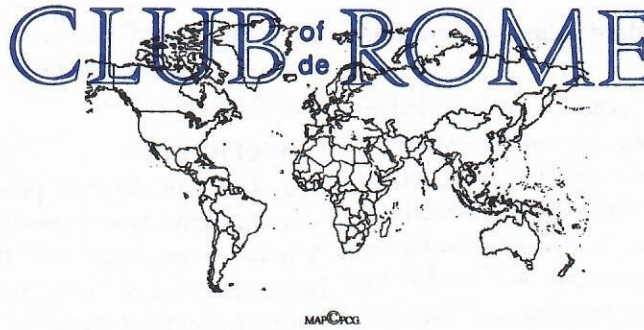


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Analysis of Proceedings

Dr. H.F. (Bob) Fletcher (Chairman of CACOR)

The theme of this international oceans conference was 'The Crisis of Knowledge; New Dimensions for Learning and Informed Decision-making for Oceans and Coasts'. CACOR assumed the prime responsibility for Panel 1, which dealt with the nature of the Crisis. Papers by members have been posted on the Web Site and will be published in this and the next issue of the Proceedings. The following is a report of the Conference proceedings from a 'broad' perspective, and is thus of particular interest to CACOR. Many of these 'broad' issues were generally recognized as important, particularly in panel discussions dealing with the fishery crisis, the shipping industry, and the directions and instruments of change. How best to address them was not dealt with at the Conference and this question is a challenge for both CACOR and the International Ocean Institute.

CACOR

The Canadian Association for the Club of Rome (CACOR) is made up of a wide diversity of professionals whose viewpoints often differ on both the nature of the human dilemma and possible solutions. Members do, however, share a common concern about the human predicament and about the need for systemic thinking and a global and long-term perspective. That is the context for these comments.

We have explored various facets of the Crisis of Knowledge in our discussions. Our apparent inability to rationalize scientific knowledge with social, economic and environmental concerns at the political level has been stressed. We have also considered numerous reasons why this is so. These are of a fundamental nature and lie beyond the realm of oceans.

Knowledge

Public scepticism about science has increased in recent years. We expect the answer from scientists, which underlines the lack of understanding of not only science, but the world around us. Traditionally, science has focussed on understanding the parts of systems, but relatively little attention has been given to the functioning of entire systems and interactions between and among systems. In recent years, modelling approaches have been used to fill this gap in understanding, but the potential of such approaches is frequently impeded by lack of data. In part, this reflects current priorities for research expenditures. However, the importance of drawing on the experience of practitioners, whose understanding of natural systems often derives from generations of observation, was noted on a number of

in ways to enhance trust and understanding was emphasized.

But synthesis of scientific and experiential knowledge about natural systems is only one step in the synthetic process. We search for new ways of dealing with uncertainty, and of aiding the understanding of interactions among natural and social systems. Some ongoing initiatives were discussed in our deliberations, viz. modelling approaches; collaboration between scientists and industry to more effectively assess risk; adoption of new concepts, such as the precautionary principle; and a unique simulation approach to enhance and communicate understanding of complex global systems. Our apparent inability to apply current knowledge in the management of the ocean and other commons has been further impeded by changes in science policy over the past three decades. Trends in Canada were discussed by way of illustration. Scientists have increasingly been called upon to serve existing policy or program initiatives, or product development, at the expense of serving future societal needs for ecological security by contributing to improved understanding of natural systems. Institutional impediments to the transfer of scientific knowledge into the policy-decision system were discussed and, in this context, the need for scientific institutions at 'arms-length' from government was raised.

Furthermore, a prime purpose of such institutions should be effective public involvement.

The evolution of scientific thought in recent years has led to what some refer to as 'the new, or modern science'. This has led to our current understanding of complexity and uncertainty, and is the basis for new concepts, such as chaos and GAIA theories. As stressed by several discussants, modern science has provided us with a new view of the world and our relationship to it. This new view has profound implications, as noted by participants in Panel 1.

We humans are a part of nature – a relationship that the Western world has not yet accepted. Both globally and within countries, we witness different viewpoints and values that lead to different aspirations and visions for the future. Western values support policies that stress economic security, while in other cultures, spiritual and ecological concerns tend to be dominant. Here, we should be very concerned about the increasing momentum of the current market-oriented and global economic imperatives that encourage growth in the name of increasing and unnecessary consumption. It was observed by one panelist that the contribution of modern science to

understanding of our world could well be a primary factor in arbitrating major differences between and among cultures.

Governance

The slow and difficult process of developing international agreements was stressed on a number of occasions. A major impediment is at the national level, where the lack of political will often reflects the difficulty in rationalizing trade-offs between short term perceptions of need and longer term security. The latter is often ignored due to a lack of understanding, by decision-makers and the public of the nature of the crises, of the commons, and of the implications of inaction.

Questions about our ability to govern in an increasingly complex world were raised during the Conference. Value systems that are out of tune with available knowledge are impediments to effective leadership and governance.

The need for more widespread awareness about the nature of the human dilemma and the consequences of inaction was emphasized in various contexts – greater community autonomy and ownership, emphasis on training and education programs, as well as in decision-making.

Other Fundamental Issues

A number of other fundamental issues were raised, which if not dealt with, are likely to neutralize or negate many direct actions taken to deal with ocean problems.

1. Population growth, both in coastal zones and generally.
2. Perceptions of security – present and future – which raises questions about militarism and attendant costs, and about economic versus ecological security.
3. Resource exploitation and demand, as this contributes to inequities among, and within countries, and increased global consumption.
4. Questions related to the privatization of intellectual property, and steps to more tightly control the Internet. The desirability of treating knowledge as a common resource was also noted in this context.
5. The balance between individual and community rights.
6. The fallacy of continuing conventional economic growth as currently measured.

The assistance of Dr. Marcus Hotz in the preparation of this statement is gratefully acknowledged.