A plenary “Symposium on Cooperation in Science and Education in the Pacific” was held on the morning of Thursday 5 May. It was attended by about 280 participants. The Symposium included:

- A keynote address on “Asia-Pacific Regionalism Overtaking the Pacific Islands by the late USP Emeritus Professor Ron Crocombe (included in these proceedings).

- Twelve major presentations by International NGOs, scientific and educational institutions and initiatives on their collaborative activities in science and education within the region (Conservation International, Worldwide Fund for Nature (WWF) South Pacific, Foundation for the Peoples of the South Pacific (FSP), the World Fish Centre/FishBase/Reef Base Pacific, the Pacific Taxonomic Initiative (PACINET), Bionet International, French Academy of Sciences, Institut for Reserche pour le Developpment (IRD), the Secretariat of the Pacific Community (SPC), and the Coral Reef Initiative in the Pacific (CRISP).

- Ten shorter presentations by regional organizations/entities including the Pacific Science Association (PSA), Secretariat of the Pacific Geoscience Commission (SOPAC), The University of the South Pacific (USP), Secretariat of the Pacific Environment Programme (SPREP), Pacific Invasives Partnership (PIP), UNESCO Pacific Office, European Union (EU), International Small Islands Study Association (ISISA), the Econesian Society of Pacific Island Students, and the French Ambassador to the Pacific Islands.

- Over 30 contributions from the floor from other entities actively engaged in cooperation in science and education in the Pacific Islands, including representatives from Chile (who are working in Easter Island), the East-West Centre, Consortium for the Barcode of Life, IUCN Specialists Groups, National Tropical Botanical Garden, Landcare Research (NZ), Australian National University, Oparo Rapa Iti Traditional Organization (Tahiti), and the Malaysia Academy of Science.

- Two songs and visual displays focusing on the Pacific Islands’ environmental crisis by the Econesian Society (a conservation youth action group from USP) with the collaboration of local youth musicians.

Major accomplishments and examples of increasing collaboration and partnerships in science and education for sustainable development included:

- The rapid increase in effective cooperation in Science and Education between regional and relevant international scientific and educational institutions, international and local NGOs, regional organizations, government agencies, the private sector and local communities, and the application of this cooperation to sustainable development in the Pacific Islands.

- The dramatic expansion over the past decade in partnerships in conservation and sustainable island development, including the increasing activity,
establishment of offices, and significant expansion of programs by international NGOs within the Pacific Islands.

- The expansion in a range of successful programmes involving community-based environmental management, health, disaster and risk management, good governance, community-based tourism, mainstreaming of sustainable rural and sustainable agricultural and forestry development initiatives.

- The rapid development of “real” partnerships between International NGOs (INGOs), local NGOs, research and educational institutions, private industry, national and local government agencies and local communities, and international and national funding agencies in an effort to apply science, education and to sustainable development, with particular emphasis on the importance of partnerships with local communities and land and resource owning groups (e.g., the Pacific Locally Manage Marine Areas Network).

- Increasing emphasis on a shift from collaboration in pure science to collaboration in the application of good science to development by users at the national, local community or island level.

- Increasing involvement of church and religious entities in scientific, educational and development initiatives (e.g., the Pacific Council of Churches’, which has a major initiative on Climate Change adaptation as one of its central programs, and has co-hosted the Pacific Roundtable on Nature Conservation twice in the past seven years).

- Increasing and effective collaboration between the Anglophone and Francophone Pacific (e.g., the Coral Reef Initiative in the Pacific/CRISP initiative that has developed extensive partnerships between most of the major Anglophone and Francophone conservation and biodiversity research entities, to promote the protection of coral reef ecosystems and to transfer and provide expertise to underpin these objectives)

- The important contribution that funding entities, including international foundations, industry, and national aid sources, have played in these developments, often funding projects that include two or more implementing agencies (e.g., the CRISP coral reef initiative).

- Expansion of flexible funding for community-based science and conservation initiatives (e.g. Macarthur and Packard Foundations, Total Foundation (France), French, New Zealand, Australian, Japan and US governments and foundations)(e.g., the CRISP initiative, which has attracted matching funds).

- The important role that the Pacific Islands Roundtable on Nature Conservation had played over the past decade in bringing about increased collaboration between funding organizations, international NGOs, regional political, scientific, conservation, education and development organizations, government entities and local communities as a basis for the rapid expansion of biodiversity conservation and sustainable-use initiatives. This includes the role of the Roundtable in facilitating the triennial Nature Conservation in the Pacific Conference and the development and implementation of the associated Action Strategy for Nature Conservation in the Pacific was also praised.

- Increasing activity in pure and applied biodiversity research/in the islands facilitated by INGOs, scientific and educational institutions and networks and initiatives, such as PABITRA, CRISP, The French Santo 2006 Expedition (French Museum of Natural History), Landcare (NZ), Pacific Invasives Partnership (PIP), and collaboration between USP, UPF, UNC, UPVD-EPHE-CRIJOBE MOOREA (Perpignon) and IRD.
Increasing access to scientific specialists and information (e.g., the increasing role played by IUCN Specialist Groups) and the increasing knowledge base and access to information on the nature and conservation status of the biodiversity and environments of the Pacific (GCRMN, ICRI, Bishop Museum, French Museum of Natural History, PSA, Roundtable database on biodiversity conservation activities, GBIF, PBIF, PACINET). This includes the rapid expansion of informatics, information management systems, taxonomic initiatives and Email networks that have brought together information on biodiversity making it more accessible to all partners in the region (e.g., Fish Base, Sealife Base, Reefbase Pacific Project, World Fish Centre, Google Earth, Pacific Ecosystems at Risk/PIER, Global Invasive Species Database and PestNet). This included biodiversity survey data, scanning of documents not available otherwise, facilitating the dissemination to user communities of research results. This has included a major emphasis on getting researchers to share information and to put their results (publish) online.

Recent initiatives to strengthen taxonomic and biodiversity information sharing through the establishment of PACINET, PBIF, much of it with the support of GBIF, Bionet and other organizations. It was stressed that most of the biodiversity collections from the Pacific Islands are located outside the region, with there being few secure herbaria or biodiversity collections in the region, and the associated need to develop virtual biodiversity collections (of “their” specimens), which will be accessible to people, through digital technology. It was stressed that we now have a PACINET which is truly the first partnership between USP, SPC, SPREP and SOPAC (which has a jointly fund the coordinator’s position) designed to promote training and awareness in taxonomic and biodiversity surveys, and the promotion of the collection of traditional environmental/taxonomic/biodiversity information. There is also an attempt to identify what expertise exists both in the region and outside the region on Pacific biodiversity and biodiversity conservation initiatives.

Establishment, with the support of international funders, INGOs and regional institutions, of large community-based and government supported conservation areas (Sovi Basin and Great Sea Reef, Fiji; Mt. Panie, New Caledonia; the Phoenix Islands Marine Reserve, Kiribati; Tetepare Island, W. Solomon Islands), UNESCO World Heritage sites (Ouvea, New Caledonia and E. Rennell, Solomon Islands) and UNESCO Man in the Biosphere Reserves (Fakarava Atoll, Tuamotu)

Increasing focus on sustainable use of biodiversity (e.g., FLMMA, WWF sustainable use and replanting of kwila/Intsia bijuga on Kabara, Fiji, SPC Forests and Trees and Facilitating Agricultural Commodity Trade/FACT programs).

The increasingly important role played by national NGOs (e.g., Partners in Community Development and Nature Fiji-Mareqeti Viti) and increasing support given to local national NGOs in efforts to build local capacity (e.g., FSPI has supported some 8 local NGOs within the region).

The development and refinement of sustainable development tools (e.g., locally managed marine areas, MPAs, community conservation initiatives), with a focus on affordable, replicable and culturally appropriate tool/initiatives.
• The increasing production of user friendly educational and awareness raising materials, in vernacular languages, that can be used at the national and local community levels in the region.

• The increased collaboration in the effort to identify and address invasive species issues, which constitute one of the main threat to sustainable island development.

• Major efforts in the application of science and local expertise in protection, restoration and sustainable use of threatened resources (e.g., kwila wood on Kabara, sandalwood in Vanuatu, French Polynesia and elsewhere, and threatened pandanus cultivars in Kiribati and the Marshall Islands).

• Increasing efforts in environmental restoration (e.g., mangrove replanting, coral farming, agroforestry)

• Major expansion in the training at the postgraduate level and involvement of young students and Pacific Islands in research and conservation initiatives (Funded and facilitated by French, international funding agencies, CROP agencies, EU, etc.).

• Rapid expansion in opportunities given to young Pacific Island and overseas students to study at the postgraduate level in the Pacific Islands and at relevant overseas institutions (e.g. Australian, New Zealand, French and Japanese scholarships, East-West Centre grants, the EU Erasmus Mundus program).

• Increasing emphasis on the application and packaging of science and education as a basis for improved education, at all levels, related to sustainable development and conservation initiatives and to facilitate bridging the gap between the most up-to-date modern science and local communities (e.g., WWF’s Community Messaging program and the production of short one- to two-page “community messages” related to important environmental issues, such as climate change, the endangered status of turtles, coral bleaching, etc.)

• Increasing emphasis on the recording, conservation and application of indigenous and traditional knowledge to local development initiatives and the collection, protection and promotion of conservation of threatened cultural plants and other genetic resources as a basis for sustainable island development.

• Increase in initiatives to study, document and recognize cultural diversity and the role that Pacific culture has in promoting truly sustainable development. There has been increasing collaboration in recognizing local models for managing and governing resources and local communities. Particular emphasis was placed on recording scientific information that is largely oral in its origin and the application of this knowledge to the promotion of sustainable island development.

• Increasing collaboration and strengthening of science and technology through, joint research initiatives (e.g., French Santo Biodiversity Survey, Vanuatu; the WWF-led Great Sea Reef Biodiversity Survey, the CI-led Nakauvadra Range Survey, and the USP-led survey in the Lau Group; IRD-UNC-USP study in Ouvea, and the ongoing survey of the biodiversity of the Phoenix Islands Marine Reserve in Kiribati and the US islands).

• The role of the PSA in promoting science throughout the region, organizing congresses and through the publication of Pacific Science and other publications was stressed.
• The role of SOPAC in their community based livelihood programme, vulnerability assessment, geodetic and bathymetric mapping work, coastal erosion programmes, etc. was praised.
• Increase in practical in-service sources to build conservation capacity within the region (e.g., the Pacific Islands Community-based Conservation Course run jointly by USP, SPREP and the World Centre for Protected Landscapes (Wales) and the Islands Species-Led Action (ISLA) course run by the National Trust of Fiji, Durrell Foundation and the Darwin Initiative in Guam and Fiji).
• The role of USP as one of the two regional universities in the world and its dominant role in producing quality graduates needed to underpins sustainable development in the region.
• The increasingly important role that the University of French Polynesia (UPF) and the University of New Caledonia (UNC) are playing in capacity building in the French territories.
• The emergence of the Eonesian Society, a student organization which was established at USP in 2007 to involve students in the identification “Pacific solutions” and to create awareness of environmental issues, with a vision to creating a sustainable Pacific future by integrally involving youth. Activities include developing negotiating skills, producing video documentaries, outreach programmes, and establishment of ecoparks and outdoor learning laboratories in schools. Have trained 50 members in Pacific Islands who have created chapters in at least six Pacific countries.
• The role of SPREP in coordinating environmental issues in a wide range of areas of interest.
• The role of the Pacific Invasives Initiative and the Pacific Invasives Learning Network that have been consolidated into the Pacific Invasive Partnership in effort to facilitate information flow and provide technological expertise to deal with invasive issues.
• UNESCO’s promotion of the UN Decade of Education for Sustainable Development and other initiatives, such as the Local and Indigenous Knowledge Systems (LINKS) program, that has a major focus on the Pacific Islands, where most knowledge is orally transmitted, often threatened and needs to be recorded as a basis for the promotion of sustainable development at the national and community levels.

Discussions focused on a number of new avenues or opportunities to further strengthen collaboration in science and education in the Pacific region. These included:

• Greater involvement in collaborative research and educational opportunities with Spanish-speaking countries and agencies, such as Chile (Easter Island) and Ecuador (Galapagos Islands), and Asian countries, such as Japan, Philippines, Indonesia and Malaysia, because of their ongoing expertise in dealing with issues related to island biodiversity conservation and sustainable island development and their active interest in Pacific Island scientific research and education.
• Increased involvement of youth, Pacific Island peoples and local community representatives in cooperative scientific and educational initiatives, with particular recognition of the increase in the representation of youth in
scientific initiatives and placing increased emphasis on the postgraduate training of Pacific as integral components of cooperative initiatives.

- Greater involvement of the private sector and church and religious groups in scientific, educational and development initiatives because of their dominant social, economic and spiritual leadership role in Pacific countries and territories.

- Greater emphasis on the involvement of local researchers in scientific research and educational materials development, and on the recording, for more culturally appropriate and effective development.

- Greater emphasis by INGOs and large research organizations on the strengthening the research capacity with the Pacific Islands though the strengthening of research initiatives and facilities within the region, increasing formal postgraduate education of Pacific Islanders, and strengthening links between Pacific rim and other appropriate research organization and their Pacific Island counterparts.

- Greater emphasis on collection, recording and application of local vernacular knowledge as a basis for the more effective delivery and application of science and education as a foundation for community-based conservation and sustainable development initiatives.

- Increased focus on publication and making the results of scientific studies in forms that are in appropriate forms, accessible to and of greater value to Pacific Island stakeholders.

- The need for large NGOs and research organizations to recognize (e.g., in credits in their publications and outputs), include in their initiatives and support local partners that may not have, or have the capacity to provide funds.

- The increased role that the regional CROP organizations, French agencies, UNESCO and US-based institutions should play in coordinating and strengthening regional bodies, instead of developing and expanding programs within their organizations.