

**NATIONAL CAPACITY SELF-ASSESSMENT
FOR GLOBAL ENVIRONMENTAL
MANAGEMENT FOR ANTIGUA AND
BARBUDA: REVIEW OF SYNERGIES AMONG
THE CLIMATE CHANGE, BIODIVERSITY &
DESERTIFICATION CONVENTIONS**

NATIONAL CAPACITY SELF-ASSESSMENT FOR GLOBAL ENVIRONMENTAL MANAGEMENT FOR ANTIGUA AND BARBUDA: REVIEW OF SYNERGIES AMONG THE CLIMATE CHANGE, BIODIVERSITY & DESERTIFICATION CONVENTIONS

SECTION 1: INTRODUCTION

The 1992 United Nations Conference on Environment and Development¹ (UNCED) constitutes a significant milestone in the evolution of international environmental law, with the agreement and signing of various landmark environmental treaties including Agenda 21, the United Nations Framework Convention on Climate Change (UNFCCC), and the Convention on Biological Diversity (CBD). The UNCED also agreed on a number of other environmental initiatives including the convening of an intergovernmental negotiating committee for a convention to combat desertification. This culminated in 1994 in the adoption of the United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification Particularly in Africa (UNCCD).

The biodiversity and climate change agreements, as well as the UNCCD, (referred to from here as the Rio conventions/agreements) aim at tackling some of the principal environmental problems confronting the global community, including the protection of the Earth's biological diversity, changes in global climate as a result of the emission of greenhouse gases into the atmosphere, and the spread of arid conditions in many areas of the world. These instruments provide legal frameworks for international environmental cooperation, commit countries to certain measures for advancing the goals and objectives of the agreements, and require the undertaking of reporting and other obligations by Parties to the agreements. In general the agreements can be seen as framework agreements, with more detailed arrangements for advancing the aims and objectives of these treaties

¹ Often also called the Earth Summit.

embodied in the 1997 Kyoto Protocol in the case of the UNFCCC, and in the Cartagena Protocol on Biosafety in the case of the CBD.

Antigua and Barbuda has signed and brought into law² the UNFCCC, CBD and CCD. Along with responsibilities relating to other international environmental agreements such as the Basel Convention, the Montreal Protocol on Ozone Depleting Substances, and the Convention on Trade in Endangered Species (CITES), the UNFCCC, CBD, and UNCCD represent a considerable attempt to promote international cooperation in environmental stewardship. However, the conventions also establish obligations and responsibilities that in many instances present challenges for implementation for small-island developing States like Antigua and Barbuda with limited technical, scientific and financial resources.

While the three conventions represent international action on three specific environmental concerns, there are considerable similarities, linkages and complementarities among the agreements at the legal and scientific levels. For Antigua and Barbuda it is important that, as far as possible, efforts are advanced to enhance such scientific and other synergies, and to integrate the various efforts so as to maximize the use of limited technical and financial resources to achieve the desired developmental and environmental goals.

As part of the effort to advance synergies in the implementation of the three conventions, the purpose of this assignment, *inter alia*, is to undertake

- An assessment of the existing institutional mechanisms for managing the UNFCCC, CBD, and UNCCD and their related environmental instruments at the national level within Antigua and Barbuda;
- An assessment of the extent of awareness of cross-cutting issues (synergies) for the three conventions and how much attention/consideration is given to them based on current national legislation, institutional arrangements, reporting, programmes and projects; and
- Based on the above, to prepare an Inventory on the constraints and limitations to integration and synergy among the conventions,

² The UNFCCC was ratified in February 1993, the CBD in March 1993, and the UNCCD in June 1997. The Kyoto Protocol was ratified by Antigua and Barbuda in October 1998.

including a proposal on opportunities to enhance integration including modifications/consolidations to existing planning and decision-making structures and processes, and provide a final assessment of priority capacity needs for synergies based on broader consultation. The assessment is expected to cover capacity building at the individual, institutional and systemic levels.

The next section of the report provides an overview of some of the scientific, technical and other linkages and synergies that exist between the instruments.

SECTION 2. LINKAGES BETWEEN THE UNFCCC, CBD, & CCD CONVENTIONS & RELATED INSTRUMENTS

2.1 INTRODUCTION

The extent of interconnection between biodiversity, land degradation and climate change makes it impossible to isolate them in terms of their scientific inter-linkages and causes. Climate change is expected to be among the major threats to biodiversity at species and ecosystem levels as well as contributing to land degradation and desertification. Globally, the loss of floral biodiversity is a major contributing factor to desertification and changing climate. Changes in climate will exceed the adaptive capacity of flora and fauna to respond to alterations in the natural environment. In most instances, pollution and other anthropogenic impacts particularly deforestation, have already seriously affected the ability of ecosystems, and the species within them, to respond to forecast changes in global climate.

The global conversion and degradation of grassland and forest ecosystems, which are significant driving forces underlying species extinction and loss of critical ecosystems, are also a major source of the greenhouse gases that cause climate change, as well as being primary contributors to processes of land degradation and desertification. Climate change is also likely to have a serious effect on desertification processes. In areas where the environment becomes drier and the soil further degraded through erosion and compaction, desertification processes will intensify. The global hydrological cycle is likely to intensify as a result of climate change and could have major impacts on biodiversity, especially in areas where water quality and supply are already challenged by aridity.

Despite the interconnections that exist between environmental impacts associated with desertification, biodiversity and climate change, the development and implementation of these conventions has largely proceeded independently of each other at international and national levels. In reality, the goals and objectives of the CBD, encompassing conservation and sustainable use of biodiversity, are unlikely to be realized where the goals of the Climate Change and Desertification conventions are not taken into account. Similarly, efforts to minimize processes of land degradation and desertification under the CCD are central to ensuring the types of sustainable resource use envisaged by the CBD, and that are required to achieve the goals of the UNFCCC. This level of interconnectedness exists between the three conventions and reflects the reality of the integration of environmental

issues. This requires cross-sectoral, multi-agency responses for implementation at the national, regional and international levels.

In addition to the thematic and policy linkages that exist between the various environmental agreements in such areas as forests, technology transfer, and sustainable development there are important institutional linkages that are also relevant to the types of linkages that should be established on the ground, particularly at the national level, to give effect to the requirements arising from the conventions themselves. These institutional linkages include reporting, research and monitoring, development of national plans, and financial arrangements.

2.2 REPORTING REQUIREMENTS

Each of the three conventions and their related instruments require the submission of reports on activities being taken in relation to the implementation of their provisions. In some instances reporting represents one of the principal requirements of the convention as this is crucial to building an official database of information on matters relating to the convention.

For the CBD, Article 26 requires that “each Contracting Party shall, at intervals to be determined by the Conference of the Parties, present to the Conference of the Parties, reports on measures which it has taken for the implementation of the provisions of this Convention and their effectiveness in meeting the objectives of this Convention”. Reporting requirements under the CBD presently focus on measures under Article 6 relating to the implementation of the convention, rather than on the status of biodiversity resources although it is possible that additional articles, such as those relating to Identification and Monitoring, could in the future also require some form of national reporting.

Antigua and Barbuda submitted its first national report to the CBD in 2000. This provided information on the status of implementation of the CBD in Antigua and Barbuda including general information on economic, social, climatic, and other factors relevant to biodiversity issues.

Guidelines for submission of second national reports require completion of an in-depth questionnaire aimed at securing information on the state of national implementation of the various articles of the CBD and relevant

decisions of the Conference of the Parties. The guidelines for the report recommend that “Contracting Parties involve a wide range of stakeholders in the compilation of information that is presented in the report, in order to ensure a participatory and transparent approach to its development”. This is also important given the cross-sectoral nature of many of the responses required. The format for the third national reports will require even more detailed information and actions being taken to implement the convention.

In the case of the UNFCCC extensive reporting is also required³. Articles 4 and 12 of the convention establish and stipulate reporting requirements for developed (annex I parties) and developing (non-annex I) country parties to the convention, such as Antigua and Barbuda. As with the CBD, the UNFCCC National Communications are expected to provide information across a wide range of subjects relevant to climate change. This includes information on the country’s national circumstances (climatic features, geography and natural resources, economy, demographics etc); a detailed scientific inventory of greenhouse gas (GHG) emissions and removals⁴; information pertaining to measures being taken for adapting to and mitigating against climate change; as well as information relating to systematic observation, public awareness, and capacity building for climate change.

National reporting under the UNFCCC is based on guidelines adopted by the Conference of Parties (COP), with the most recent set of guidelines being adopted at COP8 in 2002. Non annex I countries such as Antigua and Barbuda were required to submit their initial national communication reports within three years of receipt of financing for the preparation of their reports⁵. Antigua and Barbuda submitted its initial national communications in September 2001.

In relation to reporting requirements under the UNCCD, Article 26(1) provides that “each Party shall communicate to the Conference of the Parties for consideration at its ordinary sessions, through the Permanent Secretariat, reports on the measures which it has taken for the implementation of the

³ The Kyoto Protocol will also require substantial reporting under Articles 7 and 8 of the Protocol.

⁴ The inventory utilizes methodologies developed and agreed upon by the Intergovernmental Panel on Climate Change (IPCC). In the first national communications parties were required to report on CO₂, CH₄ and N₂O, and encouraged to report on other GHGs (PFCs, HFCs, SF₆) and precursor gases (CO, NO_x, and VOCs). Parties are now expected to report on all six of the listed GHGs, and are encouraged to report on precursor gases.

⁵No period for submission exists for non – annex 1 countries that are Least Developed Countries (LDCs).

Convention. The Conference of the Parties shall determine the timetable for submission and the format of such reports”. Article 26(2) stipulates that Parties to the convention shall provide a description of the strategies and related information that they are undertaking as part of their efforts to achieve the goals of the convention.

Article 26(6) indicates that information provided pursuant to the article should be submitted “as soon as possible” to the Conference of Parties without stipulating any specific time frame. Antigua and Barbuda’s first report to the UNCCD was submitted in June 2000 and prepared by the Environment Division. In line with the decision of the UNCCD Conference of Parties the report is intended to provide Parties with an indication of measures being taken in Antigua and Barbuda to implement the provisions of the convention and to combat land degradation and desertification.

As with the UNFCCC and CBD, and other environmental conventions, reporting under the UNCCD encompasses input and activities of a number of sectors and stakeholders and therefore requires multi-sectoral and multi-agency input.

Given the similarity of concerns addressed in the various national reports, the need for cross-sectoral inputs into the reports, and the limited technical capabilities available for preparing these reports it is imperative that the maximum amount of cooperation and coordination exist between the agencies involved in preparing these reports. This should include opportunities for shared access of information and for joint technical input into the documents.

2.3 RESEARCH AND MONITORING

The three conventions and their related instruments also each contain a number of implied or explicit requirements for scientific research and monitoring towards the goal of the overall achievement of the goals of the convention. In many cases there is important overlap and commonality among the information needs and outputs of these agreements. Article 12 of the CBD, entitled Research and Training, encourages national and international efforts to establish and maintain programmes for scientific education and training. Similarly, article 5 of the UNFCCC entitled “research and systematic observation” obligates parties to the convention to cooperate in their scientific and research endeavors relating to climate

change. Under the UNCCD, articles 16 and 17 dealing with information collection, analysis and exchange, and research and development, urge international cooperation in the acquisition and exchange of data and information in fulfillment of the obligations of the convention.

In the case of all the conventions, information is required for the evaluation of institutional, legislative and capacity-related issues. In most cases much of the data that is fundamental to analysis and assessment under a particular convention is of considerable relevance to reporting, policy development, and analysis under other environmental conventions. This would include information pertaining to physical, economic and social data (GDP, demographics, government expenditures etc) as well as more specific environmental information and data relating to such aspects as land use, vegetation type, climate, topography, and infrastructure.

Given that different agencies and organizations will be involved in implementation of different environmental conventions and different elements within the conventions, the challenge in such circumstances is to set in place institutional arrangements that allow shared access to information needed for the fulfillment of obligations under the various environmental conventions.

2.4 ACTION PROGRAMMES

Another area in which the convention requirements of the Rio conventions overlap relates to the preparation of the various national action plans and programmes for giving effect to the objectives of these agreements. Given the interconnected nature of the concerns being addressed, it is inevitable that there will be significant thematic and other linkages between policies or programmes aimed at overcoming problems associated with particular environmental conventions. It is important that there be consistency between findings and recommendations in the separate action programmes. It is also important that as far as possible the results of experiences acquired in one convention are utilized where needed in other conventions.

In the case of the UNCCD, the root causes and consequences of land degradation and desertification encompass a range of climatic, socio-economic, biological, and institutional elements. Preparation of national reports is therefore necessarily expected to incorporate multiple stakeholder interests including those pertaining to climate and biodiversity. In addition to

national reports, parties to the UNCCD are also expected to participate in the preparation of regional and subregional action programmes. These action programmes are to be fully integrated into other national policies for sustainable development and are expected to be flexible, and to be modified as circumstances change.

As of September 2004 ten countries from the Latin America and Caribbean region had submitted their UNCCD national action programmes to the secretariat including three Caribbean countries (Barbados, Cuba, and Jamaica). Antigua and Barbuda is presently in the process of preparing its national action programme.

Under article 4.1(b) of the UNFCCC, countries are expected to “formulate, implement, publish and regularly update” programmes relating to mitigation of climate change “and to facilitate adequate adaptation to climate change”. The cross-sectoral nature of the measures required for adaptation and mitigation means that climate change plans and programmes will comprise material relevant to issues of land degradation and biodiversity.

For the CBD, article 6 requires that countries “develop national strategies, plans, or programmes for the conservation and sustainable use of biological diversity”, with the intention of as far as possible integrating sustainable use of biodiversity into relevant programmes and plans. Establishment of a biodiversity strategy and action plan is one of the principal obligations of parties to the agreement, and is an activity that requires substantial cross-sectoral and multi-stakeholder involvement.

The Environment Division has implemented the development of Antigua and Barbuda’s Biodiversity Strategy and Action Plan (BSAP). The BSAP identifies a number of priority concerns and outlines recommendations for responding to these matters. Many of the key concerns of the BSAP are variants of, or related to, the concerns of the UNCCD and UNFCCC including in sectors such as coastal resources, water resources, and human health. The Environment Division has also implemented a project aimed at facilitating Antigua and Barbuda meeting its commitments under the Cartagena Protocol on Biosafety through adoption of policy frameworks, public awareness, and other measures.

2.5 PUBLIC AWARENESS

Public awareness represents an extremely important cross-cutting set of activities and is identified in all of the conventions as a matter for action. The interconnectedness of the environmental concerns addressed under the three conventions, and the similarity of the required responses means that opportunities should exist for shared and joint awareness raising activities drawing on resources emanating from a variety of sources.

The importance of programmes relating to awareness, education, and training is identified in a number of articles throughout the three conventions particularly Article 6 of the UNFCCC, Article 13 of the CBD, and Article 19 of the UNCCD. The various activities implemented under specific agreements clearly present opportunities for collaboration in terms of information inputs, sharing of limited financial and technical resources, and harmonization of actions. Given the significance of awareness raising activities it is particularly important that measures are maximized to allow for fullest possible harmonization and coordination of awareness activities among the conventions. This will allow for the shared use of limited technical capabilities and financial resources in efforts to promote environmental awareness and education.

2.6 FINANCIAL MECHANISM

One significant feature of the Rio conventions is that they seek to establish financing instruments for funding certain responsibilities and obligations arising from the conventions. In the CBD Article 21 establishes a Financial Mechanism to provide funds to developing countries for biodiversity activities, under the supervision of the Conference of Parties. This is supportive of Article 20 of the CBD that calls on Parties to the convention, particularly developed countries, to provide financing for biodiversity activities. Article 11 of the UNFCCC also provides for establishment of a Financial Mechanism under the direction of the Conference of Parties. In the case of the UNCCD, Article 21 calls on the Conference of the Parties to “promote the availability of financial mechanisms” for supporting developing countries efforts against desertification and land degradation.

In practice the role of financial mechanism for the conventions has gone to the Global Environment Facility (GEF) established as a joint initiative between The World Bank, the United Nations Development Programme

(UNDP), and the United Nations Environment Programme (UNEP)⁶. At the national level the GEF is represented by an operational focal point and a political focal point. The Chief Environment Officer presently serves as Antigua and Barbuda's GEF operational focal point responsible for in country coordination of GEF projects, approval of GEF projects, and other operational matters. Political focal points are responsible for GEF governance issues and policies. Antigua and Barbuda's political focal point is presently its ambassador to the UN.

The existence of a single financing mechanism for the three conventions provides an opportunity for ensuring complementarity and cohesion in funding requests at the national level among the conventions, and this is aided by the presence of a single GEF national focal point. The presence of the national focal points also ensures technical capability for accessing resources. Implementation of GEF financed projects in Antigua and Barbuda is managed in conjunction with UNDP and UNEP regional and international offices. Interactions between national level officials and these offices include financial reporting, and monitoring and evaluation.

2.7 CONCLUSION

The Rio conventions contain a number of similar thematic elements and requirements. These include reporting requirements, development of action programmes, scientific research and monitoring, financing, and public awareness. These in turn require the elaboration of appropriate institutional structures for their implementation. Critical to the success of implementation is the ability to coordinate and share resources, particularly personnel, across different ministries and departments including access to required information. The importance of coordination and collaboration increases given the limited number of personnel involved in Antigua and Barbuda, the interrelatedness of the concerns, and the need to advance implementation of the goals and activities of the environmental conventions.

⁶ The second GEF Assembly in October 2002 designated land degradation as a focal area of the GEF as a means to support the UNCCD.

SECTION 3: EXISTING INSTITUTIONAL ARRANGEMENTS

This section provides an overview of arrangements that have been put into place to date for the implementation of the Rio conventions in Antigua and Barbuda. An overview is also provided of the National Coordinating Mechanism for Environmental Conventions, the draft Environmental Act being initiated by the Environment Division, the National Environmental Management Strategy and Action Plan, and the National Economic and Social Council which all represent approaches to the coordinated management of the environment.

3.1 UNFCCC

Responsibilities for implementation of the UNFCCC have resided with the Permanent Secretary in the Office of the Prime Minister. Actual day-to-day management and coordination of these responsibilities rests with a Project Coordinator appointed on a contractual basis that reports directly to the Permanent Secretary. However overall implementation responsibilities, as with the other major environmental conventions, are to be assumed by the Environment Division of the Ministry of Agriculture.

The climate change enabling activity project is presently at the end of its second phase of activities intended to build capacity for meeting the requirements of the UNFCCC. During the first phase of the project, the objective of which was the preparation and submission of Antigua and Barbuda's Initial National Communications to the UNFCCC, a steering committee was in place to provide technical guidance on the implementation of project outputs. This comprised representatives from many of the government agencies involved in various aspects of work related to climate change. Agencies involved in the steering committee included the Meteorological Office, APUA, National Office of Disaster Services, the Environment Division, the Fisheries Division, the Ministry of Planning, Director of Statistics, as well as the Environmental Awareness Group. The steering committee has not been utilized during Phase 2 activities although various *ad hoc* consultations have been held with members of the committee on occasion.

Implementation of Phase 2 project activities has involved various measures including preparation of technical papers; short-term training and public awareness, in most instances national consultants have been used for providing the technical products in these fields. Arrangements for

workshops and other administrative activities are the responsibility of the coordinator, who liaises with relevant ministries and agencies in terms of technical participation. In most instances collaboration includes agencies and individuals previously involved in the steering committee. Invitations to workshops and meetings and contracts with consultants, are conducted under the direct authority of the Permanent Secretary in the Prime Minister's Office.

At the national level the now completed Caribbean Planning for Adaptation to Climate Change (CPACC) project, and its successor projects, have been implemented by the Fisheries Division of the Ministry of Agriculture. This project achieved important strides in building capacity for climate change including workshops and development of draft policy for management of climate change impacts. Under the CPACC and successor projects emphasis has been placed on capacity building for climate change impact assessment in coastal and marine areas, data compilation, and linkages to key economic sectors.

In terms of coordination with other environmental coordination, the Climate Change Coordinator has participated in, and on several occasions provided written and oral reports to, the National Coordinating Mechanism (NCM) on Environmental Conventions that is coordinated by the Environment Division. Representatives of the Fisheries Division have also participated in the proceedings of the NCM.

Important institutional relationships also exist at the international and regional levels. One outcome of the now completed regional CPACC project and its successor projects has been the establishment of an informal regional network of technicians involved in climate change issues. This has been further facilitated by participation of most of these same technicians in meetings held under the auspices of the UNFCCC. These regional and international linkages have offered opportunities for cooperation in project implementation (for example through use of common consultants), have fostered use of tried and tested best practices, and allowed for development of harmonized or common regional positions on climate change issues.

3.2 CBD

Management of activities linked to the Biodiversity Convention is the responsibility of the Environment Division of the Ministry of Agriculture, Marine Resources, Environment, Lands, and National Parks. Initial

implementation of the CBD was undertaken through a Coordinator hired on a contractual basis by the Permanent Secretary in the Office of the Prime Minister. This arrangement was used for the preparation of Antigua and Barbuda's First Report on Biodiversity that was completed and submitted in 2001. A steering committee consisting of representatives from various governmental and non-governmental agencies comprised a technical project steering Committee.

The Environment Division formally assumed responsibility for the management of the project in 2003. Since then project activities have included various public awareness programmes and the successful implementation of a project linked to the Cartagena Protocol on Biosafety for development of a national framework for Biosafety in Antigua and Barbuda. A Technical Advisory Committee provides technical input to the implementation of the project with membership drawn from the Ministry of Agriculture, the Central Board of Health, the Ministry of Health, the Plant Protection Unit, and other governmental agencies.

Regular reports on implementation of the activities of the biodiversity convention are provided to the meetings of the National Coordinating Mechanism (NCM).

For the Biosafety Protocol, administrative responsibilities reside with the Plant Protection Unit of the Department of Agriculture, and implementation responsibilities with the Environment Division. A Technical Advisory Committee comprises representatives from the ministries and departments of agriculture, health, environment, as well as stakeholders from farmer and environmental non-governmental organizations.

The proposed institutional structures for regulatory control of Biosafety in Antigua and Barbuda envisages the Environment Division as the Biosafety focal point supported by a National Environmental Council; a Biosafety Board as the Competent National Authority supported by a risk assessment team; the Plant Protection Unit responsible for administration and enforcement and as the Biosafety Clearing House; and an inspectorate consisting of the Plant Protection Unit, the Livestock Division, the Price Control Division, and the Central Board of Health responsible for such measures as food quality and labeling. These arrangements have not yet been legally mandated.

3.3 UNCCD

The UNCCD project falls under the authority of the Ministry of Agriculture, Marine Resources, Environment, Lands, and National Parks with the Environment Division responsible for overall management of the project, and day-to-day coordination and administration responsibilities residing with a technical officer within the Ministry of Agriculture. The management of the UNCCD activities is the overall responsibility of the Environment Division with the Project Coordinator functioning under the technical guidance of the Chief Environment Officer.

Antigua and Barbuda submitted its first national report to the UNCCD in June 2000. The report contains an initial national action plan for desertification including public awareness, rehabilitation of water resources, and legislative improvements. A multi-stakeholder Technical Advisory Committee (TAC) is currently preparing the National Action Plan (NAP) for the convention working under the technical guidance of the project coordinator. The TAC reports to the Environment Division and will submit its report to that agency. Most members of the TAC are, or have been, also members of other environmental technical committees such as Biosafety or climate change. The Coordinator of the UNCCD project participates in the meetings of the National Coordinating Mechanism, and provides technical reports on, the progress of implementation of activities under the project.

The UNEP Office in Mexico City administers the UNCCD project.

3.4 NATIONAL COORDINATING MECHANISM FOR ENVIRONMENTAL CONVENTIONS

The National Coordinating Mechanism (NCM) provides a forum for the coordinated follow-up at the national level to all environmental conventions ratified by the Government of Antigua and Barbuda. The role of the NCM is to strengthen communication links between the relevant ministries and departments of Antigua and Barbuda directly involved with the implementation of international environmental conventions. It consists of a network of government agencies/divisions, national focal points, competent authorities, and NGOs working together to facilitate a coordinated and timely response to Antigua and Barbuda's treaty obligations as well as providing a forum for discussions on work-programmes for government

agencies. At present the main role of the NCM relates to the important function of sharing information among agencies.

The Environment Division presently serves as the secretariat for the NCM. The present Chairman is Ambassador Dr. John Ashe, Antigua and Barbuda's Permanent Representative to the United Nations. A web-server located within the Environment Division provides electronic communication on the activities of the NCM.

3.5 NATIONAL ECONOMIC AND SOCIAL COUNCIL

The Antigua and Barbuda National Economic and Social Council Act (NESC) 2004 establishes a council "to promote the goals of economic growth and development, participation in economic decision-making and social equity"⁷. Article 3.2 provides that the NESC shall prepare and submit reports on a number of matters including "environment". Article 2.3 of the Act indicates seventeen groups and sectors to be represented on the NESC including the Environmental Awareness Group (EAG) the country's longest established environmental NGO. Article 12 of the Act calls for the establishment of a number of committees within the NESC including one on environmental protection and disaster preparedness.

The NESC is seen as providing an opportunity for consultation and participation by a wide range of social and economic stakeholders in the process of national policy making. Although not operational at the time of preparation of this report the NESC would appear to possess the legal mandate to provide important cross-sectoral and inter-ministerial coordination of the type required for effective environmental management as envisaged under the Rio conventions.

3.6 DRAFT ENVIRONMENTAL MANAGEMENT LEGISLATION

A draft Environmental Management Act has been prepared under the guidance of the Environment Division. The draft is now presently receiving stakeholder review and input.

As presently structured the Act establishes a Department of the Environment as the principal executive agency responsible for implementing the

⁷ Article 3.1(a) National Economic and Social Council Act 2004

provisions of the Act. The draft provides for the appointment of inspectors and other officers as well as the establishment of an Environment Trust Fund. Part III of the draft details the requirement and procedures for conduct of Environmental Impact Assessments including establishment of a Unit within the department to pursue these activities.

The legislation also establishes Units within the Department for climate change and ozone depletion, both being subjects arising out of multilateral environmental conventions. Other Parts of the draft that reflect obligations from international environmental convention relate to management of wastes, biodiversity and national parks, and protection of the marine environment. Other subject areas dealt with include coastal resources, sustainable forestry management, and water quality management.

The draft also establishes a National Coordinating Mechanism on Environmental Conventions (NCM) “which shall be responsible for coordinating the management and implementation of international environmental agreements”. Under the draft the NCM reports to the Minister responsible for foreign affairs.

3.7 NATIONAL ENVIRONMENTAL MANAGEMENT STRATEGY AND ACTION PLAN

Antigua and Barbuda, along with other OECS countries, has initiated work on a National Environmental Management Strategy and Action Plan (NEMS). This has involved a consultative process among a wide variety of governmental, community and non-governmental stakeholder and interests groups, with the aim of identifying a set of guiding principles and related activities for guiding sustainable environmental management.

The NEMS initiative is an output of the OECS St. Georges Declaration which enunciates seventeen principles for environmental management in the OECS region. Antigua and Barbuda’s NEMS focuses on five of the principles of the St Georges Declaration with these relating to economic tools and incentives; developing relations with civil society; public awareness and education; comprehensive environmental legislation; and building on the opportunities of the international environmental conventions. Many of the recommended actions outlined in the NEMS are aimed at promoting synergy and synthesis between agencies involved in

implementation of environmental responsibilities including the environmental conventions.

The Strategy is to be implemented through projects and annual work programmes that will further detail the specific tasks and mechanisms for implementation. Although somewhat overly bureaucratic in its emphasis on reporting requirements, the NEMS process provides an important set of principles, based on popular consultation, for developing environmental strategies and actions for Antigua and Barbuda. In addressing the principles the NEMS identifies a number of activities that will facilitate the realization of these objectives. These are generally cross-cutting activities that target a range of methods and stakeholders. The measures identified in the NEMS have strong positive overlaps and linkages with activities relating to implementation of international environmental conventions.

3.8 CONCLUSION

In general while the implementation of the individual conventions has proceeded separately, there has been considerable overlap in implementation at the technical level arising from the limited available pool of technical agencies and individuals in Antigua and Barbuda. Four important instruments, the already functioning NCM, the draft Environmental Management Act, the National Environmental Management Strategy, and the recently established National Economic and Social Council provide significant opportunities for improving the level of integration of cross cutting environmental issues between agencies and organizations involved in implementation of programmes and activities pertaining to the three Rio conventions.

SECTION 4: EXISTING CAPACITY FOR THE RIO CONVENTIONS

The capacity for implementing the Rio conventions is dependent on a number of factors. In this regard, critical factors include the extent of awareness among the general population and at technical levels, the presence of a supportive legal and administrative system, and the existence of institutions able to carry out their role.

The level of awareness as to the major issues and concerns relating to the various conventions, including of the extent of synergy among them, varies considerably. Among senior technical personnel involved in environmental management, some knowledge already exists of the main principles and concerns of these agreements. The extent to which concerns and issues pertaining to the environmental conventions are addressed within existing legal and institutional arrangements also varies. This section provides an assessment of the level of awareness, and of the regulatory and institutional measures in place for implementation of the Rio conventions in Antigua and Barbuda.

4.1 CBD

Generally speaking, knowledge of biodiversity concerns and issues appears to be higher than for either the desertification or climate change conventions⁸. This may reflect that the ecosystem approach of the CBD incorporates a wider range of well-known environmental concerns such as habitat protection, environmental impact assessment, and waste management, than is the case with the other conventions.

Existing institutions with responsibility for management of biodiversity include a number of agencies within the ministry responsible for agriculture. These include the Environment Division, the Plant Protection Unit, the Livestock Division, the National Parks Authority, and the Fisheries Division. Other agencies with significant responsibilities for aspects of biodiversity in line with the provisions of the CBD are the Ministry of Health, the Development Control Authority, and the Ministry of Finance and the Economy. Most of these agencies have been participants in either the various project steering committees or in the NCM.

⁸ This assessment is based on

For the CBD a number of provisions can be seen as representing cross-cutting and synthesis issues of relevance to wider environmental and development concerns. As noted above a critical example of this relates to the CBD provision for environmental impact assessments (EIA) as tools for decision-making and sustainable development. The use of this tool is widely recognized as being an important element of the national development planning process. Existing planning legislation allows for the use of EIAs and the requirement also exists in the draft omnibus Environmental Management legislation prepared for the Environment Division and presently receiving stakeholder input. Other provisions and concepts of the CBD with wide crosscutting awareness and implications include those relating to the ecosystem approach, protected areas, sustainable use, and access to and rights relating to genetic resources. In many instances the awareness of the concepts derives from existing incorporation into management plans and programmes being executed at the sectoral or departmental level. In addition to their widespread technical awareness, a number of these concepts and provisions also enjoy a fair degree of public awareness.

In many instances, biodiversity related provisions are available in existing legislative, regulatory, and administrative machinery. These include the Land Development Control Act (1975), the Pesticides Control Act (1973), the Plant Protection Act, the Forestry Act of 1941 and its associated regulations, the Barbuda Local Government Act (1976), the Beach Protection Act (1957) (1992) (1993) and the Beach Control Act (1959), the National Parks Act (1984) (1986), the Marine Areas (Preservation and Enhancement) Act (1972), and the Fisheries Act (1983).

Available institutional capacity for the administration of these instruments varies widely. At the level of public policy there is increasing concern for, and sensitivity to, environmental issues. The lack of capacity for developing or introducing sustainable development policies or incentives for biodiversity is, however, a key constraining factor. A major limitation is the structure of public administration that emphasizes vertical communication within ministries and organizations rather than horizontal flows of information between ministries and agencies. This is particularly important for biodiversity and other environmental issues where causes and impacts are generally cross-sectoral.

4.2 UNCCD

In the case of the UNCCD, Antigua and Barbuda's dry and arid conditions mean that there is already some popular awareness of many of the issues and concerns relating to land degradation. Additionally, important elements of a regulatory approach to land degradation and desertification exist in terms of legislation and regulations, as well as institutional mandates and structures. The Ministry of Agriculture has traditionally been the main agency involved in land degradation issues, with other key agencies being the Antigua Public Utilities Authority and the Meteorological Department.

The national Meteorological service has technical expertise and important historical data relating to drought conditions on Antigua⁹. The various sections of the Department of Agriculture have considerable experience in managing land degradation in arid conditions. Functional relationships exist with other key agencies in the water sector, particularly the Antigua Public Utilities Authority, and the Ministry of Health to ensure the optimum management and protection of scarce water resources. A number of legislative instruments are already in place to promote management of water resources. These include the Public Utilities Act 1973, and the Watercourses and Waterworks Regulations, 1954 and 1961, the Public Utilities Act (No. 10 of 1973), the Forestry Act, (1944), the Barbuda Local Government Act (1976) and the Forestry Regulations, and the Public Health Act (1957). Very importantly, public attitudes are generally favorable towards conservation and sustainable use of water.

The awareness of the actual provisions of the UNCCD is likely to be largely limited to technical personnel within certain departments but some awareness has been fostered by earlier CCD related activities, including a national workshop held in 1997.

4.3 UNFCCC

For the UNFCCC the level of awareness of the convention is very limited, being restricted to a few technical officers involved in various aspects of implementation of enabling activities. Within the national meteorological service a number of technical experts have been trained in various meteorological disciplines, and technical knowledge of climate related issues

⁹ A substantial weakness exists in terms of weather and climate data for Barbuda.

is high. Other agencies with technical capabilities in this field are the departments responsible for environment, fisheries, health, agriculture, disaster management, and statistics.

The recent experience of devastating hurricanes in Antigua and Barbuda and the Caribbean since 1995, has also spurred public interest in matters relating to climate and climate change. As a result of the hurricane experience some popular awareness exists of the linkages between weather events and development. Linkages are readily identified in terms of the impact of extreme weather events, including drought, in influencing development and increasing vulnerability.

This is supported by available national and international media coverage of climate events and climate change. A series of media articles on climate change was published during 2003 as a part of the enabling activity project. Additionally a number of persons have participated in various climate change related workshops.

The existing legislative basis for managing climate change is related to issues such as development control, health and coastal zone management. This means that efforts in those areas will impact upon climate change vulnerability in Antigua and Barbuda. Climate change concerns should therefore be integrated into development planning and control. At present no legislative instrument specifically addresses climate change although a section on climate change is included in the draft omnibus environmental legislation presently under review by the Environment Department. A critical need relates to developing a legal and administrative framework for climate change related data collection and monitoring programmes to provide information for decision-making on climate change vulnerability and risk issues.

In Antigua and Barbuda institutional development for climate change has been constrained by responsibility for this activity being outside of a technical agency. This has restricted the integration of climate change enabling activities into the national environmental management programme. The move to direct coordination of these activities by the Environment Division should increase the opportunities for greater institutional synergy in the implementation of climate change activities with other environmental conventions particularly the CBD and UNCCD.

4.4 CONCLUSION

Capacity for management of the responsibilities arising from the Rio conventions requires the availability of resources – human, legal, and administrative. In Antigua and Barbuda, the awareness of and existence of the resources for fulfilling the requirements of the Rio conventions varies for each of the conventions. In all instances, a limited number of technical agencies and individuals are required to perform various functions for the implementation of the conventions.

The following sections seek to identify constraints and limitations to enhancing synergies among the environmental conventions and to identify opportunities for enhancing cooperation.

SECTION 5: INVENTORY OF CONSTRAINTS AND LIMITATIONS

The following constraints and limitations exist as barriers to integration and synergy between the CBD, UNCCD, and UNFCCC. They are based on information obtained from a survey of environmental agencies conducted for this assignment, as well as from documentary sources particularly “Country Capacity Development Needs and Priorities: Report for Small Island Development States”¹⁰.

The constraints and limitations are not presented in any ranking. In fact given their interconnected nature it is difficult, and probably counterproductive to rank these concerns. Rather they should be viewed as expressive of the continuum of capacity constraints that face very small States such as Antigua and Barbuda.

The purpose of the section is to identify certain central constraints and limitations to implementation of the Rio conventions, and particularly those elements, which affect greater synthesis between the implementation of the conventions. Systemic constraints refer to those factors that are national in origin/scope. Institutional constraints and limitations refer to constraints that pertain to administrative and technical implementation at the organizational level. At the level of the individual, constraints and limitations refers to those factors that serve to inhibit the ability of individuals to perform functions relating to the implementation of the Rio conventions.

5.1. LACK OF INTEGRATED POLICY FRAMEWORKS FOR SUSTAINABLE DEVELOPMENT

Environmental responsibilities and objectives, as outlined in the various international environmental conventions, have been adopted without many elements of the supporting policy and legal framework necessary for their success. This represents one of the over-arching constraints towards increased synergy between environmental conventions, since a supportive policy, legal, and administrative superstructure is required to effect the type of systemic, institutional and individual level responses arising under the conventions.

¹⁰ Capacity Development Initiative. Country Capacity Development Need And Priorities: Report for Small Island Development States. Albert Binger. September 2000. GEF-UNDP Strategic Partnership.

	Systemic	Institutional	Individual	Impacts
CBD	Policy responses to biodiversity not integrated with wider development concerns.	Various institutions pursue separate goals. Inadequate coordination of action at institutional level.	Individual actions not driven by wider development purposes.	Wide ranging stakeholder inputs not adequately incorporated into biodiversity related activities. Loss of biodiversity. Adverse socio-economic impacts.
UNCCD	Land degradation concerns not adequately incorporated into development planning.	Restricted views of responsibility for land degradation. Institutions not properly mandated to pursue land degradation reduction goals.	Lack of training and capacity building available at individual level.	Continuation of ongoing processes of land alienation and degradation. Changes in micro-climates. Adverse socio-economic effects.
UNFCCC	Issues of climate change adaptation and mitigation not factored into development	No clear institutional mandate yet for disparate climate change task areas. Limited institutional capabilities for	Limited technical capability for climate change related issues.	Heightened risk and vulnerability to climate change related impacts, and lack of actions to

	actions and priorities.	convention responsibilities.		exploit technological and other options for mitigation of climate change.
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5.2 LIMITED HUMAN RESOURCE CAPABILITY

Limitations in human resource capability are associated with small size and with developing country status. The effects of constraints in this field cut across the three capacity levels. Without significant strengthening in this field the possibilities for action towards meeting the obligations of the convention are severely reduced, as the ability to develop and implement the conventions will be absent.

	Systemic	Institutional	Individual	Impacts
CBD	Limited availability of technical skills for biodiversity, Biosafety and related technical fields. Limited financial capacity.	Infrastructure needs (buildings, laboratories, materials and supplies) restrict ability to implement and enforce environmental and convention requirements.	Limited training and educational opportunities.	Affects capacity to introduce programmes and honor obligations under the convention. Contributes to long-term continued deterioration of biodiversity resources.
UNCCD	Limited financial resources. Over-reliance on government for action – need to	limited human resource development capability. Poor remuneration and rewards.	Limited professional development prospects.	Continued lack of sustained integrated response to land degradation problems.

	empower community action.			
UNFCCC	Limited availability of technical skills for climate change. Limited financial capacity.	Infrastructure needs (climate monitoring equipment,	Limited training and educational opportunities.	

5.3 INADEQUATE FUNDING

Lack of financial resources constitutes one of the main barriers in the implementation of the CBD, UNCCD, and UNFCCC including the implementation of measures for advancing synergies among the conventions. This also affects all levels of capacity development.

While the Global Environment Facility (GEF) provides funds for implementation of enabling activities, other measures require counterpart financing or direct investment by governments or developers. Funding for environment projects must compete for limited resources with other priority and high profile government programmes

	Systemic	Institutional	Individual	Impacts
CBD	Small size, economic vulnerabilities and economic dependency reduce ability to effectively pursue biodiversity protection goals. Dependence on external funding.	Limited technical capability in terms of equipment and capital. Emphasis on employment creation rather than product output.	Poor remuneration and incentives programme negatively affects productivity.	Reduces ability to attain goals of the CBD. This impacts on economic activity e.g tourism and agriculture.
UNCCD	Small size,	Limited	Poor	Adversely

	economic vulnerabilities and economic dependency reduce ability to effectively pursue land degradation management objectives. Dependence on external funding.	technical capability in terms of equipment and capital. Emphasis on employment creation rather than product output.	remuneration and incentives programme negatively affects productivity.	affects ability to reduce land degradation. Economic impacts on agriculture.
UNFCCC	Small size, economic vulnerabilities and economic dependency reduce ability to effectively pursue climate change objectives. Dependence on external funding.	Limited equipment and human resources impair research, observation and monitoring. Many critical climate parameters not monitored.	Poor remuneration and other working conditions affect staff recruitment and development.	UNFCCC objectives not met. Continued increase in risk and vulnerability to present and future weather and climate.

5.4 LIMITED PUBLIC AWARENESS AND SUPPORT

Inadequate public awareness of environmental concerns is one of the core constraints and limitations to enhanced synergy in the implementation of the goals and requirements of the various environmental conventions. This inadequate level of public awareness serves as a barrier to developing national, community, and individual actions on environmental management.

	Systemic	Institutional	Individual	Impacts
CBD	Lack of overall policy and legal	Limited technical capabilities (human and	Limited awareness of environmental issues and	Continued deterioration of biodiversity

	framework to guide awareness. Financial constraints.	technological). Inadequate information flows between agencies. Unclear mandates and responsibilities.	concerns, including of inter-linkages between environmental conventions.	resources. Piecemeal and sectoral responses. Consequent adverse socio-economic impacts.
UNCCD	Inadequate policy and legal framework. Financial constraints.	Poorly defined mandates for public awareness.	Some awareness of land degradation issues. Need to increase awareness at individual level.	Continued processes of land degradation. Consequent adverse socio-economic impacts.
UNFCCC	Project based efforts. Lack of policy and legal framework for awareness. Financial constraints.	Need to identify institutional roles and responsibilities.	Limited technical knowledge and extremely limited public awareness in context of high levels of vulnerability.	Vulnerability to adverse impacts heightened. Possibilities for assistance under UNFCCC regime not realized.

5.5 EMPHASIS ON VERTICAL COMMUNICATIONS AND INFORMATION FLOWS

The existing structure of public administration is oriented to facilitating information within the structures of each ministry, with only limited access to information and coordination between these agencies and other agencies. This is particularly important in environmental management where impacts are multi-sectoral and there is the need for a structured exchange of information between agencies, and for improved access to information by the public and stakeholders.

	Systemic	Institutional	Individual	Impacts
CBD	Administrative structures inhibit executive level coordination and policy development.	Emphasis on action by individual agency. Inadequate use of limited technical capabilities. Possibilities for competition among agencies.	Restricts possibility for individual capacity development. Fosters reliance on informal networks and contacts.	CBD sustainable development goals are thwarted. Results of biodiversity research and monitoring not fully realized.
UNCCD	Administrative structures inhibit executive level coordination and policy development. Emphasis on sectoral considerations.	Problem less severe than other conventions given limited number of agencies and lead role of Ministry of Agriculture. Remains a problem.	Fosters reliance on informal networks and contacts.	Inadequate attention paid to holistic responses to land degradation issues. Continued sectoral responses. Continued adverse socio-economic impacts.
UNFCCC	Inadequate structures for facilitating exchange of information relevant to climate change	Problem exacerbated by existing weak coordination mechanism for stakeholder consultation.	Restricts possibility for individual capacity development. Fosters reliance on informal networks and contacts.	Issues surrounding climate change adaptation not adequately appreciated by public. Vulnerability

				heightened.
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The tables indicate that achievement of the goals and requirements of the Rio conventions are constrained by a number of inter-related and inter-connected variables. These include limited financial resources, limited technical capacity, and inadequate public awareness of environmental concerns. These factors have implications at the three levels of the capacity development process. Equally significantly the costs of inability to realize the goals of the convention, and inability to increase synergies between the conventions, are reflected in adverse economic impacts in terms of tourism impacts, agriculture, disaster risk, environmental and public health, and coastal protection.

SECTION 6: OPPORTUNITIES TO ADVANCE SYNERGY IN IMPLEMENTATION OF THE RIO CONVENTIONS

6.1 INTRODUCTION

This section provides an indication of certain actions that can be taken to advance integration and synthesis between the Rio conventions. These comprise various human resource development initiatives (training and public awareness), administrative actions and processes, actions for strengthening information availability and access, and regional action.

In general, there is substantial overlap and integration between these measures. They are intended to provide an enabling environment for advancing integration and synthesis in the implementation of the Rio agreements and enhance capacity building at systemic, institutional, and individual levels. These initiatives should also contribute towards the implementation of the goals, requirements, and activities of the various conventions as well as of wider environmental management concerns. All of these measures also fall into the framework for action identified in the NEMS.

6.2 STRENGTHENING INSTITUTIONAL ARRANGEMENTS FOR SYNERGY AMONG ENVIRONMENTAL CONVENTIONS

Present institutional arrangements for environmental management through the Rio conventions necessarily involve a number of agencies providing a variety of technical and specialist services, but with most of the coordinating and reporting functions residing with the Environment Division. In addition to its role in the direct implementation of specific conventions, including the CBD, the Environment Division is also responsible for coordination functions through servicing the NCM and coordinating projects “out-sourced” to other agencies of government such as the Plant Protection Unit.

It is expected that the coordination and implementation of the climate change programme will also soon be transferred to the Environment Division possibly in conjunction with the Meteorological Department and other agencies, further increasing the tasks of the Division but allowing for the greater integration of climate change into the mainstream of environmental concerns.

The Environment Division also retains responsibility for the oversight and coordination of Global Environment Facility activities in Antigua and Barbuda. This is an important activity that involves responsibility for decision-making for the principal source of financing to environmental activities, and one that is able to serve as a catalyst for financing from other sources. Responsibilities of the Environment Division also include serving on the governing bodies of the GEF.

These responsibilities are supplementary, and complimentary, to the Environment Divisions principal tasks as the main environmental protection agency for coastal and terrestrial areas in Antigua and Barbuda, working in collaboration with other technical agencies such as health, fisheries and agriculture.

The complexity of the tasks involved require that the Environment Division have access to a range of technical expertise, possess adequate equipment, and enjoy a supportive enabling environment in terms of regulatory frameworks and public support. Increasing synergy in implementation of the conventions can assist the Division in its work by pooling available resources.

The following measures are recommended for strengthening the coordinating and executing capability of the Environment Division:

- Providing a legislative basis for the coordinating role of the NCM. This is intended to formalize the coordination and participation of key agencies as well as the functions of the NCM. The NCM could also serve as an affiliate of the recently legislated National Economic and Social Council.
- Providing an Officer within the Environment Division whose responsibility is to serve as *de facto* Secretary to the NCM under the authority of the Chief Environment Officer. This will facilitate the following up of NCM matters and allow it to provide more executive action. In addition to NCM follow-up the Officer should also have more general responsibilities for coordination responsibilities between environmental conventions.
- The Environment Division should continue to “outsource” complex technical issues to specialist agencies where feasible. This builds capacity in partner agencies and allows for important oversight, coordination and reporting functions by the Environment Division. Ensuring adequate project management

capabilities within the specialist agencies and within the Environment Division will require enhanced training and sensitization for technical and administrative staff involved in the implementation of these programmes.

6.3 STRENGTHENING INFORMATION DISSEMINATION FOR ENVIRONMENTAL MANAGEMENT

While existing bureaucratic structures tend to restrict information availability outside of departmental contacts, effective environmental management requires the availability of information to a range of stakeholders in an easily accessible format. This indicates the need for affordable and user-friendly information dissemination technologies that can provide decision-makers and technicians with certain types of available data and information, as well as allowing improved public access to various types of documents and information.

Modern information technology allows for the targeted dissemination of information to specific end users as well as allowing for more widespread distribution to a general audience. Specifically what is envisaged is to build on the Environment Divisions present web-site to introduce a closed web server to a select target audience of public and private sector decision-makers and officials. This will provide environment related news, reports and updates and be compiled and managed by the Environment Division. In addition a more general web-page will continue to provide information to the public on environmental issues.

The following measures are recommended for strengthening the information outreach and dissemination capabilities of the Environment Division:

- Appointment of a full time Information Network manager within the Division with responsibility to develop and manage a closed access web-server as well as to manage a more general public access information website. The officer would work closely with environmental project managers to distill and disseminate information in electronic and hard copy formats.
- Upgrading of information technology systems within the Environment Division to allow for the introduction of closed access and public information dissemination functions.
- Acquisition of computers and distribution to select public sector agencies to allow for establishment of network capabilities.

- Training of network participants in use and operation of the system.

Appendix 4 provides an indicative project outline for this proposed activity.

6.4 INTEGRATED CONVENTIONS WORKSHOPS

Practical considerations mean that implementation of the Rio conventions will continue to be conducted by individual departments and ministries. In this regard Permanent Secretaries and other senior management personnel are required to perform certain authorizing and administrative roles in the implementation of these conventions. Many of these officers have not been sensitized to the operation and objectives of these agreements and may therefore be at a disadvantage in implementing certain aspects of these responsibilities. At the same time the imperatives of realizing the goals of the conventions, as well as of maximizing use of scarce resources, means that there is the need for close integration and synergy between and among the activities being conducted in relation to each convention.

This points to the importance of providing decision makers involved in administration and implementation of environmental programmes with a structured opportunity to look at the objectives and requirements of these three conventions so as to identify ways in which these programmes can be implemented including areas where opportunities for synergy and coordination may exist with other conventions and with ongoing government programmes.

The following measures are recommended for strengthening the capability of the Environment Division to advance administrative level synergy and integration in implementation of the Rio conventions:

- Convening by the Environment Division of an annual one-day workshop for ministry level personnel (Permanent Secretaries, other senior administrative personnel, and technical staff) to review implementation of on-going activities and to identify opportunities for synergies and coordination with other government programmes and activities. The workshops are also intended to sensitize participants to the goals and objectives of the conventions.

- Preparation of an annual inter-ministerial/agency work programme, developed at the meeting, to guide the various ministries and agencies in accelerating the process of synergy among the conventions.

6.5 PREPARATION OF A CONSOLIDATED NATIONAL ENVIRONMENTAL REPORT

As noted earlier, the preparation of national reports to the various convention bodies represents one of the main requirements for implementation of these conventions by Antigua and Barbuda. For a small country with limited technical and financial resources and where information and data is often difficult to access, these obligations can amount to substantial investments of time and expertise. At present the various separate reports are prepared with little overall integration and linkage among the conventions. At the same time there is the need from the public for greater information on environmental issues and concerns in Antigua and Barbuda.

In response to the concern to provide a comprehensive report on environmental issues the Environment Division has begun the process for preparation of a State of the Environment report. This will encompass issues identified in the various environmental reports as well as other material relating to environmental concerns in Antigua and Barbuda. This action will also give effect to one of the recommended activities under the NEMS.

The State of the Environment report provides a useful tool for promoting synergy in the reporting and implementation of the Rio conventions while also fostering greater public awareness. While this integrated report would not replace the continued need for preparation of separate national reports to be submitted to the various convention secretariats, it is likely that preparation of both sets of reports can benefit from the work carried out by the other including sensitization as to the concerns of other conventions.

The following measures are recommended for the preparation of an integrated National Environmental Report:

- A sub-committee of the National Coordinating Mechanism (NCM) be selected to prepare a National Environmental Report integrating the various convention and departmental reports.
- The Environment Division would coordinate and provide support for the effort. The report would be prepared every two years and would

be intended for general distribution in electronic and hard copy formats.

6.6 CONCLUSION

The constraints and limitations identified in the previous chapter mean that a fairly wide ranging, yet sustainable, set of activities will need to be put into place if the goals of the conventions are to be realized, and if there is to be enhanced synergy and coordination in the implementation of international environmental agreements in Antigua and Barbuda.

The activities identified above are intended to provide practical and affordable measures for building capacity for the implementation of the Rio conventions. A central role is envisaged for the Environment Division in implementing most of these measures for improving coordination and synergy.

The next section will provide an assessment of priority capacity needs for synergies at individual, institutional and systemic levels in Antigua and Barbuda.

SECTION 7: PRIORITY CAPACITY NEEDS FOR ENHANCING SYNERGIES

To support the process of integrating activities and promoting synergies under the various environmental conventions, a number of measures for capacity building at systemic, institutional and individual levels will be required. In many cases these needs overlap categories and are mutually reinforcing.

The table below identifies some of the principal capacity needs likely to be needed for enhancing synergies among the Rio conventions.

A. Systemic Needs

Sector	Capacity Needs
Biodiversity	<p>Legislative and policy framework Legislative mandates for biodiversity. Policy endorsement on Biodiversity Strategy and Action Plan. Market instruments and incentives</p>
Climate Change	<p>Preparation of a climate change strategy. National energy sector plans and policies.</p>
Land Degradation	<p>Development of comprehensive land management programme incorporating land degradation concerns. National housing policy.</p>
Biodiversity, Land Degradation, and Climate Change.	<p>Financial resources Laboratory equipment and facilities. Information technologies (computers, internet, geographic information systems, software). Trained personnel. Land and sea transportation capability. Public awareness and outreach. Monitoring and data collection tools (e.g. wildlife, temperature, rainfall, soil moisture).</p>
Biodiversity	<p>Political commitment Establishment of zoning and development controls. Protection of sensitive habitats. Sustainable tourism.</p>

Climate Change.	<p>Institutional strengthening of environmental agencies.</p> <p>Coastal protection.</p> <p>Strengthening of disaster management capabilities.</p> <p>Development control.</p> <p>Sustainable energy (renewable resources and energy conservation).</p>
Land Degradation	<p>Development control and zoning.</p> <p>Agricultural development including linkages to tourism.</p> <p>Institutional strengthening.</p> <p>Development Control.</p>
Biodiversity, Land Degradation and Climate Change.	<p>Public awareness</p> <p>Financial resources.</p> <p>Available trained manpower for preparation and dissemination of media programmes.</p> <p>Greater incorporation of environmental concerns into educational syllabus.</p> <p>Information communications technologies</p>
Biodiversity, Climate Change, and Land Degradation	<p>Enforcement of laws</p> <p>Availability of enforcement officers.</p> <p>Adequate sanctions.</p> <p>Sensitized and committed enforcement officials.</p> <p>Political commitment to environmental management including coordination .</p>

B. Institutional Needs

Sector	Capacity Needs
Biodiversity	<p>Technical and Administrative Procedures</p> <p>Biodiversity monitoring and reporting programmes.</p> <p>Biosafety trade and notification regime.</p> <p>National report to the convention secretariat.</p> <p>Environmental Impact Assessment</p> <p>Project preparation, management and reporting.</p> <p><i>in situ</i> and <i>ex situ</i> biodiversity management.</p>

<p>Climate Change</p> <p>Land Degradation</p>	<p>Exchange of information (biodiversity information clearing-house).</p> <p>Climate monitoring programmes (temperature, rainfall, wind, sea-level and temperature, habitat monitoring etc).</p> <p>Regional and global climate observation systems.</p> <p>Greenhouse gas inventory management process.</p> <p>Climate change vulnerability and adaptation assessment.</p> <p>Climate change mitigation analysis.</p> <p>National report to the convention secretariat.</p> <p>Land capability assessment</p> <p>National and regional land degradation action programmes.</p> <p>Land degradation and desertification information collection, analysis and exchange.</p> <p>Regional implementation annex for Latin America and the Caribbean.</p> <p>National report to the convention secretariat.</p>
<p>Biodiversity, Climate Change, and Land Degradation</p>	<p><i>Integrated work programmes</i></p> <p>Administrative and political commitment to coordinated action.</p> <p>Availability of coordinating mechanisms e.g. NCM.</p> <p>Human resources.</p> <p>Technical support</p> <p>Financial resources.</p> <p>Necessary technical equipment including information technologies.</p>
<p>Biodiversity, Climate Change and Land Degradation.</p>	<p><i>Human Resource Development</i></p> <p>Short-term technical training (external).</p> <p>University training.</p> <p>Personnel evaluation and assessment processes.</p> <p>Employee reward and incentive programmes.</p> <p>Sensitization and orientation workshops (national).</p> <p>Participation in regional and international</p>

	conferences and workshops Functioning organizational information and communication systems.
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C. Individual Needs

Sector	Capacity Needs
Biodiversity, Climate Change, and Land Degradation	<i>Improved employment conditions</i> Revised mandates for environmental action. Improved working conditions. Enhanced training. Opportunities for staff development. Employee reward and incentives programmes.
Biodiversity, Climate Change, and Land Degradation.	<i>Improved information and communication flows</i> Availability of information technologies. Joint inter-agency workshops and seminars. Strengthened sectoral data-bases.
Biodiversity	<i>Training and human resource development</i> Ecosystem management Sustainable use Public consultation and policy dialogue <i>In situ</i> and <i>ex situ</i> conservation Genetic resource research Biosafety regulation Environmental law Environmental economics Project management
Climate Change	Meteorology and Climatology

<p>Land Degradation.</p>	<p>Greenhouse gas inventory preparation. Climate Vulnerability assessment. Climate change adaptation tools and techniques. Energy policy and economics. Public consultation and policy dialogue. Climate modeling. Project management</p> <p>Dryland agriculture. Agricultural extension. Soil and water engineering. Public consultation and outreach. Project management.</p>
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Capacity needs for strengthening synergies in the implementation of the Rio convention instruments covers a range of systemic, institutional and individual requirements. The extent to which success can be achieved in integrating resources and capabilities of these conventions will likely be determined to a great extent by the effectiveness with which these individual, institutional and systemic variables are supportive.

SECTION 8: CONCLUSION

Antigua and Barbuda, like much of the rest of the international community, confronts a number of serious environmental and developmental choices as it seeks to pursue goals of sustainable human development. The existence of various international environmental conventions and instruments has provided Antigua and Barbuda with an opportunity to develop the legal and institutional capabilities for beginning to respond to some of the most pressing environmental concerns affecting the global community. These conventions also impose certain obligations and requirements on small developing States like Antigua and Barbuda that can impose strains on the country's limited financial and human resources.

In order to gain the maximum benefits from these instruments, it is vital that all efforts to effect synergy in the implementation of these conventions are pursued. A number of elements of these conventions – reporting, financial mechanisms, research – provide avenues for cooperation and coordination of efforts in implementation. While substantial constraints exist to these goals, a few simple and inexpensive actions can provide options for improving the level of coordination and integration among the conventions, while at the same time improving overall implementation of the conventions.

Existing arrangements for implementation of these conventions in Antigua and Barbuda already contain opportunities for information exchange and communication as a result of shared use of limited technical resources and through the NCM. In addition to existing arrangements, new legislation establishing an Economic and Social Council with environmental concern as a part of its mandate, as well as a draft umbrella environmental Act, provide opportunities for addressing some of the issues relating to improved environmental management including coordination of environmental management efforts.

APPENDIX 1

List of Persons Consulted

1. Mrs. Cheryl Jeffrey-Appleton, Chief Fisheries Officer, Department of Fisheries.
2. Mr. Philmore James, Senior Fisheries Officer, Department of Fisheries.
3. Mr. Sean Cenac, Planning Officer. Planning Unit. Ministry of Finance and the Economy.
4. Ms. Jennifer Maynard, Liaison Officer, Ministry of Agriculture, Food Production, Environment Division. Ministry of Agriculture, Lands, Environment, National Resources, Agro-Industry & National Parks.
5. Dr. Janil Gore-Francis, Chief Plant Protection Officer, Plant Protection Unit, Ministry of Agriculture
6. Mr. Patrick Jeremiah, Director of Meteorological Services, V.C. Bird International Airport
7. Dr. Brian Cooper, Coordinator, Desertification Action Plan Project. Ministry of Agriculture, Lands, Environment, National Resources, Agro-Industry & National Parks.

APPENDIX 2

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APPENDIX 3

Overview of the UNFCCC, CBD, CCD & Related Instruments

UNFCCC

Article 2 of the UNFCCC establishes that the ultimate objective of the UNFCCC is the stabilization into the atmosphere of concentrations of the gases that cause climate change. The stabilization process should proceed in a manner that would prevent dangerous anthropogenic interference with the climate system and “allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner”. Article 3 establishes a number of principles intended to guide implementation of the convention including sustainable development, the precautionary principle, and the specific needs of developing countries.

The UNFCCC identifies two groups of parties to the convention: industrialized (Annex I) countries primarily responsible for human induced climate change; and developing (Annex II) countries. The convention recognizes that both sets of countries have common but differentiated responsibilities towards the resolution of the climate change problem.

Among the common responsibilities, parties to the UNFCCC are obligated to develop national inventories of greenhouse gas emissions by sources and removal by sinks, as well as to provide additional information pertaining to the implementation of the convention. They are also committed to developing national strategies for adapting to, and mitigating against climate change, and for taking climate change considerations into consideration in their national development planning. Parties are also required to promote sustainable management, conservation and enhancement of sinks of greenhouse gases including forests and other terrestrial and marine ecosystems.

Article 4.2(a) of the UNFCCC provides for the establishment of a financial mechanism for the provision of financial resources. The convention provides for the transfer of financial and other resources from Annex I to non Annex I countries, and stipulates that the extent to which developing countries will be required to meet their obligations under the convention will be dependent on the availability of financial resources.

The UNFCCC recognizes a number of conditions as adversely affecting the vulnerability of countries to respond to climate change. In terms of links to other Rio conventions these include “areas prone to drought and desertification” and “ areas with fragile ecosystems”. The convention provides general provisions for research and systematic observation and education, training and public awareness.

Institutional arrangements established by the UNFCCC include a Conference of Parties (CoP), as well as subsidiary bodies for implementation and for scientific and technological advice.

Under the terms of the UNFCCC, developed countries commit themselves to reduce their emissions of climate change causing greenhouse gases to 1990 levels by 2000. The convention provides that this commitment would remain under review.

Kyoto Protocol to the UNFCCC

Recognition of the need to agree on specific targets for greenhouse gas reductions has led to the Kyoto Protocol of 1997, which provides for the establishment of legally binding commitments to reduce emissions of greenhouse gases from developed countries. The Kyoto Protocol provides for these reductions to be achieved within the commitment period of 2008-2012.

To meet these targets developed countries have various options including the taking of domestic actions, as well as through certain market based tools allowing for reductions jointly with other developed countries or with developing countries in the Clean Development Mechanism. The Kyoto Protocol shares certain institutional arrangements with the UNFCCC, notably the conference of Parties. While agreeing on certain mechanisms substantial negotiations continue with regards to the actual implementation of the details of the Protocol.

The Kyoto Protocol will come into force in the Spring of 2005, having been ratified by the Russian Federation in November 2004.

Convention on Biological Diversity (CBD)

The CBD seeks to provide a comprehensive (ecosystem based) approach to the sustainable use and conservation of the Earth’s biological

resources. Article 1 indicates that the objectives of the convention are “the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources..”. Article 3 of the CBD confirms the right of States to exploit their resources in accordance with their environmental policies, and recognizes State responsibility for ensuring that actions committed within their jurisdiction do not cause environmental damage to other States or to the global commons.

The convention provides various general principles for cooperation in, and sustainable use of, biodiversity. States are required to develop national strategies for conservation and sustainable use of their biodiversity and to integrate such measures into relevant development plans. Parties are to support measures for identification and monitoring of their biodiversity resources, encourage *in situ* and *ex situ* conservation of biodiversity, promote research and training in relevant areas, introduce appropriate environmental impact assessment, and promote and encourage public education and awareness of biodiversity.

Article 15 of the CBD seeks to secure protection of genetic resources, and establishes the rights of the country of origin of genetic material as the principal beneficiary of any exploitation of genetic resources. Article 15 also promotes international cooperation and access to genetic resources for environmentally sound uses. Article 16 recognizes the role of technology in achieving the objectives of the CBD and encourages access to and transfer of technology on concessional and other terms. Article 19 encourages equitable sharing of benefits arising from biotechnology and calls for establishment of a protocol for the safe handling and transfer of biotechnology.

The CBD establishes the role of developed Parties to the convention in providing financial resources to assist developing countries to achieve the goals of the convention. The CBD also establishes a Financial Mechanism to provide funding in relation to implementation of certain matters relating to implementation of the convention.

Article 26 provides that “each contracting Party shall, at intervals to be determined by the Conference of Parties, present.....reports on measures which it has taken for the implementation of the provisions of this convention and their effectiveness in meeting the objectives of this

Convention”. Various institutional structures are established including a Conference of Parties and a subsidiary scientific body.

Cartagena Protocol on Biosafety

The Cartagena Protocol on Biosafety was adopted as a supplementary agreement to the CBD in January 2000. The objective of this protocol is to contribute to ensuring an adequate level of protection in the safe transfer, handling and use of Living Modified Organisms (LMO) resulting from biotechnology that may have adverse effects on the conservation, and sustainable use of biodiversity, taking into account, risks to human health and specifically focusing on transboundary movement.

The Cartagena Protocol establishes procedures to be followed, including advanced informed agreement, to promote safe international trade and movement of LMOs and to prevent unintended release of these organisms into the environment. A Biosafety Clearing House is established to provide for sharing of information among countries. The Protocol encourages stipulations for Risk Assessment and Management, public participation, and for monitoring and evaluation procedures.

United Nations Convention to Combat Desertification (UNCCD)

Article 2 of the UNCCD provides that the objective of the agreement is to combat desertification and mitigate the effects of drought in countries experiencing serious desertification and drought particularly in Africa. A number of principles, including participation of populations and local communities, partnership and international cooperation, and recognition of the special needs of least developed countries. A number of annexes provide regional implementation programmes including guidelines for action plans, and suggested.

Article 4 identifies a number of general obligations to be followed by States In implementing their responsibilities under the UNCCD. This includes adopting an integrated approach to addressing drought and desertification. Article 5 outlines a number of policies and measures that countries affected by desertification should pursue including giving due priority to the problems, public awareness, and tackling root socio-economic causes of desertification and land degradation. Article 6 provides that developed countries would actively support and provide substantial financial resources to combat desertification. Article 7 establishes that priority would be given to affected African countries.

Article 8 provides that “the Parties shall encourage the coordination of activities carried out under this Convention and, if they are Parties to them, under other relevant international agreements, particularly the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity, in order to derive maximum benefit from activities under each agreement while avoiding duplication of effort. The Parties shall encourage the conduct of joint programmes, particularly in the fields of research, training, systematic observation and information collection and exchange, to the extent that such activities may contribute to achieving the objectives of the agreements concerned”.

Parties to the CCD are required to prepare national, and where appropriate regional, action programmes. Regional annexes to the convention provide details as to the information and contents of the action programmes. Other articles emphasize technical and scientific cooperation including information exchange, research and development, technology transfer, and capacity building.

APPENDIX 4

Strengthening Environmental Information Dissemination

Problem

Information relevant to environmental management is compartmentalized within government departments and is not readily accessible to support environmental management. Additionally the need exists to enhance public access to environmental information in order to increase public awareness of sustainable development concerns and issues.

Development Objective

Threats to environmental sustainability are reduced and opportunities for sustainable development enhanced as stakeholders receive adequate information to sensitize them to policies, technologies and measures for promoting development through responsible environmental management and stewardship.

Project Objective

Provision of necessary support to the Environment Division to enable it to strengthen its ability to sensitize national stakeholders on matters relating to greater synergies in the implementation of the Rio conventions

Outputs

1. Increased awareness of environmental conventions (including synergies) among senior technical and managerial level policy makers in public and private sectors.
2. Increased awareness of select target groups (e.g. schoolchildren, media, disaster response personnel, building contractors) of climate change issues.
3. Increased availability of information on environmental management for Antigua and Barbuda through establishment of virtual and on-the-ground environmental management information centers.

Barriers

1. Availability of financial resources.
2. Limited technical capacities.
3. Inadequate information technologies.

Status

1. The Environment Division presently implements various public awareness and capacity building activities.
2. Proposed and ongoing similar activities include biodiversity and climate change information clearing houses, a web site maintained and managed by the Environment Division, and an official Government of Antigua and Barbuda web-site and email service.

Activities

1. Establishment of environmental information clearing house.
2. Technical workshops and seminars.
3. Establishment of national environmental management web site.
4. Preparation and distribution of multi-media material.

Assumptions

1. Availability of financial resources.
2. Administrative commitment.
3. Availability of technical expertise.

Indicative Costs¹¹

Establishment of information clearing house (equipment, software, short-term training)	– US\$ 15,000.00
Technical workshops and seminars (coffee breaks, logistics, equipment rental etc) ¹²	– US\$6,000.00
Establishment of web-site (preparation of material, web-hosting, short term expertise, technical support)	– US\$8,000.00
Preparation and distribution of multi-media material (CD:Rom, printed material, posters etc)	– US\$6,000.00
Total	– US\$35,000.00

¹¹ Personnel costs for running the system are not included. These would likely require at minimum one person for the maintenance and administration of the site.

¹² Based on ten workshops aimed at specific target groups (e.g. agriculture, tourism, forestry, government technocrats and schoolchildren).