

The 1994 Royal Colloquium  
on  
Tropical Coastal Zones



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*Ulriksdals Palace, Stockholm*  
*August 22–23, 1994*

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on  
Tropical Coastal Zones*

**Political Approaches  
to Sustainable Development:  
Going from Knowing to Doing**

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**The 1992 Royal Colloquium on Environment, Development and Industry: Protecting Tropical and SubTropical Coastal Waters – A Resource for Future Generations.**

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# Preamble

On the initiative of His Majesty, King Carl XVI Gustaf of Sweden, the first Royal Colloquium was held in August 1992, on *Environment, Development and Industry*. The Colloquium focused on the specific problem of Protecting Tropical and Subtropical Coastal Waters.

The Royal Colloquia were initiated to establish fora where scientists, politicians, and representatives of international development organizations and industry, can meet informally to discuss constraints and opportunities in the use of scientific knowledge for implementation of sustainable natural-resource management. The influence of different sector policies on coastal-zone management was selected as a theme for these discussions.

The Royal Colloquia of 1992 and 1993 focused on the carrying capacity of coastal zones for growing populations with changing social structures, and the relation of the coastal problems to failures in other sectors of social systems.

In 1992, this initiative was timely considering the strong focus of the *United Nations Conference on Environment and Development* (UNCED) on coastal zone protection. UNCED placed the protection of coastal environments and the sustainable use of their natural resources high on Agenda 21, where it is stated that coastal states should "commit themselves to integrated management and sustainable development of coastal areas and the marine environment under their national jurisdiction". UNCED also emphasized

the importance of coastal states developing national policies and management capabilities for integrating the development and management of multi-sectoral activities in coastal and marine areas.

The protection of coastal zones is, indeed, urgent considering the multitude of threats to their sustainable productivity and biodiversity. Among those threats are inappropriate fishing methods, the establishment of unsustainable aquaculture systems, toxic and other harmful effluents from industry, unregulated growth of tourism, linear flows of nutrients and organic matter from agricultural and urban areas to the coast – all of which lead to the destruction of productive and biodiverse ecosystems.

The Royal Colloquia were based on a broad approach that focused on the influence that management and policies in other sectors have on the ecosystems of the coastal zones. Thus, the 1993 Royal Colloquium concentrated on the mismatches between the structure, function and delimitations of ecosystems on the one hand, and on policy sectors and societal systems and institutions on the other (AMBIO, Vol. XXII, No. 7, 1993). Hence, the approach was widened to encompass several aspects of importance for future sustainable management, not only in coastal zones but also in other sectors of society. The joint goal of all aspects of sustainable management must be the closing of linear carbon flows.

In natural resource and environmental management, attention needs to be focused on new sustain-

able “win-win solutions” rather than on specific remedial alterations or adjustments to present non-sustainable processes.

A win-win process is characterized by being both environmentally and socially acceptable. It neither leads to significant disadvantages for any sector of society, nor to large or long-enduring adverse environmental impacts. A win-win solution for closing carbon flows, and recycling the carbon to agriculture, can be described as follows:

**Increased storage of organic substance/carbon in soil by**

- closing the rural-urban carbon cycle;
- increasing the net air-soil carbon flow.

**Decreased and closed urban-aquatic-bioproduction carbon flow by**

- changing the rural structure and scale;
- changing waste management technology;
- employing agri-connected aquaculture and mariculture.

**Advantages to be gained:**

- Decreased greenhouse effect;
- Increased rural carrying capacity;
- Better fertilizer economy;
- Increased water availability in soil;
- Rural bioenergy support;
- Diversified rural economic support;
- Decreased rural-urban migration;
- Protection of coastal ecosystems;
- Increased urban sanity and economy;
- No lowered nutritional standards.

The 1992 and 1993 Royal Colloquia established that much research has already been carried out and that we are now seeing a growing documentation of the issues and problems involved. In order to realize the positive effects of closing linear carbon flows within and between the rural, urban and coastal sectors, appropriate technologies must be developed.

The vast knowledge already available for implementing the necessary “kretslopp” was identified and recognized by the 1994 Royal Colloquium, as were the constraints to implementing this knowledge. The 1994 Colloquium concentrated on the necessary changes in institutions and regimes in order to achieve an efficient “diagnosis” – a systems-oriented discipline – and an efficient implementation of natural resources and environmental policies. Political and institutional opportunities and constraints, based on a “kretslopp” thinking, were addressed. It was emphasized that the ultimate goal must be to strengthen society’s capacity to go from knowing to doing.

**Carl Gustaf Bernhard   Erik Arrhenius**



# The 1994 Royal Colloquium on Tropical Coastal Zones

## Political Approaches to Sustainable Development: Going from Knowing to Doing

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# Introduction to the 1994 Royal Colloquium by His Majesty, King Carl XVI Gustaf

Over the years, I have taken part in many meetings and conferences concerning the environment. What I have learned from these has convinced me that we, human beings, have the knowledge to meet the demands for change that will be placed on us as we move towards the goal of sustainable societies. However, to achieve the goals we have set, we also need possibilities for the sharing of knowledge if we are to go from knowing to doing.

Pollution and degradation in coastal zones, caused by human activities, is threatening vital food sources, especially in the tropics and subtropics.

Therefore, in 1992, I invited scientists and decision-makers, from the development community and from industry and trade, to present and discuss appropriate measures and solutions to prevent further depletion and degradation of the ecosystems in these regions.

The Colloquium, focusing on the disruptions caused by organic material, recognized that the material flows from land to coastal waters must be controlled, and that all sectors of society must be involved in protecting the vital coastal zones.

As pointed out in the subsequent Royal Colloquium in 1993, many threats are closely related to the uncontrolled carbon flows in society. The meeting pointed to the importance of closing the linear carbon flows within and between the rural, urban and coastal sectors by using appropriate technologies.

During the 1993 Colloquium, I asked participants from Sweden to help me translate the Swedish con-

cept of "kretslopp" into correct English. No one could come up with an entirely acceptable English word, and several participants suggested that we use the Swedish word "kretslopp".

The concept of "kretslopp" is used in its Swedish sense to encompass both natural ecocycles and closed flows in society. I hope that we can agree to use this concept for the purpose of our meeting. Who knows, perhaps "kretslopp" will be as accepted internationally as is the case with the Swedish word "ombudsman".

In my introduction to the special issue of AMBIO containing the papers presented at the 1993 Colloquium, I expressed the hope that the material would serve as a basis for political decisions needed for the protection of coastal ecosystems.

Consequently, this year I have invited decision-makers and scientists to discuss how to transfer the knowledge gained from traditional scientific research into action at the economic, social, managerial and political levels. I am well aware of the fact that there are a number of political and socio-economic constraints which have to be eliminated.

It has become obvious to me that there is a need for new strategies to remove what appear to be insurmountable barriers between the North and the South. We can only hope for success in our own efforts if we recognize the necessity to increase the capacity of institutions in the South.

We still have much to learn if we are to draw on the wealth of indigenous knowledge from the developing



countries, and we must not hesitate to make this knowledge part of the development process. Alone, or in combination with knowledge and co-operation from developed countries, the knowledge of the peoples in the Third World may prove to be more valuable than we have, so far, allowed for. This knowledge may be our greatest hope for the future.

One strategy would be to establish, for example, somewhat less conventional means of interaction between the institutions of the North and of the South. In this respect, it is important to recognize the important role played by the aid agencies. In Sweden, SIDA

and SAREC are the two major aid agencies and they both attach much importance to efforts to remove the barriers to North-South interaction and to create true interrelations between institutions.

Changes in institutions and governance may be required in order to achieve sustainable coastal ecosystems throughout the world. In wishing you all welcome to the 1994 Royal Colloquium, it is my hope that the invited decision-makers will reach consensus concerning future actions to safeguard the ability of the vital coastal regions to sustain life for future generations.

# The Knowledge Framework and the Political Perspective

The discussions at the 1994 Royal Colloquium were based on some fundamental facts and assumptions:

- There is already vast international knowledge on
  - the immense importance of the sustainable productivity and biodiversity of tropical coastal zones for a large part of the world's population;
  - the reasons for the rapid deterioration and destruction of the coastal environments;
  - how to protect coastal environments from pollution and the unsustainable use of their resources;
  - the urgent need for proper management of the vital coastal environments;
  - how to implement the knowledge available and transfer it into action.
- Despite available knowledge, there is too little sustainable management action. If action had been taken on the knowledge that existed already in 1972 (the *United Nations Conference on the Human Environment*, held at Stockholm) and in 1992 (the *United Nations Conference on Environment and Development*, UNCED, held at Rio de Janeiro), and if the international community had taken steps to implement the decisions made, there would have been extensive progress and environmental problems would probably have been less severe today.
- Social, political and economic constraints to im-

plementing the existing and available knowledge have been identified and related to the mismatch between ecological and social structures and functions.

- In order to move from theory to action, to plot the steps from knowing to doing, changes in institutions and regimes will be necessary. Effective linkages are badly needed between scientific knowledge and the political/administrative structures for the implementation of environmental policies and the protection of natural resources. There is a lack of communication in relation to the urgency of the problems, which leads to a lack of the will to act. Win-win solutions contain a positive multiplier, but for change to take place the will to win is imperative.

## Objectives of the 1994 Colloquium

The task of the 1994 Royal Colloquium was to consider:

- how to diagnose environmental problems efficiently;
- how to implement policies for sustainable development and the use of natural resources;
- what changes in institutions and regimes are necessary;
- what political and institutional opportunities and constraints are of greatest significance.

**Epistemics and capacity building:**

- Knowledge systems and structures;
- Knowledge transfer and transformation;
- Knowledge implementation.

**Market-based approaches:**

- Tradeable permits, carbon bonds;
- Prices;
- Transaction costs.

**Regulations and conditionalities:**

- Swaps;
- Appropriate technology investment guarantees;
- Procurement conditionalities;
- Administrative regulative measures.

**Institutions:**

- Incompatibility of biogeochemical and institutional systems;
- Skewed North–South distribution of epistemic capacity and the domains for efficient “kretslopp” implementation;
- Interrelation between different institutional levels;
- Interrelation between institutions with different domains of interest.

The discussions at the Colloquium addressed a number of issues and concentrated on how to strengthen society’s capacity to implement its knowledge into positive action based on “kretslopp” thinking from the ecological and social perspective.

***Co-operation and access to responsibility***

Over the past ten years, international consensus has emerged to the effect that the scope of coastal-zone management must be broadened.

Based on experience from Third World countries, the World Bank has concluded that forests, pasture land and fishing grounds are often overexploited when people have free and open access to these resources. However, change for the better often occurs when people are given access to and responsibility for the resources they use. For example, providing land titles to farmers in Thailand has helped reduce forest damage, the assignment of property titles to slum dwellers in Bandung has tripled household investment in sanitation facilities, and providing security of tenure to hill farmers in Kenya has helped reduce soil erosion.

Coastal-zone management programmes and policies cannot be formulated without the active involvement of local authorities and the full support of the people concerned. Efficient land-tenure legislation is, thus, needed to avoid unclear responsibilities and to allow options to local authorities and individuals in order to achieve sustainable use of land, water, energy systems, transports, etc.

Integrated coastal-zone management should be used as a tool for dealing with the most harmful land-based sources of degradation, poorly planned or unplanned coastal development, and the environmental damage caused by poverty, as well as unsustainable development. Physical planning based on regional and subregional co-operation constitutes an important means of achieving concerted visions and strategies for action.



## *Obstacles to action*

*Between the idea*

*And the reality*

*Between the motion*

*And the act*

*Falls the Shadow*

These words by the English poet T.S. Eliot provide food for thought. Six obscuring obstacles to action were suggested, based on the conclusions

- that the most important constraint lies in the transfer of knowledge to implementation;
- that social practices are at the heart of both problem and solution;
- that changes in social behaviour have their roots in public attitudes; and
- that such changes can only be attained if the public is informed and convinced that change is necessary, will benefit them and their grandchildren, and is morally right.

The six major limiting factors to sustainable management of the coastal zone that need to be addressed are as follows:

- Defective communication between scientists and those who make social and political decisions;
- Intellectual and cultural arrogance, especially dismissive of tradition and the “wisdom of the poor”;
- Defective economics, leading to distorted valuation of natural resources and, hence, errors in cost-benefit analysis;
- Defective governance, especially through sectoralism and over-centralization;
- Defective public information;
- Defective ethics.

## *Defective communication*

Scientists have, or should have, the most precise descriptions of the world’s environmental systems. They hold the best knowledge of ecosystem structure and function, and their models allow for explorations of the likely consequences of change in various determinant parameters.

Science must be permitted to step outside the cultural and political context of the individual scientist, but politicians and other decision-takers have to stay embedded in the national, and often local, cultural context. As a result, communication between scientists and the decision-takers becomes difficult. Scientists are accused of obscurantism and decision-takers of intellectual superficiality and dependence on public emotion. Scientists dismiss politicians as time-serving, and politicians dismiss scientists as incapable of applying their knowledge in the real world.

However, this obstacle could be diminishing. UNCED managed to establish for politicians and decision-takers that the world’s economy depends on the world’s ecology. Today, more and more laws and policies attempt to be well-grounded in ecological science.

## *Intellectual and cultural arrogance*

A less recognized and therefore more serious arrogance is that of Western European culture – including science – dismissing traditional knowledge of people who have not codified their knowledge in ways in which Western science can recognize it. Little respect has been paid to the existing knowledge systems in recipient areas for Western assistance. Similarly, little consideration has been given to indigenous traditions that are likely to be better adapted to a specific region than are ideas from the outside.

Such cultural and intellectual arrogance constitutes

a major obstacle to sustainable development. In addition, sustainable development is further aggravated by the gulf between national leaders in developing countries (who have absorbed Western educational and cultural standards) and their own rural poor. Unfortunately, this problem seems to be decreasing only very slowly.

### ***Defective economics and valuations***

The social and cultural belief that the free operation of the market is the best means of optimizing our use of resources is well established. The fact that “natural capital” is not yet correctly valued in most economic appraisals is, however, a sign of the distortion of the market. Certain environmental systems are left outside the economic model on the grounds that they are effectively limitless and unaffected by anything people do. However, these “goods” are neither limitless nor free, and the collective impact upon them needs to be curbed.

The resources used sustainably by people – especially poor people – outside the formal economy are also undervalued. Some of these natural resources, when cropped sustainably, have real economic value. When resources are owned by the state, however, local people are deprived of the incentive to conserve and develop them, which leaves them open to expropriation by enterprises supported by local government. A clear example of this is when traditional fisheries are disrupted by offshore fishing fleets using advanced technology.

The social costs of disruption are not taken into account in overall economic assessments (GNP, revenues), but when they are the long-term balance is likely to be negative.

The problem of defective economics and valuations is addressed, but there are still plenty of examples of

bad investment, externalizing costs in terms of pollution and social disruption.

### ***Sectoralization and over-centralization***

Sectoralization in academia and in government is a major impediment to the application of knowledge. The basic problem might, however, not be sectoralization as such but rather the lack of cross-linkages between the various sectors. Sectoralization may, in fact, be necessary to break down the business of government into manageable and relatively homogeneous parts. In the environmental field, where it is evident that the universality of the environment is the basis for development and human well-being, problems occur when cross-sectoral linkages are missing. When such linkages are established, there is a basis for compiling, *inter alia*, national environment strategies.

The problem with linear carbon flows has arisen because of the widening parameters of world spheres. We no longer have to live within our immediate environmental carrying capacity, but have universalized food production and centralized decision-making to supranational level, e.g., the European Union or the Group of 7. As a result, local rights in and control over the environment are eroded and local decisions about community are impeded.

Agenda 21 recognizes the need to reverse this process. This is important for closing the carbon cycles and many other imperatives for sustainable development.

### ***Defective public information***

People are frustrated because they recognize the environmental problems, but are largely unable to do anything about them. Opinion polls have shown that people do take an interest in the environment and want to see it protected, but they mostly feel angry, upset



and powerless. People need to be informed about what the problems are on their own ground and what they as individuals can contribute to identifying the problems and to finding the solutions. They need to be actively involved in an interactive mode, not just fed information.

Environmental education is inadequate in many countries. Agenda 21 emphasizes the importance of such education. Unfortunately, governments are concerned with formal education and leave informal education to the media. For most people, the informal sector is the most influential means of education. They can, thus, be falsely motivated to demand action, on the basis of distorted media information and biased priorities.

Much public information is, in fact, hostile to sustainable development. Advertising, e.g., upon which newspapers and commercial television largely depend, is often designed to accelerate the linear flow of materials.

"Kretslopp" is slowly becoming a sales argument and an object of advertisement, but true sustainability will demand major reductions in our use of energy and raw materials. It is doubtful whether such a change is compatible with the consumer society information habits.

### ***Defective ethics***

People do what they believe in, and the strength of this fact should not be underestimated. They will demand closed cycles and sustainable resource use if they feel that this will bring them benefits, if it is essential for the welfare of their children or grandchildren, if it alleviates visible human suffering, or if they are satisfied that it is morally right.

As expressed in the second World Conservation Strategy, *Caring for the Earth*, we need to "secure a

widespread and deeply-held commitment to a new ethic, the ethic for sustainable living, and to translate its principles into practice."

Ethics can be impeded by the immediacy of poverty or even crowded out by strife. However, the societies most impeded by a lack of an ethic of care for the Earth and its people are very possibly the advanced, affluent, consuming societies, which have yet to find a new social consensus of values.

### ***One step at a time***

Being progressive means taking one realistic step at a time. It is unrealistic to expect instant, total, universal solutions.

Action must involve the people on the ground, it must empower and inform them, and it must be guided by their perceptions, traditions and goals. Instant perfection is impossible.

Or, once more, in the words of T.S. Eliot:

*Be not too curious of good and evil  
Seek not to count the future waves of time  
But be ye satisfied that you have light  
Enough to take your step and find your foothold.*

### ***The welfare lie***

There are plenty of signals that our present pattern of production and consumption is destroying the life support of future generations. The necessary change of consumption patterns is, therefore, one main focus of the *Commission on Sustainable Development* (CSD) in the implementation of Agenda 21. Land use, sectorization, and the role of all groups, including



women, in development are other important issues in the CSD work.

Prices expressed on the market do not reflect the ecological costs involved. Consequently, we should speak of "the welfare lie of our generation". Today's markets and structures reflect yesterday's prices. Similarly, today's prices will shape the market and the structures of tomorrow. Since subsidized prices lead to distorted structures, the prices must be right in order to be able to shape a sustainable future. For example, the world market works to the disadvantage of developing countries, which currently ask not only for debt-for-nature but for debt-for-debt.

It is also important to realize that charity begins at home. Unless ecological costs are internalized in Western countries and economies, in order to start the

move towards sustainable development, there will be no credibility to the West preaching the urgent need for sustainable action abroad, i.e., in developing countries.

A new emerging trend is seen in the shift of international communities to global environmental conventions coupled with financing mechanisms – either the *Global Environment Facility* (GEF) or a system of contributions by developed countries – to enable developing countries to implement these conventions. Examples of such international conventions are the *Framework Convention on Climate Change*, and the *Convention on Biological Diversity*. GEF is jointly managed by the UN Environment Programme (UNEP), the UN Development Programme (UNDP), and the World Bank.

# The Political Dimension

The political commitment made by countries and governments in Agenda 21 to implement national coastal-zone management programmes was emphasized by several participants at the Colloquium.

According to Chapter 17 of Agenda 21, coastal states commit themselves to integrated management and sustainable development of coastal areas and the marine environment under their national jurisdiction. To this end, it is necessary, *inter alia*, to provide for an integrated policy and decision-making process, including all involved sectors, to promote compatibility and a balance of uses.

Agenda 21 also emphasizes the role of international co-operation and co-ordination on a bilateral basis and, where applicable, within subregional, interregional, regional or global framework, to support and supplement national efforts of coastal states to promote integrated management and sustainable development of coastal and marine areas.

## Agenda 21

The Colloquium noted that the UNCED commitment had been followed up at the global level, for example, at the *World Coast Conference* held at Noordwijk in The Netherlands in November 1993 in response to UNCED. The conference was attended by representatives from 90 countries and over 40 international governmental and non-governmental organizations.

A special *Coastal Zone Management Centre* has been established in The Netherlands, a country with broad experience of "struggling against water" over the past 50 years. The Centre is involved in developing integrated approaches for low-lying coastal areas.

The World Coast Conference concluded that the urgency to act has only increased as a result of the negative effects of growing poverty in certain coastal communities. Population growth and economic development in coastal areas have led to an increase in marine pollution from land-based sources and to loss of valuable habitats.

The implementation of *Integrated Coastal-Zone Management* (ICZM) can stimulate and guide sustainable development of coastal areas, minimize the degradation of the natural systems, provide a framework for the management of multi-sectoral activities and maintain options for future use of resources.

Reports to the World Coast Conference illustrated the impact of tourism, which represents an important and growing activity in coastal regions with an attractive climate. In the Caribbean, tourism is estimated to contribute about 43 per cent of the region's total GNP. Policy-makers face a major challenge in meeting the demands for further development for tourism while at the same time striving to protect the quality of the environment.

Coastal management issues were further elaborated at the *Intergovernmental Conference for the Protection of the Marine Environment from Land-Based Activities*, held at Washington, D.C., in October 1995.



National Agenda 21 projects were reported by several Colloquium participants. For example, as of 1996 all development projects within the new five-year plan in China must be conducted in accordance with the national Agenda 21, which serves as a guiding strategy and will have a profound impact on economic development including legislation. In Tanzania, the National Plan for Agenda 21 includes measures for integrated management and sustainable development of the country's coastal zone and marine environment along and off the 800 km long coastline.

### *Lack of good case studies*

There seem to be general international agreement that integrated coastal-zone management programmes and projects could constitute efficient systems for managing coastal resources. However, there are still a number of major obstacles blocking the next step, e.g., translating the substantial knowledge already available about problems and trends into operational actions to achieve the common political goal of an ecologically sustainable development that is shared by most of the parties involved.

One obvious drawback is the serious lack of good case studies that clearly demonstrate the merits of multisectoral, integrated management systems. Thus, it is still difficult to convince many policy-makers of the socio-economic and political advantages of ICZM compared to traditional single-sector management.

It was pointed out at the Colloquium that an ICZM system could be a blueprint for sustainable development at the local level, provided that the processes and management actions are directed towards solving the current environmental and natural-resource problems facing the coastal zones in many regions of the world.

In addition to being used as an efficient system for local-level environment planning and management, an ICZM system could also be used as the general framework wherein integrated management of fisheries, marine pollution prevention and management, conservation of biodiversity and other sectoral management could be undertaken.

However, to achieve this it was emphasized by several speakers that it is important for countries to make political decisions to move from the single-sector approach, e.g., control of pollution, which has dominated environmental policies for the past 20 years, to a much wider approach that takes into account all activities in coastal areas which potentially threaten the environment and its resources.

Co-operation is needed at all levels – international, national, regional and local – and is essential for the successful development and implementation of ICZM plans and programmes.

### *Strong commitment, insufficient resources*

In many developing countries, commitments and good intentions are hampered by lack of resources, including detailed scientific information through a multidisciplinary approach, as well as environmentally sound technology. Colloquium participants emphasized the importance of a relevant transfer of knowledge, adequate training and human capacity building and donor interest. These components for sustainable development are vital but mainly lacking in current approaches.

Donor interest is called for, but foreign assistance is also characterized by sectorization. It is not reasonable that 20 development agencies are simultaneously involved in one country. Especially as there are natural desires among the agencies to maintain the status quo.



The estimated cost for developing countries to ensure sustainable development of coastal and exclusive economic zones is around six billion USD annually. Again, support is mainly needed to enhance national capacities in the area of information and data management, scientific and technological development, and the development of human resources.

At present, developing countries lack the suitable institutional frameworks and access to qualified research personnel, resource managers, and acceptable mechanisms for national and regional co-operation.

Awareness of the need for coastal zone management must be promoted at all levels; whole communities should nurture the concept that the oceans are a resource in need of human stewardship, not simply a commodity available for unrestricted use.

Special problems face the small island states. In situations of, e.g., limited land for agriculture, building purposes, etc., and rising populations, conflicts inevitably arise. Pressures are put on governments to alter existing policies to open more land for housing and roads in order to support services. Thus, there is a steadily increasing pressure to make use of land set aside for nature conservation, or to reclaim new land from the sea, which is a very expensive exercise. For the Seychelles, the latter amounts to approximately 200 000 USD per reclaimed hectare.

The Seychelles is a typical example of the conflicts between coastal-zone management and dependence on tourism. More than 40 per cent of the over 600 km coastal zone is presently set aside as nature reserves, by free choice of the State itself. At the same time,

tourism represents the mainstay of the Seychelles' economy and provides employment to a significant proportion of the population. However, tourism largely revolves around the utilization of the coastal waters.

### *Local involvement imperative*

The need for a bottom-up approach and, thus, of strong involvement from local people was emphasized by Colloquium participants from, *inter alia*, Tanzania, Thailand and Indonesia.

Today, local people are the most seriously affected by the uncontrolled development of the coastal regions that lead to the collapse of local fisheries. The positive news is that, gradually, traditional and local knowledge of resource use on the coast, as well as local initiative to protect the resource base, are being recognized and supported. In Thailand, fishing families serve a "watchdog" function in relation to industries in the coastal zone.

Public participation is a strong political force to promote action. There is an urgent need to formulate and implement policies that will allow for local people to participate in the management of their environment and resources. Past experience has demonstrated that problems will not be solved and environmental protection never realized unless there is active public participation and awareness. However, to achieve positive results, considerable efforts to strengthen local capacity are also required.

# The Institutional Dimension

In the face of stagnating overseas development assistance (ODA), a crucial question for international financing institutions and development agencies is where funds can be most effectively put to use. In a changing system, the effectiveness of traditional institutions – the management systems – and their compatibility with the existing social reality must be re-evaluated.

The scarcity of assistance funds may also be misleading, because there is no scarcity for good projects to invest in. In order to identify even more good projects, a pilot-oriented process should be linked and, eventually, be scaled up.

From the discussion at the Colloquium on the institutional dimension of going from knowing to doing, it was quite clear that capacity building, education and participation are not only desirable components but indispensable pillars on which successful development projects must be built.

Capacity building is a cheap and very cost-effective means of transferring useful knowledge. However, capacity building in terms of institutional building can be difficult or even impossible in very small states.

The need for capacity building, education and training – including training courses on coastal-zone management – was further underlined with a quotation of an old Chinese saying:

*If you want to plan for one year, plant rice.*

*If you want to plan for ten years, plant trees.*

*If you want to plan for a hundred years –  
then educate and train.*

## *New flexible, integrated approach*

Today, the World Bank embraces an approach characterized by improved public participation and integration rather than by sectorization. This implies a more client-oriented policy, where the Bank learns by doing and increasingly builds on local knowledge. In a number of areas – including property rights and land titling – feedback needs to be taken into account in the diagnostics.

There is a move towards being open to local demands and a more knowledge-driven process. Guidelines are revised and more labour-intensive technology is used in Bank projects. A more interventionistic approach is now being applied.

There is momentum in moving towards this more flexible, integrated approach, and the process should be speeded up. Quicker and more effective ways of working are needed. However, international institutions are unwilling to change as rapidly as could be desired. Although sometimes suggested in order to improve efficiency, it is simply not possible for international institutions to bypass central government in the recipient countries.

- Three roles can be envisaged for the World Bank:
- *The catalyst.* To make diagnoses, generate action, bring actors and resources together, and fill gaps.
  - *The learner.* It is important for the Bank to speed up the learning process and review experience as a basis for future policy.



- *The capacity builder.* This role should be executed at both the central and local level.

The World Bank shift in development approach has recently been demonstrated in a number of integrated coastal-zone management projects, where attempts are also being made to build in a learning process in the programmes:

- The Mediterranean Sea Basin Programme;
- The Black Sea Programme;
- The Baltic Sea Joint Comprehensive Environmental Action Programme;
- The Aral Sea Environmental Programme;
- The Caspian Sea Programme;
- The Danube River Basin Programme;
- The East Africa Coastal Zone Programme (including Lake Victoria);
- The Nigeria Coastal Zone Programme.

In East Africa, the Bank has worked with NGOs, the EU, GEF and the EBRD. River states have been brought together and an integrated coastal-zone management report has been developed in East and West Africa for consideration by the concerned governments.

It is important to search for win-win solutions and to avoid exaggerating the conflict between development and environment. The aim should be on getting the prices – including energy prices – right, as well as on introducing prices where they do not yet exist. A move towards a more market-based approach can be observed in the form of bilateral swaps, e.g., the Chicago exchange on carbon dioxide emissions, carbon bonds, tradeable permits.

There is also a trend towards devising national green accounts.

The impact of trade is important, and three aspects

of trade impact are now observable:

- through the regulatory framework;
- through tariffs, which is a more promising and flexible way;
- national accounting, which is generally helpful in getting the prices right.

### ***Bottom-up: Regional and central support***

Donors cannot act unless there is political commitment in the recipient countries. This process is so complicated that even the creation of conditions for action may prove formidable.

The bottom-up approach can be functional, again provided it is actively supported by regional and central government. However, for it to succeed, balance and dialogue are required within the whole political system. Presently, hierarchical levels create problems.

The Swedish International Development Agency (SIDA) and the Swedish Agency for Research Co-operation with Developing Countries (SAREC), underlined that capacity building in the South is of vital importance, particularly the promotion of institutional capacity. There is a profound institutional crisis in Africa, which to a certain extent reflects the financial problems of the African countries – they cannot afford governance. This is closely related to the current inequitable flow of financial resources.

Key civil servants need to be properly trained. This is especially true for those working in ministries of finance, who are often key people. Unless they obtain a better understanding of the “economics of the environment” and the many functions of natural systems; e.g, ecological services, climate, building of top soil, hydrocycles, etc., it will be difficult to achieve change in the current development strategies. How-



ever, capacity building is only a first step. Capacity maintenance is equally important.

How is the knowledge to be transferred from the North to the South to be packaged? Capacity building efforts must always include local knowledge, as well, if they are to succeed. There is also a need for an international organization for distance education.

Applied research and pilot projects are important tools in development. However, greater efforts should be made to strengthen ongoing successful projects rather than to find new ones. SAREC attempts to organize participatory research which, *inter alia*, implies blending traditional technology with high technology.

The North–South dialogue should be based on a perception of security for all concerned. Transparency is of vital importance for democracy building.

### *Northern educational bias*

Ideally, one per cent of funds in all projects should be set aside for capacity building in the South, according to the Third World Foundation, which also underlines

the need to include local knowledge into this process. Currently, only about two per cent of knowledge generated in the Third World reaches the North.

Capacity building requires an infrastructure of science and technology, and “each wants his own model of development” – which is really the essence of capacity building.

The problem of knowledge transfer is not a simple North–South issue. We have on the one hand the institutional world and, on the one hand, the technological world. The latter is dominated by traditional technology, high technology and novel technology. Scientists from the North tend, however, to largely accept existing structures and to neglect the need for change in the system itself. In addition, there is a heavy educational bias in the North, which often leads to the transfer of inappropriate technology.

Officials and managers are seldom aware of the impact of the social sciences in the development process. For this reason, the social sciences should be given major priority in efforts to create a better understanding of the crucial mechanisms involved in people’s participation in sustainable development.

# Statement on Future Action

**A**t the 1994 Royal Colloquium, the discussions on how to strengthen society's capacity for going from knowing to doing was concentrated on the coastal zone and, particularly, on the tropical coastal zone. Broadly defined, the coastal zones cover only eight per cent of the Earth's surface but are home to over 50 per cent of humanity. Virtually every environmental problem, with some obvious exceptions, could be found somewhere within the coastal zones.

Consequently, any discussion concerning the coastal zones has a much wider range. The overall issues involved are

- the nature, productivity and use of resources and human impact upon them;
- environmental processes, especially the flows of carbon;
- social processes, i.e., how communities use and misuse resources, the flow of finances, the incorrectness of environmental valuations or economic models;
- development and application of scientific knowledge;
- building of human capacity;
- political systems in terms of establishment of more effective local, governmental and intergovernmental institutions and policies;
- how to get issues, processes and actions in the right sequence with the right relationships ("Rubik's cube").

## *Intergovernmental actions*

The 1994 Colloquium put forward the following goals for intergovernmental action:

- ❑ Development of a **new and more flexible machinery for North-South co-operation**, including transfer of knowledge in correctly packaged form.
- ❑ **Development of an Earth Charter**, to include the ethnical dimension of the commitment and responsibility of the world as a whole.
- ❑ Reformation of **world trading and financial systems**.
- ❑ Recognition of the **continuing importance of international programmes**, e.g., UNEP Regional Seas Programmes, and other efforts to address important issues affecting the coastal seas.
- ❑ Strengthening of the **developing role of international agencies**, e.g., the World Bank, as they move towards more of an enabling, catalytic and supportive role.
- ❑ Strengthening of, especially, the **institutions of the developing world**. This includes strengthening training and education facilities, as well as the capacity to develop new and appropriate technology.

❑ Continued refinement of **global networks** for the exchange of information and technology, both social and natural science information and including South/South and South/North links, as well as North/South trade.

### *Urgent actions*

❑ Countries should be exhorted to **develop national Agenda 21 plans and strategies for sustainability**, with local components reaching down to local levels and including, *inter alia*, definitions on how integrated coastal-zone management can be achieved.

❑ The approach to **environmental resource management should be integrated, facilitated and transparent**. Local communities need to be involved through public participation in the management of their own resources. By making resource management stimulating for the people concerned, the will-to-win can be also be stimulated. Authority must be devolved to local communities, parallel to offering them support in the form of technical expertise, training and finance.

❑ Central governments should establish a **framework of law, economic instruments and public education and information**. Included in this can be an alteration to land-tenure systems to give local communities proper control over their environments. Governments should rank long-term development interests as highly as short-term economic interests.

❑ **Government-to-government aid** remains highly important, but the debt barrier must be eased. Also, access to international funds for sustainable development is imperative.

❑ Systems to develop **skilled manpower and to help implement domestic plans in developing countries** continue to be needed. Networks are required to link and support all key groups and committed groups.

❑ Governmental aid agencies need to **guide and function as engines for the sharing of policies and experience**. They should accept the responsibility to discourage destructive practices.

❑ **Conceptual development** is needed in many areas, including the development of indicators of sustainable development. For example, how can win-win solutions be generated? And how can loops be closed and "kretslopp" systems introduced?

❑ The proceeds of development must be made to **feed back to benefit the communities concerned** and continuously strengthen their incentives for improvement.

❑ **New economic systems and methods should be developed** to cater for the needs of tomorrow. Such systems and methods will provide for a proper valuation of environmental resources, not just "add some green" on top. Externalization of costs should be avoided, and the use of environmental technology should be promoted.

❑ **Better communication** must be developed between natural and social scientists on the one hand and decision-takers on the other. Transfer of knowledge must be carried out in a form suitable for practical use.

❑ **New forms of research**, including participatory research, should be supported to enhance the effec-



tiveness of new approaches. Furthermore, cultural barriers must be addressed, recognized, and removed.

❑ **Intersectoral mechanisms** need to be created, within international institutions like the UN and between them and the NGO community, as well as within central governments. All community sectors need to be involved in decisions affecting the regions and environmental resources. Following this, there is a need for physical planning linked to financial planning.

❑ **Mechanisms for sounder education**, for better approaches to training and capacity building, need to be developed and based on “kretslopp” thinking.

### *Pilot projects and case studies for success*

To date, no nation has fully solved the problem of sustainable development. As a concrete step to show the possible result of practical action, the Colloquium agreed on the need for practical examples.

❑ **Pilot projects and demonstration projects** should be promoted to obtain case studies and model frameworks of how societies may function in a sus-

tainable way. Although not the only possible areas, coastal zones are nevertheless ideal ones in which to develop such studies. By developing case studies of this kind, we can try to leapfrog the present practices into better practices for tomorrow.

Among other things, pilot projects should demonstrate:

- the way scientific studies have been applied to the diagnosis of the problems, and how scientists have been involved in developing policies;
- the way in which environmental resource use has been part of science; e.g., zoning of fishery rights, zoning involving a segregation of fishery use, ecotourism, natural reserves, etc.;
- the way in which techniques (e.g., environmental impact assessment) have been actually applied, and how fundamental principles like the precautionary principle have actually been incorporated;
- methods for ensuring the proper valuation of environmental resources and correcting market failures or distorted investment;
- ways of involving and supporting the true participation of local communities;
- ways of proportioning benefits between central and local government interests;
- methods for sharing and applying environmental-science technology and then developing it better.

# Concluding Remarks

## by His Majesty, King Carl XVI Gustaf

**I**t is now three years since I introduced the idea of gathering a group of scientists, industrialists and decision-makers, to discuss the protection of coastal ecosystems of vital importance in densely populated regions.

I did not realize that this would lead to the initiation of a series of international Colloquia. However, to me these Colloquia have been most instructive, indicating the long way we have to go from gathering knowledge to adequate action. I am most grateful to all who have contributed to these meetings.

I feel that the success of the Colloquia largely depends on the very active role played by the participants. Several people have already remarked that this third Colloquium, dealing with the political approaches to sustainable development, has been particularly impressive since it has, at very short notice, attracted

such a large number of top-level people from many parts of the world. I would like to regard this fact as a guarantee for the advance of yet another step on the road from knowing to doing.

Thus, it is my sincere hope that the views expressed by this Colloquium shall succeed in activating others, so that future degradation of coastal areas can be prevented.

In closing this meeting, I would like to thank you all for the efforts you have made to ensure that “*no shadow falls*”

*Between the idea  
And the reality  
Between the motion  
And the act.*



