# Reports of Meetings

## Joint Oceanographic Assembly, of the Scientific Committee on Oceanic Research [SCOR]

Acapulco, Mexico August 23–September 2, 1988

The conference addressed itself to advances in oceanographic science since the last JOA some 6 years ago. The conference was organised by SCOR and co-sponsored by:

IABO— International Association for Biological Oceanography
IAMAP— International Association for Meteorology and Atmospheric Physics
IAPSO— International Association for Physical Sciences of the Ocean
CMG— Commission for Marine Geology for SCOR
ICES— International Council for the Exploration of the Sea

With support from

IOC— Intergovernmental Oceanographic Commission.

The conference was subdivided into 4 General Symposia, 12 Special Symposia and the associated sessions of IABO, IAPSO, IAMAP and CMG.

*General Symposia:*

*G1–New developments*
*G2–Ocean and climate*
*G3–Hydrothermal Processes*
*G4–State of the art*

*Special Symposia*
S1–Oceanography in Mexico
S2–Physical and ecosystem models
S3–New observation methods
S4–Large scale changes from human activity
S5–Life strategies in extreme environmental conditions
S6–Small scale ocean processes in the surface layer
S7–Tropical coastal systems
S8–Global ocean storage and fluxes
S9–Pollution in the marine environment
S10–Ocean variability and biological change
S11–Global sea level change
S12–Scientific basis for ocean resource use

A feature of the conference was its exhausting length, spanning some 11 days. Unfortunately, the decision of the programme committee to put on the general symposia to the exclusion of alternative programmes meant that there was a captive audience on topics which for many present, were of marginal interest, yet once the special symposia and allied sessions commenced, one was scuttling from room to room like frantic rabbits to catch presentation of the important papers. Many of the best papers were forced to be presented in only 10 minutes, and this in my view was insulting to senior scientists presenting significant scientific advances in our knowledge of the oceans, and was not a "fair go" for the sponsors who supported their travel costs to the JOA.

Unfortunately also, the programme was marred by the non-attendance of very many authors listed; the resulting chaos in paper presentation times was disconcerting and conference participants were irked at missing many presentations due to last minute programme adjustments.

Surprisingly, for this day and age, the stan-

dards of paper presentation were very mixed. The opening plenary address by J. J. McCarthy from Harvard on the International Goesphere Biosphere Program (IGBP) was the poorest keynote address I have ever heard at an international conference. Only 2 of the 5 major papers on "New Developments"—essentially keynote addresses—showed evidence of thorough preparation. Fortunately many of the papers in the normal scientific sessions were better prepared and competently presented with good scientific content.

The major "hotspots" emanating from the conference were:

(1) *Major advances in the understanding of El Niño and Southern Oscillation* circulation patterns. Both the mechanisms and numerical modelling or prediction was a major theme. Mechanism is now positively associated with Rossby wave reflection from the edges of a Kelvin wave of sea surface temperature movement in the tropical Pacific. We are now into operational real time ocean circulation forecasting.

(2) *Sea Level Changes.* There was prevailing scepticism expressed at the JOA conference that sea level will rise substantially. R. W. Stewart presented evidence to show that sea level rise was mainly relative and a result of coastal subsidence.

(3) *GLOSS*—Global Ocean Sea Surface monitoring from satellite technology has become very important. Associated are the SCOR—IOC Committee on Climate Changes and the Ocean (CCCO) and Tropical Ocean Global Atmosphere (TOGA) programs. Important is the "Coastal Zone Colour Scanner" satellite observation system.

(4) *Mid-Ocean Geothermal vents* and associated life forms. Work of E. Suess received considerable exposure and a new SCOR working group was established on this topic.

(5) *Climatic Change from Greenhouse Effect.* R. C. Sommerville demonstrated that temperature rise due to $CO_2$ increase in atmosphere would be diminished by a negative feedback resulting from greater albedo of enhanced cloud cover.

(6) *Marine Pollution* continues to be of wide concern. Notable was the degree of international cooperation emerging to confront this problem.

A major impression from JOA, as for the conference on Natural and Man-made Hazards in the Coastal Zone, was the strength of science and quality of advances from some developing countries, particularly India, Mexico and Brazil.

New international programmes established under the auspices of SCOR included *JGOFS—Joint Global Ocean Flux Study.* This is a large study, whose goal is "to determine and understand on a global scale the processes controlling the time-varying fluxes of carbon and associated biogenic elements in the ocean, and to evaluate the related exchanges with the atmosphere." It is essentially a study of the carbon cycle, and the capability of the oceans to absorb $CO_2$ from the atmosphere, thus to better ascertain and predict climatic changes associated with increased concentrations of atmospheric $CO_2$ and hydrocarbons. A second major programme on *Polar Deep Sea Paleoenvironments* initiated by J. Thiede of Germany intends to drill several holes in the deep Arctic Ocean around the North Pole.

New SCOR Working Groups established, included:

- chemical evolution and origin of life in marine hydrothermal systems
- methodologies available for the development of chemical and biological oceanographic probes
- pelagic biogeography
- physical processes affecting biological variability
- ocean atmosphere paleochemistry

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