

Preservation Association; fifteen US and foreign universities, and three Canadian and two international organizations, co-sponsored the Symposium. Participants came from the US and some fifteen other countries.

The field excursions focused on the effects of the recent storms and hurricanes. Sea-level rise papers dealt with its effects in specific sites. A sample of research application was presented in the discussion of accommodation for sea-level rise in the design of shore protection. Its impact on wetlands was stressed for deltas, mangrove coasts, and flats; salt intrusions were also described.

Bypass-backpass management papers considered inter alia design, use of dredge spoils, and floodwater withdrawal at tidal inlets. The geology-geomorphology sessions related in general to sea-level rise effects and coastline modifications, though sediment transport and deposition was occasionally touched upon.

The sessions on law and administration emphasized the growing conflict between public and private rights, the latter of which come not infrequently in collision with environmental guidelines. Coastal protection structures have been the source of local government liability litigation.

A cursory count, scoring 45, evidenced that 'erosion storm-tides' coastal protection' was a major topic among papers. However, several presentations encompassed far more than response to storm hazards. Protection against shoreline retreat due to normal conditions and beach restoration were widely discussed. This brought the matter of artificial 'beach nourishment' repeatedly to the fore; though apparently preferred for some time to protection by hard structures, and practised quite commonly, it does not meet with universal endorsement. Major objections to it remain and include the costs involved and the temporary nature of the 'medication's' effects. Yet considerable improvements have been made in the approach, precisely about the occasional rapid loss of deposited fill-material; also use for profile feeding and provision for underwater feeder berms. Hardly any paper-suggested breakwater or groyne construction, at least not as a solo solution. Innovative alternative solutions to the now traditional approaches of hard structures, artificial nourishment, plantings, by-pass, included gravity drainage, beach scraping, and beach building were proposed.

Two panel discussions — allowing for attendees' participation, input, and comment — covered, respectively, foreign and American observations on comprehensive coastal management. This Symposium overall yielded a rich harvest of information and, notwithstanding an apparent, and deceiving, regional slant, it attracted a good participation. It is certain that the reputation of Per Bruun, the organizer, played a primary role therein. The ever-rising registration fees, besides the proliferation of meetings, do, however, make it increasingly difficult for a large number of scientists to attend international gatherings of this type — a circumstance that should be thought about.

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#### FIFTH MEETING OF THE CONFERENCE OF THE CONTRACTING PARTIES TO THE RAMSAR CONVENTION, HELD IN KUSHIRO, HOKKAIDO, JAPAN, FROM 9 TO 16 JUNE 1993

The Kushiro Conference marks a turning-point in the history of the Ramsar Convention: the biggest Ramsar meeting to date, it has also taken decisions which will markedly influence wetland conservation in the next few years.

#### *Programme, Budget, and Record International Participation*

In a significant gesture of commitment, the Contracting Parties resolved to double the Convention's budget, thus placing the Bureau's activities on a more solid base than hitherto, and allowing for increased technical support for developing countries. The meeting also adopted the 'Kushiro Statement', setting priorities for wetland conservation for the coming triennium in the context of post-Rio environmental efforts. The Kushiro Statement reinforces the Contracting Parties' commitment to the conservation and management of wetlands of international importance (Ramsar sites), to the implementation of the concept of wise use of wetland resources, to international cooperation through development assistance and management of shared wetland resources, and to the promotion of the Convention.

Over 1,200 delegates, representing almost all of the 77 national Contracting Parties, more than 20 Observer States, and a number of international and national nongovernmental organizations, met in Kushiro to discuss wetland conservation priorities in both plenary and workshop sessions. The Press, by more than 300 journalists, was also well-represented. In plenary sessions and four workshops, the Meeting reached important policy decisions and set the direction for Convention work in the next triennium. It also established a Scientific and Technical Review Panel.

#### *Wise Use of Wetlands and Ramsar Sites*

Additional guidance on implementation of the wise-use concept was adopted, and the meeting called for increased recognition of the importance of wetlands for fish biodiversity and yield.

The procedure for initial designation of sites for the 'Ramsar List of Wetlands of International Importance' was clarified, studies were launched on how to define and measure ecological change at those sites, while sites under threat were singled out for intensified attention in the next few years. Delegates reviewed the 'Montreux Record', which notes those Ramsar sites where priority conservation action is required, and adopted guidelines as to its operation. Furthermore, many governments indicated their intention of designating new sites for the 'Ramsar List of Wetlands of International Importance'.

#### *The Wetland Conservation Fund, International Fora, and Awareness-raising*

The Ramsar Wetland Conservation Fund, established in 1990 at the Montreux Conference, received much attention. Participants stressed its utility, which was demonstrated by the review of a number of projects financed by the Fund. Annual allocation for the Fund was increased from 10,000 to 100,000 Swiss francs. In addition, the Meeting called for increased voluntary contributions to reach the desired total of 1 million dollars a year.

The relationships of the Ramsar Convention with the Global Environment Facility (GEF) and the Biodiversity and Climate Conventions, were also examined, as were multi- and bilateral development assistance procedures. The Meeting laid particular stress, through two recommendations, on the necessity of raising awareness of the values and functions of wetlands. It is also worthy of note that the meeting adopted a recommendation commending the role of NGOs and encouraging governments to cooperate with these organizations.

The Kushiro Meeting was undoubtedly a success, and has laid the foundation for fruitful work in the next triennium. Leading up to Ramsar's 25th Anniversary, this period offers a challenge to the Parties and the Bureau to arrive at the next such occasion with a record of real progress in their wetland conservation efforts. For Australia, to be the host of the Sixth Conference (in 1996), there will be the added challenge of equalling the exceptional hospitality displayed by the City of Kushiro, the Province of Hokkaido, and the Japanese Government, which together made the Fifth Meeting not only so productive, but very enjoyable as well.

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FIFTH INTERNATIONAL CONGRESS ON THE HISTORY  
OF OCEANOGRAPHY, HELD AT THE SCRIPPS INSTI-  
TUTION OF OCEANOGRAPHY OF THE UNIVERSITY OF  
CALIFORNIA-SAN DIEGO, AT LA JOLLA, CALIFORNIA,  
USA, FROM 7 THROUGH 14 JULY 1993

The organization was founded at Monte Carlo, Principality of Monaco, in December 1966. This rapporteur, one of the founders, has witnessed since then meetings in England, Massachusetts, and Hamburg. The venue for this fifth meeting was well chosen. Scripps was founded in 1903, becoming part of the University of California in 1912. Its first building, erected in 1910, became a national landmark in 1977. The Institution now has one of the major marine-science libraries of the world, besides comprehensive biological and geological collections. It is now, and has long been, involved in coastal environmental research as well as open-ocean work of many kinds, being altogether a leader in oceanography.

The neighbouring Southwest Science Fisheries Center — which Congress attendees visited — includes a Coastal Fisheries Resource Division concerned with management of coastal fishes and environmental influences on their distribution and abundance. Advice is provided to the Inter-American Tropical Tuna Commission. Another division monitors dolphin and other coastal marine mammal populations in the Pacific. Antarctic ocean species' conservation and management information is provided by the Antarctic Ecosystem Research Group, which aims at preventing overexploitation.

#### *Multidisciplinary Stressed*

A Congress that straddles several scientific fields and their history will unavoidably pay tribute to 'giants' of oceanography, with some emphasis on those who were at one time linked to Scripps. Stressed also was the historical development of oceanography teaching and research on the

US Pacific coast, and the growth of the institutions located there. Papers dealt also with exploitation of marine resources — especially biological ones — and with ecological approaches and aquaculture in coastal regions. This led occasionally to expressions of national pride, *e.g.* by French Polynesia and China, the latter of which wishes to trace its oceanographic activities back to the 21st century BC.

Environmental conservation and pollution abatement were approached when discussing tide-mills, their eventual revival, and their possible use for small industries or as Third World economy boosters. The session on the 'Educational mission of marine studies' threw light on aspects of concerns for Nature preservation, restoration, and the impact of television on marine environmental awareness. Coastal-water structures and climatic control have been linked to fish abundance. An entire session was devoted to coral reefs. It was somewhat stunning to be reminded that a celebrated British biologist believed, only fifty years ago, that 'inexhaustible' open-sea fisheries could not be compromised. The Ocean Food and Energy Farm was 're-visited'; this project, which ran out of funds in 1986, could benefit from traditional-fuels' depletion, carbon dioxide problems, and global warming concerns.

Conservation and environmental protection were thus brought up, occasionally with eloquence, as when a strong plea was made for a multidisciplinary approach especially when dealing with environmental problems. In this regard it was said, 'it would be better to work on Man than on knowledge', and it was stressed that we should keep in mind that if in science no action is just that, in economics, 'no action is an action.'

#### *Better Future than Past Still Possible?*

One of the keynote addresses, purporting to provide a projection into the next fifty years, dwelled on the past and intimated a better future. Improved health was forecast for the ocean, due to pollution reduction and control. However, it appears to this attendee that, with predictions of worldwide concentration of human populations in coastal areas, the ocean's health problem is not free from clouds, and the developing situation has not been thoroughly appraised.

In Ukraine the Institute of Biology of the Southern Seas has initiated, during recent decades, radiation-level monitoring and the analysis of responses of pelagic and bottom ecosystems to pollution and to increased eutrophication. Progress is somewhat stymied because the Institute (as so many others almost everywhere!) is currently financially strapped. During 30 years the Russian research vessel *Vitiaz* plied practically all the seas, the national oceanography school being founded at the end of her career, accommodating students from 14 countries. Now retired, the *Vitiaz* is being transformed to house an 'ecomuseum', including an exhibit covering marine exploration history.

Speaking about museums, Congress participants had an opportunity to visit Scripps' 'Blue Planet' exhibit and the new aquarium, and to make a simulated descent to the ocean depths in the 'Deep Diver'. Already mentioned was the visit to the Southwest Science Fisheries Center, where there was briefing on sustainable yields. The field excursion took conferees to Ensenada and the Instituto Superior de Ciencias Marinas of the University of Baja California (Mexico). Ensenada has had, for over 20 years, one of the worst-polluted bays of the North American west coast, though now improvement is real.