SPC MASTERFISHERMAN ASSISTS PNG’S NATIONAL FISHERIES COLLEGE IN TRAINING FISHING CADETS

Introduction

The National Fisheries College (NFC) was established in 1977 and has been responsible for training many of the national fisheries officers and persons employed in the fisheries sector. The college originally provided training for the domestic pole-and-line tuna industry.

By 1981, the pole-and-line fishery in PNG collapsed due to limited access to the tuna resource and falling fish prices. As there was no need to provide training for the pole-and-line industry, the college implemented a two-year certificate programme in Tropical Fisheries. This programme had a broader syllabus which focused on training fisheries extension officers and generalists for the fisheries sector.

As the domestic fishing industry grew over the next decade it became apparent that the certificate course was inappropriate and did not provide adequate training in the technical skills required for the commercial fisheries sector.

A review by the Asian Development Bank (ADB) in 1995, of the NFC Tropical Fisheries Course syllabus, recommended a radical change to meet the needs of the industry as employment opportunities for Papua New Guineans in the commercial sector were dependent upon the availability of appropriately trained and qualified people. In response to these recommendations the NFA, with input from the Fishing Industry Association of PNG, established an industry-related modular training programme in 1997.

New Fisheries Cadet Course

This new course for Fishing Cadets consists of three training modules with a duration of three months each. The modules are designed to meet the minimum performance and competency standards as set by the International Maritime Organization (IMO) under the 1995 Convention of Standards of Training and Certification and Watchkeeping (STCW) and also to meet the technical skill requirements of the growing fishing industry.

The first module is held at the PNG Maritime College in Madang. The college provides training in a Pre-Sea Induction (STCW 95 Requirements) module for a Qualified Deckhand Course.

This module includes training in basic seamanship skills, first aid, survival at sea and fire fighting. Students who graduate receive an STCW (Pre Sea Induction Deck and Engine Rating 2—for general purpose) certificate which qualifies them to be employed on a commercial vessel.

The second module is held at the National Fisheries College in Kavieng. The syllabus includes training in basic fishing gear technology, fishing operations, seafood technology, refrigeration and mechanics and carpentry skills for fishing vessel operations.

The third module is an industrial attachment where the students are assigned to work with local commercial fishing companies to gain some ‘hands-on’ experience and use the skills they were taught at the colleges.

Students enrolled in the 1997 courses were either assigned to prawn-trawl, purse-seine, or tuna longline operations. Some students were also assigned to work in local tuna canneries to learn further processing skills and assist in basic operations.

After the Industrial Attachment is completed the students return to NFC in Kavieng to attend a short two-week course in Fisheries legislation and regulations.

The students are tested and evaluated throughout the course to determine the level of their competency and understanding of the theory and skills taught by the tutors.

Managers of the companies where the students are assigned for their Industrial Attachment also evaluate the student’s competency. Students who graduate receive a ‘Fishing Technology Certificate’.

SPC’s assistance in 1998

Following an official request by the Government of Papua New Guinea for technical assistance from the Capture Section of the SPC, the Secretariat of the Pacific Community (SPC) provided assistance in 1998.
Coastal Fisheries Programme, to assist in running the second module of the new Fisheries Cadet Course in 1998, SPC assigned the services of Masterfisherman Peter Watt to this project. The aim of this project was to provide technical training in various fishing techniques for students attending the Fisheries Cadet Course at Kavieng, New Ireland.

On arrival at the airport in Kavieng to start the assignment the Masterfisherman was met by the NFC principal, Mel Ware, who gave a quick run down on the content of the course syllabus and what his responsibilities for the next three months would be. The Masterfisherman would be working with the skipper of the college’s training vessel, FTV Leilani (Figure 1), Kisi Geotau, and fisheries technology specialists, Camillus Kabinawedi and Satoshi Nagashima.

The team would be responsible for providing students with theoretical information for various fishing methods, train the students in the fabrication of fishing gears and conduct fishing operations to demonstrate the application of the fishing gears fabricated in classes.

Also, the team were responsible for training the students in onboard handling of the catch as well as basic navigation and seamanship skills. The main objective of the fishing operations during the course was to develop the students’ skills to an acceptable level for employment in the fishing industry.

There were eighteen students enrolled in the first three-month training block at the college. The students came from every part of the country and included two from the highlands who had never experienced being on the ocean before. Also there were three women who at first were thought by the male students to be bad luck on a fishing boat but who later proved to be as competent at fishing as the men and often had better catches.

The students were split into two groups. Each week, one group was taught how to make fishing gear then went to sea for fishing operations while the other group stayed ashore and was taught theoretical and practical skills in seafood technology, carpentry skills for fishing operations, refrigeration and mechanics. The groups alternated between going to sea and staying ashore weekly.

The students were exposed to as many fishing techniques as possible in the short time frame scheduled for the course. Special emphasis was placed on acquiring practical skills needed for the main commercial fisheries in PNG: the prawn-trawl, purse-seine and tuna longline fisheries. Most of the on-shore practical training sessions in fishing technology focused on making nets and tuna longline gear.

**Fishing programme**

A comprehensive fishing operation programme was designed to ensure that the students were given as much sea time as possible to learn the skills required for each fishing method. The fishing operations for the three-month course included:

- **Week 1 & 2:** Trolling for pelagic species and dropline fishing for bottom fish species;
A rigid work schedule was followed every week for the fishing operations. Usually two days and one night were spent at sea but occasionally the vessel had to return to port after only one day’s fishing as there was not enough ice or room in the fish hold for another day of operations. If this was the case, the vessel would return to port, off-load the fish and head back out to sea early the next morning. The weekly work schedule was the following:

- **Monday:** Theoretical lectures on fishing gear technology and fishing operations;
- **Tuesday:** Fishing gear fabrication, preparation of fishing vessel for fishing operations;
- **Wednesday:** Demonstration and training in fishing gear utilisation aboard the FTV Leilani;
- **Thursday:** Same as Wednesday; and
- **Friday:** Vessel clean-up, repair and maintenance of fishing gear.

**Results from fishing activities**

Catches during the fishing operations aboard the FTV Leilani were quite exceptional. A total of 4,446 kg of fish were caught in 12 weeks; 1,280 kg of bottom fish were caught with the drop-lines, handreels and handlines; 204 kg of skipjack and other pelagic fish were caught trolling and 2,673 kg of yellowfin tuna and 289 kg by-catch were caught tuna longline fishing.

Tuna longline catches were the most impressive as only 9 sets of 200 hooks were deployed. This is an average catch ratio of 1.6 kg/hook which is almost three times above the average catch ratio for the Pacific region.

The fish when brought aboard the boat were killed, gilled and gutted, and placed immediately into an ice slurry. Large tunas and other pelagic species such as marlin and sailfish were stored in the fish hold and packed in ice.

When we returned to port the catch was transported to the college and the fish was cut into either fillets or loins at the Fish Processing Plant (Figure 2). This gave the students an opportunity to have some 'hands-on' experience in fish handling and processing methods. The processed fish were sold to restaurants and stores in Kavieng, given to the mess at the college to feed the students or distributed to the staff. The college collected almost K 1,000 from fish sales to donate to the Aitape Disaster Relief fund.

The students have now completed the three-month module at NFC and have been assigned to work at a number of fishing companies for their three-month Industrial Attachment.

One company has taken five of the students and guarantees them full-time employment if they prove to be competent. Hopefully, through this training programme there will be sufficient qualified Papua New Guineans to meet the demand for the current and projected developing fishing industry.