



Marine Studies

The University of the South Pacific

Technical Report

THE SOUTH PACIFIC REGIONAL SEAS PROGRAMME
COOPERATION IN MARINE TECHNOLOGY

POSITION PAPER

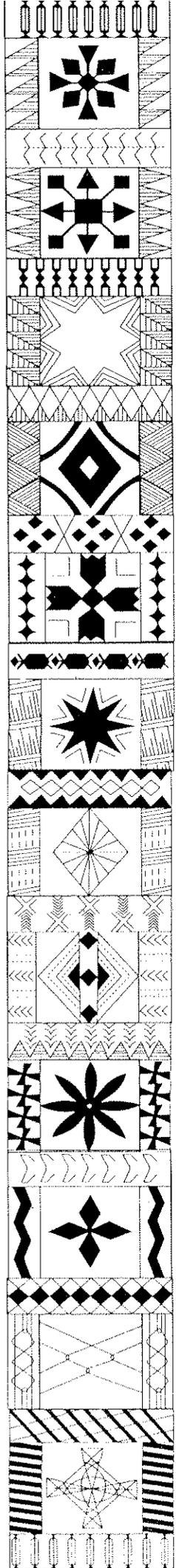
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THE SOUTH PACIFIC REGIONAL SEAS PROGRAMME

COOPERATION IN MARINE TECHNOLOGY^{1 2}

1.0 Purpose

1.1 The Regional Seas Programmes, comprising Conventions, Action Plans and Protocols in eleven regional seas, are in a process of transition. Conceived originally in the sectoral perspective prevailing in the early seventies, they must now adjust to the comprehensive perspective of the nineties and the next century. From the original purpose of protecting the marine environment they must move to the purpose of integrating environment and development concerns according to the principles of sustainable development.

1.2 An upgrading of regional cooperation and development is of crucial importance for the implementation of all the Conventions, Agreements and Action Programmes emanating from the Rio Conference on Environment and Development (UNCED, 1992). Agenda 21, the Convention on Biodiversity, the Convention on Climate Change, the Action Programme of the Barbados SIDS Conference, the recommendations of the Nørdwijk Conference on Integrated Coastal Management, the Agreement on the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks in the High Seas, and the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities: they all build on regional cooperation as an essential element of implementation.

1.3 The regional response to these new challenges cannot be piecemeal, Convention by Convention, programme by programme. It must be conceived in an integrated and systematic way, avoiding duplication of efforts and conflicting arrangements.

1.4 It is the **purpose** of this position paper to address the regional priority for the **establishment of a Regional Centre for the development of socially sustainable technologies in accordance with Articles 276 and 277 of the United Nations Convention on the Law of the Sea.**

2.0 Background:

2.1 The Regional Seas Programme provides the most comprehensive institutional framework for regional cooperation in the seas and oceans.

¹ Includes background information provided by Prof. Elisabeth Mann Borgese. Founder, IOI, and the IOI Headquarters, Malta.

² I am grateful to Esekia Solofa, Vice-Chancellor, the University of the South Pacific for his review of and contribution to this presentation.

Initiated by UNEP following the Stockholm Conference on the Human Environment (1972), it was one of the success stories of the United Nations System.³

2.2 The programme necessarily reflected the sectoral approach which still prevailed in the early seventies. The Stockholm Conference generated the establishment of sectoral Ministries of the Environment at the national level, and the Regional Seas Programme for the Protection of the Environment at the regional level.

2.3 Between 1972 (Stockholm) and 1992 (Rio) global awareness has moved from a sectoral to a comprehensive approach, from the protection of the environment to sustainable development.

2.4 In the South Pacific, global, regional and national initiatives resulted in the establishment of the South Pacific Regional Environment Programme (SPREP): it was SPREP that facilitated the development of National Environment Management Strategies (NEMS) for the Pacific Island countries, in preparation for UNCED. UNEP's Regional Seas Programme has been overseen by SPREP.

2.5 The International Ocean Institute (IOI) is one of UNEP's Partner Agencies. As stated on p. 77 of the UNEP Draft Proposal:

IOI will support the implementation of the Global Programme of Action by explaining the main parameters of the Programme of Action in its courses on integrated Management of the Coastal Ecosystem which it will conduct in its worldwide network of Operational Centres in Canada, China, Cost Rica, India, Japan, Malta, Senegal, South Africa and the South Pacific. It will also conduct regional workshops in Canada, Costa Rica, India, Japan and Senegal to consider the whole question of sustainable management of the coast and ocean areas.

2.6 The International Ocean Institute is a partner in the United Nations Division on Law of the Sea (UN/DOALOS) TRAIN-SEA-COAST Programme (TSC), with founding Curriculum Development Units at IOI-South Pacific, IOI-India, IOI-Costa Rica and IOI-Senegal. The TSC Programme is a member of the UN's TRAINMAR Group of training programmes, using the TRAIN-X Training Methodology: it is committed to training of coastal managers, planners and decision makers in the coastal and marine sectors.

2.7 IOI-South Pacific's TSC CDU has the regional endorsement of the United Nations Development Programme (UNDP), and is a regional partnership with the South Pacific Regional Environment Programme, the South Pacific Applied Geoscience Commission (SOPAC), the Forum

³ United Nations, 1995. *Basic Facts about the United Nations*. United Nations, New York. pp. 150-158.

Fisheries Agency (FFA), the South Pacific Commission (SPC) and the South Pacific Forum Secretariat.⁴

2.8 IOI-South Pacific is an integral part of the University of the South Pacific's Marine Studies Programme (MSP): it operates under a Memorandum of Agreement with the University, and a Memorandum of Understanding with the Government of Fiji.

2.9 The University of the South Pacific is a regional University serving 12 member countries⁵. The Marine Studies Programme was established in 1993, and is a priority development of the University. Specifically the University is through MSP strengthening its programmes in marine science education, training and research. Major donor support for these activities is being provided by the Governments of Canada (programme development) and Japan (capital).

2.10 The MSP has significant regional components in the Institute of Marine Resources (Solomon Islands) and the Atoll Research Programme (Kiribati).

2.11 The USP operates a substantial regional network comprising three campuses (Laucala in Suva, Fiji; Alafua in Apia, Western Samoa; Emalus in Port Vila, Vanuatu) and eleven Extension Centres (Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Solomon Islands, Tonga, Tuvalu, Vanuatu and Western Samoa).

2.12 The MSP's capabilities as a regional centre for marine science will be greatly enhanced with the opening in mid-1998 of the new MSP Facilities on the Laucala campus, funded by the Government of Japan. Incorporated in the facilities will be the IOI-South Pacific, a regional Post-Harvest Fisheries centre (to be operated in collaboration with the SPC), the Institute of Applied Sciences (IAS), a research laboratory for marine biotechnology and natural products chemistry, and the Pacific Islands Marine Resources Information System (PIMRIS).

2.13 In 1995 the IOI stimulated the formation of the Independent World Commission on the Oceans (IWCO): the report of the Commission will be tabled with the United Nations General Assembly in 1998, the Year of the Oceans. President Soares of Portugal was the original President of the Commission.

2.14 During 1995 - 1996 regional IWCO Hearings were conducted, including a series in the South Pacific carried out under the auspices of IOI-South Pacific.⁶

⁴ Report of the Regional Consultation Meeting on the TRAIN-SEA-COAST Programme. Nuku'alofa, Tonga, May 1996.

⁵ Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu and Western Samoa.

⁶ International Ocean Institute, 1996. *Independent World Commission on the Oceans. Report on the Hearings for Oceania. September - October 1995.* Report prepared by Joeli Veitayaki.

2.15 At its meetings in Rio in July, 1996 the IWCO identified the following major themes resulting from the Hearings held in Oceania, Japan, China, India and Canada, as follows:

1. The legal and institutional framework for use and protection of the oceans;
2. Sovereignty, security and peaceful use of the oceans;
3. Ocean economics in the context of sustainability;
4. Promises and challenges of science and technology;
5. Awareness, decision making a societal participation;
6. Partnership, solidarity and ocean governance.

2.16 It is theme 4 that is the major focus of this Position Paper.

3.0 Promises and Challenges of Science and Technology (S&T)

3.1 The IWCO recognises that while technology is absolutely necessary for exploiting marine resources, there is a big gap between North and South. The suggestion was to close this gap at the earliest opportunity as otherwise there was a danger of sustainability not being achieved. The need was expressed for:

1. Building up S&T capacity in developing countries through both South-South and North-South cooperation (IOI centres in China, India, Japan, Oceania and Senegal);
2. There being international and regional cooperation on an equal basis between North and South and South and South (IOI Centres in China, India and Japan);
3. Reviewing the entire system of technology transfer and capital movement and thereafter drawing up an international action programme (IOI-Japan);
4. Developed countries providing technology and capital to developing nations in the fields of aquaculture, mariculture, ocean energy and underwater mineral resources (IOI-Japan);
5. Biotechnology being used for maintaining biodiversity and sustainability of fisheries (IOI India);
6. Ocean research should be undertaken after: pooling resources; avoiding duplication; being integrated; being linked to industries; being relevant and properly planned (IOI-Canada, India).

3.2 It was noted that many NGOs in India and Canada expressed their reservations about scientific results and felt that scientists, local communities and NGOs need to collaborate so that socio-economic issues get factored into the research system.

4.0 Marine technology cooperation under the Law of the Sea Convention:

4.1 Almost 100 of its 320 articles of the comprehensive and voluminous text of the Law of the Sea Convention touch, one way or another, on science and technology cooperation.

4.2 In general terms, the Convention postulates that States and competent international organisations shall promote and facilitate the development and conduct of marine scientific research (Art. 239). More specifically, science and technology cooperation is mandated at three levels: national, regional, and global. Article 275 calls for the establishment of national marine scientific and technological research centres and the strengthening of existing national centres, in order to stimulate and advance the conduct of marine scientific research by developing coastal States, and to provide advanced training facilities. Articles 276 and 277 mandate the establishment of regional centres “in order to stimulate and advance the conduct of marine scientific research by developing States and foster the transfer of marine technology.” Article 276 postulates that “All States of a region shall cooperate with regional centres therein to ensure the more effective achievement of their objectives.” Article 278, finally, exhorts the global competent international organisation to cooperate in facilitating technology transfer.

4.3 Considerable efforts have been made to promote technology cooperation between North and South, in accordance with the Conventions and Resolutions of the United Nations. Examples at the global level are the International Centre for Genetic Engineering and biotechnology, with headquarters in Trieste and Delhi and, more recently, the International Centre for Science and High Technology (ICS) in Trieste, both established by UNIDO. Also at the global level, a Multilateral Ozone Fund has recently been established to cover all “incremental costs” arising from the introduction of environmentally safe technologies, and similar arrangements have been made for the implementation of “technology transfer” under the Biodiversity and Climate Conventions.

4.4 At the regional level of the Mediterranean, there is the UNDP-sponsored Centre for Education and Research in Cairo (CEDARE) which was established to enhance European-Arab cooperation in sustainable development, and has a technology cooperation component. The tasks of the newly established Mediterranean Commission for Sustainable Development include the identification of technologies and knowledge of an innovative nature for sustainable development in the Mediterranean region, and provision for advice on the various means for their most effective use, in order to facilitate exchanges among the Contracting Parties and to enhance capacities for national development.

4.5 National examples include the mechanism established in Greece to facilitate technology cooperation in the private sector, and more recently a

centre for the advancement of environmentally sustainable technology was established in, and financed by, Spain.

5.0 Marine Technology Cooperation in Oceania:

5.1 Within Oceania⁷ extensive opportunities exist for marine technology cooperation; this cooperation is a stated goal of Australian and New Zealand aid programmes and is directly evident from their long history of support of regional organisations such as the South Pacific Commission (coastal and oceanic programmes), the South Pacific Forum Fisheries Agency, the South Pacific Applied Geoscience Commission, the South Pacific Regional Environment Programme, and the University of the South Pacific. The aid draws heavily on facilities and expertise within Australia and New Zealand, and has a dual capacity-building function in both the home and recipient countries. Only recently, however, has there been a regional strategy focussing on the Forum Island Countries, and there has yet to be developed a clear policy on the ocean and marine sectors. The South Pacific Organisations Coordinating Committee (SPOCC) is expected to spearhead the development of this policy in the near future.

5.2 Other aid donors, either through bi-lateral or multilateral programmes, have had a significant influence on marine technology transfer and capacity building in the Pacific Islands. These include the United States (USAID), Canada (the South Pacific Ocean Development Programme, Phases I and II; the Canada Fund), Japan, the United Kingdom and more recently Norway, Sweden, China, Korea, and Taiwan. In addition, UN agencies such as the UNDP, UNESCO, UNIFEM and UNEP have played a significant role in the funding of projects and agencies in the marine sector. The Global Environment Facility (UNDP/UNEP and the World Bank) first tranche has also played a key role in the ocean sector during the past five years.

5.3 The net result of post-Stockholm developments in the Pacific Islands marine sector, however, has been a negligible development of marine technology and marine science capacities at the national level (ie. UNCLOS Article 275), and a sustained sectoral approach to marine technology at the regional level [Earth Science with SOPAC; Coastal and Oceanic Fisheries with the SPC; Oceanic Fisheries (Policy) at the FFA; Environment with SPREP]. The sectoral approach is further exacerbated by the fact that there are different suites of member countries in different regional organisations (ie. not all may benefit).

5.4 The opportunity which long presented itself, through the University of the South Pacific, to develop a regional centre for marine technology, was not taken up until 1993, twenty-five years after its foundation. Other urgent human resource developments needs of the region had taken precedence. The speed of development of this initiative is strong evidence for the need: it

⁷ Includes Australia, New Zealand and the Pacific Island nations.

remains hampered, however, by the fact that its member countries comprise only 50% of the total of 23 Pacific Island nations, and by the lack (see 5.1) of a regional policy on marine technology development. It is also hampered by a general lack of scientific know-how and policy in its member governments, and by the fact that its Council is made up of Ministers of Education who may not, in many cases, consult adequately with fellow ministers concerning matters of science policy.

6.0 The University of the South Pacific's Marine Studies Programme: the South Pacific Regional Centre for Marine R&D?

6.1 In the timely implementation of Articles 276 and 277 of the United Nations Convention on the Law of the Sea, which calls for the establishment of a regional centre for the advancement of marine science and technology, ***it is recommended that the University of the South Pacific's MARINE STUDIES PROGRAMME be identified as a South Pacific Regional Centre for Marine R&D.***

6.2 With the exception of one or two countries, the rest of the Pacific island countries, as micro states, will find it extremely difficult, if at all possible, individually to build up any sustained capacity to meet the call of Article 275 of UNCLOS. This then provides a further imperative for the above proposal, as the regional centre will need to double as the national R&D Centre, or possibly to sponsor a sub-centre at/for each micro state.

6.3 In the context of the Pacific micro states, R&D in marine technology is unlikely to involve the development of any capital-intensive or sophisticated technologies. The interdisciplinary nature of the MSP enables the university to supplement its training programmes in science and technology with the creation of an awareness of the social, political, and cultural importance which the increased use of technology may generate. The kind of R&D, therefore, that the regional centre should target would focus upon advising public and development policy. The emphasis would be on policy advice, and a basic concern for the centre is the development for itself of a sustained "local" capacity to enable it to provide sound advice at the local, national and regional levels on issues relating to the marine sector and environment. Director involvement of the University in the centre will facilitate a response to this concern.

6.4 Human Resources Development must be at the core of the development of marine science and technology, and of the programmes of cooperation between developed and developing countries. As the only regional university in the South Pacific, the University of the South Pacific is ideally situated to fulfil this mandate.

6.5 It is further recommended that ***the University of the South Pacific, together with its partner regional organisations and aid donors, establish a mechanism of consultation that will permit:***

- 1. The strengthening of the University of the South Pacific's Marine Studies Programme as a Regional Centre for Marine R&D;**
- 2. The strengthening of existing cooperation between the USP and regional IGO's to establish workable arrangements in marine technology transfer and human resources development in the marine sector;**
- 3. The adoption of a regional code of behaviour for technology transfers (including biotechnology);**
- 4. The creation of a regional fund for technology development;**
- 5. The development of pilot technology projects of regional and national priority;**
- 6. The development of appropriate private/public sector linkages in marine technology R&D;**
- 7. The establishment of a regional register of technological data;**
- 8. The establishment of a policy advisory network for South Pacific countries concerning marine R&D;**
- 9. Assistance to South Pacific countries in the establishment of national research and technology centres, where the necessary capacity exists;**
- 10. Establishment of guidelines to ensure that technology cooperation is conducted within a broad culturally, socially and environmentally sustainable context;**
- 11. Establishment of guidelines to ensure that intellectual property rights are protected in marine technology R&D activities.**