities that are being given to Pacific women such as ourselves to study more on post harvest and hope that such attachments will be given to other women in the Pacific if requested. The Marine Science Lab is an excellent venue, having all the necessary equipment, combining modern technology with village level methods. I am very confident about transferring the skills I have learnt to other women in the Pacific if needed and I hope that this kind of training will continue to be offered to women in the Pacific.



Silika Ngahe showing some mouth-watering fish fingers

Acknowledgements

My sincere thanks to the Government of Canada and the Marine Science Project, USP, for making funds available for us to do this attachment. I also thank the Government of Tonga and Ministry of Fisheries for accepting the invitation for my attachment. Thanks go to all Marine Science staff, especially to Tony Chamberlain and Samisoni Sauni, for their kind assistance during our stay in Fiji. Despite their busy schedules, they were always there to help when needed. Also to Joep for his great help in the Lab especially for starting the fire for our smoking and for helping with shopping and providing materials needed for our product

development. And lastly to Richard Byer for sharing his time with us.

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SPC FISHERIES TRAINING ACTIVITIES



Tuna handling workshops in American Samoa

by Michel Blanc
Fisheries Education and Training Adviser

Following a request for assistance made at the First Heads of Fisheries Meeting in Noumea in August 1999, SPC Masterfisherman Steve Beverly and SPC Fisheries Training Adviser Michel Blanc spent a few days in Pago Pago during the last week of September. The purpose of the visit was to train local fishers and fish retailers in the handling and grading of sashimi-quality tunas.

Two workshops were run at the Department of Marine and Wildlife Resources (DMWR), following the programme and training methodology used at similar workshops in other countries and territories. Morning sessions covered the sashimi concept, on-board handling, and grading factors, while afternoon sessions focused on hands-on demonstration and practice of on-board handling and cutting of sashimi slices. A total of 40 participants attended the workshops, mostly fishers (28) with some boat owners, fish retailers, company managers and staff of DMWR.

There are currently 26 active longliners in American Samoa, most of them being Alia catamarans built and purchased in

neighbouring Samoa. The catch is presently sold either on the local market for fresh fish or to one of the two canneries in Pago Pago. Some local entrepreneurs are keen to start exporting tunas to sashimi markets overseas and are encouraged to do so by DMWR Director Ray Tulafono. By looking at the key factors to successful longline operations for the marketing of chilled sashimi-grade tunas, it appears that American Samoa has all the elements in place for such a development: one of the most sheltered harbours in the Pacific, deep enough to accommodate all types of fishing vessels, direct passenger and cargo flights to Hawaii and the West coast of mainland USA, two canneries that can absorb a large volume of by-catch, straightforward access to US markets and a strong interest amongst fishers and entrepreneurs in catching and exporting fish to overseas markets.

For more information please contact:

Mr Michel Blanc
Fisheries Education and Training Adviser



Masterfisherman Steve Beverly showing the right way to cut sashimi slices



Part of the Alia fleet in Pago-Pago

New course materials available

by Michel Blanc
Fisheries Education and Training Adviser

In July 1999, Mr Grant Carnie, acting CEO at the Australian Fisheries Academy, spent two weeks in Noumea to undertake a consultancy for the SPC Fisheries Training Section. The purpose of this consultancy was to write the curriculum and produce the resource materials for two courses that would complement the certification structure for Pacific Island mariners as developed by the SPC Maritime Programme early in 1998. Following recommendations made at recent regional maritime meetings, the Fisheries Training Section had identified funding to develop the Basic Sea Safety and the Restricted Class 6 Master/Engineer certificates. Both certificates are for the crew of small vessels (fishing vessels below 15 metres; trading vessels below 20GT) operating in near-shore waters (<200nm).

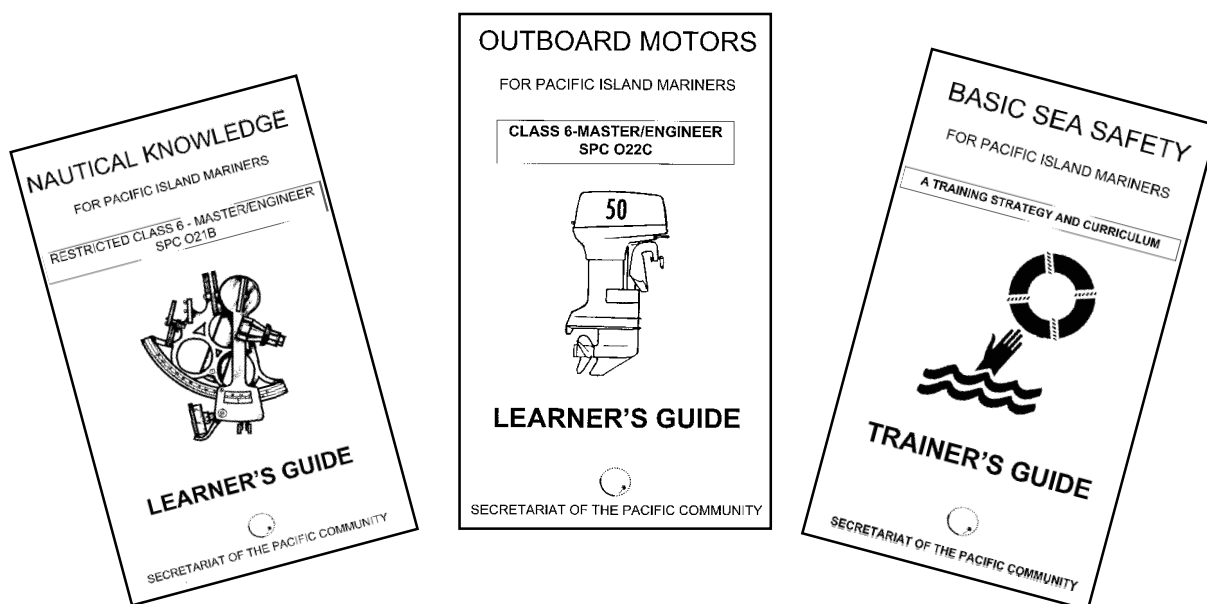
The Basic Sea Safety certificate covers the minimum safety skills required by the crew of small vessels. Its delivery, very hands-on, will take three to five days, depending on local circumstances and the equipment available. It is envisaged that the Basic Sea Safety certificate will become a statutory course for the crew of small vessels, in most countries in the region. The curriculum is very similar to that of the Australian Elements of Shipboard Safety and has already been adopted by Samoa. The course materials developed in August include a user-friendly Trainer's Guide with Learning Outcomes, Assessment Guidelines, Delivery Guidelines and Overhead Transparencies and a Learner's Guide which summarises the course content with a series of drawings.

The Restricted Class 6 Master/Engineer certificate is a modular course intended for the skippers of small vessels. It is a lower version of the Full Class 6 certificate developed by the SPC Maritime Programme in 1998. The new modules are the Restricted Nautical Knowledge (SPC 021B), the Diesel Engineering (SPC 022B) and the Outboard Motor (SPC 022C). Each module includes a Trainer's Guide and a Learner's Guide, as for the Basic Sea Safety certificate.

Through the production of these new modules and certificates, the intention of the Training Section is to increase the range of options available to national maritime authorities when developing their small-vessel legislation. The course materials will soon be copied onto CDs and their distribution to maritime authorities and training institutions was scheduled for December 1999. The first Restricted Class 6 certificate course was run in November 1999 at Lautoka, Fiji, for tourist boat operators of Viti Levu. The course curriculum and resource materials will be reviewed at the next meeting of the Association of Pacific Islands Maritime Training Institutions and Maritime Authorities, in March 2000.

For more information please contact:

Mr Michel Blanc
Fisheries Education and Training Adviser



Expert assistance to the Fiji seafood industry

by Michel Blanc

Fisheries Education and Training Adviser

As a follow-up to the regional course on seafood business operations and management for Pacific Island women (12 April to 7 May 1999), SPC Fisheries Training Section contracted a Seafood Technology expert to visit two companies in Fiji. Ms Cushla Hogarth, tutor at the New Zealand School of Fisheries, spent one week at Ocean Trader in Pacific Harbour (19–23 July), then four days at Celtrock Holdings, ex-Feeders Seafood (27–30 July).

At Ocean Trader, Ms Hogarth worked alongside the company's Quality Control Officer Ms Archana Ben, who had attended the regional course in New Zealand. In a limited time frame, Ms Ben and the company manager, Ms Lisa Stone, received assistance in the following areas:

- Hazard Analysis and Critical Control Point (HACCP) Plans: the HACCP Plans for Ocean Trader's existing seafood products (dried tuna jerky and hot smoked fish products) were reviewed and suggestions made for improvement.
- Standard Sanitation Operating Procedures (SSOP): SSOPs were reviewed for water treatment and testing, conditions and cleanliness of food contact surfaces, cross contamination, toxic chemicals and pest control. SSOPs were also developed for personnel control and repairs and maintenance.
- Good Manufacturing Practices (GMP): a GMP on product recall was developed.
- Product Coding: a suitable form of product coding was discussed with the aim of further refining identification of smoked, sliced and dried batch codes.
- Specifications: raw material and product specifications for all products were developed and will be used to control product quality.
- Staff Training: a brief training session on personal hygiene and food safety was conducted for staff of Ocean Trader.



Ocean Trader's processing room



Packing smoked tuna for export

The Seafood Technology expert also developed HACCP Plans for potential new products and processes. Some technical recommendations were also made for the improvement of Ocean Trader's premises.

At Celtrack Holdings, Ms Hogarth ran a three-day HACCP training programme for nine staff of the company. The curriculum of the United States Food and Drug Administration (USFDA) was followed and a class example of chilled, headed and gutted tuna destined for the USA was used. Participants then developed their own HACCP Plan — either chilled, vacuum-packed tuna loins or canned tuna. All nine participants gained a good insight into the concept of HACCP and received a Certificate of Attendance for their efforts.

The opportunity was taken to review the October 1997 Celtrack HACCP Plan and some changes were made. The

Celtrack Sanitation Standard Operating Procedures were also reviewed and suggestions made for improvement. Celtrack's new canning facility was visited and some suggestions made on the standard of construction and process controls to meet FDA requirements.

The Fisheries Training Section believes that the short-term placement of experts can successfully assist Pacific Island seafood businesses to meet the requirements of importing regions such as North America and Europe. The managers of seafood companies wishing to receive similar assistance should contact the SPC Fisheries Training Section.

For more information please contact:

Mr Michel Blanc

Fisheries Education and Training Adviser

A tool for calculating longline profitability

by Michel Blanc

Fisheries Education and Training Adviser

With funding assistance from the United Nations Development Programme (UNDP), the Fisheries Training Section has produced, and will soon distribute, computer software designed as a tool to understand and manage the financial aspects of longline vessel operations.

The programme will be useful to vessel skippers, owners, company managers, fleet managers and any others who have an interest in the economics of longlining. It gives a quick and accurate indication of vessel profitability and can immediately calculate profit variations caused by changing parameters in vessel operation.

The programme is particularly interesting in the teaching situation where it can be used to compare vessel income with fixed and variable costs and give the cash flow and profit/loss figures. With this achieved, the programme user may then alter any parameter in vessel operation and the soft-

ware will instantaneously show how this change affects the profit. By this means, the key factors and the most effective ways of increasing profitability are demonstrated.



A tool for calculating long-line profitability

The software was developed by Ivanhoe Associates, a New Zealand-based computer company, with technical advice from Alastair Robertson and staff of SPC Fisheries Training Section. The software, with an instruction manual, will be distributed shortly.

If you are interested in obtaining this computer programme, you should contact staff of the SPC Fisheries Training Section.

For more information please contact:

Mr Michel Blanc

Fisheries Education and Training Adviser

Rambo goes deep-sea

*by Terii Luciani
Fisheries Training Specialist*

This short SPC video, entitled *Rambo Goes Deep-Sea*, is designed to highlight the everyday dangers of working on board a commercial fishing vessel, or more specifically a longline vessel. In this training video on fishing boat safety, humour is used to highlight the situations. The video takes a character, Rambo, previously developed in the *Better Safe than Sorry* video on small boat safety, and introduces him to the risks faced on a bigger commercial vessel.

Pasifika Communications Ltd was hired to produce the new video and it was directed by Pasifika's Glen Hughes. The filming took place in Fiji. The SPC Fisheries Training Section agreed to charter the vessel F/V *Miss Oahn* from Saheb Holdings for the purpose of shooting the video. As the majority of the scenes needed to be filmed at sea, the boat was chartered with the skipper and crew to operate and manoeuvre the boat safely. Pasifika Communications was able to organise the same actor Isimeli (Rambo) as for the previous video. The skipper and crew were often used as background talent.

I had the task of supervising and assisting in the filming of this new video. I requested the assistance of William Sokimi (Masterfisherman) from the Capture section and it was a

great experience for us both to be involved. Our plan was to strictly follow the initial script. However, we had to rearrange some of the scenes to suit the situation on board the *Miss Oahn* and also to get around several others factors. William, with his knowledge and experience of longline fishing techniques, provided valuable assistance. He was also among familiar faces. As he personally knew the skipper and crew, we were able to get their full support.

The filming of the scenes went successfully and by the end of the week all the required scenes were shot. It was a great pleasure to work with Glen Hughes and his team. Pasifika Communications will need one to two weeks to complete the editing and we hope to receive the first copy of the video soon for our last comments and changes. The SPC Fisheries Training Section will advise training institutions and fisheries organisations on the availability of this new SPC video.

For more information please contact:

Mr Terii Luciani
Fisheries Training Specialist



Funding proposals approved by Taiwan/Republic of China

*by Michel Blanc
Fisheries Education and Training Adviser*

The Government of Taiwan/ROC has recently given SPC its approval for the funding of a series of proposals submitted in early 1999. Of these proposals, two originated from the Fisheries Training Section.

The first project proposal, amounting to USD40,000, is a repeat of the regional course on vessel operation management and electronic aids which was run jointly by SPC and the New Zealand School of Fisheries in February 1998. This second Skippers' course, scheduled for April 2000, will soon be advertised by the Section. It will be two weeks in duration and will be run in Nelson, New Zealand.

The second project consists of training activities in seaweed farming site surveys and demonstration farms. The project will start early in 2000 and will last for approximately one year. The funds available for this project are USD35,000. The above good news shows the commitment of the Government of Taiwan/ROC towards fisheries training activities in the region.

For more information please contact:

Mr Michel Blanc
Fisheries Education and Training Adviser

A new dimension to fisheries training in Federated States of Micronesia

*by Michel Blanc
Fisheries Education and Training Adviser*

Following the Government of FSM's decision to re-open the Micronesian Maritime and Fisheries Academy (MMFA) in Yap, under the umbrella of the College of Micronesia (COM), SPC Fisheries Training Adviser made a visit to Pohnpei in August to meet local fishing industry representatives, MMFA newly appointed Director and COM Director of Vocational Education. The main purpose of this visit was to advise MMFA/COM on their future organisational structure and course programmes while identifying areas where SPC could assist.

On his first day in FSM, SPC Fisheries Training Adviser took part in a meeting organised by MMFA/COM and attended by the managers of the five Pohnpei-based commercial fishing companies — Micronesian Longline Fishing Company (MLFC), National Fisheries Corporation (NFC), Caroline Fisheries Corporation (CFC), Pacific Foods and Services Inc., and Pacific Longlining and Supplies. This meeting was useful in putting MMFA/COM staff in contact with private sector representatives. It also pointed out the main deficiency in FSM's domestic fishing industry — the lack of local involvement (on the 27 domestic fishing vessels operating from Pohnpei, only 45 deckhands and one skipper are FSM nationals). A quick assessment of industry representatives' concerns revealed that the lack of qualified local engineers and the absence of a pool of Micronesian fishing deckhands are major constraints to the harmonious development of the FSM tuna fishing sector.

Based on the above findings and following further meetings with representatives of FSM fisheries administration, Japanese International Cooperation Agency (JICA) and Overseas Fishery Co-operation Foundation (OFCF) offices in Pohnpei and with a couple of fisheries consultants, SPC Fisheries Training Adviser drafted a training strategy for MMFA/COM for the period 1999–2002. The main points in

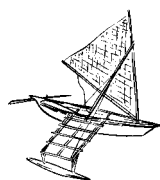
this strategy are the development of an apprenticeship training scheme for cadet engineers, the delivery of a series of pre-sea safety and fishing courses for crew of longliners and purse-seiners, watchkeeping rating courses for the fishing and maritime industry, and Class 6 courses for master/engineers of small vessels. It is also suggested that an instructor position be left vacant to hire external expert tutors for the running of short-term training courses or workshops in areas outside MMFA's expertise (Hazard Analysis and Critical Control Point—HACCP, quality management systems, seafood processing, resource management and conservation etc.). As for the training of the few officers of FSM-flagged merchant vessels, it is advised to seek scholarship opportunities to undertake studies at overseas institutions. Finally, SPC sees a priority in the acquisition of a suitable training vessel for MMFA in Yap.

The Government of FSM is making a major funding commitment to revive the only maritime and fisheries training institution in the country. Being placed under the umbrella of the College of Micronesia, the school is now part of the US educational system, which may offer financial as well as operational advantages. The SPC Fisheries Training Section is committed to assist MMFA's second birth in any way it can. Section staff will stay in close contact with MMFA's new Director, Matthias Ewarmai, and COM Director of Vocational Education, Gary Robertson. SPC Fisheries Training Specialist, Terii Luciani, will travel to Pohnpei at the end of November to help MMFA staff plan their initial pre-sea safety and fishing course.

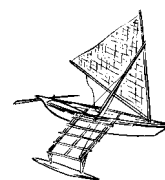
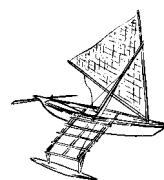
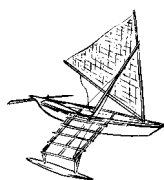
For more information please contact:

Mr Michel Blanc
Fisheries Education and Training Adviser





USP NEWS



Inaugural Meeting of International Association of Fish Inspectors and Third International Fish Inspection and Quality Control Conference

by Tony Chamberlain, University of the South Pacific

The idea of an International Association of Fish Inspectors (IAFI) only originated in 1997. Since then the Canadian Food Inspection Agency (CFIA) has begun the process of incorporation for the IAFI, as well as a membership drive. The inaugural meeting of the IAFI was in Halifax, Nova Scotia, Canada, on 4–5 October 1999 in conjunction with the Third International Fish Inspection and Quality Control Conference, which was held from 6 to 8 October 1999. An Executive Committee was elected at this time to officially assume duties from the current Interim Committee. With funding from Canada, Tony Chamberlain, USP Post Harvest Fisheries Lecturer, attended these two important events.

It is encouraging to see an organisation such as the IAFI being formed; what was less encouraging was the lack of representation of Pacific Island nations at these important occasions. Considering the importance of trade in fish and seafood products to the Pacific Island nations and the recent international drive to enforce quality control requirements on exporting states (for example, Hazard Analysis and Critical Control Point requirements), these two events were important. It was an opportunity for Pacific Island countries to be seen to be taking seafood quality control seriously in the eyes of the international community.

IAFI envisages itself as being an open organisation with membership from the world's fishing, fish processing and fish consuming nations. It brings together Fish Inspectors and those who have an interest in this fascinating field from different countries and backgrounds—government, the fish and seafood harvesting, processing and marketing industries, academia, public and private organisations and other diverse disciplines. The Association provides opportunities to exchange information and ideas, foster interaction and collaboration, contribute to discussions, disseminate knowledge, encourage development, promote advancement, provide services to members, and to provide fish, seafood and associated product inspection, quality management and fish/seafood processing technology, and consultative, inspection and audit services to individuals and organisations. The vision of the IAFI is: 'Fish, seafood and associated

products that are safe, of acceptable quality and readily available for sale in the world's marketplaces'.

The third International Fish Inspection and Quality Control Conference was an ideal opportunity to learn from prominent keynote speakers and experts and to participate in interactive sessions.

The main plenary sessions included:

- Hazard Analysis and Critical Control Point (HACCP)
 - Review of countries' experiences introducing and implementing HACCP
 - Review of how industry has implemented HACCP in several countries
 - Interactive sessions with HACCP experts
- Trade and The Environment
 - Emerging trade policy and international law
 - Aquaculture's emerging trade and environmental issues
- Inspection and Quality Control Technology Developments
 - The latest and emerging inspection and quality control technological developments

Among some of the key networking activities was contact with FAO representatives who are willing to consider supporting Pacific Island countries to improve seafood quality control capabilities.

For more information please contact:

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USP runs a Fish Handling Module for the Fiji School of Maritime Studies

by Tony Chamberlain, University of the South Pacific

Recently a Needs Assessment for the Post Harvest Fisheries Development Project (funded by the Canada – South Pacific Ocean Development Program Phase II and run by USP's Marine Studies Program) identified that fish handling should be included into regional Maritime College programmes. Colleges that were approached suggested a relevant fish handling module would be useful and that staff be trained to deliver the materials. There were requests from Fiji, Solomon Islands and Kiribati for modules and training, and other countries, such as Federated States of Micronesia, are also interested. A pilot module on fish handling took place from 26 to 29 October 1999 for the Fiji Institute of Technology (FIT) School of Maritime Studies Course in Fishing Operations at USP's new Marine Studies Center. Ten trainees were given theory and practical sessions on fish handling, chilling, freezing and quality and were assessed on their knowledge and understanding at the end of the module. This sort of training is considered important for Maritime College trainees because many of them will end up working on fishing boats. Fish, unlike other cargo, is a highly perishable food that will end up on someone's dinner plate. It is very important that proper handling and quality control be practised at all stages along the line of production and marketing of the fish from the boat to the dinner plate.

The workshop was a big success and under the Post Harvest Fisheries Development Project, USP is willing to develop a

publishable fish handling module and provide the training of either trainees or FIT trainers. However, there is a need to make this type of training more sustainable by making it a formal requirement of the College courses. This issue was raised with the Fisheries Training Adviser, Regional Maritime Project of the Secretariat of the Pacific Community

who likewise believes that a fish handling module at this time is a worthwhile endeavour. SPC has attempted to do some fish handling training on a 'one-off' basis but there is a need for more sustainability. To achieve this sustainability there is a need to formally incorporate fish handling into the College curricula and make it a requirement for the award of certification. In order to facilitate this process a brief paper with recommendations will be tabled at the Fifth Annual General Meeting of the Association of Pacific Islands Maritime Training Institutions and Maritime Authorities early in 2000.

For more information please contact:

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FIT trainees going through the sashimi handling process



FIT trainees comparing the chilling rates of fish in ice, chilled seawater and refrigerated seawater



FIT trainees conducting a hygiene survey and comparing bacterial counts on different parts of fish



AROUND THE TRAINING AND EDUCATION CENTRES



SEAFDEC*—Programmes of Activity for 2000

(* *South-East Asian Fisheries Development Centre*)

Secretariat (SEC)

Seven projects are proposed under the Secretariat in 2000 as follows:

- Center-wide Information Network
- Fisheries Resource Survey in Waters of Vietnam, the Philippines, and Cambodia (to be confirmed in January 2000)
- Regionalization of the Code of Conduct for Responsible Fisheries in Southeast Asia
- Regional Program of Fishery Statistics
- Pilot Project for Semi-intensive Culture of Shrimp
- Socio-economic Integration
- Sustainable Coastal Fishing Gear and Practices

Training Department (TD)

Nineteen projects are proposed under the Training Department in 2000. Among these, 6 are training, 6 are information, 2 are research, and 5 are collaborative projects as follows:

Training Projects

- Regional Training Course in Marine Engineering
- Regional Short-term Training Course in Marine Electricity and Electronics
- Regional Training Course in Responsible Fishing
- Regional Training Course in Longline Fishing
- Special Fellowship Training Programs
- International Training Course for Fishery Extension Officers in Extension Methodology and Coastal Resource Management

Information Projects

- Production of CD-ROM on a Monograph of Fishing Gear and Method in Southeast Asia
- Digitized Atlas on Fisheries Resources and Oceanographic Conditions
- Fisheries Human Resources Development by Effective Learning Media
- Production of Audio-Visual Materials

- Information and Library Services
- Publication of Printed Materials

Research Projects

- Tuna Fishing Ground Condition in the East Indian Ocean
- Women's Role in Management of Coastal Fisheries in Southeast Asia

Collaborative Projects

- Study on JTEDs in Southeast Asia
- Fisheries Resource Survey in Waters of Vietnam, the Philippines and Cambodia (to be confirmed in January 2000)
- Study on Oceanic Squid in the Andaman Sea and South China Sea
- Promotion of Responsible Fishing Operations in Southeast Asia
- Regional Workshop on Fishing Gear Selectivity including the Application of TEDs and JTEDs

Marine Fisheries Research Department (MFRD)

One training project and one information project are proposed for implementation by the Marine Fisheries Research Department in 2000 as follows:

Training Project

- Special Fellowship Training in Improvement of Traditional Fish Products—Fermented Products

Information Project

- The First Workshop on the Application of HACCP in the Fish Processing Industry in Southeast Asia

Aquaculture Department (AQD)

Thirty-six projects are proposed by the Aquaculture Department in 2000. Among these, 5 are training, 7 are

information, 8 are research, and 16 are collaborative projects as follows:

Training Projects

- Fish Health Management
- Management of Sustainable Fish Farming Systems
- Marine Fish Hatchery and Nursery Operations
- Freshwater Aquaculture
- Sustainable Aquaculture and Coastal Resource

Information Projects

- Library and Documentation
- Publications and Video Production
- Round Table Discussion
- Seminar-Workshop on Selective Breeding and Genetics in Aquaculture
- Workshop and Expert Consultation on Diseases in Aquaculture and Diagnostic Methods
- Third Conference on Milkfish Culture
- Workshop on Fish Nutrition

Research Projects

- Marine Fishes (Milkfish, Grouper, Red Snapper, Sea Bass, Rabbitfish, Ornamental Fishes)
- Freshwater Fishes (Tilapia, Bighead Carp, Catfish)
- Crustaceans (Tiger Shrimp, Mud Crab)
- Molluscs (Abalone, Other Invertebrates)
- Seaweeds (*Gracilaria* sp.)
- Lake Ecology
- Mangrove-friendly Aquaculture (Priority Commodities identified above)
- Coastal Resource Management

Collaborative Projects

- Mud Crab Project with the Australian Centre for International Agricultural Research (ACIAR)
- Grouper project with NACA and ACIAR
- Larval Food Project with the European Union (EU)
- Oplan 'Sagip-Sugpo' (Shrimp) Task Force
- Accelerated Transfer of Marine Fish Hatchery Management
- Community-based Coastal Resource Management
- Dissemination and Adoption of Milkfish Aquaculture Technology in the Southeast Asian Region with ICLARM
- Fish Diseases Project under the Proposed SEAFDEC and JIRCAS Collaborative Arrangement
- Development of a Health and Husbandry Manual for Grouper Farming with APEC
- Fish Diseases Program

- Mangrove-friendly Aquaculture Program (also in collaboration with ASEAN)
 - Second Workshop on Mangrove-friendly Aquaculture (engineering designs)
 - On-site Training on Mangrove-friendly Aquaculture (engineering designs)
 - Third Workshop on Mangrove-friendly Aquaculture (Cost-benefit Analysis)
- Management for Sustainable Coastal Fisheries
 - Training of Four RIMP Staff at AQD
 - Pilot Project for Semi-intensive Culture of Shrimp to include Conservation of Mangrove Forests
- Third Country Training Programme on Responsible Aquaculture
- Special Training Programs
- Meetings on the Code of Conduct for Responsible Aquaculture Development
- Technology Verification and Extension

Marine Fishery Resources Development and Management Department (MFRDMD)

Twenty-six projects are proposed by the Marine Fishery Resources Development and Management Department in 2000. Among these, 2 are training, 7 are information, 15 are research, and 2 are collaborative projects as follows:

Training Projects

- Regional Training Course on Acoustic Methodology
- Regional Training Course on Operation of FQ-70

Information Projects

- Tuna Statistics in Southeast Asia
- Compilation of the Catch-effort Statistics for the South China Sea Area
- Library Reference Collection
- Publication of Printed Materials
- Regional Workshop on Specific Shared Stock in the South China Sea
- Regional Workshop on Marine Turtle
- Regional Workshop on Remote Sensing of Fisheries

Research Projects

- Development of Correction Method for Back-scattering Strength (SV)
- Experiments on Target Strength Measurements
- The Establishment of the Guideline for Acoustic Survey Methodology and Analysis in the South China Sea
- Analysis of Historical Catch-effort Statistics for the South China Sea

- Unit Demonstration on Spanish Mackerels in the South China Sea
- Establishing of Taxonomy of Commercially Important Squid in the South China Sea
- Fish Taxonomy Studies in the South China Sea
- Kind, Abundance and Distribution of Fish Eggs and Larvae in the South China Sea
- Compilation and Mapping of Oceanographic Data
- Remote Sensing Application in Fisheries
- Remote Sensing of Plankton in the South China Sea
- Selectivity Studies on Commonly Used Fishing Gear
- Biology and Fisheries of Sharks in the SEAFDEC Member Countries
- Population Genetics of Marine Turtle in Southeast Asia
- Marine Turtle Statistics in Southeast Asia

Collaborative Projects

- Regional Marine Turtle Tagging Program in Southeast Asia
- Regional Tuna Tagging Program in the South China Sea

For more information on any of these courses and projects, please contact:

Mr Bundit Chokesanguan

Information and Extension Division Head
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HomePage: <http://www.seafdec.org>

Sub-regional Monitoring, Control, Surveillance (MCS) Training Courses at the FFA Secretariat

Two Sub-regional MCS [Monitoring, Control, Surveillance] Training Courses were held at the FFA [Forum Fisheries Agency] Secretariat, Honiara during 1999. The first was held from 31 May to 4 June involving participants from Tonga, Nauru, Federated States of Micronesia, Fiji, Solomon Islands and Marshall Islands. The second was held from 26 to 30 July with participants from Palau, Cook Islands, Niue, Vanuatu, Samoa, Kiribati, Tuvalu and Papua New Guinea. The courses enhanced the participants' general knowledge of the region's fisheries, the role of the FFA in fisheries MCS, and promoted practical use of the FFA VMS [Vessel Monitoring Systems], and case investigation and preparation. Using feedback from participants as a guide, the courses were considered very successful. Two more such courses will be held at the FFA Secretariat during 2000, once again with the generous funding support of the Canada South Pacific Ocean Development Program.

MCS Fellowship Attachment at the FFA Secretariat

From 11 to 15 October 1999, SSGT Ierome Mulumulu of Samoa's Police, Prisons and Fire Service completed an MCS Fellowship Attachment at the FFA Secretariat, Honiara. The aim of the attachment was 'Examination of the use of the FFA VMS in Samoa compared with its usage in other FFA member countries'.

During his attachment at the FFA Secretariat, SSGT Mulumulu was briefed on the role and functions of the Agency's MCS Division, the FFA databases in support of MCS, the Niue Treaty and the FFA VMS. At the conclusion of the attachment, SSGT Mulumulu presented a report to the Agency of his findings, including his proposed activities in Samoa in relation to the FFA VMS. There will be a further MCS Fellowship Attachment conducted at the FFA Secretariat from 8 to 11 November 1999. Two more such attachments are scheduled in 2000, supported by funding from the Canada South Pacific Ocean Development Program.

Surveillance Officers' Course

The FFA Secretariat hosted 11 surveillance officers from FFA member countries during a one-week course from 18 to 22 October 1999. The participants were completing the National Fisheries Officers' Surveillance Course conducted by the Australian Maritime College as part of the Australian Defence Cooperation Programme.

In addition to receiving instruction on legal, economic and MCS issues, the participants were instructed in the practical application of the FFA VMS. They also took part in the boarding of a foreign longline fishing vessel in Honiara and visited an RNZAF surveillance aircraft that was passing through on a surveillance patrol.

Calendar of events**MCS Fellowship Attachment**

FFA Secretariat, Honiara, Solomon Islands, 8–12 November 1999

Mr Falasese Tupou from Tuvalu will undertake an MCS Fellowship Attachment designed to research and report on MCS matters of particular concern to Tuvalu.

For more information please contact:

Source: *MCS Newsletter*, Volume 1, Issue 1 (Incorporating the FFA VMS Newsletter), 3rd Quarter, 1999

The Director

Forum Fisheries Agency

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E-mail: andrew.richards@ffa.int

Seafood Business Operation and Management Workshop, 21–23 September 1999

The National Informal Employment and Sustainable Livelihoods Project coordinated a three-day Seafood Business Operation and Management Workshop in September 1999. The workshop was conducted by Ms Columba Madraisau through the kind assistance of the Ngchesar State Government. Ms Madraisau had participated in the earlier Regional Course on Seafood Business Operation and Management for Pacific Island Women. The September workshop was coordinated by the Secretariat of the Pacific Community and conducted by the New Zealand School of Fisheries.

On the first day, Ms Madraisau explained the objectives and outline of the course she had attended. She then explained the structure of the fisheries industry in New Zealand and how they emphasised quality from boat to consumer. The participants then broke into small groups. Each group was assigned to deliver a presentation on what is top quality seafood and what needs to be done to assure the best quality. Quality assurance measures were summarised. The basics of seafood retailing were covered next. Ms Madraisau then specified some low-cost, easy measures which could be implemented to improve existing local operations. The importance of customer service and satisfaction was pointed out, including product knowledge, knowledge of customers, and presentation.

On the second day, skills in filleting were taught. Then an exercise in SWOT (strength, weakness, opportunities, threats) analysis was conducted in small groups. The topic of the analysis was 'Seafood business operations in Palau'. Ms Madraisau summarised the presentation and emphasised simple steps which may be taken to build strengths and minimise weaknesses. An ice breaker on communication was conducted.

On the last day, the participants visited four local seafood business operations. Following this, they broke into groups to deliver presentations on what they saw and their suggestions for improvement. Before the results were summarised another ice breaker on communication was conducted. The workshop ended with a lecture on the factors in the success of profitable seafood business operations.

For more information please contact:

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Informal Employment & Sustainable Livelihoods Project

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News from the Kiribati Fisheries Training Centre

by Tioti Bauro Teburea

The seventeenth and eighteenth courses are currently running. A total of 72 trainees (36 in each course) began the courses but to date 48 remain after some were dismissed or declared unfit after medical screening. The seventeenth course runs from 6 April to 19 December 1999, while the eighteenth course runs from 7 June 1999 to 4 February 2000. Continuous fishing training is maintained on board the TS *Tia Akawa* under Captain Kumkay Namakin's command.

Concerning the attachment scheme, one FTC engineer instructor is currently on attachment with the South Pacific Marine Service (SPMS) on German cargo vessels. Two other engineer instructors will be on attachment with Japanese fishing vessels in 2000. A new Japanese chief instructor has started, replacing the former Japanese instructor whose contract ended in March 1999.

Staff of the FTC are conducting HIV/AIDS lessons following their attendance at the SPC HIV/AIDS workshop.

The hard work is continuing to bring FTC to full compliance with the International Convention on Standards of Training, Watchkeeping and Certification (STCW-F '95) syllabus.

For more information please contact:

Mr Tioti Bauro Teburea
Principal FTC
Fisheries Training Centre
PO Box 295
Bikenibeu
Tarawa
Kiribati

Samoa Polytechnic School of Maritime Training: Proposed Programmes for the year 2000

Programme	Start	End	Duration	Maximum N° of Students
Basic Maritime Multipurpose Course (Rating 2)	07 Feb	17 Nov	1 year	30
Fishing Technology	07 Feb	23 Jun	20 weeks	20
Integrating Course (Rating 1)	06 Mar	26 May	12 weeks	20
(1st)—Master/Engineer Class 6	06 Mar	31 Mar	4 weeks	20
Master Class 5 (Deck)	12 Jun	01 Sept	12 weeks	10
Engineer Class 5	12 Jun	01 Sept	12 weeks	10
(2nd)—Master/Engineer Class 6	10 Jul	04 Aug	4 weeks	20
Fisheries Basic Safety	-	-	3 days	20

For further information about course content and course fees, please contact:

Mr Fatu T. Lafoa
Head of School — SPSMT
Samoa Polytechnic School of Maritime Training
PO Box 3269
Apia
Samoa

Marine Training Centre courses, Kiribati

*by Lutz Wesemann
Captain Superintendent*

All courses are for Kiribati citizens only.

1. IDF Rating Course

- Duration: 15 months, covers STCW '95 reg. II/4, III/4, VI/1-1...4
- Prerequisites: basic English language knowledge, minimum class 9 school certificate, medical fitness
- Age: 18 – 30 years

2. Basic Safety Training Course

- Duration: 3 weeks, covers STCW '95 reg. VI/1-1...4, course held in Kiribati language
- Prerequisites: none

3. Elementary First Aid Course

- Duration 3 days, covers STCW '95 reg. VI/1-3
- Prerequisites: none

4. Tanker Familiarisation Course

- Duration: 3 days, covers STCW '95 reg. V/1 'tanker familiarisation course'
- Prerequisites: English language knowledge

5. Safety Upgrading and Refresher Course

- Duration: 2 weeks, covers STCW '95 VI/1-1, 2, 4 and VI/2-1
- Prerequisites: successful completion of IDF Rating resp. Basic Steward Course and 2 years experience on board foreign going ships

6. Basic Steward Course

- Duration: 9 months, including coverage of STCW '95 reg. VI/1...4
- Prerequisites: basic English language knowledge, minimum class 9 school certificate, medical fitness
- Age: 18 – 30 years

7. Additional courses provided

- Upgrading and refresher courses to Able Body, Motorman and Qualified Steward
- Prerequisites: successful completion of IDF Rating resp. Basic Steward Course and 2 years experience on board foreign going ships

Dates for all courses are available on request from:

Mr Lutz Wesemann

Captain Superintendent

Marine Training Centre

PO Box 511

Tarawa

Kiribati

Phone: +686 26086 or 26152

Fax: +686 26561

E-mail: mtctrw@tskl.net.ki

Certificate in Marine Engineering at Nelson Polytechnic

by Tena Koutou Katoa and Afio Mai

Full-time or part-time course

Full-time: 34 weeks (excluding holidays)

Part-time: by arrangement

What is it?

The programme is designed to give students a range of skills relating to modern engineering practices both at sea and ashore. It covers the practical aspects of vessel operating systems and the function of the various equipment installed on modern vessels.

How is it structured?

The programme is offered in modules and is open to full-time and part-time students. The certificate will be granted

to students who successfully complete the 34-week programme and meet the course assessment requirements. Modules vary from 60 hours to 120 hours and where possible they are based on New Zealand Quality Assessment (NZQA) unit standards.

The students ... who is it for?

The programme is for:

- marine engineers who want to update their skills,
- school leavers and other students who are interested in a marine engineering career.

The subjects ... What is it about?

Modules offered will include the following subjects:

- Safe workplace practices
- Vessel systems management
- Machine shop practice
- Basic marine electronics
- Marine electrical systems
- Marine refrigeration
- Hydraulics
- Vessel operating systems
- Electronic control systems
- Computers in marine engineering

What are the entry requirements?

- School leavers require 6th Form English, Physics and Mathematics with grades of at least 5 in the three subjects, or the equivalent unit standards.
- Mature students will need to demonstrate an appropriate level of academic skills and a continuing commitment to the industry.

How are the applicants selected?

Selection is based on an interview, curriculum vitae and school results.

How are the modules assessed?

Performance is assessed using a mixture of internal assessments based on the programme work as well as competency-based assessments for each particular module. There is no exam.

What will the programme lead to?

The programme can lead to a range of careers in maritime and industrial engineering, including ship repair work, vessel management, refrigeration and related motor trades. Students who satisfactorily complete all modules will be awarded a Nelson Polytechnic Certificate in Marine Engineering.

When does the programme start?

The course commences for full-time students early in the year and covers 40 weeks including semester breaks. For part-time students, enrolment can take place throughout the year. Part-time students will be asked to nominate the modules they wish to attend for the year. Start dates for each module and timetables are available from the school. Applications are processed as they are received so please apply early to avoid disappointment.

Programme dates: Courses commence 21 February 2000 and 24 November 2000. Apply before 7 February 2000.

How much will the programme cost?

Because of government funding policies, different fees apply for Study Right and Non Study Right students. Study Right provides three full years of full-time study at reduced rates. Study Right is available to most students under the age of 25 who enrol in their first course before the age of 22. Programme fees for 2000 will be available from October 1999. Study Right: NZ\$3157. Non Study Right: NZ\$4404. These fees include the fees for First Aid and Basic Fire Fighting.

Is financial assistance available?

Student Allowances are paid to help towards the living expenses of full-time students. Whether students qualify for an allowance depends on their situation and, if they are under 25, on their parents' income. Student Loans are a government loan provided at a low rate of interest that graduates repay through the Inland Revenue Department when their income is high enough. To find out if you qualify for Student Allowances and Student Loans and to get application forms, please telephone Work and Income NZ (WINZ) on 0800 889 900.

There is a wide range of scholarships and grants which Nelson Polytechnic students can apply for. Scholarship applications are considered using a number of factors, not just previous academic achievement. Ask for the Scholarship and Grants Brochure from the Nelson Polytechnic Information Centre on 0800 422 733. Ask for the Funding Your Education brochure from the Nelson Polytechnic Information Centre to help you work out the costs of study.

Student services

There is a range of student services available including study support, counselling and health services.

Is accommodation available?

The Polytechnic has a hall of residence. For information, telephone the Accommodation Officer, Nelson Polytechnic on +64 3 546 2445.

Interested?

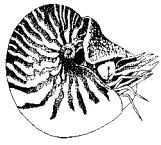
Contact Nelson Polytechnic now for an application form or additional information.

Industrial School

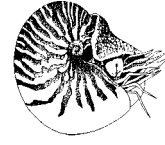
Nelson Polytechnic
Private Mail Bag 19
Nelson
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NEWS FROM THE FISHERIES DEPARTMENTS



Scuba Diving Workshop conducted at Christmas Island, 6–13 July 1999

by Leslie Farnel, Dive Pacific International, and James Uan, Fisheries Training Officer

Dive safety, equipment maintenance, visual cylinder inspection, scuba diving, First Aid, and CPR and rescue courses were held on Kiritimati Island during the week of 6–13 July 1999 for seventy-six participants mostly from tropical fish suppliers. Some other interested private sector fishers and fisheries personnel also attended. Instructors were Leslie Farnel of Dive Pacific International, Hawaii, and James Uan, a dive instructor from Fisheries Division, Kiribati. Mr Uan conducted the basic scuba training course to ensure that divers were certified while Ms Farnel covered the advanced course. Extensive time was spent on dive tables, physics and physiology. It was determined that more time would have been appropriate, since a lot of crucial information needed to be transferred to the participants, coupled with the fact that the session was done in English and then translated into the Kiribati language.

Kiritimati is unusual in that the diving being done is deeper than normal for the pet fish industry. Many divers dive to 140–200 feet. The recreational dive tables used to gauge the absorption of nitrogen, in the attempt to ward off the 'bends', do not permit divers to go down to this depth. While this workshop spent much time on NAUI dive tables, they were useless below 140 feet. It was determined that the best thing to do would be to teach the participants dive table principles and how to use them. Later, by post, they would be supplied with US Navy Dive Tables that can go to below 140 feet, as well as the decompression stops to make when ascending. Without these decompression schedules, divers will continue to get hurt. Even when following all the rules, divers can still get the 'bends'. Therefore much time was also spent on 'negative dive factors' which increase 'bends' risks, and 'silent bubbles' which may cause unseen injuries to the body that become apparent over a longer time.

A recent accident involving divers suffering from the 'bends' was the subject of discussion during the workshop. It is known that the earlier the treatment for the 'bends', the better the chance of recovery. While no one can say for sure, it would seem logical that if these divers had received adequate training on diving safety, their injuries might not have been as serious — one is now in a wheelchair and the other has died. Oxygen is one of the best aid treatments for

diving injuries and must be given as soon after the accident as possible. With the pet fish industry, oxygen is available and it was discussed how to administer this as well as field neurological tests, shock treatment, rescue breathing, CPR and ways of recognising diving illness. As well, the non-functioning recompression chamber owned by a private sector dive tour operation on the island would save lives if it were restored to working order. This would reduce the need for flights to Honolulu, which can increase the injury with altitude and also delays treatment. As well, it would be appropriate to have trained personnel to run the chamber. Courses are given on a regular basis at Catalina, California, among other locations. It is inappropriate and dangerous to have untrained persons operating the machinery. The recommendation here is to make every attempt to have a functional chamber run by professionals. With this in mind the Hawaiian and Australian specialists in water recompression methods, who were discussed in a Sea Grant study by Richard Pyle of Bishop Museum, were introduced to workshop participants.

Another non-conventional idea discussed was the use of Nitrox for decompression. With the unusual availability of oxygen on Kiritimati the only additional thing needed to implement this would be the adequate training of divers in breathing the mix, oxygen cleaning methods and partial pressure blending of the mix.

During the equipment maintenance portion of the training some tanks only one year old were discovered to be stored improperly on wet concrete and as a result had extensive corrosion for their age, with electrolysis damaging the neck threads and valves as well. Owing to the incompatible environmental conditions, it was recommended that all tanks on the island be inspected. Some regulators were found to have ferrous internal parts that caused much rust in the first and second stages. It was discussed that this brand may not be the best for the environment in Kiritimati. Many pieces of equipment had incorrect parts, as spare parts are difficult to find, ordering is inadequate due to the distance and communications difficulties, and no parts catalogues are available. It was agreed that each operator would be supplied with a parts list and maintenance instructions for

the equipment they use and that ordering and repairs could be expedited through Dive Pacific International in Hawaii. It was also discovered that some divers had a habit of injecting a small amount of oil into the tanks; this can contribute to other diving disorders. This practice of making the tanks look nice inside is extremely dangerous for divers.

In summary, the attendance at the workshop was overwhelming as it was Independence week and most businesses were on holiday. This shows that divers in Kiribati are serious in their attempt to gain knowledge of safety and theory. It was regrettable that more time could not be spent on equipment maintenance; however, this could be considered for later courses. It was discussed that the dive operators might at some time get together and agree on safety standards for Kiribati. Some of these standards might include: diving within a safe range with dive tables, knowledge of decompression schedules, practising First Aid and CPR skills on a regular basis, updating knowledge and dive skills, understanding what is contained in scuba diving certification courses and requiring that the recompression chamber be operational.

The divers themselves funded the workshop by paying AUD150.00 each. This covered expenses such as hire of scuba gear, boat hire, consultant fees and living expenses on Kiribati, as well as the certificates issued to the participants after the course. The Government of Kiribati also provided additional funding to cover the consultant's return air fare from Maui to Kiribati as well as costs of sending the

local counterpart instructor to the island. Other commitments such as fuel costs for the boat and training materials were also borne by the government.

Future plans include conducting a similar workshop on Tarawa for the group, getting one of the local instructors certified with Nitrox diving and a VCI instructor's course. These courses would be conducted separately. Also included is an ongoing programme of upgrading divers' skills and teaching new divers safe diving practices.

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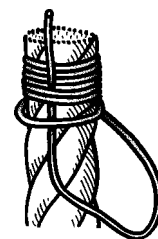
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The National Maritime Polytechnic: Taking the lead in maritime training in The Philippines

As every maritime nation is aware, the implementation of the Standards of Training Certification and Watchkeeping 1978, as amended in 1995, obligates each maritime member country to conform and comply with the standards and regulations embodied in the code. One of the areas where the code has set stringent standards is the maritime training and education system of each country. This system should be the source or supply of competent seafarers—seafarers that meet world standards.

The amended STCW Code of 1995 places much emphasis upon the use of simulation in education and training. Simulators are being used in the conduct of training and assessment in maritime training institutions and education systems. They have been proven to be effective tools or aids in the learning process and for technology transfer. More so, with the advent of technological advances in the shipping environment, it becomes vital that simulation be adopted as

a primary technique in the training of future seafarers, particularly merchant marine officers.

In the late 1970s, the Philippines government saw the need for this type of maritime training and education, and facilitated the establishment of a modern training centre for seafarers. Thus, the birth in May 1978 of the National Maritime Polytechnic (NMP) in Tacloban City, Leyte, located in the eastern central part of the country. Through the Technical Cooperation Program with the Government of Japan through the Japan International Cooperation Agency (JICA), the latest models of simulators and other training equipment were donated to the centre for the conduct of upgrading courses in deck, engine and specialised areas as well as in basic safety.

Twenty-one years from then, NMP is still the premier maritime upgrading training centre in the country. In 1999,

a total of 9923 training certificates were issued in various levels of courses to seafarers, both officers and ratings. Despite the presence of private training centres, NMP dominates the field with 30 modular course offerings, 10 of which are simulator-based, while the rest use actual equipment.

Within the first decade of the new millenium, the training centre will expand its curricular offerings, as well as add a new branch centre in the Luzon area, in Cavite. This expansion plan will provide greater access to subsidised government training programmes for many seafarers in the Luzon area. Funding for the expansion programme will also come from a soft loan from the Japanese government through the Japan Bank for International Cooperation. This is part of the Polytechnic's thrust in the next two to five years to upgrade the training facilities in Leyte and extend training services to Luzon. Included, of course, is the continued conduct and more training programmes for Filipino seafarers, and the implementation of industry-related and technology researches and studies, which are the two primary objectives of the Polytechnic. In the pursuit of quality training and support services, the Polytechnic will likewise continue to enhance the knowledge and skills of maritime trainers and assessors through the implementation of the IMO Model Courses 6.09 (Training Course for Instructors) and 3.123 (Training of Assessors).

With the global concern for the participation of women in development efforts, the Polytechnic includes in its thrusts to address the training needs of women in the maritime

sector and to continue the implementation of Gender and Development (GAD) programmes integrated into other NMP programmes and projects. The development of industry-driven training programmes for domestic fleet crew of passenger vessels will also be considered in the five-year plan of the Polytechnic in the new millenium. Moreover, the corporate application of information technology and enhanced access to the information superhighway via the Internet will be given impetus early in 2000.

These and other corollary objectives and programmes will propel the path and directions of the National Maritime Polytechnic in the next millenium as the leading institution in terms of maritime training and education. As with any third world country, funding for major programmes will be a problem but with intensified networking and collaborative efforts, the National Maritime Polytechnic will sail through stormy, turbulent weather and seas, and come out safe, strong and intact, with successfully carried out programmes and projects.

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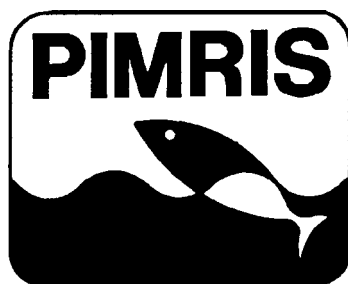
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PIMRIS is a joint project of 4 international organisations concerned with fisheries and marine resource development in the Pacific Islands region. The project is executed by the Secretariat of the Pacific Community (SPC), the South Pacific Forum Fisheries 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



Pacific Islands Marine Resources Information System

on marine resources to users in the region, so as to support their rational development and management. PIMRIS activities include: the active 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.