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A report on the University of the South Pacific's Marine Studies Programme and the Institute of Marine Resources

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Programme and the Institute of Marine Resources**

for

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Introduction

The Marine Studies Programme (MSP) of the University of the South Pacific, based in Laucala Bay, Suva was founded in the early 1990's, partly in response to a directive to move the then Institute of Marine Resources to Honiara. The Programme teaches several undergraduate courses, some in conjunction with other departments, runs a substantial post graduate programme, provides marine support services for the university, undertakes various training programmes, hosts international students, undertakes research projects and until 2002 was the base for the International Oceans Institute (IOI), Pacific Islands. The successes of the programme to date are largely because of funding from the governments of Japan (facilities) and Canada (setup, postgraduate and project funding).

Tertiary education in fisheries management

As stated by Gillett, Preston and Associates in a recent review of SPC's Coastal Fisheries Programme, the University (through MSP) is required to provide an academic approach to fisheries education and research with an applied focus as well as providing education and training services in aquaculture and post harvest fisheries. It can, however, only provide this regional service if it receives the funds needed to employ the appropriate lecturers and to support the post graduate students who are later employed by regional agencies like SPC and by fisheries departments throughout the region.

In this regard the University has serious concerns about the way that both Gillett Preston's Report (Information paper No.5) and that of King *et al* (Strategic plan for fisheries management and sustainable coastal fisheries in Pacific islands, Working Paper No. 7), address the relationship between SPC and the University of the South Pacific (and implicitly other universities in the Pacific). There seems to be a resistance on the part of regional agencies other than USP to identifying the need for long-term, foundation training in fisheries research. This was apparent recently when the University experienced difficulty in having officials from other regional agencies on the Marine Sector Working Group agree to having a principle acknowledging the importance of carrying out, within the region, basic long-term scientific training and education for indigenous Pacific islanders added to the draft Regional Oceans Policy (which the Forum subsequently took to the WSSD meeting in Johannesburg). The fundamental problem is that long-term training to produce graduates with the capacity to enhance the ability of fisheries departments and other organisations throughout the region is NOT the core business of regional agencies like SPC. Yet they want to play an educational role and see the way to achieve this as offering a miscellany of short courses as is apparent under Goal 1 "To enhance the capacity of fisheries agency staff to manage sustainable

fisheries" in King *et al.*, Working Paper 7 (page 20). Ironically this goal runs counter to the Regional Oceans Policy – the strategic plan needs, therefore, to be changed.

The short two week workshop as preferred by SPC is no substitute for tertiary education in fisheries management. SPC appears unwilling to advocate this because ultimately it means that the donor funds go to the University. Ultimately the losers are a dozen or more Pacific Island Countries and Territories who send their students to USP, which struggles to deliver because it needs more funding.

The Coastal Fisheries Programme reviewers and others repeat the contention that USP is out of touch with the region. Two observations are pertinent here. The first is that this is not a particularly objective statement. The University is a very large organisation and to generalise that hundreds of academic and technical staff are out of touch is inappropriate. The second is that perpetuating this misconception benefits SPC and the consultants engaged by SPC who compete with USP for donor funding and who are sometimes direct commercial competitors with USP's institutes, especially in marine consultancy work.

The Marine Studies Programme and others in USP contend that as a regional agency charged with co-operating with other regional agencies through the Council of Regional Organisations in the Pacific (CROP) mechanism, SPC should in its strategic plan be considering its linkages with other regional agencies. This applies particularly to building capacity for fisheries research and management: the Regional Ocean Policy clearly states the importance of educating Pacific Islanders in the region to manage their own resources. In the longer term this will only be achieved through tertiary education and not by two week intensive courses. If SPC is unhappy with the content of USP's marine studies courses, then the organisation should become more proactively involved with USP to ensure that the requisite staff, courses and post-graduate scholarships are in place to raise the standard.

The Marine Studies Programme within USP

The MSP sits unusually within the USP structure of Departments, Schools and Institutes. Larger than most University Departments and with a budget larger than two schools, MSP comprising both social and "hard" scientists comes under the separate jurisdictions of the School of Social and Economic Development (SSED) and to the School of Pure and Applied Sciences (SPAS). This unusual arrangement means that MSP is not directly represented on many of the important committees within USP such as Academic Committee, equipment committees and Senate.

2003 is an important milestone year for MSP for it marks five years occupation of the \$FJ 25 million facility provided by the Government of Japan and five years since the University identified marine studies as a priority area and a desire to for MSP to become an international centre of excellence in its 1998 Five Year Strategic Plan. Within that five-year period and since the last Heads of Fisheries meeting there have been several important changes and events affecting MSP and how it relates to fisheries within the region.

In 2000, the Institute of Marine Resources, reduced almost to a nominal status, was recalled to Suva after its new facilities were destroyed in the Solomon Islands. The May 2000 coup in Fiji and attempted military mutiny in November that year was a disruptive year for USP

generally and the Institute only started to gather momentum again in 2001. It now has six substantive staff and several short-term contract positions. For the last two years the Institute has been helping MSP to deliver its undergraduate academic programme and it has helped to advance aquaculture within marine studies generally.

Since the last HoF meeting there have been significant changes to the roles played by University institutes. Whereas previously there were regarded as units heavily involved in research, training and post-graduate supervision, they are now viewed primarily as commercial units with the expressed purpose of generating revenue for the University. As such, the University no longer pays the salaries of Institute staff, which have to be earned commercially. This change in emphasis from research and training to commerce is something that member countries need to consider when there are further suggestions for USP to decentralise. If the desire is to see enhanced localised training and research, then an institute (as compared to a slice of MSP) will be ill-suited to this task. This is a good argument to build up MSP further so that parts of it can later be decentralised.

Professor Robin South, who helped found MSP in the early 1990's, resigned in March 2002. The Programme has since been under the caretaker coordination of Dr Cameron Hay who is also the Director of the Institute of Marine Resources. Recently USP appointed a new Professor of Marine Studies and Coordinator of MSP: Professor Leon Zann will arrive to take up this post early in 2004.

The MSP has continued to produce a steady trickle of MSc and PhD students most of whom (32) have been CSPODP-funded by Canada. Since the Program began, about 24 students have graduated and most are now employed in fisheries and environmental organisations throughout the region. In 2002 MSP appointed new lecturers in marine geology and a marine law policy to its staff. In 2003 it advertised a new position for a coral reef ecologist (a position obtained for MSP by the Institute of Marine Resources). With the appointment of Professor Zann, who is also a coral reef ecologist, the Programme will become much stronger in the area of coral reef ecology. A fisheries biologist and physical oceanographer were also appointed on short-term contracts in 2003. The Japanese Government has continued to support MSP in the area of Post Harvest Fisheries by contributing a specialist in 2003 and the likely semi-permanent appointment of a specialist in this area in 2004. With respect to post graduate students, a senior USP professor was temporarily appointed as post graduate co-ordinator to assess the urgent needs of the post graduate students. Working together, and in part funded by the Canadian CSPODP-II programme, the University has made major advances in aquaculture concentrating on *Tilapia*, species of *Penaeus* (seawater shrimp), mud crabs, and the freshwater prawn, *Macrobrachium*. Proposals have been submitted to USP managers for MSP to secure facilities for a marine laboratory and to undertake facilities for marine and freshwater aquaculture. Finally over the last two years serious efforts have been made to upgrade the quality of MSP's boats, motors, diving equipment etc.

In April 2002 MSP was externally reviewed after a delay of more than two years. This very thorough review identified several problems and weaknesses in the Programme. These included:

- the current ad hoc nature of its scientific undergraduate course structure lacking structure and a clear career path for students and the lack of emphasis in applied areas such as fisheries;

- the difficulty that MSP has had in adding new courses because there are no free slots (caused by other departments requiring that their courses be marine studies prerequisites), and because it lacks the academic staff to do so;
- serious problems with respect to equipment and support services to the extent of compromising safety;
- that MSP was not master of its own destiny being answerable to two schools comprising some departments who viewed MSP as their potential competitor for students and resources (eg Biology Department);
- insufficient staff and expertise to supervise post graduate students;
- the serious lack of facilities for field work (eg the absence of a marine laboratory) and adequate aquaculture facilities);
- the confusingly vague arrangement that MSP had with IOI and what IOI actually contributed to the University;
- The likely lack of scholarship opportunities for post graduate students after 2004 when the Canadian-funded CSPODP scholarship program ends.

It is timely here at this meeting to consider whether USP's goal to develop its Marine Studies Programme as an international centre of excellence was achieved during the five years of its strategic plan (1998-2003). However excellence may be measured, MSP has not become an international or even regional centre of excellence in marine studies. While MSP is firmly marked on the map, it has not produced sufficient quality publications nor is it actively involved in a sufficient range of research projects to justify such a claim. Relative to some universities such as Canterbury University or Victoria University in New Zealand, USP produces courses and students with a relatively high emphasis on marine studies. But compared with universities such as James Cook University in Queensland, which specialises in marine studies and offers a wide range of undergraduate courses, USP's Marine Studies Programme is below average.

Of particular concern is the lack of emphasis that MSP has developed in areas of applied fisheries. As a result, the MSP programme has produced students who are inadequately trained in marine sciences particularly in areas such as fisheries research and stock assessment, in sampling and surveying design and nearshore oceanography. Since these are qualities needed in most fisheries departments throughout the region and many of MSP's graduates are employed by such agencies, this remains a serious shortcoming.

There are five main reasons for this:

First the Marine Studies Programme has never been sufficiently independent within the USP structure to have sufficient control over the structure of its undergraduate courses and to have direct links with the University's Executive.

Second, MSP has not been supplied with the human resources needed to employ the range of academic staff needed to achieve the strategic goal. That five years lapsed before the Programme ever appointed a coral reef ecologist is indicative of this problem. Without such staff there is little impetus to establish new courses on such fundamental issues as fisheries management, coral reef ecology, sampling and surveying design and bio-statistics, nearshore oceanography and specialized courses such as marine mammals and marine ornithology.

Third there is scant opportunity for marine science students to undertake ecological field experiments or aquaculture experiments because of MSP's location in the heavily urbanised Laucala Bay. MSP lacks a suitable marine research laboratory in an area where equipment can be deployed with a reasonable assurance that it will not be stolen and in an area with suitable water quality.

Fourth the scientific equipment and support facilities (many of which were new in 1998) have been allowed to deteriorate without adequate maintenance and without sufficient setting in place a budgeting mechanism to take depreciation into account and to make replacements. This has been particularly serious with respect to boats, motors, diving equipment, workshop facilities, microscopes, oceanographic sampling gear (eg CTD's) and electronic equipment.

Fifth the coup year of 2000 was detrimental to MSP and USP generally causing staff attrition and the significant damage to electronic equipment because erratic voltages. About 25% of all computers and printers were damaged or ruined, for example.

Finally in the near future, the uncertain prospect of securing new scholarships to replace those previously offered by the Canadian Government means that MSP will not have the means to support its post graduate students which will compromise the entire post graduate programme. This will have serious ramifications in terms of generating the social and scientific capacity for fisheries management and research in the region.

Conclusion

My personal view, gleaned over two years of co-ordinating MSP, is that over the last five years University managers have not given marine studies the high priority specified in their strategic plan. This may, in part, be because some managers thought that a new marine studies building was a recipe for excellence, when in fact excellence hinges mainly upon having the right blend and numbers of motivated personnel. There are however, undoubtedly funding problems. Three key problems that must be resolved if MSP is to progress in the immediate future are :

- (1) adding appropriately qualified academic staff to provide the means and impetus to diversify the academic programme particularly in areas of applied fisheries research;
- (2) securing funding for scholarships for marine studies post graduate students and
- (3) improving the working conditions for marine ecological research (eg by having a marine laboratory and access to outdoor aquaculture facilities).

There is, as yet, no commitment from senior USP managers to address these issues, although staff within MSP are endeavouring to address them. **What is needed, in my opinion, is for the regional agencies and for the fisheries departments to become more pro-actively involved in the composition and the quality of the MSP academic programme in terms of specifying the skills that they need and in terms of advocating for the necessary funding to make these improvements.** Dr Tim Adams recent verbal suggestion that SPC and USP develop a memorandum of understanding would be a good place to begin.