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**FORGING UNITY:  
Coastal Communities and the Indian Ocean's Future**

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***Keynote Address***

**Ocean Governance and the Fishing Village**

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## I.

It is with deep regret that I have decided to cancel my trip to India and my personal participation in your important Conference. It certainly is not a fear that keeps me from visiting your part of the world at this time. It is the concern that, considering the terrible uncertainty overhanging everything, including international air traffic, I would risk remaining stuck at some airport, which would force me to cancel a series of other obligations, and I would hate to have to do that. Our agendas are full, and we all intend to continue to work for what we believe, although sometimes this is very difficult. Who cares about dying corals when people are butchering each other?

Just recently I came across a beautiful passage that answered this question.

...Dead coral are the victims of the injustices we continue to ignore, of greed, of selfishness and of the abdication of moral and ethical responsibility. It is an act of genocide against the corals and so against species who depend on them, including, ultimately, humans. The coral polyp's own world mirrors the human experience -- the cries for freedom from foreign debt, poverty, starvation, the cries to change lifestyles, not the climate, the cries to stop burning fossil fuels. To ignore the death of coral reefs is, I believe, to ignore the cries of many of the world's people of today, at the peril of our future generations and our planet.

(S. Rayner, Mapping institutional diversity for implementing the Lisbon Principles, *Ecological Economics*, 31, 259-274, cited in Azfar Bin Mohamad Mustafar, *Ocean Governance*, Master of Science in Maritime Affairs thesis, World Maritime University, 2001)

The International Ocean Institute not only has done voluminous work on the theory of ocean governance, it has also been deeply and practically involved in action to enhance the realization of this theory:

- At the level of the local community, working with villages and trying to contribute to improving their livelihoods;
- At the national level: Many of us are advisors to their Governments on the issues of marine policy; and many of our Operational Centres have conducted training courses for coastal managers for their governments;
- At the regional level we are heavily involved in the process of revitalization of the UNEP Regional Seas Programme, i.e., the expansion of its scope and its functions, including *capacity building through education and technology cooperation and transfer*;
- At the global level IOI has been instrumental in the establishment of the General Assembly's *Consultative Process (UNICPOLOS)* as well as in the evolution of the International Sea-bed Authority.

The essence of our theoretical work on ocean governance can be summarized as follows:

1. Ocean Governance is based on a *legal framework* consisting of the United Nations Convention on the Law of the Sea (the Constitution for the Oceans) enhanced and kept up to date by the Conventions, Agreements, Protocols,

Programmes and Codes adopted by the UN Conference on Environment and Development in Rio de Janeiro, 1992, and in its wake. All of these more recent legal and paralegal instruments have important ocean dimensions.

2. To implement laws, regulations and agreements, an *Institutional Framework* is needed. This framework is quite comprehensive, consisting of the Specialized Agencies and Programmes of the United Nations (in particular, the Intergovernmental Maritime Organisation, IMO; the Intergovernmental Oceanographic Commission of UNESCO (IOC), the Food and Agriculture Organisation (FAO), the United Nations Environment Programme (UNEP), with its Regional Seas Programmes, and half a dozen others. Other important components of this institutional framework are the institutions created by the Law of the Sea Convention, i.e., the International Sea-bed Authority; the International Tribunal for the Law of the Sea, the Commission on the Limits of the Continental Shelf, and the Meeting of States Parties. Thirdly, there are the institutions created in the wake of UNCED, i.e., the Secretariats of the Climate and Biodiversity Conventions and the Coordinating Office for the Global Programme of Action for the Prevention of Pollution from Land-based Activities (GPA). Fourth, there are three institutions, created by the UNCED Process, intended to streamline and hold the whole system together: The Subcommittee on Oceans and Coastal Areas of the Administrative Committee on Coordination (ACC/SOCA), the Commission on Sustainable Development (CSD), and, above all, the Consultative Process of the General Assembly (UNICPOLOS). Last but not least, there is the whole nongovernmental sector, civil society, comprising local communities, major groups or stakeholders such as science and industry as well as nongovernmental organisations (NGOs) This whole institutional framework is as yet somewhat amorphous and poorly co-ordinated raw material or building blocks for an architecture yet to be designed.
3. A vision, however, already exists. It has been evolving since the days of the United Nations Commission on Environment and Development, the Brundtland Commission and its Report, *Our Common Future (1987)*. There is today universal agreement that this institutional framework must be comprehensive, consistent, trans-sectoral or multi-disciplinary, and participational, bottom-up rather than top-down.
  - Comprehensive means that it must reach from the local level of the coastal community through the levels of provincial and national governance to regional and global levels of international organization.
  - Consistent means that regulation and decision-making processes and mechanisms at all levels of governance must be compatible.
  - Trans-sectoral or multi disciplinary means that activities in the ocean environment cannot be considered separately, sector by sector, but must be seen as interactions.
  - Participational means that regulation must not be imposed by central or federal governments, then to be ignored or flouted by local communities whose livelihoods depend on the ocean, but that these communities must be involved in the making of regulation and

management. Thus the notion of co-management is gaining ground globally.

In my two most recent books (*Ocean Governance and the United Nations*, 1996, and *The Oceanic Circle*, 1998) I have tried, by way of illustration, to design such a system in some detail. My inspiration came from Gandhi's magnificent vision of the majesty of the oceanic circle, projecting a global social order reaching from the individual through the village and the community of villages to the global level, where the outermost circumference will not wield power to crush the inner circle but will give strength to it and will also derive its own strength from it.

I want to view the role of the fishing village in this global context.

## II.

We all know that the fishing industry is in some sort of crisis in most parts of the world. A new pattern of population distribution has resulted from the greatest people migration in human history: the migration from in-land areas towards the coast, and from the village to the sprawling mega-city. Over 60 per cent of the world population now resides in coastal areas, including coastal mega-cities; and this proportion of a growing world population is expected to rise to 80 per cent during this century. The coastal area has become the world's most densely populated area. At the same time it also is the world's most vulnerable area, exposed as it is to floods, storms, tsunamis and other natural or man-made disasters.

Obviously this new pattern of population distribution is putting unbearable pressure on coastal oceans. Physical erosion of coastlines, chemical pollution of coastal waters and habitat destruction, are phenomena common to most coastal areas. Technological development aggravates the problems. Industrialized hunting is a contradiction in terms. Modern trawlers, long-liners, drift nets, 50 km long or even longer, scoop up the living substance of the oceans faster than it can be reproduced. The competitiveness of the Western market system does the rest, setting up the industry in an unfair competition with the inshore traditional fishers and resulting in perversities such as the by-catch problem. Thus shrimp trawlers in the Caribbean -- just to use an example -- bring up 12 kg of unwanted by-catch for every kg of shrimp. While shrimp fetches a high price, the by-catch is unceremoniously thrown back into the sea, whether dead or dying. And this in a world where almost half of the population is undernourished or starving.

Finally, there is climate change, and we do not really know what it does to the ocean's productivity, nor do we understand how its impact interacts with the impact of human activities. We know that climate change has decimated life in the oceans at various times in geological history, long before humans appeared on the scene. On some occasions the great dying in the oceans went hand in hand with increased productivity and the emergence of many new species on land. It is not too surprising, therefore that recent imagery taken from satellites indicate a greening of

some land, not by way of geographic expansion but by intensification and extension of the growing season.

We know so little. If Western scientists, until recently, could boast that their mathematical models could calculate and project the limits of sustainable yield, they know today that they cannot. The behaviour of complex systems is not linear and predictable. The more data you add to the model, the greater the uncertainty it will produce.

Fisheries constitute extremely complex systems, comprising biological, chemical, physical, meteorological, social, economic, technological, cultural and legal factors, among others. To place the fishing village into this context is a rather daunting task.

Rather than only on science, we need to rely on intuition, on native wisdom and experience, on ethics and equity -- all of which, however, can be enhanced through blending it with modern science and technology if they can be grafted onto indigenous technology, which would make it socially and environmentally sustainable.

### III.

Many problems, which cannot be solved in a large-scale context, can instead be solved at the level of the local community. The small community facilitates forms of direct democracy, with the full participation of all stakeholders; it is easier to create a sense of individual and collective responsibility, a feeling of commonality of interests. The village, in Gandhi's sense -- which may also be a district of a megacity -- is the real core of governance. It might be a community, ideally, of not more than three thousand people -- the number of people an individual gets to know during a life time, no matter whether (s)he lives in a village and never moves from it, or whether (s)he is a jet-setter and keeps moving around the globe.

If the village does not function properly, the nation will not function, the region will not function; the global community will not function.

In anthropological terms, the fishing village is one of the oldest forms of social organization, based on a life style that reflects a special relationship between humans and the ocean. The ocean is both benign, a provider of food, and antagonistic, a destroyer of human life or even of the village in its entirety. The human being is so small and helpless in confronting the mighty ocean in fear, awe, reverence, if also in a spirit of myth-making and superstition. To face this ocean, fishing activities have to be *cooperative*, not *competitive*, and the distribution of the common resource has to be *equitable*, for were it not, cooperation would disintegrate.

A common resource, cooperatively managed and equitably distributed, will not be destroyed, whether by over-fishing, which is a consequence of competition, or by

pollution, which is a waste. Wisdom, accumulated through centuries or even millennia by the village, will inspire self-regulation to prevent both.

Fishing, on which the fishing village depends, is not the only activity required for the sustainability of the village. There must be builders, food processors, metal workers, gardeners, agriculturists, animal husbanders, cooks, scientists, educators, doctors, traders, artists and spiritual leaders. Fishing activities must find their place among all these other activities and be harmonized with them in what is now called horizontal integration.

Nor can the village stand alone. Developments beyond its control, from the hinterland as well as from the ocean, may interfere and frustrate the application of its wisdom and self-regulation. Its decisions therefore must be harmonized with the decisions of larger communities, comprising more villages, at the provincial, national and international level. This is what today is called vertical integration.

Horizontal integration plus vertical integration give rise to a system, which today is called community-based co-management. It is emerging in many parts of the world, including the Indian Ocean region. It may take as many forms as there are villages, and the form it will take depends on culture, existing institutional infrastructure, and stage of development, but its general features could be articulated as follows:

#### Article 1 *Coastal Communities*

1. The municipal council of a coastal village or town shall elect a Marine Resources Council, composed of 15 representatives of the port authority, ship-owners, fishing associations, maritime industries, the tourist board, coastguard, research institutes, nongovernmental organizations, consumer cooperatives and the insurance industry.
2. The Marine Resources Council shall deliberate on all matters affecting the sustainable development of marine resources, the protection of the marine and coastal environment, research and training in ocean affairs, and shall prepare legislation thereon for the Municipal Council.
3. The Marine Resources Council shall prepare short-term (one year) and medium-term (five years) plans for sustainable resource development and the protection of the marine environment, and submit them, through the Municipal Council, to the Provincial Government.
4. The Marine Resources Council shall be responsible for the local implementation of Chapter 17 of Agenda 21 and the Global Programme of Action (GPA)
5. The Marine Resources Council shall meet as often as necessary.

6. Municipalities, through their Marine Resources Councils, shall cooperate within their Province and with municipalities of neighbouring Provinces as well as with municipalities of neighbouring countries affecting their common eco-systems. Appropriate provincial, national or international encounters shall be arranged for this purpose.
7. A Forum shall be established for joint deliberation and decision-making on ocean and coastal issues comprising representatives of local communities and provincial and national governments.

#### IV.

Integrated coastal management, embodied in community-based co-management structures will serve a number of purposes.

- It will enhance self-regulation and self-enforcement of fisheries.
- Self-regulation and self-enforcement in an integrated eco-system based fishery will eliminate the by-catch problem. In an eco-system integrated fishery, the problem simply does not arise. While technological improvements, such as turtle exclusion devices (TEDs) can reduce the capture of protected species, a village centred, cooperative, eco-system integrated fishery need not be strictly species-targeting. By-catch of fish not fit for human consumption can be processed by the village community for fish feed in aquaculture, fishmeal, or fertilizer.
- The coastal zone includes, on the seaward side, the entire Exclusive Economic Zone, out to its 200 nm limit. Coastal villages could declare trawling as well as long-lining as destructive fishing practices, and, through the co-management system press for their elimination from the entire EEZ. This would be the only effective way to eliminate the conflict between inshore and offshore fishers, which, in many cases, is a conflict between indigenous fishers and multinational companies.
- Community-centred co-management will facilitate cooperation between scientists and fishers (through horizontal integration). Fishers thus may participate in fisheries research, encouraging the blending of modern science and traditional wisdom.
- Cooperation between local communities and national governments in common decision-making fora (vertical integration) will facilitate the blending of indigenous technology, contributed by the local community, and high technology, contributed through national governments, into so-called eco-technology, which should be socially and environmentally sustainable.

- To be truly integrated, coastal management, through community-based co-management, must comprise *all* village activities. It is not realistic to separate marine and coastal activities from others, including agriculture, fresh water management, building, women's organization, education, public health, and financial administration -- anything that contributes to the well being of the village community.
- Horizontal integration will include, *inter alia*, also, local branches of international oil companies among the stakeholders, in locations where there is drilling for hydrocarbon. In the context of contemporary management theory, multinational companies, too, tend to decentralize and to delegate much more decision-making power to their various branches. The local offshore oil manager has a stake in village consensus and harmonization of conflicts of uses. This may contribute to the mitigation of conflicts between the hydrocarbon industry, fisheries, and tourism at the local level.
- You will have noted that, in the horizontal integration among the stakeholders, I have included the insurance industry. This was not done casually. Coastal managers and the insurance industry have a common interest in risk reduction and poverty alleviation in coastal areas. The future of the insurance industry, in fact, depends today on making the coastal zone insurable. At the same time the insurance industry can make major contributions to integrated coastal management. We have elaborated on this elsewhere. Here it may suffice to just mention these contributions under the following headings: (1) transfer of advanced risk assessment technologies; (2) advice on building standards and zoning; (3) technology and coastal engineering risk assessment; (4) community training in disaster preparedness and response; (5) assistance in introducing micro-mutual insurance schemes, linked to micro-loan schemes (like Grameen banking).
- Integrated coastal management must contribute to the alleviation of poverty and the raising of living standards in coastal villages, including fishing villages, or it will not be sustainable.
- Village empowerment through integrated coastal management and community-based co-management inserts itself into the global socio-political trend towards decentralization and increased local autonomy (often driven by cultural, including religious, linguistic, and ethnic factors), within a broader global trend towards unification within larger than national, often regional, organizations, driven by ecological, economic, and technological factors.
- Village empowerment through integrated coastal management and community-based co-management is today the best countervailing force against market driven globalisation, which, as we all know, makes the rich richer and the poor poorer. This, as we all know, has reached the limits of tolerability. Building a better way of ocean governance, starting from the fishing village, will contribute to building a better world.

