

REGIONAL AFFAIRS

CARICOM

Towards Effective Environmental Cooperation and Governance (Part 2)

by Ronald Singh*

NOTE: This article is the second of a two-part series and is condensed from a more in-depth analysis of CARICOM's Environmental Cooperation and Governance.¹ The first part² focused on issues of economic growth and environmental integrity. Part 2 posits the need for a long-term approach, if CARICOM's strategies and policies are to be a success. It suggests that CARICOM could draw inspiration and guidance from the European Union and South East Asia organisations in strengthening cooperation for the common good of the region.

Proactive Regional Educational and Environmental Institutions

CARICOM's survival depends on the integrity of ecosystems because they provide a wide range of indispensable services. Only by understanding the economics, science and social forces driving specific threats can effective policy responses be developed to counter them.³ To that end, the regional educational and environmental institutions have vital individual and collective roles to play in the sustainable future of the region. While there are many educational and health-related institutions⁴ and centres in the region, only a few are discussed as they serve to explain the interrelatedness and functional cooperation that are required of all within the regional setting.

Educational Institutions

Educational institutions such as the University of the West Indies, University of Guyana and other institutions of higher education have a critical role in the integration process and environmental initiatives of CARICOM. They are uniquely positioned to implement, as well as influence, research technology, forcing standards suitable and viable in the Caribbean. As teaching institutions, they must be equipped to create and teach programmes and courses relevant to the environmental sustainability of the region. Further, they are strategically placed to establish multidirectional horizontal and lateral links at the country, regional and international levels. Besides dissemination of information, they can work in tandem with the CARICOM Secretariat to host environmental research conferences at which the main players would be the environmental experts and prominent financial agencies, with regional leaders, public and private sector-representatives of important regional organisations and focal points functioning as audience-participants.

Environmental Centres

The environmental unit within the Secretariat, and other similar regional institutions should take cognisance of the traditions and cultures of the citizens. The resolution of environmental issues in the CARICOM must take into account communal tenure systems, traditional land and coastal use practices, and cultural values. The regional leaders must recognise the importance of local knowledge and natural resource management practices. For example, SPREP,⁵ a small island regional body, has The Capacity Building and Environmental Management Project which works towards recording indigenous knowledge on Pacific island ecosystems. Such work takes on added value for the Pacific islands, not only because it enables younger Pacific islanders to learn traditional wisdom and lore, but because there is a wider global interest in cultural issues these days.

The goal of the Caribbean Environmental Health Institute (CEHI) in St Lucia is to provide, *inter alia*, leadership, and technical and advisory services in all areas of environmental health, including environmental quality monitoring, environmental impact assessment, environmental health information, water resources management and waste management. CEHI acts as a regional reference point for the collection and dissemination of technical and scientific information, and as a focal point for various environmental monitoring networks for the collection and dissemination of environmental information in the Caribbean. CEHI should provide leadership to Member States to improve and support policy development decisions that are consistent with the goals and targets of health initiatives, and in the collaboration with national, regional and international organisations. Its capacity to fulfil these functions, however, warrants revisiting and restructuring for effective delivery.

Harmonisation of Regional Decision Making

A major challenge for regional governance in the Caribbean is the need to increase the efficiency of decision

* Ronald Singh, LL.M., Pace University School of Law; M.S., Hunter College/CUNY; LL.B. (Hons.), University of London; B.Sc., University of Guyana; Adjunct Faculty, Department of Human Services, Touro College.

making in the Community. It has become increasingly clear that, despite the establishment of various ministerial councils,⁶ decision making within the Community remains largely centralised, with issues being referred upwards for decisions. The lack of direction and timely decision making has implications for globalisation and the significant geo-strategic shifts which have occurred in the international system and the geopolitics of energy.⁷ Similarly, the appointment and role of the Secretary-General (not explicitly discussed in this study) need revisiting in light of changing global circumstances, the state of CARICOM economies, and effective functional regional organisations in other parts of the world.

There is widespread consensus that effective systems of regional governance require radical decentralisation in order to shift less important issues to lower levels of regional decision making. Heads of Government should



Courtesy: CARICOM

therefore insist on the various ministerial councils (COFCOR, COTED, COHSOD and COFAP) to take definitive decisions in respect of issues falling within their respective areas of responsibility, which they are empowered to carry out under relevant articles of the Revised Treaty.⁸ They may have to prioritise their plans and efforts which would help to identify other possibilities. Environmental project management and coordination under a “best practice” approach should be identified and given to a country that has the capacity as exemplified by an efficient track record in managing such projects.

Inherent tension between “nationalism” and “regionalism” impacts governance in the Caribbean as Member States seek to defend their sovereignty mainly because the achievement of national independence has been relatively recent. Additionally, the Community’s composition of mainly island States, scattered over a fairly large expanse of sea, not only generates geographical separateness, but also encourages a certain degree of particularism and ethnocentrism. The fact that many Member States contain a multi-ethnic population or are comprised of a plurality of island communities leads to further conflicts. Member States must respond to the complex challenges presented by the profound geo-political and geo-strategic shifts that have occurred globally; governments and private actors must accept that new methods of management of integrated economies are necessary.

But establishing a unitary form of governance is also constrained by factors such as the economic, social and political environments of the different countries. It has also been articulated that political leaders are reluctant to transfer authority and cede their sovereign status because of their history as slave and indentured societies. While these

factors may hold credence, the major problem in the Caribbean has been the absence of a well-thought-out CARICOM governance structure (including the role and terms of reference of the Secretary-General) and the inability of the Regional Body and the individual countries to articulate and charter clearly defined procedures and practices. In view of the disparities among Member States, cooperation and integration must be premised on a “bargain” theory (*i.e.*, parties must have bargained for the exchange of a promise) among Member States that recognises the development of individual Member States, as well as the equitable distribution of the benefits of integration.

There is an “implementation deficit” in the activities of CARICOM due mainly to the almost exclusive dependence of the Community on the individual Member States to implement measures agreed upon at the regional level,

and the absence of institutions involving the organs of both Member States and the Community, with specific responsibilities to implement regional decisions.⁹ These shortcomings need careful attention and can be corrected through the adoption of regional institutions and arrangements based on a “carrot and stick” framework of environmental cooperation and governance.

Developments at national, regional and international levels are likely to exert pressure on Member States of the Caribbean Community to intensify the process of regional integration. This in turn requires national decision-making to be increasingly supplemented by collective decision-making at the regional level, supported by the principle of “direct effect”, a principle according to which certain pieces of legislation are enforceable by citizens of the Member States. This is essential since the objectives of regional economic integration are unlikely to be achieved, unless supported by a high level of cooperation and effective governance. This is a pragmatic attempt to identify a creative and flexible form of governance that facilitates regional integration, *i.e.*, such a system must support the wide-ranging process of economic integration while responding to global challenges impinging on prospects for national and regional development. The decisions taken on the structure of governance therefore assume critical importance in determining the capacity of the region to deal with the burgeoning multi-faceted environmental challenges.

Integration of national action plans within the CARICOM can be advanced through such measures as harmonisation of standards, joint implementation of agreed environmental management systems to enhance effectiveness and remedy deficiency, and projects that emphasise

shared capacity building.¹⁰ But such measures require a facilitative and supportive institutional framework within individual economies, as well as Caribbean-wide. To that end, the region need not re-invent the wheel; it can draw from the various working models of regional cooperation around the world, and adopt the salient features to create a CARICOM hybrid. For example, the European Community (EC) as an integrated regional economic bloc has evolved an elaborate system of environmental law. A specific but limited example of regional environmental governance is the Canada-United States Great Lake Water Quality agreement which facilitates coordination of provincial, state and federal water pollution controls across the watershed. A similar effort exists for the Lower River Mekong Basin for Lao, Cambodia, Thailand and Viet Nam, and the Zambesi River Basin in Southern Africa. There is the South Pacific Regional Environment Programme (SPREP) which is hailed as having similar small-island problems experienced in the Caribbean. But the ASEAN Way has drawn attention in recent years, as noted by the United Nations:

*Today, ASEAN is not only a well-functioning, indispensable reality in the region. It is a real force to be reckoned with far beyond the region. It is also a trusted partner of the United Nations in the field of development...*¹¹

Kofi Annan, Secretary-General of the United Nations

CARICOM, therefore, should look to guidance from the ASEAN model of regional governance, with selective inputs from other models. Without the elaborate socio-economic and legal arrangements of the EU and its Member States, inter-state cooperation on sustainable development and environmental governance is emphasised through the Association of South East Asian Nations (ASEAN), dubbed the ASEAN Way.¹² For well over two decades ASEAN functioned without the centralised control and coordination of a secretariat, yet successfully organised the linguistically and culturally diverse region of Nation States into cooperating on the control and management of the region's environment. Quite noteworthy, it has a four-year rotational policy of appointing its Secretary-General, rather than permanent appointments. The ASEAN Way involves cooperation at the sub-regional level through consensus. There is no parliament to issue laws, regulations and directives to member countries, and there are no enforcement agencies. In the absence of enforcement, cooperation among members becomes necessary. The ASEAN environmental undertakings may be characterised as plans for cooperation among national institutions, rather than strengthening regional institutions as a hub for policy decisions.

While the EU, ASEAN and SPREP models of environmental protection and preservation have experienced many challenges in the formulation and implementation of the various instruments, they nevertheless underscore many patterns of divergence and convergence not uncommon to CARICOM. The Caribbean Community can therefore create a hybrid of regional cooperation and governance to further its environmental programmes.

Regional Capacity Building

One supreme objective of CARICOM is to enhance the quality of life of its peoples. To achieve this goal, the Community must function efficiently through prioritisation of its activities. This requires wider participation and empowerment than is currently experienced. For example, people should be empowered to bring suits against defaulters, be they individuals, private businesses or public entities. However, this necessitates mechanisms to give citizens the standing and the legal means to challenge unlawful environmental practices. While at this time, it may not be appropriate at the CARICOM level, individual economies that are plagued by an uncaring culture of money-grabbing individualism could adopt such measures to protect the environment. One of the frequently cited reasons for the level of success of environmental conservation in the USA, besides the health concerns and caring capacity of citizens, are the citizen suit provisions in several environmental laws.¹³

The 1998 review of the SIDS Programme of Action elevated "institutional capacity building" above "poverty alleviation" and "involvement of marginal groups".¹⁴ Instituting such mechanisms requires an effective and collective CARICOM political will, at the regional level and within individual economies, to stimulate people to become integrally involved in matters affecting their lives at the community, national and regional levels. Specifically, people must be sensitised to think and act as one region. The CARICOM vision for the future must incorporate the participation of women and youth in the conservation of the environment. Finally, strengthening regional cooperation and building strategic international alliances, as a means to pursue external negotiations with major countries, economic blocs and international financial institutions, must be given high priority. But real integration requires the fashioning of arrangements which significantly influence member states to ensure coordination and the harmonisation of policies. These arrangements would complement existing cooperation among member states on matters of the environment and civil society.

Capacity building encompasses the country's human, scientific, technological, organisational, institutional and resource capabilities.¹⁵ Some areas that need attention and strengthening include:

Community Participation

Integration of sustainable development planning between government workers and village people requires a methodology based on the vision-making process of Agenda 21. Civil society should be increasingly integral to the independent monitoring of project implementation. Project preparation and monitoring information needs to be accessible in a place, style, form and language which is meaningful to affected parties and which allows them to constructively engage in the process and for their views to be heard. This requires new and innovative participatory approaches, methodologies and instruments for civil society engagement and inclusion in project design and execution. This includes the development of guidelines

for public participation in various phases of the project cycle and to facilitate a consistent approach to public participation in the project cycle through technical cooperation, service, training, research and a well-trained motivated staff.

Great strides in harmonising sustainable development goals can be achieved by integrating all concerned parties into the decision-making process. Models of development must be found which enhance human life, rather than marginalising it, which replenish, conserve or preserve natural and environmental resources, rather than destroying them, and which encourage the participation of people in the events and processes that shape their lives.

Corporate Social Responsibility

In recent years practical business concerns as well as ethical issues have driven corporations to commit to social and ecological responsibility. The financial risk of bad public image has forced shareholders, stakeholders and civil society to be more environmentally conscious in their operations.¹⁶ In what has become known as corporate social responsibility (CSR), corporations and NGOs are drawn to the notion of safe use of the environment and biodiversity resources.

Agenda 21 contains recommendations for corporations to introduce policies and commitments to adopt equivalent stringent environmental standards of operation. A source of incentives for voluntary improvements in environmental behaviour of private companies is through standards advocated by national and international standard-setting agencies coordinated by the International Organization for Standardization (ISO).¹⁷ As part of the CSR a written environmental policy aligned with the organisation's business is an integral part of corporate environmental management. NGOs and corporations are expected to commit to compliance with applicable laws and regulations, prevention of pollution and improvement of corporate performance in these areas. Their environmental management system must have a documented planning process that identifies the environmental aspects of their activities, products and processes, as well as applicable legal and regulatory requirements. The planning process must result in specific environmental objectives and targets must be measurable and transparent if the organisation is to maintain credibility with its stakeholders. There must also be defined roles and responsibilities associated with essential components of the environment management system including an accountability link to senior management. The organisation

must maintain a process for investigating non-compliance or activities causing environmental impacts. Finally, the management review must initiate new environmental objectives consistent with its environmental improvement policy.¹⁸

An integral aspect of CARICOM environmental governance should be to monitor indigenous as well as transnational corporations, to determine the extent of CSR compliance. Most of these firms have already been given some carrots to invest in the region, thus, scrutinising compliance would not be repressive. The role of the public and private sectors must also be strengthened to foster enforcing compliance. This may be possible through both internal carrots (such as tax credits and other concessions) and externally driven incentives (such as voluntary eco-labelling). Eco-labelling can be a huge marketing tool because it helps consumers discriminate in favour of en-



(L-R) David Hales, Programme Manager, External Economic and Trade Relations, Amb. Colin Granderson, ASG Foreign and Community Relations, Neville Bissember, Asst. General Council, and His Excellency Edwin Carrington
Courtesy: CARICOM

vironmentally conscious companies and products. In the final analysis, the measures of environmental efforts and their success, subsequently, are associated with the political pressures brought by lobby groups and NGOs, and the availability of carrots and sanctions.

Culture and Traditional Knowledge

The resolution of environmental issues in CARICOM must deal with communal tenure systems, traditional land and coastal use practices and cultural values. Leaders need to recognise the importance of local knowledge and natural resource management practices. As part of capacity building, the national governments and the regional authorities should document indigenous knowledge on ecosystems. This would be valuable not only to help the younger generations learn traditional wisdom and lore, or

to satisfy an increasingly global interest in cultural issues, but because knowledge of traditional practices can help in planning strategies for dealing with people and their problems. In this context, Guyana has taken an innovative step in establishing the Iwokrama International Centre for Rain Forest Conservation and Development Programme¹⁹ dedicated to the international community. It aims to conserve biological diversity and promote sustainable development, and equitable and sustainable use of tropical rain forests that will bring lasting ecological, economic and social benefits to the peoples of Guyana and contribute to the world's knowledge of critical aspects of rain forest management and development.

However, culture taken in its broadest sense can be a double-edged sword. Strict adherence to cultural traditions can be a hindrance to technological advances that may be necessary for reversing some of the negative impacts of poor environmental practices. Because of uncertainties and lack of adequate information, people may oppose changes. The individual economies must take steps to understand and harness cultural practices for the common good of the region.

Additionally, lending agencies and institutions must recognise the importance of addressing the capacity building needs of their clients. They must also recognise the value of country-specific environmental analysis in helping to identify capacity-building priorities, so that an integrated training programme can be developed to enhance institutional capacity for environmental management.

Gender, Youth and Indigenous People

An often neglected dimension of development focus is the role of women, who are significant users of land and coastal resources, and who tend to be primarily responsible for family health. Their input will be increasingly important on land degradation issues, decision making and training (*i.e.*, as trainers and recipients) on waste management and land use and other activities related to the environment. Governments of CARICOM economies, thus, have to place more emphasis on gender equity. They must actively strive to ensure gender equity is integral and reflected in all aspects of their plans and programmes for regional environmental and sustainable development. In fact, Agenda 21 recommends organisations make efforts to create opportunities for women's involvement in all aspects of the development process. It states that: *tackling the problems of ... development and environment should begin by focusing on ... people ... and enhanced health care and education, the rights of women, and the role of youths and indigenous people.*²⁰

The Role of the Media

With ever improving information and communication technologies, the media have the advantages of both speed (*i.e.*, instantaneous information) and reach (*i.e.*, getting to a huge number of people). Thus, communication should be exploited to the fullest, to educate CARICOM citizens and promote positive actions for the environment. The media can provide information that is balanced, accurate and comprehensive to *inform and educate* readers and

viewers on environmental issues. Coverage should not only highlight environmental problems but also promote public appreciation of the inherent values and benefits that the natural environment provides. They can also facilitate positive popular action for the environment by encouraging people to take initiatives in contributing to environmental sustainability. Additionally, good environmental reporting stimulates public interest and gives citizens the basis for making informed decisions, whether in calling for better management of natural resources by their governments or for businesses to adopt more sustainable practices.²¹ For example, the United States of America has many effective environmental laws mainly because of the concerted efforts of a handful of Hudson River fishermen (including a local sports writer who could keep the issue in the public eye) exercising their citizens' rights against huge odds, and the involvement of the media. They became the Riverkeepers. The Riverkeepers have since become a model for ecosystem protection in the United States.²²

The environment is not just about clean air, clean land and clean water; it is part of people's life and future. CARICOM need to find a more effective way to involve all stakeholders to achieve sustainable development. Extreme positions and confrontational advocacy are not likely to bring stakeholders to a mutually beneficial outcome. On the other hand, reliable and responsible knowledge and information sharing and a strong sense of common purpose can help to safeguard the region's future.

In Search of Alternative Energy

The world is facing a convergence of numerous socio-economic, energy and environmental problems unprecedented in human history. Energy has allowed society to sustain a complex social order and maintain improvements in quality of life, thus, decisions related to the future production and use of energy are critical. The World Conservation Union²³ and the Canadian-based International Institute for Sustainable Development²⁴ indicate that about two billion people live without modern energy services, and only an increase in energy production can meet basic human needs. Renewable energy will make a difference in the way the world meets its power needs, as worldwide power capacity expanded in 2005.²⁵ Some countries around the world have already moved in this direction with varying levels of success.²⁶ The decisions, practices and priorities over the next two decades will determine the fate of future generations, especially in small island states where heavy dependence on energy subjects everyone to both internal and external vulnerabilities. The energy mix and technology selected will have a profound impact on a sustainable future that requires low emissions of greenhouse gases.

The Caribbean region faces growing demands for energy at a time of rising energy prices and tensions over reliability of supply. The major source of energy for CARICOM States is fossil fuel, with Barbados, and Trinidad and Tobago producing oil and gas, and a handful of others generating significant amounts of power from geothermal, solar, wind, wood and waste products.²⁷ The

dependence on fossil fuels has not only deepened the vulnerability of the region to global fuel price increases, but has also plagued its foreign exchange reserves. This is further complicated with the likelihood of consumption increases due to growth in urbanisation, industry and hospitality services.²⁸ The region must search for alternative viable sources of energy that reduce dependence on fossil fuel. One major challenge is how to meet energy needs and development aspirations while reducing greenhouse gas emissions. Clearly, the alternative should be more environmentally friendly through the reduction of air pollution and the wise use of environmental resources.

CARICOM need to adopt integrated energy systems that derive power from solar, wind, hydro-electric, geothermal and ocean energy technologies as well as bio-fuels. Integrating these renewable energy inputs into a workable economy requires considerable revision of the energy infrastructure, a shift towards more distributed energy systems, and the introduction of specialised components like fuel cells and flow-cell batteries. A shift to such systems will not happen overnight nor will it occur everywhere at the same pace. It calls for a regional effort to implement mechanisms to facilitate its introduction, as well as open access to information – a fundamental part of good environmental governance, and a necessary prerequisite to public involvement in decision-making processes that affect the environment. In this context, where externalities are all but inevitable, public access to environmental information may be one useful mechanism to force States to take into account the views of all those who are impacted by actions taken within their borders.

The best hopes to provide energy, particularly in rural areas, lie in cheap adaptable renewable energy resources. Not only do they provide the best choice and diversity, but the energy extracted is returned to the environment with normally no net pollution effect. The following are among the viable alternatives which CARICOM should emphasise in its current and future development strategies.

Solar energy, one of the most potent sources of energy for the future, is presently being used on a smaller scale in furnaces for homes and to heat up swimming pools.²⁹ The solar panel is very environmentally friendly, but requires adequate legal and infrastructural arrangements for its wide use in the region. Coupled with solar panels, changing building designs to make them climate sensitive, *i.e.*, to reflect and capitalise on tropical conditions – abundance of sunlight and wind – can dramatically reduce the use of and dependence on electricity.

Wind power does not produce by-products that are harmful to nature. Like solar power, harnessing the wind

is highly dependent upon weather and location. It is simple and cost-effective, and with the Caribbean's good wind conditions, onshore wind power can even cost less than conventional power. More importantly, the environmental benefits are huge. For example, two wind farms in the Netherlands will cut 5,000 tonnes of carbon dioxide a year from the atmosphere.³⁰ Denmark is leading the world with 20% of its power coming from wind power.³¹ In some rural areas of Guyana, small wind turbines have been re-introduced in recent years. However, the infrastructural requirements and high costs limit them to a few light bulbs, a refrigerator and recharging batteries.³²

Geothermal energy, although not enough to replace more than a minor amount of the future's energy needs, should be considered. Obtained from the internal heat of the planet, it can be used to generate steam to run turbines, which in turn generate electricity. This power can be accessed from *geothermal hotspots*, *i.e.*, volcanic countries such as Montserrat and St Vincent, where there is no need to drill deep into the earth.

In the continental states, *i.e.*, Guyana, Belize and



Senior Director of the Caribbean Regional Negotiating Machinery, Mr. Henry Gill, with another delegate at the Meeting
Courtesy: CARICOM

Surinam, as well as the larger islands, *i.e.*, Jamaica, Barbados, *bio-fuels* (bio-diesel, bio-gas and bio-mass) have great promise. They have huge areas of arable lands for those crops which are used for generating environmentally friendly bio-fuels. The energy plants can be run by solar and/or bio-fuel energy.

Further, adopting carrot-and-stick measures (*e.g.*, encouraging newer models of automobiles while taxing less efficient means of transportation) can be extremely useful, cost effective and economically feasible ways of conserving energy and coping with energy crises. Like the renewable energy sources, it would reduce costs through less use of gas, and ultimately reduce pollution and dependence on fossil fuel.

Adopting solar-derived renewable technologies will only be effective through the cumulative efforts of whole communities, at the national as well as the regional level. Government action is needed to redirect funding towards these ends and to remove institutional obstacles.³³ Noting CARICOM's growing demands for energy, the Inter-American Development Bank (IDB) Sustainable Energy and Climate Change Initiative (SECCI) has pledged to finance selected programmes and projects³⁴ aimed at finding economically and environmentally sound energy options. But sustainability in the region requires more than financing selected projects; it requires huge investment inflows with long-term plans and initiatives. The implementation of such measures within CARICOM can only be achieved through facilitative legal frameworks and sustainable financing mechanisms. The carrot approach can be extremely useful in encouraging inter-State cooperation, and can be a valuable tool within individual economies to forge compliance among the various stakeholders.

CARICOM States must create regulatory frameworks that reward investment in energy efficiency, as few utilities have meaningful incentives to promote a product which may reduce their profit margins. This would foster long-term investment in least cost, sustainable energy resources, promote technological innovations and avoid polluting industries.³⁵ Tax concessions and other forms of incentives could be offered to importers and consumers of vehicles. As a counter measure, the disincentive of higher taxation, or transportation taxes could be imposed. The electronic taxation system, which has its genesis in Singapore, but became popular in London, has been successful in keeping vehicles out of crowded cities. In fact, there have been debates about implementing a version of the system to limit the number of automobiles going into certain areas of New York City.³⁶ CARICOM therefore must hasten to look seriously at their policy towards future energy needs amidst regional environmental concerns.

Tourism and Environmental Cooperation

Tourism is one of the most important economic activities³⁷ in CARICOM. Over the last two decades, these economies, with less than 1% of the world's population, have consistently received more than 6% of the world's tourism arrivals.³⁸ The growth of the industry presents enormous challenges in protecting biodiversity resources. Tourism is plagued by major difficulties, some of which are inherent in the industry itself, while others are derived from the countries. They include, *inter alia*, vulnerability to economic shocks in the source markets, susceptibility to natural disasters in the destinations and infrastructure, the size and significance of tourism, and the importance of the tourism sector to the economies.

Sustainable management of natural resources depends on striking a balance between the preservation and renewal of resources and their use for trade and economic well-being. CARICOM economies have failed to access the latest policies, practices and technologies to promote the sustainable management of natural resources, and provide the foundation for sustainable national economic development.

Not unlike other parts of the world, and even within particular CARICOM economies, there are divergences in the pursuit of the use and protection of natural resources and sustainable development. Where there are common concerns, it is easier to find a convergence.³⁹ Divergences occur because issues relating to environmental governance and sustainable development of natural resources require progressive deliberations to achieve a clear vision and policy for the formulation of strategies and a legal framework.⁴⁰ The nexus between the environment and the economy, the limited capacity and narrow resource base, as well as the Caribbean's vulnerability to natural disasters demand a development agenda based on sound policy decisions informed by reliable and timely information. Among the principles advanced are the *common but differentiated responsibilities*⁴¹ for States, the *precautionary principle*,⁴² and the *polluter pays principle*.⁴³ However, the extent to which the polluter pays principle has been (or would be) effective in the Caribbean context is debatable, as in cases where the cost of the harm done greatly outweighs what a defaulter can afford to pay; or enforceability, given the region's inability to enforce legislation. Nevertheless, it comprises a starting point to force compliance with environmental norms. Many of the recommendations and principles of Agenda 21, *i.e.*, the focus on national legislation, measures, plans, programmes and standards, as well as on the use of legal and economic instruments for environmental planning and management are of great importance because the success of CARICOM tourism depends on its socio-economic and environmental sustainability. Failure of regional economies to protect and preserve their biodiversity and provide quality visitor experiences would render them likely to be overlooked in favour of destinations with more natural lures. The recognition of environmental needs has led the *Eighth General Increase in Resources of the Inter-American Development Bank*⁴⁴ to call on borrowing member countries to strengthen environmental legislation, establish regulations and create systems of incentives and sanctions aimed at promoting environmental conservation, and improve the management and efficiency of institutions responsible for the environment and natural resources.⁴⁵

Clearly, CARICOM need to establish efficient institutional mechanisms to address environmental matters which entail the coordination of decision-making processes and the promotion of participation among local public and private organisations. To date, the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region is the only legally binding regional environmental treaty. Article 10 of the Convention requires Parties to take "all appropriate measures" to protect and preserve "rare or fragile ecosystems", as well as the "habitats of depleted, threatened or endangered species", and, to this end, establish specially protected areas.⁴⁶

The model of good environmental governance emphasises the role of the government and its responsibility to environmental protection, and the promotion of civil society.⁴⁷ The specific themes arising from the good governance model are economic incentives for environmen-

tal management, and citizen participation. These are the very principles advanced in the “carrot” framework being advocated. It recognises potential risks for those countries and local communities that are ill-equipped to adapt, but posits they can be minimised by adopting innovative legal (e.g., framework laws) and economic (e.g., carrots or incentives) instruments for environmental management and conservation of CARICOM’s biodiversity, thereby setting the platform for a sustainable environmentally safe tourism industry.

Inter-generational Principle of Environmental Cooperation

Scrutiny of CARICOM’s programmes, projects and policies reveals a sadly lacking, but necessary feature of sustainable economic and environment development, *i.e.*, inter-generational equity, a fundamental principle of sustainable development. While most countries acknowledge the inter-generational principle, few CARICOM strategies explicitly incorporate it. One approach for incorporating this principle is consideration of an inter-generational timeframe in the strategy process. European countries, including Sweden, Denmark and Germany, appear to be key innovators in this regard, but other countries such as the Philippines and Mexico have adopted inter-generational time-frames in their strategic processes as well. Sweden’s approach was to adopt an inter-generational timeframe for the strategic management process. For example, the objectives in their national sustainable development strategy extend to cover one generation (*i.e.*, 25 years).⁴⁸

Fostering human dignity requires a sustainable community, and its long-term economic viability is tied to the investment made in safeguarding its environment. The bulk of the everyday citizen’s wealth is in nature, unspoiled landscapes, beaches and oceans and rivers to fish and to swim, pure water to drink, and air to breathe.⁴⁹ To that end, CARICOM sustainable development requires a forward-looking approach with long-term principles, strategies and policies. Long-term planning not only allows for monitoring of performance and compliance, with regard to anticipated outcomes, but also forces future governments and administrators to carry out the projects and plans. This would also ensure greater consistency and continuity in programmes and policies. It appears that despite more than three decades of existence, the region’s leaders lack the political will to introduce changes and work towards their implementation. Further, the leadership needs to lobby institutions of higher education and the private sector for innovative technology and finances. Successful regional programmes require consensus among participating countries on the distribution of programme benefits and costs, and strong national voices in governance arrangements. They also need to clearly delineate and link national and regional institutions and mobilise adequate packages of grant, credit, and loan financing for the extended preparation and implementation typically necessary to achieve regional programme objectives.



The carrot and stick approach to environmental cooperation and governance thus holds the promise of encouraging greater participation as well as facilitating integration and sustainable regional development.

Creating a Hybrid of Regional Environmental Governance

The many similarities between CARICOM and other regional bodies such as ASEAN and the South Pacific Regional Environment Programme (SPREP) make it easy to create a hybrid by adopting some of their mechanisms feasible and applicable to the Caribbean Region. The regional environmental policy must be prepared by the multi-governmental body and adopted by its member governments. The Secretariat’s work plan should be overseen by a committee with each country appointing a focal point to work with the Secretariat. The CARICOM Secretariat, with the support of regional institutions/agencies, NGOs, international agencies, and Member countries must develop (or revise):

- A National State of the Environment Report
- A National Legislative Review
- A National Environmental Management Strategy
- A Series of Intergenerational Environmental Projects/ Programmes

The CARICOM Action Strategy should be of use to any individual or organisation interested in helping to protect the rich natural heritage of the region through the conservation and sustainable management of its natural resources and biodiversity for the benefit of the peoples of the Caribbean Community and the world. The Intergenerational Plan of CARICOM must establish key measurable objectives. For example, the SPREP⁵⁰ strategy, like those of the EU and ASEAN, has specific measurable objectives, prioritised key actions, how and where these actions will be implemented, and a way to regularly measure progress towards these objectives.

The strategy focuses on the interaction of people and natural resources by encouraging people’s participation. Once empowered, people would attend to actions that affect them the most. The plan should focus on the most critically needed actions rather than being a list of activities. To be effective, the strategy must be included in annual work programmes and annual reviews of progress. The objectives⁵¹ are to:

- develop National Environmental Management Strategies for all countries and territories within the region and begin to implement priority conservation and sustainable resource management activities with emphasis on intergenerational project plans, implemented in segments.
- develop and advocate appropriate funding mechanisms for the sustained support of conservation and sustainable resource management activities at the local, national and regional levels.
- identify and address the most urgent threats to the re-

gion's biodiversity and protect the plants, animals and ecosystems for future generations.

- involve communities (emphasising involvement of women, youth and indigenous people) in cooperative natural resource management that recognises and strengthens local resource owners' rights and uses environmentally sound customs.
- strengthen local expertise and technical ability in planning and implementing sustainable natural resource management programmes for marine and terrestrial environments through programmes of training and extension that use local expertise wherever possible.
- improve environmental awareness and information sharing and to build working partnerships at the local, national, regional and international levels in support of conservation activities.

This plan emphasises research, resource inventories and information gathering as fundamental components of all conservation activities rather than a separate objective. Information gathering is linked with each conservation action in order to focus research efforts on applied information needs.

Adopting strategies from the EU, ASEAN and SPREP models of environmental cooperation and governance would facilitate a hybrid model for CARICOM's environmental and biodiversity conservation and set the foundation for sustainable development.

Recent Trends and Closing Remarks

Recent trends in cooperation augur well for the CARICOM environment and sustainable development, as Ministers and representatives from the Caribbean, together with the World Bank, met in Washington, DC for the "Caribbean Catastrophe Risk Insurance Facility Donor Pledging Conference"⁵² (the first-ever multi-country catastrophe insurance pool) which will provide governments with immediate liquidity if hit by a natural disaster, thereby saving them approximately 40% of individual premium payments. The special circumstances of the Region have been recognised as the following excerpt illustrates:

*Caribbean countries share many of the same vulnerabilities that other developing countries experience but ... these countries are also smaller both geographically and in their capacity to borrow. [and] much harder to recover after disaster strikes. ... limited borrowing capacity ... also prevents them from accessing loans [Thus] makes them less able to spread the financial risks of exposure over time.*⁵³

Paul Wolfowitz, President of World Bank Group

Similarly, World Bank Country Director for the Caribbean, Caroline Anstey concluded that "The Facility [CCRIF] represents an important shift from reacting to disasters after they hit, to being much more proactive about disaster management and mitigation."⁵⁴

These remarks served as stepping-stones for collective regional arrangements aimed at wooing and harness-

ing financial inflows for CARICOM-wide environmental management. CARICOM hosted a "Conference on the Caribbean: A 2020 Vision" in June 2007.⁵⁵ The primary audience comprised policy makers from CARICOM and the United States, donors, local and foreign private sector leaders, representatives of development foundations and academics. The initiative is laudable: it is forward looking and hints at long-term prospects; and it signals the ongoing efforts required to attract sustainable funding for environmental projects.

Which Way Forward?

CARICOM's economic viability and sustainable development, individually and as a regional bloc, rest heavily on the preservation of the environmental and biodiversity resources for tourism and ecotourism. Members face, among other challenges, increasing competition between economic interests for limited natural resources, and pressures from increasing tourism and natural disasters. Sustainable development requires the regional governing bodies to revisit the policy initiatives to determine their currency in light of emerging global changes, challenges and prospects. Establishing and strengthening regional environmental governance through cooperation necessitates a change in behavioural ethics and the

adoption of a workable framework and intergenerational plans. Ecological evaluations must become an integral part of the plans, and the results of these studies should be disseminated more widely in order to identify the approaches and prescriptions that best deliver biodiversity enhancement.

While environmentalists will argue that ecology has no boundaries, policies and laws are construed within borders and states, each being sovereign. Consequently, cross-boundary environmental problems require cooperation among sovereign nations. Responding to environmental malpractices requires rethinking and re-engineering regional initiatives and mechanisms at the various levels, through the right mix of policies and instruments to facilitate and complement the carrot and stick approach aimed at gaining greater consensus and cooperation.

Finally, a "carrot" inducement supported by sparing use of the "stick" would greatly advance regional environmental cooperation. Capacity building and networking among stakeholders would strengthen the region's position to attract finance which CARICOM can present as incentives for Member states' support and cooperation. Failing this, financing environmental programmes would remain piecemeal. Ultimately, the lack of adequate incentives would negatively impact cooperation and sustainable regional environmental governance.

Notes

1 Ronald Singh, 2007, "Advancing a Carrot and Stick Framework for Effective CARICOM Environmental Cooperation and Governance". *Penn. St. Env't L. Rev.* 15.



- 2 EPL 37/5 at page 406.
- 3 Paul R. Ehrlich, "Foreword", *International Environmental Law and Policy* (Hunter *et al.*, 1998), Foundation Press.
- 4 Some of the related institutions are: Caribbean Disaster Emergency Response Agency (CDERA), Caribbean Meteorological Institute (CMI), Caribbean Meteorological Organization (CMO), Caribbean Food Corporation (CFC), Caribbean Environment Health Institute (CEHI), Caribbean Agriculture Research and Development Institute (CARDI), Caribbean Centre for Adult Education (CARCAE), Caribbean Epidemiological Centre (CAREC), Caribbean Centre for Developmental Administration (CARICAD), Commonwealth Caribbean Medical Research Council (CMCRC), Caribbean Food and Nutrition Institute (CFNI). The following are Associate Institutions of the Community: Caribbean Development Bank (CDB), University of Guyana (UG), University of the West Indies (UWI), Caribbean Law Institute/Caribbean Law Institute Centre (CLI/CLIC), Organisation of Eastern Caribbean States (OECS), Anton De Kom University of Suriname. See <http://www.itcilo.it/english/actrav/telearn/global/ilo/blokkit/caricom.htm> for information on the role and activities of each.
- 5 See <http://www.ice-pac.org/background/pic-concerns.html#crit> for details of SPREP initiatives and programmes.
- 6 Namely, Council for Foreign and Community Relation (COFCOR), Council for Trade and Economic Development (COTED), Council for Human and Social Development (COHSOD), and Council for Finance and Planning (COFAP)
- 7 See Report of the Technical Working Group on Governance, *Managing Mature Regionalism & Regional Governance in the Caribbean Community* (October 2006) at <http://www.caricom.org/>.
- 8 See details at <http://www.itcilo.it/english/actrav/telearn/global/ilo/blokkit/caripro2.htm>.
- 9 See Edwin W. Carrington, CARICOM: Toward Making the Caribbean Whole (keynote address delivered to the 7th Annual North-East regional Caribbean Students Conference at MIT, on April 2, 1999, for discussion on sustained cultural, economic, social, scientific and technological advancement; promoting opportunities for cooperation and concerted action on trade and investment issues; and establishing, consolidating, and augmenting cooperative and institutional arrangements that are responsive to the region's various cultural identities, development needs and normative systems) at <http://www.caricom.org/jsp/speeches/mitspeech.htm>.
- 10 See Koh Kheng-Lian and Nicholas A. Robinson, 2002, "Strengthening Sustainable Development in Regional Inter-Governmental Governance", *Singapore J. Int'l. Comp. L.* 6: 641 (for a discussion on the ASEAN model of environmental governance).
- 11 See UN Secretary-General Kofi Annan's address to the Indonesian Council on World Affairs in Jakarta, Indonesia (16 February, 2000) at <http://www.aseansec.org/6910.htm>.
- 12 Koh Kheng-Lian and Nicholas A. Robinson, *supra* note 10, at 640.
- 13 See The Clean Water Act at <http://www.r5water/cwa.htm>, The Clean Air Act at <http://www.epa.gov/air/caa>, and The Endangered Species Act at <http://www.fws.gov/Endangered/esa.html> for details on the citizen suit provisions.
- 14 Jonathan Pugh, "Physical Development Planning in the Anglophone Caribbean: The Re-articulation of Formal State Power", *Environmental Planning in the Caribbean* (Pugh and Momen (eds.) 2006), quoting the United Nations Economic Commission for Latin America and the Caribbean Report 1998.
- 15 Earth Summit: Agenda 21 (1992) at 270.
- 16 Steven C. Rockefeller, 2007, "The Need for New Planetary Ethic", *Green Law* 10: 3.
- 17 R.V. Percival, C.H. Schroeder, A.S. Miller and J.P. Leape, 2003, *Environmental Regulation: Law, Science, and Policy* at 1119 (Aspen).
- 18 See Hunter *et al.*, 1998, *International Environment Law and Policy* at 1400–1402, (Foundation Press), discussing ISO 14001 standards for environmental management systems.
- 19 The Agreement is embodied in and receives legal status from the Iwokrama International Centre for Rain Forest Conservation and Development Act 1996. See details of the programme at http://www.iwokramacanopywalkway.com/new_page_6.htm.
- 20 Earth Summit, Agenda 21 (1992) at 27 and 40.
- 21 *Id.*
- 22 See Cronin and Kennedy Jr., 1999, *The Riverkeepers* at 20–49. The movement gained momentum to the extent that there are now numerous "riverkeepers" around the country protecting the environment.
- 23 IUCN at <http://www.iucn.org/themes/energy/Production/production.htm>.
- 24 See International Institute for Sustainable Development at <http://www.iisd.org/climate/>.
- 25 Xiaodong Wang, 2007, "Legal and Policy Framework for Renewable Energy to Mitigate Climate Change", *Sustainable Dev. L. & Pol'y* VII: 17 (power capacity expanded to 182 gigawatts).
- 26 Xiaodong Wang, *supra*, note 25 at 17. In India, Israel, Iran, Mexico, China and North Africa various renewable energy systems – biomass, wind, solar, and water power have been operating for a few decades now.
- 27 Not all countries have yet been able to diversify their energy sources, however. Barbados, Dominica, Jamaica and St Vincent and the Grenadines generate small amounts of energy from alternative sources.
- 28 See the CARICOM in Figures 2002 at <http://www.caricom.org/>. See also USAID, "United States Government Initiatives to Build Trade Related Capacity in Developing and Transition Countries" (2001) at http://www.usaid.gov/our_work/economic_growth_and_trade/eg/trade/report/01main_tcb.pdf.
- 29 See *Tiny Village gets Light* at <http://www.cnn.com/2007/world/asiapcf/07/26/india.solar/index.html> for additional information on Gudda, a village of about 500 people 300 miles southwest of Delhi, which uses only solar panels to provide energy.
- 30 See Alternative Energy at <http://www.bp.com/sectiongenericarticle.do?categoryId=9013393&contentId=7026238>.
- 31 Frances Beinecke, 2006, "Letter from Denmark: Our Energy Future Today", *On Earth* 28: 4.
- 32 Information is based on personal communications I had with some of the individuals who currently use small wind power generators (August 2006).
- 33 D. Schumacher, 1987, "Energy for Human Shelter within the Global Shelter: Energy Policy Planning in the 3rd World" in *Homes above all* at 192. The Building & Social Housing Foundation.
- 34 See <http://www.iadb.org/secci/> for a list of IDB financed projects, programmes and activities within the region. Most of the projects fall within the wider ambit of Latin America and the Caribbean region.
- 35 Dale Bryk, 2007, "States Tackle Global Warming", *Sustainable Dev. L. & Pol'y* VII: 54.
- 36 Debates were current at time of writing (March–May 2007) as NY City officials contemplate legislative support for an \$8.00 charge per car for driving in certain busy areas of the city.
- 37 It contributes roughly 30–50% of the GDP of most Member States, and about 25% region-wide.
- 38 See "Women and Men in the Caribbean Community: Facts and Figures, 1998–2005" at <http://www.caricomstats.org/Files/Publications/CHAP1-POPFAM.pdf>.
- 39 Koh Kheng-Lian, "ASEAN Environmental Protection in Natural Resources and Sustainable Development: Divergence and Convergence" presented at the 3rd Asian Law Institute and East China University of Politics and Law, Shanghai, May 25–26, 2006.
- 40 Koh Kheng-Lian and Nicholas A. Robinson, *supra* note 10.
- 41 This principle was agreed on and entered into the resolution at the Conference of Heads of Government of the Caribbean Community at its Twenty-First Meeting held in Canouan, St Vincent and the Grenadines on 2–5 July 2000, establishing a CARICOM Regional Climate Change Centre.
- 42 The Precautionary Principle urges a willingness to take action in advance of scientific proof of evidence of the need for the proposed action on the grounds that further delay could prove ultimately most costly, and perhaps selfish and unfair to society, nature and future generations. Central to the application of the Precautionary Principle is the concept of proportionality or cost-effectiveness. Policies to reduce the threat of future climate change, for example, may need to include radical shifts in energy-use behaviour.
- 43 Under this "polluter pays principle", the polluter is responsible, thus must pay for the environmental and economic effects of his or her polluting activities.
- 44 See <http://www.iadb.org/secci/> for a list of IDB financed projects, programmes and activities within the region. Most of the projects fall within the wider ambit of Latin America and the Caribbean region.
- 45 IDB, *id.*
- 46 UNEP, 2006, "Specially Protected Areas and Wildlife in the Wider Caribbean Region – A Regional Protocol on biodiversity" at <http://www.cep.unep.org/cartagena-convention/plonearticlemultipage>.
- 47 That is, promoting private rights and individual initiative through pluralism, accountability and transparency.
- 48 See OECD/UNCSD Expert Meeting on Institutionalising Sustainable Development, City Conference Centre, Stockholm, Sweden, 31 August – 1 September 2006, <http://www.oecd.org/dataoecd/58/42/36655769.pdf>.
- 49 *Supra*, note 15 at 273–75.
- 50 "Harmonizing National Sustainable Development Policy" at <http://www.tellusconsultants.com/national.html>. See also <http://www.ice-pac.org/background/pic-concerns.html#crit> for details of SPREP initiatives and programmes.
- 51 *Id.*
- 52 Caribbean Catastrophe Risk Insurance Facility Donor Pledging Conference (CCRIF) met in Washington, DC, February 26, 2007. CCRIF will serve as a pilot for possible extension or replication to other regions, such as the Pacific Basin, with small states running the same risk of being struck by natural disasters.
- 53 Paul Wolfowitz, President, World Bank Group, "Conference remarks" at <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/>.
- 54 World Bank, Conference on the Caribbean: A 2020 Vision, The Experts Meeting convened international and regional experts at the World Bank in Washington, DC from June 19–21, 2007 at <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/>.
- 55 *Id.*



ICEF

The Mediterranean and Black Sea Ecosystem under Discussion

by Amedeo Postiglione*

The International Court of the Environment Foundation (ICEF), in collaboration with the Veneto Region, organised an important International Conference on “*The Protection and Sustainable Development of the Mediterranean-Black Sea Ecosystem*”. The meeting was held in Venice, at the splendid Scuola Grande di San Giovanni Evangelista. The conference continued its work on environmental governance (first addressed in a conference in the same city in 1994), looking at more specific questions relating to the Mediterranean-Black Sea ecosystem.

For about twenty years, the ICEF Foundation has promoted access to justice on environmental matters, also at an international level, through the institution of an equilibrated model of *governance*, including both an International High Authority (or Agency) with real management and control powers, and an International Court of the Environment, with jurisdictional competence for preventing and solving the environmental conflicts that cannot be resolved by national legal orders.¹ ICEF believes that one of the positive ways to promote the effectiveness of environmental law is to begin at the bottom, involving the ordinary parties who have to apply the regulations, namely, judges and the public administrations.

Although still believing that the competence of experts and the contribution of environmental associations are of pre-eminent importance, ICEF also feels that the moment has arrived to strengthen the ordinary network of the institutions, made up of the Courts of Justice and the Public Administrations (central and peripheral) in the individual countries. This is also in line with UNEP’s philosophy. It is real practices that count.

After the positive outcomes of the Conference of Ostia Antica (Rome), under the patronage of the European Commission in May 2005, on environmental damage in Europe in the light of Directive 35/2004/EEC, ICEF believed it was important to seek the collaboration of the Supreme Courts of the various countries on the Mediterranean-Black Sea rim and of their Ministries of the Environment, to verify the state of implementation of existing environmental regulations, through an exchange of experiences within a wider space. The long preparation, since October 2004, was the key to success, because the Conference enjoyed real participation, through the compilation and presentation of specific national Reports by Southern European, North African, Middle Eastern and Black Sea countries. Judges and experts from other European

areas (North Sea and Baltic Sea) were also invited for a comparison of models for the management of their relative ecosystems with that of the Mediterranean-Black Sea. The problems associated with the management of big rivers (like the Danube) were also looked at, given their undeniable impact on the ecosystem.

With reference to method and considering the complexity of the matter, some non-binding guidelines were presented in advance in order to simplify the drafting of the Reports, making it possible to compare the data. The focus was on four problem areas:

- a) land and sea-based pollution;
- b) protection of biodiversity;
- c) protection of cultural heritage;
- d) best models for sustainable development.

The Conference represented a special cultural experience, bringing all the countries of the ecosystem together and intentionally choosing not to start from pre-established objectives and programmes. Throughout the process, in fact, suggestions, integrations and modifications were welcomed.

The idea of linking the Mediterranean and Black Seas in a single Conference proved to be wise and realistic, both for environmental reasons (the ecosystem is holistic or, in any case, connected) and for strengthening cultural awareness of the common origins of civilisation. The main organisations which deal with the protection and sustainable development of the Mediterranean-Black Sea took part in the Conference – including UNEP/MAP, the Commission on the Protection of the Black Sea Against Pollution, the European Commission, the Council of Europe, UNESCO, IUCN, UNDP/GEF-Global Environment Facility, the International Commission for the Protection of the Danube River (ICPDR), the Regional Environmental Centre for Central and Eastern Europe (REC) and the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), among others. The European Forum of Judges for the Environment and the Arab Forum of Judges for the Environment were also associated with the initiative. The participation of the Mayor of Venice and representatives of the Italian Ministry of the Environment was appreciated, as well as that of authoritative experts from various research centres and Italian and foreign universities. Various well-known environmental organisations like WWF, Greenpeace and the Cousteau Society also contributed.

In addition, ICEF’s women’s forum *The International Forum of Women for an International Court of the Envi-*

* Amedeo Postiglione is a Justice of the Italian Supreme Court and Director of the ICEF. He is also Vice-President of the EU Forum of Judges for the Environment.

ronment – also met, focusing on the fundamental question of access to justice in preventing and remedying environmental damage.

A final declaration – *2007 Venice Statement* – of a scientific and cultural nature was presented and approved at the end of the Conference. The Statement listed some priorities, including the unresolved problem of land-based pollution and sustainable coastal management. The propositional aspect of this Statement is of particular importance:

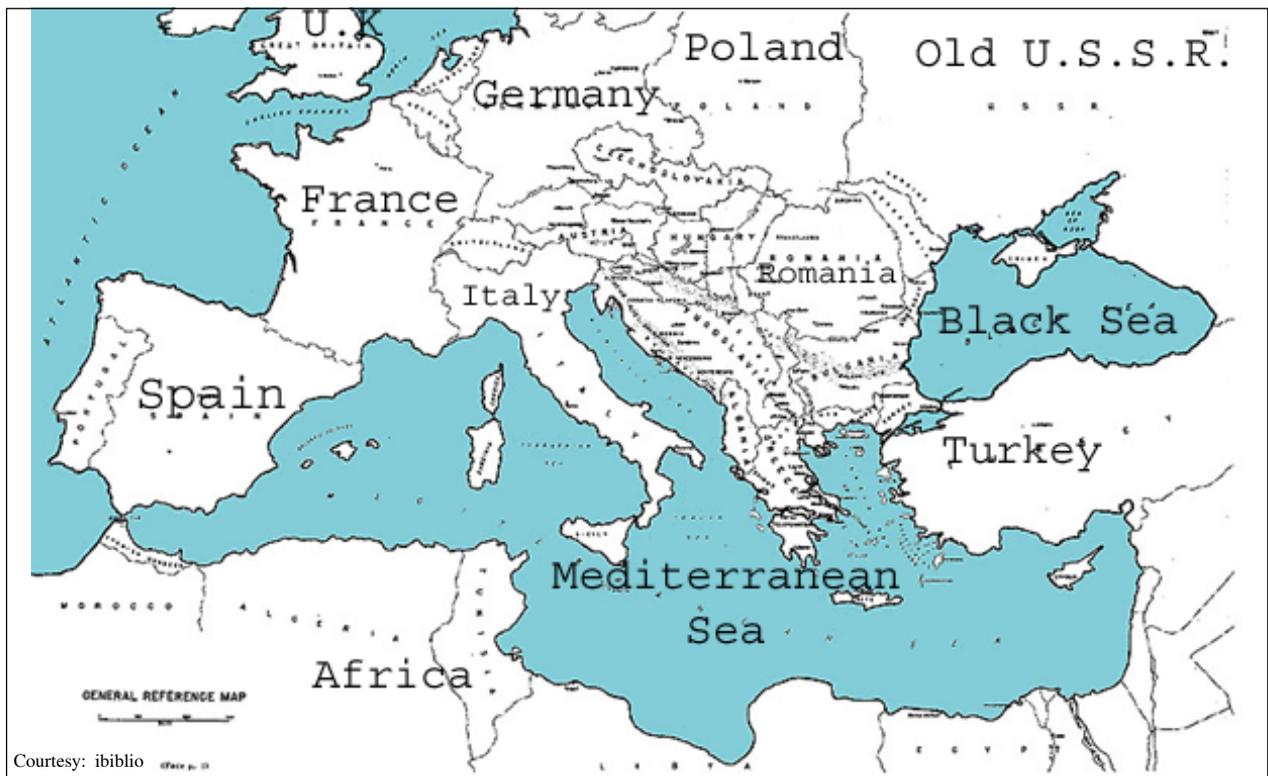
- a) the consideration that the principles of integrated environmental management should serve as the foundation for addressing common and shared threats and risks to the Mediterranean and Black Sea ecosystems;
- b) the request to urgently ratify the Conventions and all the Protocols relating to the ecosystem;
- c) the request to strengthen the system of controls and the application of sanctions;
- d) the request to involve the independent role of the judiciary with the competent public administrations;
- e) the request to enhance the role of local authorities and the Regions or, in other words, sub-state entities (the response of the Veneto Region was truly exemplary, as recognised by the representatives from all the countries);
- f) the request to reinforce the role of NGOs, above all with regard to proposals (for example, in reporting emergencies in the protected natural areas for the protection of biodiversity);
- g) the request to take into account scientific research, both on space and in the sea, as well as its results, also with reference to current phenomena such as climate change and desertification;

- h) the request to all European and international institutions for greater coordination, looking at the substance of the problems;
- i) the request to the States to assume their responsibility with a higher level of collaboration, creating exclusive economic areas and, in any case, environmental areas beyond the limited space of their territorial seas: the high seas (in relatively closed marine ecosystems) must not provide an opportunity for uncontrolled fishing, for ships flying flags of convenience, for trafficking in immigrants, for terrorism and other forms of illegality;
- j) the request, consequently, for reciprocal trust and cooperation: the creation and multiplication of the numbers of protected natural areas in international waters are a priority;
- l) the acknowledgement that an alliance of nature, culture, and landscape helps to overcome viewing the sea only in the negative terms of pollution, creating the pre-conditions for a new economy and for sustainable development on behalf of all the interested populations.

In conclusion, the greatest result of the Conference was its spirit of working together for the protection and sustainable development of the Mediterranean-Black Sea. It began a dialogue which will, it is hoped, continue in 2008 through a future conference, possibly in Istanbul, an emblematic city of the Eastern area of the ecosystem.

Note

- 1 For further information on the ICEF Project for an International Court of the Environment see the ICEF site: www.icef-court.org.



Courtesy: ibiblio

Antarctica

The Treaty System – Continuing Challenges –

by David Manowitz*

Introduction

Watching a nature film on Antarctica, one expects to see a largely barren, snow-filled landscape, populated near the coasts with penguins and seals. Evidence of human activity is nonexistent. These popular images of Antarctica have largely been true due to the measures set forth in the Antarctic Treaty System (ATS). However, both on land and at sea, the Antarctic ecosystem has begun facing challenges that could significantly impact its relatively pristine condition. Overfishing, tourism and certain scientific research questions are the main issues that have emerged.

Antarctica is the only continent without an indigenous human population. Due to its isolation, unique geography and harsh climate, unique flora and fauna have evolved, both on land and in the surrounding seas. With the beginning of human exploration of Antarctica in the nineteenth century, countries laid claim to its lands, and individuals began to hunt, kill and interfere with its wildlife. However, in the intervening two centuries, Antarctica has gone from a land of racing explorers and competing claims to one of scientific inquiry and environmental concern based on the principles laid out in the ATS.

History of the ATS

The basis of the ATS is the Antarctic Treaty,¹ which was signed in 1959 and entered into force in 1961. The treaty is mainly an attempt to mediate territorial claims (some overlapping) and allow for the peaceful continuation of scientific exploration in Antarctica started during the International Geophysical Year of 1957–1958.² Despite its emphasis on scientific research and peaceful cooperation, the original treaty has almost no environmental aspects. It was negotiated at the height of the Cold War, two years after the launch of Sputnik I, and only four years after Victor Lebow's famous statement on consumption:

Our enormously productive economy demands that we make consumption a way of life, that we convert the buying and use of goods into rituals, that we seek our spiritual satisfaction, our ego satisfaction, in consumption. We need things consumed, burned up, replaced, and discarded at an ever-increasing rate.³

In recognising the heightened nuclear tensions of the times and the possibility of serious environmental damage due to nuclear explosions or radioactivity, Article 5

of the treaty states: "Any nuclear explosions in Antarctica and the disposal there of radioactive waste material shall be prohibited". However, beyond this, only in Article 9, paragraph 1(f) of the treaty, is "preservation and conservation of living resources in Antarctica" explicitly mentioned.

Even before the treaty had been signed, many felt that the Antarctic environment should be protected, while others felt that Antarctica's unclaimed status meant that it was open for commercial and industrial uses by anyone. Recognising the pristine nature of the Antarctic ecosystem, recommendations regarding protection of the Antarctic environment were laid out in the first Antarctic Treaty Consultative Meeting (ATCM) in 1961. These and later recommendations established the framework for the first environmental amendment to the original treaty, the Agreed Measures for the Conservation of Antarctic Flora and Fauna (Agreed Measures), agreed upon in 1964, although not effective until 1982.⁴ This agreement was followed by three other major treaties: the Convention for the Conservation of Antarctic Seals (CCAS)⁵ in 1972, the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR)⁶ in 1980, and the Protocol on Environmental Protection to the Antarctic Treaty⁷ in 1991. All of these treaties had entered into force as of 1999, except for an annex to the 1991 Protocol regarding liability (agreed upon in 2005, but not yet entered into force). The Antarctic Treaty, along with these treaties and other agreements proposed at the ATCMs and ratified by the required countries, form the ATS. Despite its lack of official governance and its hodgepodge nature, many people believe that the ATS has basically functioned well to protect the Antarctic environment.⁸ However, there are also a few areas where the ATS needs strengthening or where it needs additional connections to other international agreements.

ATS Successes

By most accounts, with regard to international cooperation and scientific advancement, the ATS is immensely successful. The ATS has also been relatively successful at protecting the Antarctic environment, especially in the matters of mineral resources and protection of many native animals. Furthermore, the Environmental Protocol lays the framework for environmental planning in the Antarctic. However, this framework is relatively recent, so its ultimate impact cannot yet be judged.

Due to the environmentally destructive nature of mining and drilling operations, development of mineral resources (including hydrocarbons) is a charged issue. The

* David Manowitz, a graduate of MIT, is completing the Masters Program in Engineering and Public Policy at the University of Maryland.

original Antarctic Treaty makes no mention of mineral resources. Given the harshness of the Antarctic climate, there was initially little interest in attempting to exploit these resources. However, as technology improved, other factors such as the OPEC oil embargo of 1973 and the discovery of gas traces in the southern waters led to renewed interest in the potential mineral resources of Antarctica. Various groups proposed several approaches, including governing Antarctica as the “common heritage of mankind”, where any mineral resources would be shared among all countries, or making Antarctica a “World Park”, completely banning natural resource development both onshore and offshore.⁹ In the 1980s, countries negotiated an agreement (Convention on the Regulation of Antarctic Mineral Resource Activities) that attempted to balance ecological sensitivity with mining interests. However, a number of environmental groups, including Greenpeace and the Antarctic and Southern Ocean Protection group, along with several governments, including France and Australia, that had proposed World Park status, opposed this agreement, leading to its defeat. As a result of this defeat, the Environmental Protocol of 1991 was negotiated, which included a ban on mineral resource activities, other than for scientific purposes, for the duration of the Protocol (currently set at fifty years) or until “there is in force a binding legal regime on Antarctic mineral resource activities that includes an agreed means for determining whether, and, if so, under which conditions, any such activities would be acceptable”.¹⁰ Thus, although not definitively addressing the question of mineral resources, the ATS has, for the time being, successfully prevented the exploitation of mineral resources and the potential for environmental damage that goes along with such activities.¹¹ Nonetheless, these issues may again resurface with the recent British plans to extend their Antarctic claim over a large portion of the seabed.¹²

Although it took a number of years for the topic of mineral resources to reach the agenda of the ATCMs, the importance of protecting native species of organisms was on the table from the earliest meeting. Since the ratification of the Agreed Measures, the general principle of Antarctic wildlife preservation has been to prevent the exportation of Antarctic life and the importation of non-native life without express permit, and to prevent interference to native Antarctic life. As far as land-based life is concerned, these measures have generally been effective, as more than twenty-five countries (including all of the G8 countries, China and India) have ratified the Environmental Protocol and most of the other treaties of the ATS, binding a huge portion of the world’s population under their terms.

No major breaches of these agreements have been noted so far.

Those concerned with preserving native Antarctic life are particularly interested in protecting the six species of Antarctic seal. Commercial sealing was a part of early Antarctic history, but as seals were hunted to near extinction, sealing eventually ended. However, in response to the perceived threat of renewed sealing, countries rati-



Scientists plan to study the differences between marine creatures found in the shallow waters and those that live in the Antarctic deep. This deep-sea species of *Paraceradocus* is white in colour, but related species found in shallower waters are bright red
Courtesy: BBS News

fied the CCAS, setting limits (zero for some species) on the size and number of seals that may be caught, establishing seasons, and so forth.¹³ However, no major commercial sealing has restarted in Antarctica and, in 2006, the Antarctic Committee for Environmental Protection even recommended the Antarctic Fur Seal (*Arctocephalus gazella*) and Sub-antarctic Fur Seal (*Arctocephalus tropicalis*) for removal from the list of specially protected species under the Environmental Protocol due to their recovery.¹⁴

The Environmental Protocol highlights the importance of the Antarctic ecosystem as a whole and lays out a procedure for evaluating any new or changed activities anywhere in the Antarctic ecosystem, including the oceans and air. In addition to strengthening the existing precautions in earlier agreements, it calls for an environmental impact assessment to be carried out before any activity is undertaken or modified, and for any party (or group of parties) to the protocol to be able to inspect such an activity. It also calls for waste management and removal in the Antarctic areas. These rules lay a fairly solid framework for future environmental protection of the Antarctic ecosystem for those activities that occur directly within the Antarctic area. Unfortunately, the protocol has been in force for less than ten years, and the additional annex on assessing liability for violations has not been fully approved, so it will take some time before the true success of these measures can accurately be ascertained.¹⁵

ATS Problems

Despite its successes, the ATS has, so far, had problems addressing several issues. The foremost among these is overfishing of certain fishes, especially the Patagonian toothfish (known in the United States as the Chilean sea bass), and the growth of and subsequent environmental impact from Antarctic tourism.

The overfishing of the Patagonian toothfish is not only a significant problem within the ATS framework, but also emphasises the enforcement issue facing many international treaties. The toothfish, along with other marine organisms, is regulated under the CCAMLR treaty, and so is theoretically subject to controls set in place by the treaty's commission. Animals living on or very close to Antarctic land benefit from the natural barriers created by the increasingly harsh conditions as one approaches the Antarctic continent. Regrettably, the toothfish lives in more northern waters. Thus, a vessel can more easily obtain the toothfish. Furthermore, the remoteness of the Southern Ocean makes monitoring and catching illegal fishers much more difficult. These factors, combined with the high price the fish fetches and its low reproductive rate, make for a serious problem. In fact, in the late 1990s, around the Indian Ocean alone, UNEP estimated that *ten times more* toothfish were caught illegally than legally.¹⁶ Different groups have tried various schemes to deal with this problem, including attempts to list the toothfish in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), proposals to deny illegal catchers access to ports, and programmes to educate consumers so they will stop buying the fish. Yet illegal fishing continues.^{17,18} Since the CCAMLR commission does not have the authority to force governments into banning the import of the toothfish, it must rely on voluntary cooperation to address this issue, as with many international agreements. Unfortunately, as long as there is a market for toothfish, it is relatively easy for fishers to simply fish out of a country that is not a party to the CCAMLR. Hopefully, these measures will succeed, or the supply of toothfish may be exhausted rapidly.

Another major issue with the existing ATS is the increase in Antarctic tourism. From 1990/91 to 2003/04, tourists and their associated crew have risen by roughly an order of magnitude: from approximately 4,700 to approximately 44,000, outnumbering the scientific crew in Antarctica.¹⁹ As technology advances, more people will be able to afford the cost of visiting Antarctica, exacerbating the problem. Unfortunately, this leads to a feedback loop: as more people visit Antarctica to see its pristine condition, the less pristine it is for the next person. Although no group is actively calling for an outright ban on Antarctic tourism, numerous groups are calling for regulation of Antarctic tourism via a new Annex to the Environmental Protocol. Unlike the situation with overfishing, though, there may be easier solutions to this issue. Due to the Antarctic Peninsula's proximity to Argentina, 90% of passengers on cruises to Antarctica (who make up 93% of the tourists to Antarctica) pass through the city of Ushuaia, Argentina.²⁰ Thus, rather than attempting to convince all parties to the Protocol, pressure could be concentrated on

the Argentine government to pass laws regulating Antarctic tourism, such as capping the maximum number of Antarctic tourists who pass through the port. This could have the unintended side effect of pushing trips to other ports, though. Due to the logistics of traveling to Antarctica, however, there probably are not that many ports in other countries where such trips could originate, so similar pressure could be brought on the governments of these countries. Alternatively, there could be pressure on the tour operators to make their environmental impact assessments more public. Given that one of the major selling points of Antarctic tours is to see the unique environment, if a major tour operator could be convinced to highlight their environmental protection measures, others might follow. As Antarctic tourism is increasing over time, it would be wise to address the issues it brings up before tourism becomes a serious issue.



Seventy-six species of sponge, including this glass sponge, made up some of the larger fauna discovered in the Antarctic deep. Among them, 37 had never been spotted in the Southern Ocean before
Courtesy: BBS News

Although overfishing and environmental damage from tourism are the two main issues not explicitly dealt with in the Antarctic Treaty System, there are others that concern environmental groups. First, both NASA and the Russian Antarctic programme are interested in the possibility of drilling into Lake Vostok, a large Antarctic lake buried underneath 4km of ice. Some scientists want to drill into the lake to study its life, which has been hypothesised to contain new life forms or processes. Others want to keep it untouched, as there seems to be no way to pen-

erate the ice without exposing any life there to the external world. At the moment, no one has drilled all the way into the lake, but there is still ongoing debate about what, if any, exploration should take place there or at other similar subglacial lakes.^{21,22} Second, a number of people are concerned with “biological prospecting” in Antarctica, which is the patenting of life forms or processes unique to the Antarctic environment. Although this encourages the maintenance of biodiversity in the region, it counters the spirit of free sharing of scientific information that has always been part of the Antarctic Treaty System.²³ Third, as in other areas of the world, there is concern about the effects of bottom trawling fishing vessels, and also about the effect on cetaceans of underwater noise generated by sonar and seismic systems.^{24,25} Lastly, there is great concern about the possible environmental damage due to climate change. Serious damage is possible to the Antarctic ecosystem from rising temperatures and melting ice, let alone the potential damage to the rest of the world from the melting of the Antarctic ice sheet and the accompanying rise in sea levels. Since the production of greenhouse gases takes place all around the world, not just in the Antarctic region, this issue is beyond the scope of the ATS, which is geographically limited to Antarctica and certain regions immediately surrounding it. As such, it must be addressed by other means.



Courtesy: EBA

Conclusion

For nearly fifty years the ATS has been the framework around which the Antarctic ecosystem has been protected. The global community has achieved some of this success by not trying to address all topics at once. By first achieving consensus on some topics before moving on to more controversial ones such as mineral resource exploration, additional agreements have been easier to reach. Nevertheless, challenges continue to exist that must be addressed if the Antarctic ecosystem is to be preserved.

Notes

- 1 13 Sept. 2007 http://www.ats.aq/uploaded/treaty_original.pdf.
- 2 David Hunter, James Salzman and Durwood Zaelke. 2007. *International Environmental Law and Policy*. 3rd edition: 1125–1126. New York: Foundation.
- 3 Victor Lebow. 1955. *The Journal of Retailing* Spring 1955: 7, as seen on 13 Sept. 2007 at http://www.targetearth.org/about/conscientious_consuming.html.
- 4 13 Sept. 2007 at <http://reco.ats.aq/ats.reco/details.aspx?id=9&lang=e>.
- 5 14 Sept. 2007 at http://reco.ats.aq/ats.reco/recatt%5Catt076_e.pdf.
- 6 14 Sept. 2007 at http://reco.ats.aq/ats.reco/recatt%5Catt077_e.pdf.
- 7 14 Sept. 2007 at http://reco.ats.aq/ats.reco/recatt%5Catt006_e.pdf.
- 8 Hunter *et al.*, 2007, 1124.
- 9 Hunter *et al.*, 2007, 1131–1133.
- 10 Protocol on Environmental Protection to the Antarctic Treaty, Article 25.
- 11 Hunter *et al.*, 2007, 1132–1141.
- 12 Owen Bowcott 2007. “Britain to claim more than 1m sq km of Antarctica”. *The Guardian* 17 Oct. 2007, 20 Oct. 2007 at <http://www.guardian.co.uk/news/2007/oct/17/antarctica.sciencenews>.
- 13 13 Sept. 2007 at <http://www.nsf.gov/pubs/1996/nstc96rp/apx1.htm>.
- 14 14 Sept. 2007 at <http://reco.ats.aq/ats.reco/details.aspx?id=360&lang=e>.
- 15 Hunter *et al.*, 2007, 1141–1146.
- 16 Hunter *et al.*, 2007, 1136.
- 17 Hunter *et al.*, 2007, 1135–1137.
- 18 14 Sept. 2007 at http://www.asoc.org/what_sof.TAP.htm.
- 19 14 Sept. 2007 at http://www.asoc.org/what_tourism.htm.
- 20 14 Sept. 2007 at <http://www.asoc.org/pdfs/IP%20119%20ASOC%20Tourism%20Maps.pdf>.
- 21 17 Sept. 2007 at <http://www.asoc.org/Lake%20Vostok/LakeVostok.htm>.
- 22 Hunter *et al.*, 2007, 1147.
- 23 17 Sept. 2007 at http://www.asoc.org/what_other2.htm.
- 24 17 Sept. 2007 at http://www.asoc.org/what_seamounts.htm.
- 25 17 Sept. 2007 at http://www.asoc.org/what_other4.htm.



Tehran Convention

Implementing the Caspian Convention

– Ancillary Protocols –

by Elena Kvitsinskaia*

Introduction

The first Conference of the Parties (COP-1) to the Framework Convention for the Protection of the Marine Environment of the Caspian Sea (Tehran Convention) was held from 23–25 May 2007 in Baku, Azerbaijan. The

agenda of the meeting encompassed a large range of issues, from those which the Tehran Convention requires it to address, such as the adoption of the rules of procedure and financial rules and institutional arrangements for the Convention, to discussions on the status of the preparation of ancillary protocols.

Indeed, the work on protocols in the areas of priority concern started well before the entry of the Tehran Convention into force. Between autumn 2004 and June 2006, negotiations had been organised resulting in the development of three ancillary Protocols to the Convention: the

* Elena Kvitsinskaia is a UNEP Staff Member, in UNEP’s Regional Office for Europe. This paper is presented by the author in her personal capacity and opinions expressed in this paper should be attributed to the author. They are not meant to represent the positions or opinions of the UNEP or of the States Parties to the Framework Convention for the Protection of the Marine Environment of the Caspian.

Protocol on Environmental Impact Assessment in a Trans-boundary Context (EIA), the Protocol on Pollution from Land-Based Sources [and Activities] (LBS), and the Protocol on Biodiversity Conservation. In addition, the Interim Secretariat, jointly with the Caspian Environment Programme/Programme Coordination Unit, has already organised two regional expert meetings on a fourth Protocol concerning Regional Cooperation in Cases of Emergency.¹

Geographical and Historical Background

With an area of some 390 000km²,² the Caspian Sea is the largest land-locked body of water in the world, and is of high global environmental significance. Its isolation, together with its climatic and salinity gradients have created a unique ecological system where some 40% of its species are endemic to the Caspian waters. Among the many environmental challenges that the Caspian Sea is facing are: (i) booming exploitation of oil and gas resources; (ii) growing networks of pipelines and transport routes; (iii) industrial pollution from inflowing rivers and groundwater; (iv) sea-level fluctuations; (v) climate change and coastal desertification; (vi) over-exploitation of its fish stock; and (vii) alien species introduction. All require joint coordinated action of the Caspian States³ and the international community.

In recognition of the seriousness of the growing environmental problems in the Caspian Sea region and their impact on social and economic development, the Caspian States had already approached the international community for assistance in the 1990s. In response the Caspian Environment Programme (CEP) was set up as a comprehensive long-term strategy for the protection and management of the Caspian environment and has been undertaking environmental protection activities for almost ten years. The major partners of the CEP included all Caspian States as well as the UNDP, UNEP, the EU, the World Bank and the GEF.⁴

Legal Background

The pre-existent legal regime of the Caspian is based on agreements between the former Soviet Union and the I. R. of Iran – the Treaty of Friendship of 1921 and the Treaty of Commerce and Navigation of 1940. These instruments did not define marine borders or the legal status of the Caspian. They established the principle of common use of the Caspian Sea by the littoral States and deal only with issues of navigation and fishing rights.⁵

After the break-up of the Soviet Union, the issue of legal status acquired importance for all Caspian States. Having direct geopolitical and economic implications, it raised political disagreement and academic discussions. The Caspian is alternatively referred to as a lake, an enclosed sea, a sea and a unique body of water. Negotiations on the legal status were initiated in 1995 and continue on a regular basis. The Second Caspian Summit held on 16 October 2007 in Tehran, I. R. of Iran, confirmed once again the wish to “improve the legal status of the Caspian Sea” and to expedite the adoption of the Convention on the legal status of the Caspian Sea.

Still, this undefined legal status did not prevent the Caspian States from creating a cooperation mechanism to protect the marine environment of the Caspian Sea. After eight years of complex and politically sensitive negotiations, the Caspian governments, in November 2003, signed the Framework Convention for the Protection of the Marine Environment of the Caspian Sea. Further to the wish of the Caspian States, the Convention includes an article stating that the Convention should be seen without prejudicing the ongoing negotiations on the legal status of the Caspian Sea. However, the conflicting positions on the legal status of the Caspian did influence negotiations on the Tehran Convention and will continue to have a strong impact on negotiations on future ancillary protocols.

Having entered into force on 12 August 2006, the Framework Convention for the Protection of the Marine Environment of the Caspian Sea (herein, the “Tehran Convention”) became the first legally binding agreement ratified by all five Caspian littoral states. The Tehran Convention serves as an umbrella legal instrument laying down the general requirements and the institutional mechanisms



Caspian Sea

Courtesy: NASA

for environmental protection and sustainable management of the Caspian region.

The Convention goes beyond mere protection of the Caspian environment from all sources of pollution. It also aims towards the protection, preservation, restoration, and sustainable and rational use of the biological resources of the Caspian Sea. Further to the general obligations of the Convention the Parties are required to individually or jointly take all appropriate measures to achieve these ob-

jectives and to cooperate with competent international organisations to that end. Some main principles of international environmental law, such as the precautionary principle, the polluter pays principle and the right to access to information are referred to in the Framework Convention as guidelines for proper implementation.

In general, the Convention is rather pollution-reduction oriented and includes provisions for the control of pollution from land-based sources, seabed activities, vessels, dumping, and other human activities. However, it also covers the introduction, control and combating of invasive alien species (Art. 12), the protection, preservation, restoration and rational use of marine living resources (Art. 14), environmental emergencies (Art. 13), coastal zone management (Art. 15), and sea level fluctuation (Art. 16). The Convention requires the Contracting Parties to apply procedures of environmental impact assessment for activities that are likely to cause significant adverse effects on the Caspian marine environment. It also includes general obligations on environmental monitoring, research and development, and exchange of and access to information.

Being a framework legal instrument, the Tehran Convention envisages that concrete obligations of the Parties will have to be formulated and implemented through an-



Nearly 250 dead seals were found washed up on the shores of the Caspian Sea in Kazakhstan
Courtesy: Wikipedia

cillary binding instruments, mainly in the form of protocols (Art. 6). These Protocols should, as a minimum, address: pollution from land-based sources; pollution from seabed activities; pollution from vessels; pollution caused by dumping; protection, preservation and restoration of marine living resources; sea level fluctuations; environmental emergencies and environmental impact assessment.

The negotiations for the development of the protocols started soon after the signature of the Framework Convention witnessing the commitment of the State Parties to convert provisions of the Convention into action. The State Signatories of the Convention at their first meeting (Tehran, I.R. Iran, July 2004) agreed to initiate the development of protocols for priority areas of concern, namely: i) Protocol on Environmental Impact Assessment in a Transboundary Context (EIA); ii) Protocol on Pollution from Land-Based Sources [and Activities] (LBS); and iii)

Protocol on Biodiversity Conservation. In addition, work continues on a fourth protocol, the draft Protocol concerning Regional Cooperation in Cases of Emergency. It is very encouraging that the Final Declaration of the Caspian Presidents, meeting in Tehran on 16 October 2007, reiterated the request for the expedited development and approval of the protocols associated with the Convention.

Three of the four draft protocols under consideration relate to environmental protection activities, in particular, globally recognised priority areas: pollution from land-based sources, conservation of biodiversity and regional cooperation in cases of oil spills. The fourth protocol concerns a procedure – environmental impact assessment. The three thematic protocols follow the same structure: scope of application, general obligations and specific means to meet the objective of the protocol, implementation and compliance provisions, and institutional arrangements, including in one instrument (LBS) a specific financial mechanism. The three protocols that have been completed also address public participation.

All the draft protocols have been prepared taking into account evolving international practices, as well as the experience and achievements of other relevant multilateral environmental agreements. On the other hand, they are tailor-made to reflect the existing problems and unique conditions of the Caspian Sea. To facilitate negotiations on provisions of ancillary protocols and to avoid any political repercussions a special provision, stating that nothing in these protocols shall be interpreted as to prejudice the outcome of the negotiations of the final legal status of the Caspian Sea, is included in the text of each protocol.

Protocol on Environmental Impact Assessment in a Transboundary Context

In order to meet obligations stipulated by the Tehran Convention State Parties agreed on a number of measures such as their duty to cooperate, undertake research, monitoring, exchange information and conduct environmental impact assessments, where appropriate. In this connection, there are a large number of projects, including those related to oil extraction, with potential transboundary impact in the Caspian Sea region. Consequently, the call for the establishment of harmonised procedures for EIA in a transboundary context has been growing. Lacking proper and agreed operational EIA procedures creates problems not only for the protection of ecosystems, but also for project developers, including oil companies, seeking to comply with all legal requirements, including both national and international commitments. The draft Protocol on EIA in a Transboundary Context is an important tool in the implementation of the provisions of the Convention, and will certainly assist in preventing pollution and preserving the marine environment of the Caspian Sea.

In 2002, UNEP, together with the European Bank for Reconstruction and Development and the UN Economic Commission for Europe, initiated the development of the Guidelines “Environmental Impact Assessment in a Transboundary Context in the Caspian Sea Region: Step by Step Procedure”. The Guidelines were agreed upon after two

meetings in which delegates from the five Caspian littoral states, representatives from NGOs and oil companies participated, and also after national consultations. The decision made at the First meeting of the Representatives of the State-Signatories to the Tehran Convention in 2004 allowed for the start of negotiations on a binding protocol. The Tehran Convention in its Article 17 regulates obligations of the Contracting Parties in respect to EIA procedures separately for internal (national) activities and for activities that may have negative impact on the environment in a transboundary context.

The draft EIA Protocol was prepared, taking into account the previously agreed "Guidelines" and consistency with the obligations and procedural framework of the UNECE Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention). It allows Caspian States to include specific details of transboundary EIA relevant to the Caspian Sea region and to take into account any specific requirements of States that are not party to the Espoo Convention.

The Protocol stipulates that Parties to it shall ensure that the proposed activities covered by its Annex 1 are subject to an EIA procedure prior to the decision to authorise or undertake such an activity. The objective of the protocol is to establish a set of detailed, clear and transparent procedures for the implementation of transboundary EIA in the Caspian Sea region in order to prevent, reduce and control pollution of the marine environment of the Caspian Sea, promote conservation of its biodiversity, and rational use of its natural resources, and protect human health.

It envisages a step-by-step EIA procedure from the moment of deciding if a proposed activity is subject to EIA requirements through the process of post-project monitoring. The EIA procedure stipulated by the draft protocol follows and further develops the Espoo convention EIA procedure, making it more precise and explicit. The draft protocol uses the same approach as the previously agreed Guidelines: all important steps of the EIA procedure are fixed, one by one, in the draft text.

The draft EIA Protocol includes detailed provisions regarding public access to relevant EIA information and provides provisions for public consultation. It gives the public the right to submit comments upon proposed activities to the Competent Authorities. Furthermore, it includes under general provisions the obligation of the Concerned Parties to ensure timely and effective public participation in the EIA procedures as well as the obligation of the Competent Authorities to provide the public with assistance and advice to ensure that public participation is undertaken pursuant to this Protocol. In this connection, the draft protocol contains two annexes: Annex 1 provides a list of necessary measures that all Parties should adopt to implement the provisions of the protocol. Annex II describes requirements to the EIA documentation. It is expected that the set of clear and specific procedures established by the protocol will prevent unnecessary delay in the implementation of the EIA process and encourage transparency in terms of administrative procedures and fees.

The draft EIA Protocol gives an important role to its Secretariat in the implementation of protocol provisions. The Secretariat should be properly informed about ongoing EIA procedures and be able to inform other Parties upon their request, promote the exchange of information and cooperation, prepare and transmit reports on matters relating to the implementation of the protocol.

During three rounds of negotiations experts encountered problems in defining the scope of application of the protocol and "coastal areas". Similarly to the draft protocols reviewed hereafter, the "scope of application" of the EIA Protocol relates to the issue of the legal status of the Caspian Sea and marine borders and requires further negotiation and internal consultations by the Caspian States.

Protocol on Pollution from Land-Based Sources [and Activities]

The Tehran Convention addresses four types of pollution: pollution from land, seabed activities, ships, dumping and other human activities. Of these, land-based pollution has been identified as one of the principal environmental problems of the Caspian Sea.⁶ For this reason, the Convention stipulates that marine pollution originating from land-based sources and activities should be addressed by a separate protocol (Art. 7, 8–11). Without such a protocol formal implementation of the Convention in this area can be neither enforced nor controlled as the Convention leaves it to the discretion of the Parties to "take appropriate measures to prevent, reduce and control pollution from land-based sources" (Art. 7.1).

The objective of the draft Protocol on Pollution from Land-Based Sources [and Activities] (the LBS Protocol) is to "prevent, control, reduce and to the maximum extent possible eliminate pollution of the marine environment from land-based sources [and activities] in order to achieve and maintain a sound environmental status of the Caspian Sea" (Art. 1). It is intended to address emissions of polluting substances originating from land-based point and diffuse sources, including those transported through the atmosphere, which may affect the marine environment and coastal areas of the Caspian Sea.

The draft LBS Protocol sets out both the general obligations of States and basic principles, which States should apply, including the precautionary and polluter pays principles. It also clearly states the need for integrated coastal zone management and Environmental Impact Assessment. Its objectives are to be achieved by concrete measures at the regional and national level. These measures include adoption of programmes and plans of action, emission control mechanisms, common guidelines and standards and application of best available techniques (BAT) and best environmental practices (BEP). A second group of measures relates to information and data collection and exchange, scientific and technical cooperation and assistance, and compliance verification and control. It also contains detailed provisions on reporting and compliance procedures.

As is common in other protocols addressing technical and statistical issues, the draft LBS Protocol will rely on

annexes to provide more detail on “procedural, scientific, technical and administrative matters”. Five such annexes are currently under consideration, defining elements to be taken into account and consideration for implementation of the protocol, conditions of its application, elements to be taken into account while considering authorisation of emissions, and criteria for BAT and BEP.⁷

There is one principal issue still outstanding, relating to the question whether the draft LBS Protocol should apply only to land-based *sources* or should cover also *activities* which affect the ecological conditions of the Caspian Sea. So far no regional consensus has been reached on the issue. Consequently, Annex 1 “Activities and Substances of Concern” to the Protocol was discussed only partially and relevant references to the “activities” in other protocols (Biodiversity and EIA) were left in square brackets. Negotiations are also still ongoing concerning the option of enlarging the area of application of the Protocol by including lower reaches of inflowing rivers and the hydrological basins adjacent to the Caspian Sea areas.

Biodiversity Conservation Protocol

Biodiversity conservation and protection have been identified as another priority issue in the Caspian region. Concern over loss of biodiversity is widespread internationally and regionally. Two major flagship species in the Caspian – the Caspian Seal and the Beluga sturgeon – are officially classified as threatened. The major factors having adverse impact on decreased biodiversity of the Caspian are: regulation of the Caspian rivers, illegal fishing and over-fishing, water level changes, pollution, invasive and introduced species, climate change.

Caspian States are parties to or have signed a number of global biodiversity protection-related instruments (Table 1). However, the signatories to the Tehran Convention felt that there was a need for a regional agreement in this particular area as all the above-mentioned factors are of a regional and transboundary nature. The Protocol on Biodiversity Conservation will reinforce relevant provisions of the Convention on Biological Diversity at sub-regional level.

The Tehran Convention itself is not explicit about specific measures for biodiversity conservation. It notes only that the Parties to the Convention have an obligation to “protect, preserve, restore and rationally use the marine living resources” (Art. 2 and 14). Relevant to this, the Convention refers to the conservation of “endemic, rare and endangered marine species” (Art. 14 e) and to measures to prevent the introduction of, and to control and combat invasive alien species (Art. 12).

The Biodiversity Conservation Protocol further develops these provisions, specifically discussing the Parties’ obligation to protect, preserve and restore the marine environment of the Caspian Sea. This objective shapes the structure of the Protocol and the duties of its Parties. It will be achieved by addressing various facets of the problem, including protection of rare species and their habitats, controlling the introduction of alien species, assessment of genetic resources, transfer of technologies that are relevant to biodiversity conservation, and rational use

of biological resources. One key provision calls for the protection of environmentally valuable or representative coastal and marine ecosystems by setting up Specially Protected areas, by protecting Sensitive Areas, and by integrated coastal zone management. Linked to the EIA Protocol, the draft Biodiversity Conservation Protocol also provides for EIA procedures for projects and activities which may have an adverse impact on Caspian Sea biodiversity.

At article 4, the draft Protocol also envisages that Parties shall adopt strategies, action plans and programmes for conservation of biodiversity and sustainable use and management of marine and coastal biological resources, including their habitats. Beyond this, it formulates provisions ensuring environmental education and public awareness relevant to biodiversity protection. Its two annexes comprise, respectively, an internationally recognised list of protected species, to be used for the purposes of the protocol (Annex I); and criteria for inclusion in the list of Special Protected Areas of importance to the Caspian Sea (Annex II).

The draft Protocol sets out the basic elements for co-ordinated action by the Caspian States for the protection, preservation and restoration of the health and integrity of the biological diversity of the Caspian Sea. The issue of sustainable and rational use of biological resources referred to in the Tehran Convention is not directly addressed by this protocol. At the COP-1 the Contracting Parties agreed to request the interim Secretariat to prepare a scoping paper on the relationship between fisheries and the protection of the marine environment of the Caspian Sea with a view to paving the way for the possible development of legally binding arrangements addressing this aspect of the protection of the Caspian Sea marine resources.

After the third round of negotiations of the draft Protocol, several key issues remain outstanding. One was the legal status of the Caspian Sea, regarding which it was agreed to avoid discussion of issues that might prejudice the outcome of negotiations, including those related to Specially Protected Areas and Sensitive Areas. In addition, pending further national consultations relating to them, all articles addressing genetically modified species, access to genetic resources and transfer of technology were placed in square brackets.

Protocol Concerning Regional Preparedness, Response and Cooperation in Combating Oil Pollution Incidents

In 2001 the Caspian Environment Programme countries and the IMO decided to develop a regional mechanism on cooperation in cases of major oil spills in the Caspian Sea. It was agreed that such a regional mechanism should take the form of a plan of cooperation among the Caspian littoral States, based on national oil spill contingency plans for each of the States. Consequently, the Caspian Sea Plan concerning Regional Cooperation in Combating Oil Pollution in Cases of Emergency was developed and agreed upon (in 2003). The parties to the Plan concluded that they needed to agree on a legal basis for it, and identified the Framework Convention for the

Protection of the Marine Environment of the Caspian Sea as a suitable “legal host”. The Tehran Convention is not very specific in its requirements relating to regional co-operation in response to cases of major oil spills from any source, be it land-based, from seabed activities or from shipping. In Article 6, however, it opens the door for the development of protocols prescribing additional measures, procedures and standards for the implementation of the Convention.

Based on this background, the IMO and the CEP agreed to develop a draft Protocol Concerning Regional Preparedness, Response and Cooperation in Combating Oil Pollution Incidents (herein, the draft “Emergency Protocol”). Following the request of the Caspian Governments, the Convention interim Secretariat facilitated further negotiations and engaged all five Caspian States in the final stage of protocol negotiations. The Protocol was finalised in principle at the meeting of government-nominated experts, held in Tehran, from 26–28 September 2005.

The draft Emergency Protocol defines the responsibilities of each Contracting Party in terms of preparedness and response to pollution incidents, and includes provisions for regional coordination and cooperation, through the establishment of a regional centre or other mechanism, as appropriate. Together with the Tehran Convention, it provides the institutional setting for the implementation of the Caspian Sea Plan concerning Regional Cooperation in Combating Oil Pollution in Cases of Emergency. When in force, it will require, *inter alia*, the setting up of a national oil pollution preparedness and response system, including:

- Designation of one or more competent authorities;
- Preparation of a national contingency plan;
- Determination of material resources necessary for dealing with oil spills;
- Rescue measures;
- Procedures for the assessment of the causes and consequences of oil pollution incidents.

Finalisation of the draft Emergency Protocol has encountered two major obstacles. In the absence of defined marine borders, countries are reluctant to assume obligations for national oil pollution preparedness and response in their responsibility zones even on an interim basis. Due to the unclear legal status of the Caspian, some countries might have difficulties in designating national authorities responsible for implementation of the Protocol.

Conclusions

The Framework Convention on the Protection of the Marine Environment of the Caspian Sea commits the Caspian states to protect and safeguard the marine environment of the Caspian Sea. Complemented by ancillary protocols, the Tehran Convention will create a web of rules, regulations, standards, recommended practices and procedures with respect to the sustainable and rational use, protection, preservation and restoration of the Caspian. The Protocols will provide substantive guidance and

an institutional setting for turning the related provisions in the Convention into operational reality. They will form a cornerstone for regional environmental policy and lay down the basis for national actions for protecting and securing the health of the marine environment of the Caspian Sea.

International practice shows that complex protocols, which have technical obligations and involve several governmental departments, are difficult to negotiate and ratify. This makes it very important to note that the development of these Protocols has been very rapid. Negotiations have reached the stage, however, where more sup-



Cyclic Fluctuations in the Level of the Caspian Sea

Courtesy: UNEP

port and the alliance of all major stakeholders is needed to finalise the protocols and make them ready for signature.

The negotiation process for each of the protocols has been determined by a number of common factors and circumstances, of which two appear particularly important.

First, pending a decision on the legal status of the Caspian Sea, negotiators have had difficulties in defining the scope of application of all the protocols, including especially the definition of Special Protected Areas under the draft Biodiversity Conservation Protocol, and the setting of responsibility zones for the purposes of the draft Emergency Protocol. Second, Caspian States seek to ensure that all four protocols are fully compatible with their existing national legislation. Each Caspian State has a different combination of major multilateral environment agreements that it has signed, ratified or acceded to. Finally, simultaneous preparation of the four protocols requires a harmonised approach to common issues such as exchange of information, data management and public participation.

Another important decision that is still pending relates to the institutional arrangements and financial mecha-

Convention... allowing for the Protocols to be adopted and signed at the second Meeting of the Conference of the Parties". The Statement also confirmed the readiness of the Caspian State Governments to "expedite finalization of the national approval processes of the Protocol Concerning Regional Preparedness, Response and Cooperation in Combating Oil Pollution Incidents with a view to its adoption and signature before or at the second Meeting of the Conference of the Parties".

The Conference of the Parties is scheduled to hold its second meeting in the first half of 2008. The Parties have high expectations for COP-2, as expressed by the Second Caspian Summit, which has requested it to expedite development and approval of ancillary protocols to the Convention and finalise procedural issues of the Convention, in particular the issue of the location of its permanent Secretariat.

Table 1. Adherence of the Caspian States to Biodiversity-related MEAs

| | CBD | CITES | CMS | WHC | Ramsar |
|--------------------------|------------|--------------|------------------------|------------|---------------|
| Republic of Azerbaijan | apv | acs | no | rtf | rtf |
| Islamic Republic of Iran | rtf | rtf | no | acs | rtf |
| Republic of Kazakhstan | rtf | acs | signed some agreements | acs | rtf |
| Russian Federation | rtf | cont | no | rtf | rtf |
| Turkmenistan | acs | no | no | succ | no |

apv = approval
acs = accession
rtf = ratification

cont; succ = State agreement to assume duties on the basis of pre-existing ratification (executed by the USSR) applying to their territory

nisms for each protocol. This decision will be influenced by the final institutional arrangements for the Tehran Convention itself. Once the institutional structure for the Convention has been put in place, it will guide the negotiators to reach an agreement on the most suitable institutional framework for each protocol allowing it to fit under the overall institutional structure of the Convention. Such an overall institutional structure will need to be sufficiently flexible to accommodate the future needs of the protocols and other ancillary legal documents.

Despite these unsettled issues, protocol negotiations have advanced considerably, reflecting the commitment of the Caspian States to collaborate and jointly secure a healthy and productive Caspian Sea. The Statement of Ministers adopted by the COP-1 reaffirmed the "intention of the Contracting Parties to continue regional negotiations on the three priority area Protocols to the Tehran

Notes

- 1 At the latest meeting of government-nominated experts in Tehran, Islamic Republic of Iran, September 2005, this draft protocol was renamed the "Protocol concerning regional preparedness, response and cooperation in combating oil pollution incidents".
- 2 И. С. Зонн, 2004, Каспийская Энциклопедия. Москва, «Международные отношения», at 218.
- 3 Republic of Azerbaijan, Islamic Republic of Iran, Republic of Kazakhstan, Russian Federation and Turkmenistan.
- 4 Caspian Environment Programme. 2005, *An Introduction to the Caspian Sea and the Caspian Environment Programme*. CEP, Tehran.
- 5 А.А.Салимгерей, 2003, *Правовой статус Каспийского моря (проблемы теории и практики)*. Алматы. Vinogradov, Sergei and Patricia Wouters, 1995, "The Caspian Sea: Current legal problems". In: *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* 55: 604–623; Afshar Houman, 2005, "The Caspian dispute: is a doctrinal analysis too late or can we turn back the hands of time?" In: *Ocean and Coastal Management* 48: 972–995.
- 6 Strategic Action Programme for the Caspian Sea (Caspian SAP), 2003; the Transboundary Diagnostic Analysis (TDA), 2002.
- 7 UNEP GPA, 2006, Implementation of the GPA at regional level. The role of regional seas conventions and their protocols.



Eritrean-Ethiopian War

Impacts of Landmines on the Environment and Biodiversity

by Edem A. Eniang, Amleset Haile and Teshale Yihdego*

Introduction

Africa is reputed to be the most heavily mined continent in the world, with more than 40 million weapons still unaccounted for, and Angola, Afghanistan and Iraq are reputedly the most heavily mined countries. This article examines a landmine situation that is, internationally, less well known.

The Eritrean-Ethiopian War ended more than 16 years ago, when the Eritrean Peoples' Liberation Front (EPLF, which later became the Peoples' Front for Democracy and Justice) captured the capital city of Asmara on May 24, 1991. It has, however, left significant impacts on the wildlife resources of the Tigray region that continue to this day.

The war lasted for approximately 30 years. One primary strategy was to disrupt agricultural production in Eritrea and this resulted in serious habitat changes. In this effort, approximately 1–2 million landmines were scattered over much of Eritrea. Reciprocally, the arid plains and weather-carved canyons of Ethiopia's northern highlands are littered with landmines from the bitter border conflict.

Results of the mining are still felt today, and greatly affect the environmental conservation prospects and everyday life in the region in many areas. Farming or herding in most of the countryside has become very dangerous, for example. According to a 2004 Landmine Impact Survey, 82% of communities affected by landmines in Ethiopia live in border regions – with Somalia in the east and in the north with Eritrea.

In appreciation of the enormity of the problems of landmines in the Somali and Tigray regions, the European Union pledged eight million euros (US\$9.8 million) to help with clearing landmines in Ethiopia, where nearly two million lives are threatened by the deadly devices. "By financially supporting the efforts of UNDP and the Ethiopian Mine Action Office..., the EU wants to contribute to the eradication of land mines and explosive remnants of war in Ethiopia".¹

The Kafta Humera Wildlife Reserve, North Western Tigray, Ethiopia, offers a critical case in point, demonstrating the conservation impacts of landmines. This article is intended to highlight the current status of the reserve and help draw the attention of the regional and federal governments, the international community as well as all other interested organisations, to its conservation needs.

General Conservation Trends in Ethiopia

According to Anderson and Grove (1987), Ethiopia is a late starter in the field of conservation of natural areas to protect remaining populations of wild fauna and flora. However, it has made appreciable progress in gazetting two important national parks, Awash and Simen Mountains National Parks in 1969 and 1970 respectively (Hillman, 1993). It further strengthened these efforts by identifying and conserving core representative natural areas in several localities. Among the areas proposed for national parks were the Abijatta-Shalla, Bale Mountains, Omo, and Nechisar National Parks. On the other hand, Ethiopia has not formed a national protected area strategy based on equity and representation of different ecological zones within the country. Consequently, it has been suggested that the country may have left out other biodiversity entities, that are important on a national scale (Allen-Rowlandson, 1991).

Conservation Status of the Tigray Region after the Ethiopian-Eritrean War

The Tigray region was the area of Ethiopia that received most of the direct impacts of the war in terms of mine weaponry deployment. The western zone of Tigray is one of the few areas in the region where relatively undisturbed natural vegetation cover and few migratory wild populations of large mammals have been reported (Assefa, 1998; Abunie and Sime, 1996; Dellelegn Gebretensay, 1997; Yihdego *et al.*, 2001). Initiated by Ras Mengesha Seyoum in the early 1960s (Naty, 1982) and officially recognised by the Ethiopian Wildlife Conservation Organization in the late 1960s, the Kafta-Sheraro Wildlife Reserve is the only such area of its kind in the region and has great potential in terms of its biodiversity, conservation, economic, aesthetic and scientific values. The proximity of the reserve area to the Simen Mountains and the historical interior of Tigray add to its tourism potential. Among the resident wildlife species reported are elephants, Slender-tailed Mongoose, monitor lizards, warthogs, Grey Duiker, Honey Badger, Greater Kudu, *etc.* (Abunie and Sime, 1996; Dellelegn, 1997).

Kafta Humera Forest Reserve

One such site that was denied the deserved recognition and protection was the vast area in northwestern Tigray that includes today's Kafta-Sheraro Wildlife Reserve. Tigray is one of the ten regions in Ethiopia without any form of protected area for wildlife, even though the lowlands of Tigray, which include Sheraro and Asgeday and all the ground adjacent to the Tekeze River up to the border with Eritrea, are historically rich in wildlife.

* Dr Edem A. Eniang is at the Dept. of Forestry and Wildlife, University of Uyo, Nigeria. In addition, Dr Eniang, Amleset Haile and Teshale Yihdego are all with the Dept. of Animal, Rangeland and Wildlife Sciences, at Mekelle University, located in the Tigray Region, Ethiopia.

Naty (1982) reported that the first settlers of these lowlands, especially in the areas of Sheraro (Lemlem), are the Kunama, a Nilo-Saharan ethnic group, whose domain has extended to the present-day Eritrea since the era of Axum. Oral evidence suggests that, three decades ago, there was much wildlife and diverse plant life in the area. The Kunama have lived as sedentary agriculturists and pastoralists in a natural balance with the ecology of the area until external intrusion by other groups of people, mainly from the highlands of Tigray (Naty, 1982). Oral and "legendary" evidence indicate that these areas were rich with diverse flora and fauna including large animals such as lions, elephants, giraffes, ostriches, Greater Kudus, leopards and various gazelles.

Prior to the Ethiopian-Eritrean war, the external forces that were blamed for upsetting the traditional way of life of the agro-pastoralist Kunama society were the Funj, Italian colonisation and Christian missions (Naty, 1982). Early invasions from the highlands of Gondar, Gojam and Tigray are also said to have decimated the population of the Kunama and other people bordering the Sudan (Pankhurst, 1976). Although big game hunting (elephants, lions, *etc.*) was practised by the nearby highlanders of Ethiopia and Eritrea for the sake of local customs relating to respect and honour, the area's wildlife was first seriously threatened when highlanders from Adwa, Axum and other places immigrated in the early 1970s, in search of arable land. The agro-pastoralist Kunama could not compete with the agricultural society of the highlanders, which needed land devoid of bush and trees. Wildlife soon lost ground to a changing agricultural society but was mainly hunted out as well. Even though motiveless killing of wildlife was restricted by the TPLF as early as 1978, covert killing of wild animals still continued.

The modern conservation history of the area dates back to the late 1960s, to a time when the then Governor General of Tigray, Leuil Ras Mengesha Seyoum, showed a strong interest in developing the area as a game reserve (Nicol, 1969). This interest, which arose from concern that too many people were going into prime wilderness areas and converting the land into farms, was expressed to the Ethiopian Wildlife Conservation Organisation (Yilma and Kahsay, 1997).

Efforts to Conserve the Biodiversity of the Reserve

Although the Tigray Development Organization (TDO) had intended to develop the area for wildlife preservation during the late 1960s, the site was not assessed for about thirty years due to the Ethiopian-Eritrean war (political instability) and neglect. Presently, human pressures coupled with abandoned mines have impacted directly on the resident as well as migratory large mammalian populations of the reserve. Field evidence shows that the bulk of elephant mortality in the reserve is largely attributable to landmines. Carcasses of elephants have been discovered in the reserve in recent years with their tusks intact, and local residents have reported sighting other individuals with damaged or deformed limbs. In 2006, local hunters reported sighting three dead baboons

(carcasses) in the north western flanks of the reserve in a depression that appeared to have been made by an explosion.



Dead sub-adult African Elephant *Loxodonta africana* found in the reserve with intact tusks. (Photo by Yihdego)

The Ethiopian Wildlife Conservation Organization carried out the first ground survey in 1993. This was followed by the 1996 Elephant Aerial Survey (Leykun and Kefyalew, 1996), a joint study conducted by Ethiopian and Eritrean governments on elephant population status.



An adult African Elephant has its trunk, tusks and face blown off in the reserve. (Photo by Yihdego)

A number of larger ungulates have been found dead in unexplainable circumstances in the reserve and landmines are suspected since carcasses of smaller mammals have not been found in the area.



Carcass of Greater Kudu found dead in the reserve (Photo by Yihdego)

Need for Strategic Conservation Action

Clearly, conservation area systems are needed, along with further research which has in the past been inhibited by the political instability in the region. A high percentage of the land area in Tigray is either inhabited or else degraded, but there are still vast expanses of arable land in the region, which have survived to the present time amid conflicts and war in the region, and which can support wildlife.

A valuable conservation activity employing casual game scouts commenced in 1996, but was discontinued due to the risk of mines, lack of conservation funds and general lack of sufficient attention from the various tiers of government. Currently, the wildlife reserve is more threatened than ever, owing *inter alia* to hunting by the military, landmines, the ongoing resettlement programme and the influx of huge livestock and human populations attracted by the economic boom in the area. Military observers attached to the United Nations Mission in Ethiopia and Eritrea have intensified mine clearing in recent years, particularly in the border region. This exercise should be encouraged and intensified in the reserve areas of north western Tigray.

The Role of International Environmental Law

The rapid development of international environmental law through the United Nations system, particularly as related to sustainable development provides a new and innovative response by the international community to the most pressing global environmental challenges.² New concepts, principles and ideas have resulted in facilitative and enabling mechanisms and procedures in areas such as implementation and compliance. International environmental law is playing an increasingly important role in promoting the integration of environment and development and providing an effective legal and regulatory framework for underpinning the efforts of the international community to achieve sustainable development.

The total number of legal agreements in these areas is rising while the average time taken to negotiate each treaty is decreasing.³ Environmental concerns and principles – precaution, inter- and intra-generational equity, scientific uncertainty, life-cycle economy, common but differentiated responsibility, and sustainable development – have also arisen in recent years and now need to be factored into the negotiation process. Clearly the definition, negotiation and creation of the various legally binding conventions and protocols on the environment represent an outstanding achievement of the international community.

With binding international conventions in areas as diverse as climate change, biological diversity and biosafety, desertification, prior informed consent for trade in hazardous chemicals and pesticides and now persistent organic pollutants, it may be time to address more detailed issues, such as environmental impacts of war and mines. The current body of instruments represents an impressive record of achievements of the international community, but seems to necessitate continuing processes to ensure policy coherence and adequate substantive coverage

among the various instruments that exist in this area, at both the inter-agency and intergovernmental levels.

The Role of International treaties in Conserving the Ethiopian Environment

Both in terms of the total number and scale of problems addressed, multinational agreements dealing with the environment and sustainable development are expanding. Operating at scales from sub-regional through hemispheric to global, these negotiations are becoming mammoth in proportion – the total number of sovereign States that have to participate in the negotiation of such legal arrangements has gradually burgeoned.

The Ethiopian parliament has been active across a broad range of these instruments. In particular, it ratified the Mine Ban Treaty nearly a decade ago, so it has a moral responsibility to expedite mine clearing to justify the Mine Ban Treaty and rid the Tigray region of these devastating weapons. The current international governance structures for implementing this commitment, however, do not meet the needs of the environmental agenda (Tekle, 1994). Taken together with the other instruments, there is a proliferation of complex meetings that impose onerous demands on negotiators, particularly from developing countries. Moreover, the multiplicity of instruments leads to the fragmentation of the agenda that prevents any particular environmental issue (such as landmines in protected areas) from being dealt with in a comprehensive manner and does not allow the emergence of an approach that could underpin and support the implementation and monitoring of legally binding commitments under international law.

Conclusion

The Tigray region of Ethiopia is a vast sensitive and fragile dryland area with great potential for biodiversity conservation, ecotourism and agricultural development. Despite the risk of landmines especially in the war-affected areas, all efforts must be made to de-mine the reserve in accordance with the Ottawa Convention, which bans the use, production, stockpiling and transfer of anti-personnel mines and calls for mined areas to be cleared within ten years. This will ensure the conservation of the Kafta Humera wildlife reserve for obvious environmental and conservation as well as social benefits.

Recommendations

- Transboundary management should be considered in the future to protect migratory animals across their range, especially elephants.
- Laws, regulations and directives should be revised to address the problems of landmines. Moreover, comprehensive forest and land-use policies should be developed while existing conservation-related policies and legislation should be harmonised.
- As the management of wildlife protected areas is a highly intricate process, involving a wide range of activities, it is impossible for the management authority to carry out all conservation-related functions by itself.

There should be delegation of some duties, and broad participation and cooperation from a spectrum of institutions. At least the police, and perhaps the military authorities as well, must join with the local government in order to enforce these laws adequately.

References

- Allen-Rowlandson, T. 1991. "A systematic approach to wildlife conservation in Ethiopia". *Parks* 2(2): 42–48.
- Anderson, D. and Grove, R. 1987. "The Scramble for Eden: Past Present and Future". In: Anderson, D. and Grove, R. (Eds), *Conservation in Africa: People, Policies and Practice*. pp 1–12. Cambridge University Press, Cambridge, UK.
- BoANRD. 1996. Sociological Survey on the Wildlife potential of western zone, Kafta Humera and Tahtay Adiabo Woreda. Bureau of Agriculture and Natural Resource Development. Unpublished report.
- Commonwealth Secretariat. 2005. "Law Development Issues of the Commonwealth". Cheryl Thompson-Barrow and Margaret Bruce, (Eds), *Proceedings of an International Workshop, July 2005* Vol.2, No.3.
- Leykun Abunie and Kefyalew Sime. 1996. Report on Survey of Elephants in Northern Ethiopia (Shire) and south western Eritrea (Gash Setit). 16pp. (Unpublished).
- Naty, A. 1982. "The impact of Euro-Christian Missions on Kunama Traditional Culture". A paper submitted to the Department of Applied Sociology in partial

fulfilment of a BA degree in Sociology, Addis Ababa University, Addis Ababa, Ethiopia.

- Nicol, C.W. 1969. A letter written to John Blower (then advisor to the Ethiopian Wildlife Conservation Organization) about the potential of Shire Lowlands for Wildlife Conservation.
- Pankhurst, R. 1996. "A chapter in the history of Ethiopian Elephants: The Ptolemaic century (305–284 BC), and its Aksumite Aftermath (TO 525 AD)". *Walia* 17:11–16.
- Tekle, Amare. (Ed.) 1994. *Eritrea and Ethiopia: From Conflict to Cooperation*, The Red Sea Press, New Jersey, USA.
- Teshale Yihdego, Kumara Wakjira, Mekebe Eshetu, Michael Abraha and Aregawi Berehe. 2001a. Wildlife Assessment of Kafta-Sheraro Reserve Area. A Field Report Submitted to the Ethiopian Wildlife Conservation Organization and Tigray Regional National Bureau of Agriculture And Natural Resources Development. (Unpublished).
- Yilma Dellegn and Kahsay G/Tensay. 1997. A Preliminary Assessment of Wildlife Areas in Tigray Region. A field survey in western zone. Ethiopian Wildlife Conservation Organization. (Unpublished).
- Young, J. 1996. "The Tigray and Eritrean Fronts". *The Journal of Modern African Studies* 34 (1): 112–18.

Notes

- 1 Young, 1996.
- 2 Commonwealth Secretariat, 2005.
- 3 *Ibid.*



Europe

Local Governments and Sustainable Development

by Monika Zimmermann*

The Fifth European Conference on Sustainable Cities and Towns (21–24 March 2007, Sevilla, Spain) demonstrated again the strong commitment of local governments to sustainable development and the wide range of actions being undertaken in pursuit of this goal. More than 1500 participants gathered in Seville for three days to exchange examples of good practice, and strategies and tools for implementing the "Aalborg Commitments". The Sevilla Conference was the largest conference in the series, and adding to its uniqueness, it marks the first time that the European Commission did not co-fund the event. Rather the host city, Spanish partners, sponsors and participants managed to set-up and fund this huge gathering. ICLEI acted as co-organiser and was responsible for the programme and participants, with strong support from a Preparatory Committee of the European Sustainable Cities and Towns Campaign.

The conference was an important step in the European milestone process for committed local governments, the "Aalborg Process", which began in 1994 (only two years after the Rio Earth Summit). European cities took up the "Local Agenda 21"¹ mandate, by convening at the First European Sustainable Cities and Towns Conference in

Aalborg, Denmark. The meeting produced the Aalborg Charter outlining "urban sustainability" and calling for local action. It has become the leading document on this issue, signed by more than 2500 local governments from 40 European countries.² Following this meeting, three more were held – in 1996 (Lisbon), 2000 (Hannover) and 2004 (Aalborg) – to advance their sustainability policy.

In particular, in 2004 (ten years after the first conference), the Fourth European Sustainable Cities and Towns Conference returned to Aalborg to adopt the "Aalborg Commitments" – ten commitments that reinforce the original goals and offer a European-wide framework for local target setting and implementation.

The most recent gathering – the Sevilla Conference – can be seen as a "snapshot" illustrating the current dynamics of local government activities. Among the highlighted characteristics and progress, participants were able to note advances in leadership. Local leaders and decision makers increasingly show commitment and make effective use of their roles in moving communities towards sustainability. Urban sustainability and environmental protection have become important political themes independent of party politics. Courageous decisions and expanding visions of local leaders in Europe advance progress towards urban sustainability. Examples abound, such as Ken Livingstone, Mayor of London, who has linked his political career to the initiation of the Central

• I • C • L • E • I
Local
Governments
for Sustainability

* Monika Zimmermann is the Director of the International Training Centre of ICLEI-Local Governments for Sustainability, an international association of more than 630 cities, towns, counties and their associations worldwide that have made a commitment to sustainable development.

London Congestion Charge Zone; and Bärbel Dieckmann, Lord Mayor of Bonn, Germany, who is acting as chairperson for the World Mayors Council on Climate Change (WMCCC).

Another key area of progress, awareness, was also demonstrated at the conference. In thousands of cities and towns across Europe, sustainability issues are increasingly moving up local agendas and lists of priorities. What was some years ago recognised primarily among Northern and Western Europeans, is now a high profile issue for the whole continent. For example, the City of Oslo has calculated its impact on the globe through an “Ecological Footprint” analysis of the resources required to maintain current lifestyles. This step has been an excellent starting point for a public debate which in turn raises awareness. Throughout the Conference, cities and towns presented a

this regard, “Local Agenda” approaches incorporating diverse stakeholders have become the precondition for successfully defining and implementing local policies. While “developing a vision” was the main goal of the first generation of the agenda process, joint implementation is now become the major purpose to encourage early cooperation of stakeholders. One example of this is found in the so-called “Projekt21”, where nine German towns have developed thematic action plans in close cooperation with stakeholders whose contribution is crucial to their implementation. A cyclical monitoring and target-setting mechanism ensures that other thematic action plans will follow over the next few years (www.iclei-europe.org/projekt21).

Integrated approaches, that incorporate economic, social and ecological development, have similarly been recognised as crucial to urban planning and development. In



Courtesy: ICLEI

wide variety of local actions and approaches taken. Two-thirds of these participants came from Spain, Italy, France, Portugal and Greece – countries that were hardly represented at similar events ten years ago.

Progress has also been obvious in the area of implementation – the ability and willingness of cities and towns to move from awareness to action. A great many local governments have successfully developed and implemented policies for urban sustainability. For example, the city of Växjö, Sweden, has set the target of becoming “fossil fuel free” by 2050. On the way to achieving this ambitious goal, a whole range of activities and projects are being implemented, as well as focussing on an increased use of renewable energy.

Public and citizen involvement has long been recognised as the key to success in sustainable development. In

this respect, Local Environmental Action Plans (LEAPs) have grown to be a relevant means of planning for municipalities in Eastern Europe. Cooperation across departments and areas of responsibilities – an important concept for administrations to consider in promoting the uptake of sustainability principles have been demonstrated in communities such as the City of Ludwigsburg, Germany, which is currently undergoing a complete revision of its organisation and administration reflecting the results of a participatory approach to set objectives for their city development concept.

Developing and applying sustainability management instruments is becoming relevant for an increasing number of cities and towns. Though only a few instruments work with standardised environmental management systems such as Europe’s EMAS,³ there is an increasing realisa-

tion that anchoring management principles with central decision-making processes is the most efficient way to ensure the best allocation of financial, political and natural resources. Within the project "Managing Urban Europe", for example, 25 cities have developed and implemented an integrated management system for local sustainability based on previous experiences with environmental management strategies utilising the ecoBudget process. The cities of Lewes (UK) and Växjö (Sweden) have explicitly advanced their existing environmental management by factoring in sustainability dimensions.

Following the process proposed in the Aalborg Commitments, cities and towns base their planning and policy making on management cycles which include the following steps: Baseline Review, Target Setting, Political Commitment, Implementation and Monitoring, as well as Evaluation and Reporting. Among these are Stockholm (Sweden), Leeds (UK), Aalborg (Denmark), Turku (Finland) and Kaunas (Lithuania) all of which have successfully implemented sustainability-oriented management cycles of the Aalborg Commitments.

The European Sustainable Cities & Towns Campaign,

founded in 1994, is a cooperation platform for various local government associations in Europe working in the field of environmental protection and urban sustainability.

The Campaign aims to support local governments across Europe in their efforts to mainstream sustainability best practice and to implement the Aalborg Charter and Aalborg Commitments. Recently, the Regional Environmental Center (REC) joined the Campaign as its newest partner.

More information: www.sustainable-cities.eu

Another critical need, the need to define tangible targets for policy and action, is also becoming more widespread in Europe, although it is still not part of each sustainability strategy. In Italy, however, the Provincial government of Siena, together with the municipalities in the province, have jointly developed a system of targets to guide their implementation of sustainability principles.

In addition, cities and towns increasingly understand the relevance of their own municipal actions, as examples to others. Thus, Miskolc, Hungary, is among those cities where sustainable procurement strategies are applied to the many goods and services purchased by the local government.

Ideas, support systems, directives and funding from the European (regional) level have instigated activities on the local level and continue to provide an important catalyst for action. For example, the European mobility week initiative, which promotes car-free days and non-motorised traffic in many cities, has been a useful guiding force, especially in Italy. The current debate on this particular directive has spurred plans to reduce inner-city traffic in cities across Europe.

Global issues and initiatives, too, have been an inspiration for local action, addressing a wider spectrum of issues than had previously been the case. The City of Stockholm's goal of zero CO₂ emissions provides one example. This goal has to be integrated into urban planning, mobility concepts, building standards, etc. Similarly, it has been found that recognised participation in international efforts

is a very positive element. For example, when activities formerly called "nature protection" began to be referred to as "biodiversity conservation", they were perceived to have more global appeal. This is one factor that led the City of Tilburg, Netherlands, to sign the "Countdown 2010" – a commitment to protect biodiversity.

Exchange and cooperation among local governments is also increasing. Many are joining European-wide projects for pioneering and advancing innovative policies. For example, 25 cities, towns and regions have joined the R&D project "Managing Urban Europe 25" to develop and pilot an integrated management system that is providing best practice examples for implementing the Aalborg Commitments.⁴ Recognising that the gap between scientific knowledge and practical implementation still exists, local governments are increasingly cooperating in research projects to make use of results for their practical application. The European Commissions' Framework Programme for Research 5, 6 and 7 has supported a multitude of joint projects between researchers and local governments. One of the many results is the Internet portal "local sustainability".⁵

Despite the variety and extensiveness of these local approaches throughout Europe, they are not entirely effective. There is a need for support mechanisms which, when present, have been found to substantially increase the efficiency of local action, helping local authorities to fulfil their responsibilities towards targeted environmental protection and sustainable development. A number of examples exist, such as the Italian Local Agenda 21 Association; Service-Agency Communities in One World, Germany; local government associations such as ICLEI, CEMR, Climate Alliance, Union of Baltic Cities; and support agencies such as the Regional Environmental Centre in Budapest.

The conference website⁶ offers a rich source of information on local government actions. All presentations and further material can be downloaded.

As co-organiser of these five European Sustainable Cities and Towns Conferences, ICLEI analyses the role of local governments as well as the framework conditions they need to unfold their potential. These framework conditions are set by the particular social and economic situations, but even more through legal and financial conditions defined by national governments, and to a growing extent, by the European Union. Both the national and international levels can only achieve their targets, *e.g.* CO₂ reduction targets, if the local implementation takes up their impulses, targets and incentives. Facilitating the development of suitable framework conditions for local governments is one of the most efficient instruments to achieve sustainable (urban) development.

Notes

1 Local Agenda 21: Cities and towns are mandated to initiate local consultation processes aiming at vision finding and outlining development strategies for their areas.

2 The Aalborg Charter can be found online at www.aalborgplus10.dk.

3 Eco-Management and Audit Scheme, see http://ec.europa.eu/environment/emas/index_en.htm.

4 For more information see www.mue25.net.

5 See www.localustainability.eu.

6 See www.sevilla2007.org.

