# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Content</td>
<td>1</td>
</tr>
<tr>
<td>Acronyms and Abbreviations</td>
<td>4</td>
</tr>
<tr>
<td>Executive Summary</td>
<td>6</td>
</tr>
<tr>
<td>CHAPTER 1: GRENADA AND THE UNITED NATIONS CONVENTION TO COMBAT DROUGHT AND DESERTIFICATION</td>
<td>12</td>
</tr>
<tr>
<td>1.1 The United Nations Convention to Combat Drought and Desertification</td>
<td>12</td>
</tr>
<tr>
<td>1.2 The Caribbean Small Island Developing States Programme and the Enabling Environment</td>
<td>14</td>
</tr>
<tr>
<td>1.3 Grenada’s Response to the UNCCD</td>
<td>15</td>
</tr>
<tr>
<td>1.4 Data Collection Methods</td>
<td>17</td>
</tr>
<tr>
<td>1.5 Scope of the Study</td>
<td>18</td>
</tr>
<tr>
<td>1.6 Desertification and Sustainable Land Management</td>
<td>18</td>
</tr>
<tr>
<td>CHAPTER 2: CONTEXT AND OBJECTIVES</td>
<td>22</td>
</tr>
<tr>
<td>2.1 Why Seek to Manage Land Sustainably?</td>
<td>22</td>
</tr>
<tr>
<td>2.2 Context of the Action Programme</td>
<td>22</td>
</tr>
<tr>
<td>2.3 Goals and Objectives of Grenada’s NAP</td>
<td>23</td>
</tr>
<tr>
<td>CHAPTER 3: STATUS AND ASSESSMENT OF LAND MANAGEMENT IN GRENADA</td>
<td>25</td>
</tr>
<tr>
<td>3.1 Overview of Land Management Issues in Grenada</td>
<td>25</td>
</tr>
<tr>
<td>3.2 Analysis of Threats to Grenada’s Land Resource</td>
<td>28</td>
</tr>
<tr>
<td>3.2.1 Land Use Planning</td>
<td>28</td>
</tr>
<tr>
<td>3.2.2 Urban Development and Construction</td>
<td>28</td>
</tr>
<tr>
<td>3.2.3 Agriculture</td>
<td>29</td>
</tr>
<tr>
<td>3.2.4 Agro-chemical usage and abuse</td>
<td>31</td>
</tr>
<tr>
<td>3.2.5 Waste Disposal</td>
<td>31</td>
</tr>
<tr>
<td>3.2.6 Mining</td>
<td>32</td>
</tr>
<tr>
<td>3.3 Recent Developments</td>
<td>33</td>
</tr>
<tr>
<td>CHAPTER 4: OVERVIEW OF POLICY AND INSTITUTIONAL CAPACITY FOR LAND MANAGEMENT IN GRENADA</td>
<td>34</td>
</tr>
<tr>
<td>4.1 Overview of National Capacity</td>
<td>34</td>
</tr>
<tr>
<td>4.2 Policy, Legislation and Administrative Overview</td>
<td>34</td>
</tr>
<tr>
<td>4.3 Land Use and Land Use Policy</td>
<td>35</td>
</tr>
<tr>
<td>4.4 Agricultural Policy</td>
<td>36</td>
</tr>
<tr>
<td>4.5 Physical Planning and Development Policy</td>
<td>37</td>
</tr>
<tr>
<td>4.6 Forest Policy</td>
<td>37</td>
</tr>
<tr>
<td>4.7 Legislation Issues</td>
<td>38</td>
</tr>
<tr>
<td>4.8 Biosafety</td>
<td>41</td>
</tr>
<tr>
<td>4.9 Research</td>
<td>41</td>
</tr>
<tr>
<td>4.10 Monitoring and Impact Assessment</td>
<td>41</td>
</tr>
<tr>
<td>4.11 Public Awareness and Education</td>
<td>42</td>
</tr>
<tr>
<td>4.12 Incentive Measures</td>
<td>43</td>
</tr>
</tbody>
</table>
CHAPTER 5: THE NATIONAL VISION OF LAND MANAGEMENT  44
   5.1 The Value/Opportunities of Effective Land Management  44
   5.2 National Targets for Land Management  44
   5.3 The Approach to Attaining the Land Management Target  44
   5.4 The Guiding Principles of the Programme  45
      5.4.1 The Participatory Approach  45
      5.4.2 The Cyclical/Adaptive Approach  46
      5.4.3 The Ecosystem Approach  47
      5.4.4 The Precautionary Approach  48
   5.5 Roles of Stakeholders in Land Management  48
      5.5.1 Public Agencies  48
      5.5.2 The Private Sector  49
      5.5.3 Regional Bodies  49
      5.5.4 The General Public  49

CHAPTER 6: PROPOSED PROGRAMMES FOR LAND MANAGEMENT  50
   6.1 Programme Areas  50

CHAPTER 7: IMPLEMENTATION PROGRAMME  86
   7.1 Institutional Requirements for Implementing the Programme  86
   7.2 Mobilization of Financial and Technical Assistance  86
   7.3 Ensuring Long-Term Financing and Sustainability  86

CHAPTER 8: MONITORING, EVALUATION AND REPORTING  87
   8.1 Monitoring  87
   8.2 Evaluation  87
   8.3 Reporting  87

Bibliography  88
Appendix 1: Members of the National Coordinating Body  89
Appendix 2: List of Persons and Organizations Consulted  90
Appendix 3: Persons and Organizations Represented at the Consultation Workshops  91
Appendix 4: Policies and Legislation that Influence Land Management In Grenada  93

List of Boxes  3
List of Figures  3
List of Maps  3
Plates  3
LIST OF BOXES

Box 1: Key Thematic Areas of the Convention to Combat Desertification and Drought 13

Box 2: Benefits of the Land 22

Box 3: The General Objectives for the Formulation of a National Land and Land Use Policy 24

Box 4: Objectives of Grenada’s National Action Programme Under the UNCCD 25

LIST OF FIGURES

Figure 1: The National Land Management Planning Cycle 47

LIST OF MAPS

Map 1: Map of Grenada 15

Map 2: Land Use Concepts Applied In Grenada 30

PLATES

Plate 1: A Participant Makes a Point at the First Consultation Meeting 17

Plate 2: Participants Assembled in a Working Group During the First Consultation Meeting 17

Plate 3: Physical Structures Occur Largely Along Mountainous Areas in Grenada 25
# ACRONYMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARD</td>
<td>Agency for Reconstruction and Development</td>
</tr>
<tr>
<td>ART</td>
<td>Agency for Rural Transformation</td>
</tr>
<tr>
<td>BPOA</td>
<td>Barbados Programme of Action</td>
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<tr>
<td>CDB</td>
<td>Caribbean Development Bank</td>
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<tr>
<td>DFID</td>
<td>Department for International Development</td>
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<td>Drought</td>
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<td>EHP</td>
<td>Emergency Housing Policy</td>
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<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<tr>
<td>FAO</td>
<td>Food and Agricultural Organisation</td>
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<tr>
<td>FD</td>
<td>Forestry Division</td>
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<tr>
<td>FNPD</td>
<td>Forestry and National Parks Department</td>
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<tr>
<td>GM</td>
<td>Global Mechanism</td>
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<tr>
<td>GoG</td>
<td>Government of Grenada</td>
</tr>
<tr>
<td>GOGCP</td>
<td>Government of Grenada, Carriacou and Petit Martinique</td>
</tr>
<tr>
<td>GRENCODA</td>
<td>Grenada Community Development Agency</td>
</tr>
<tr>
<td>GREP</td>
<td>Grenada Rural Enterprise Project</td>
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<tr>
<td>HYV</td>
<td>High Yielding Varieties</td>
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<tr>
<td>IPM</td>
<td>Integrated Pest Management</td>
</tr>
<tr>
<td>LAC</td>
<td>Latin America and the Caribbean Management Unit</td>
</tr>
<tr>
<td>MOALFF</td>
<td>Ministry of Agriculture, Lands, Forestry and Fisheries</td>
</tr>
<tr>
<td>MOF</td>
<td>Ministry of Finance</td>
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<tr>
<td>MOHE</td>
<td>Ministry of Health and the Environment</td>
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<tr>
<td>NAP</td>
<td>National Action Plan</td>
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<tr>
<td>NAWASA</td>
<td>National Water and Sewage Authority</td>
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<td>NBSAP</td>
<td>National Biodiversity Strategy and Action Plan</td>
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<td>NCSA</td>
<td>National Capacity Self-Assessment</td>
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<td>National Environmental Action Plan</td>
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<tr>
<td>NEP</td>
<td>National Environment Plan</td>
</tr>
<tr>
<td>NFAP</td>
<td>National Forestry Action Programme/Plan</td>
</tr>
<tr>
<td>NFDP</td>
<td>National Physical Development Plans</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-governmental organization</td>
</tr>
<tr>
<td>NPEDP</td>
<td>National Physical and Environmental Development Plans</td>
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<tr>
<td>NSC</td>
<td>National Steering Committee</td>
</tr>
<tr>
<td>OAS</td>
<td>Organization of American States</td>
</tr>
<tr>
<td>OECS</td>
<td>Organization of Eastern Caribbean States</td>
</tr>
<tr>
<td>OECSNRMU</td>
<td>Organization of Eastern Caribbean States Natural Resources</td>
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<tr>
<td>PISLM</td>
<td>Partnership Initiative on Sustainable Land Management</td>
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<tr>
<td>ROLAC</td>
<td>Region of Latin America and the Caribbean</td>
</tr>
<tr>
<td>SDC</td>
<td>National Sustainable Development Council</td>
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<tr>
<td>SDC</td>
<td>Sustainable Development Committee</td>
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<td>SIDS</td>
<td>Small Island Developing States</td>
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<tr>
<td>SLM</td>
<td>Sustainable Land Management</td>
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<tr>
<td>UNCBD</td>
<td>United Nations Convention on Biodiversity</td>
</tr>
<tr>
<td>UNCCD</td>
<td>United Nations Convention to Combat Desertification and/or</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>UNCED</td>
<td>United Nations Conference on Environment and Development</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>UNEP</td>
<td>United Nations Environment Programme</td>
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<tr>
<td>UNFCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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EXECUTIVE SUMMARY

Continued and growing land degradation and a recognition of the importance of land to a number of economies have contributed to the placing of the need for effective land management on the global agenda. Accordingly the United Nations Convention to Combat Drought and Desertification (UNCCD) was adopted by the United Nations General Assembly on 17th June 1994 and came into force on 26th December 1996. Countries agreed to develop (or adapt existing) strategies, plans or programmes for the conservation and sustainable use of land, and to integrate land management into the agenda of various sectors and sub-national levels of administration and planning.

Land management is recognized as essential for Grenada. On 27th May 1997 Grenada ratified the UNCCD. Since that time the Island has established its focal point in the Ministry of Agriculture, Forestry Division that is directly under the responsibility of the Forestry Officer that hosted its awareness workshop in 2001. The workshop revealed significant inadequacy in knowledge and information relating to the components of land management and reported significant levels of threat to the Island’s land resources. The likely increase in these threats, and the emergence of new threats, arise out of the imperative for development. While the development imperative is understandable, its successful implementation will be configured by the resource base, on which it depends. The use of land must therefore be carried out with the responsibility and be accompanied by efforts to protect representative samples of the component of that tract of land. Action would be necessary at all levels to ensure this.

The National Action Programme (NAP) is a product of national policy to elevate concern for land management to the level of planning and action. It recognizes land management as an important national asset that offers the country manifold economic options.

The NAP is intended to be consistent with the general direction of the Island’s National Development Strategy as both documents will harmonize in respect of matters to place and use of land resources for development activities. The Programme is intended to promote both the conservation and the responsible use of land resource. It comprises a number of programme areas under which various actions are identified for execution.

All planning and management efforts that either use or impinge on the land resource should, as far as possible, consider and be based on four approaches/principles:

- The Participatory Approach
- The Cyclical/Adaptive Planning Approach
- The Ecosystem Approach
- The Precautionary Principle

In the Programme, a number of projects or other activities are clustered under individual programme areas in a five (5) year cycle. Many of the actions identified in the Programme will require additional financial resources and technical support, both from external sources and from local inputs. The majority of the actions are project-oriented, but are non-project in nature.
FOUNDATION PROGRAMME

Programme Area 1: Mobilization of Financial and Technical Resources

Given the present status of Grenada’s human and financial resources significant additional financial and technical resources will be required to develop the capacity necessary to elaborate the UNCCD and implement the Action Programme. The achievement of this state will require the mobilization of considerable financial and technical resources to develop the required capacity; hence this Programme Area is highly critical for the implementation of the entire Programme and should be given absolute priority in the early stages of the Programme.

Programme Area 2: Human Resources and Institutional Capacity Building

Grenada’s public, private and NGO sectors experience shortages of expertise in the areas relevant for effective land management. Institutional capacity is generally weak throughout the sectors that make up this area. Together they combine to present a serious obstacle to the achievement of national goals relating to land management.

The programme will address these weaknesses by developing human resources and institutional capacity for the management of land. This capacity development will be conducted at the central and regional levels and will be complemented by the programme on public awareness and education, as well as career guidance efforts. A more fundamental purpose of the activities under this programme area is to help ensure that capacity is available for the implementation of the Action Programme.

Programme Area 3: Establishing an Enabling Policy Framework for Land Management

Prior to the passing of hurricane Ivan the growth and development of the agricultural sector had been constrained by an inadequate policy framework and the new WTO agreements especially the liberalization of markets, and sanitary and phyto-sanitary measures. The destruction of the agriculture sector by hurricane Ivan has exacerbated the situation and is further likely to negatively impact on the agricultural sector. It is therefore necessary that the right policy framework be provided to encourage agricultural practices that conserve the land resource.

As a result, this component will look to encourage the pursuance of projects to correct the policy dimension, such as formulation of land and agricultural policies consistent with the goal of sustainable land management.

Programme Area 4: Improving the Agricultural Sector

The agricultural sector is said to be faced with a number of challenges that restrict the ability of policymakers to modernise the sector and reduce the negative externalities resulting from the absence of effective land use planning. The challenges include weak institutional framework, the absence of adequate and appropriate information to support planning and policy decisions and the lack of coordination among local, regional and international institutions resulting in a duplication of activities.
This programme aims to seek to encourage the use of indigenous species for the re-vegetation of critical watershed, to rehabilitate watersheds and improve the sustainable livelihoods of the populace that depend on the land.

Programme Area 5: Research and Information

Lack of local expertise and weak institutional and financial capacity have contributed to a generally low level of research undertaking locally. Also, the identification of areas for research has not been conducted in any systematic way, so that many of the national priorities are still to be addressed. This weakness in research achievement has contributed to a low level of information on Grenada’s land resource. Research and information are integral to planning, management, identification and monitoring and are identified as a priority area. The programme will set priorities for land related research, indicators for monitoring, and mechanisms for the collection, analysis and dissemination of information.

Programme Area 6: Consolidation of the Policy, Legal and Administrative Framework

The policy framework on land management at the sectoral level is incomplete, with policy absent in many areas. The legislation relating to land management is old, incomplete in coverage, and inadequate in so far as recent developments in the field are concerned. The policy and legal foundations are basic to the development of other initiatives and therefore would require to be addressed as a matter of priority.

The programme involves actions that will address protection and compensation of local knowledge, access and benefit sharing of public lands, the development of land and land use policy and agricultural policies and projects.

Programme Area 7: Public Awareness and Education

Levels of public awareness in Grenada are fairly high when viewed comparatively with other Caribbean Islands. However, there is still some way to go and unless these are addressed, will pose a threat to the realization of the general objectives related to land management. Such awareness is needed, not only for the wider adoption of the conservation ethic, but also for reducing threats to land resources, and for encouraging human resources development in the area.

The programme will support activities leading to the preparation of instructional material, formal and informal training of citizens, the training of trainers and career guidance exercises.

Programme Area 8: Incentive Measures and Alternatives

The use of incentive measures is complementary to legislative and administrative measures for the conservation and sustainable utilization of land resources. Whereas incentives can be used to encourage conservation of land resources, some policies may serve as perverse incentives contributing to land degradation. On the other hand, the
development of viable economic alternatives can serve to reduce poverty-based threats to the land resource.

The programme contains initiatives leading to the review of national policies relating to land management, the identification and removal of perverse incentives, and an examination of the possibility of using incentive measures as a mechanism to encourage responsible use of land. It will also lead to the identification of economic alternatives to replace poverty-driven threats to land management.

Programme Area 9: Monitoring, Evaluation and Reporting of the Implementation of Programme Areas 1 thru 8

The successful implementation of the plan and its appropriateness to changing circumstances and needs will be enhanced by monitoring and evaluation of implementation and effectiveness. Monitoring and evaluation are seen as essential parts of the cyclical and adaptive planning approach.
## SUMMARY OF ACTIONS AND RECOMMENDATIONS

<table>
<thead>
<tr>
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<th>Implementing Agency</th>
<th>Commencement Date (Years)</th>
<th>Estimated Budget (US$)</th>
</tr>
</thead>
<tbody>
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<td><strong>Programme Area 1: Mobilization of Financial and Technical Resources</strong></td>
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<td>1. Recruiting Resource Mobilization Specialist</td>
<td>NCB</td>
<td>X</td>
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<td>2. Mobilization of financial resources from the regional and international donor community</td>
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<td>3. Mobilization of financial and technical resources from national inputs</td>
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<td></td>
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<td>NCB</td>
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<td>1. Formulating a National Land and Land Use Policy</td>
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<td>2. Formulating a National Agriculture Policy</td>
<td>MOALFF</td>
<td>X</td>
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<td>3. Improving the Institutional Arrangement for the Implementation of the National Land and Agricultural Policies</td>
<td>MOALFF</td>
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<td><strong>Programme Area 4: Improving the Agricultural Sector</strong></td>
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<td>1. Develop programme to improve output and productivity from the agricultural sector</td>
<td>MoALFF</td>
<td>X</td>
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<td>2. Rehabilitating and Protecting the critical watersheds</td>
<td>MOALFF &amp; Communities</td>
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<td><strong>Programme Area 5: Research and Information on Land Related Issues</strong></td>
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<td>1. Preparation and implementation of a prioritized programme of land related research for Grenada</td>
<td>NCB, SDC, Private Sector, Communities “</td>
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<td>2. Preparation and maintenance of a national database on land related issues</td>
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<td><strong>PROGRAMMED AREA 6: Consolidation of the Policy, Legal and Administrative Framework</strong></td>
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<td>1. Developing a legal regime for promoting the protection, compensation for local</td>
<td>NCB and</td>
<td>X</td>
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2. Comprehensive review and updating of national legislation relating to land access and benefit sharing

3. Comprehensive review and upgrading of national legislation on natural resources

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<tr>
<td>2. Training of Teachers to Infuse Land Manage Issues into their Curricula</td>
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<tr>
<td>3. Developing non-formal methods of promoting land resource education and awareness</td>
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<tr>
<td>1. Review of incentives and disincentives for conservation and sustainable use of land and the identification of sustainable economic alternatives to activities but threaten their effective management</td>
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<th>Attorney’s General Chambers</th>
<th>Sector agencies and NCB</th>
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<tr>
<td>2. Comprehensive review and updating of national legislation relating to land access and benefit sharing</td>
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<td>3. Comprehensive review and upgrading of national legislation on natural resources</td>
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<td>NCB and NGO</td>
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<td>NCB, NGOs and Sector Agencies</td>
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| Programme Area 8: Incentive measures | NCB, MoF and Sector Agencies | X | - |

| Programme Area 9: Participatory Monitoring, Evaluation and Reporting of the implementation of Programme Areas 1 to 8 above | NCB | X | 130,000 |
CHAPTER 1: GRENADA\textsuperscript{1} AND THE UNCCD

1.1 The Convention To Combat Desertification And Drought

The United Nations Convention to Combat Desertification and Drought (UNCCD) is one of the Conventions that emerged out of the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992. Further, the UNCCD is the result of a two-year negotiating process under the auspices of the United Nations.

After UNCED, an intergovernmental negotiating committee was established and mandated to prepare this international instrument by June 1994. The Convention was adopted by the United Nations General Assembly on 17\textsuperscript{th} June 1994 and came into force on 26\textsuperscript{th} December 1996, 90 days after it had been ratified by 50 countries. Currently, there are more than 170 parties from around the world including all 14 independent states of CARICOM and all 33 states of the Latin American and Caribbean (LAC) region.

As stated in Article 2 of the Convention, one of the objectives is “to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through effective action at all levels, supported by international corporation and partnership arrangements, in the framework of an integrated approach with a view to contributing to the achievement of sustainable development in the affected areas.” The Convention therefore serves as an international framework instrument for signatory countries to develop actions and take steps to achieve and implement objectives of the Convention in their own countries. Furthermore, it provides an international legal basis for cooperation among State parties and other international entities in the fight against desertification and thereby allows for the transfer of resources from where they are to where they are most needed in this struggle which is of universal concern.

**Article 4** of the Convention calls on States to develop national or adapt existing programmes to combat desertification and drought. These programmes have three main objectives. These are:

- To be holistic
- To seek to integrate all necessary stakeholders in the process
- To engage the important stakeholders in a participatory manner so as to provide ownership and continuity of the programme

Additionally, it commits contracting parties to the integration of sustainable land management into relevant sectoral and cross-sectoral plans, programmes and policies, seeking to promote synergies and complementarities as far as practicable.\textsuperscript{2} The Convention advocates not only a modification of current approaches to viewing and using

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\textsuperscript{1} For the purposes of this project and unless otherwise stated, the State of Grenada will include the islands of Carriacou and Petite Martinique.

\textsuperscript{2} For example, reversing land degradation and alleviating poverty are integrally linked as both involve improving food security, building human capacity and mobilizing non-governmental organizations (NGOs).
the land resource, but the taking of new initiatives to bring about the realization of its main objective.

A determining factor of the extent to which a country could implement the additional obligations under the Convention is the availability of additional capacity and resources. This is a need resulting directly from the Convention and applies to both developed and developing countries alike. In the case of developing countries, the Convention recognizes the need for the availability of new and additional financial resources and calls on developed country Parties to provide such resources to enable developing country Parties to meet the incremental costs to implement their obligations under the Convention. This requirement is based on the recognition of the limited financial wherewithal of developing countries. The obligation of developed country Parties extend from the provision of financial resources to facilitating technology transfer, whereas those of developing countries extend to the creating a suitable enabling national environment that may include, *inter alia*, the devising of financial instruments suited to local needs or the promotion of research activities, drought contingency plans, and improved early warning systems. Additionally, national governments are expected to make commitments to remove obstacles and provide support by enacting new laws, rationalizing existing laws and/or strengthening existing legislation that encourage sustainable utilization of the land resource.

The Convention allows for flexibility in its implementation within States in accordance with national circumstances. It also provides for the exchange of information, expertise and experiences in areas relevant to the Convention. A comprehensive assessment conducted by the Parties in 2000 and 2001 emphasized the establishment of national information systems to enhance information flow.

The articles of the Convention address a number of themes relevant to the objectives of the Convention. To these have been added a number of other themes that emerged from the national consultation workshops and discussions held. **Box 1** enumerates these thematic areas.

<table>
<thead>
<tr>
<th>Box 1: KEY THEMATIC AREAS OF THE CONVENTION TO COMBAT DESERTIFICATION AND DROUGHT</th>
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<tbody>
<tr>
<td>Policy and planning for sustainable land management at the national, sectoral and other levels</td>
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<td>• Identification and monitoring of land degradation</td>
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<td>• Conduct impact studies on degraded lands</td>
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<td>• Have a participatory approach</td>
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<td>• Legislative and institutional framework</td>
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<td>• Resource Mobilization and coordination</td>
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<td>• Linkages and synergies with the other Conventions</td>
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<td>• Measures for rehabilitating degraded lands and for early warning systems</td>
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<td>• Drought and desertification monitoring and assessment</td>
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<td>• Access to appropriate technology, knowledge and know-how</td>
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<td>• Provision of incentives measures</td>
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<td>• Public education and awareness</td>
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<td>• Research and technology transfer</td>
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<td>• Land use planning</td>
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<td>• Linkages, participation and collaboration</td>
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1.2 The Caribbean Small Island Developing States Programme And The Enabling Environment

To advance the implementation of this Convention along with the United Nations Convention on Biodiversity (UNCBD) and the United Nations Framework Convention on Climate Change (UNFCCC) Decision 4 of the 14th Meeting of the Forum of Ministers of the Environment of Latin America and the Caribbean for Sustainable Development held in Panama in November 2003 called for the establishment of the Caribbean Small Inland Developing States (SID)3 Programme to facilitate the further implementation of these Conventions under the Barbados Programme of Action (BPOA). To assist this process, the Meeting also proposed the establishment of a South-South Cooperation Programme between LAC and Caribbean SIDS that will, inter alia, facilitate the transfer of technology to assist Caribbean SIDS in the elaboration of their various programmes under the BPOA. As such, a Ministerial Support Group of the Forum of Ministers was established under the Chairmanship of Chile.

The First Meeting of the Support Group was held in Havana Cuba from 18 – 19 October 2004. At this meeting the partners identified possible areas of collaboration that included sustainable land management, renewable energy, with particular respect to generation of energy from biomass, and more specifically from sugarcane; water resource management with specific reference to coastal aquifers, bio-safety, trade and the environment and integrated management of the Caribbean Sea. As such, at a Task Force Meeting for the Partnership Initiative on Land Degradation and Sustainable Land Management and the Extended Task Force Meeting of Participating Agencies and Latin American Countries for Enhancing South-South Cooperation between Latin American and Caribbean Countries and Caribbean SIDS in Barbados in May/June 2005, the parties sought to concretized areas in which Caribbean SIDS could benefit from South-South Cooperation, inclusive of land degradation and sustainable land management.

Further, at an earlier meeting of the Caribbean Sub-Regional Workshop on Land Degradation held in Port-of-Spain, Trinidad on 3 – 6, February, 2005 a decision was taken to establish a Partnership Initiative on Sustainable Land Management (PISLM) in support of the implementation of the UNCCD.

The Partnership Declaration of Caribbean SIDS adopted by the Caribbean Sub-Regional Workshop on Land Degradation, called for the establishment of an Interim Sub-regional Task Force comprised of representatives from Focal Point States, the Global Mechanism of the UNCCD, UNEP and other strategic partners. The PISLM is led by the GM/UNCCD and is intended to translate objectives of the UNCCD into action. Furthermore, it seeks to include a number of partners, inclusive of UNEP, FAO, the CARICOM Secretariat, University of the West Indies, civil society including RIOD, GTZ and Caribbean SIDS to ensure complementarity and synergy. As such, the PISLM is being formulated as an integral element of the Caribbean SIDS programme (UNEP/ROLAC, 2003).

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3 This term is used to describe both small island and low-lying coastal developing states.
1.3 Grenada’s Response to the UNCCD

Grenada, located within the Caribbean Sea (Map 1) became a party of the UNCCD on the 28th May 1997. Since that time, various actions have been taken by the Government of Grenada in pursuant of its obligations under the Convention. Furthermore, recent policies and practices in Grenada are leading to the building of a tradition in support of participatory decision-making and policy to effectively manage the Island’s land resources.

Map 1: Map of Grenada
At the national level the Island established its focal point in the Ministry of Agriculture, Forestry Division and is directly under the responsibility of the Forestry Officer. The focal point is responsible, inter alia, for maintenance of direct communication between the Convention’s Secretariat and the Government of Grenada, and for the coordination, planning and supervision of all UNCCD related activities at the national level. However, at the national level, the slothfulness in setting up a national coordinating body, as mandated under the Convention for its elaboration and implementation, affected the Island’s ability to advance its efforts in actualizing its commitments under the UNCCD. However, this body was established in September 2005 (Appendix 1).

Since the establishment of the focal point office, a number of activities aimed at the realization of the objectives at the national level have been undertaken. For example, during the period July 9 – 12, 2001 the country held its national awareness seminar on the Convention in the three (3) islands, i.e., Grenada, Carriacou and Petite Martinique. Government agencies, the private sector, non-government organizations, as well as individuals contributed to this event. The main objectives of this event were:

- To create national awareness of the UNCCD and land degradation and land management issues in Grenada
- To lay the guidelines for the development of action programmes to combat land degradation on the Island
- To identify priority areas for intervention and arrive at common agreement in terms of how best to address the issues identified
- To propose the composition of the national coordinating body (NCB) that will elaborate the process.

Also, the Island has sought to insert the importance of land management in a variety of its plans for the future development of the Island, have enacted some laws that aim in some way at effective land management and is in the process of developing a land policy. While the importance of these early steps cannot be overstated, the portion of the task to be completed in respect of involving society, farmers groups and NGOs in the sustainable development of land resources on the Island is a larger one.

At the Regional level Grenada has been attending various meetings with the other 33 country parties in the Latin American and Caribbean region as they face many common problems. These countries have developed a regional action programme that covers inter alia:

1) The development of a regional information system on drought and desertification in the Latin American and Caribbean region
2) A programme for the harmonization of public policies as regards these issues
3) A programme for education and capacity building
4) Programmes covering the involvement of youth and women in the process

Furthermore, the Minister of Health and the Environment of Grenada agreed to the formation of the Caribbean SIDS programme to further implement the BPOA that include better management of land resources to reduce degradation.
At the international level, Grenada has submitted national reports to the Conference of the Parties in 2000 and 2002, but did not submit any in 2004 due to the ravages of Hurricane Ivan. These reports provided a comprehensive of actions taken by the Government of Grenada in its quest to actualize its obligations as regards the Convention.

Grenada presented its National Environmental Policy and Management Strategy (NEP/NEMS) was presented in Mauritius at the United Nations Conference on the Sustainable Development of Small Island Developing States in January 2005. This was a further demonstration of Grenada’s commitment to fulfilling its international obligations.

1.4 Data Collection Methods

1.4.1 Literature review

A number of recent references, such as the draft Agricultural Strategy and Corporate Plan (2005), Silberstein (2003), and FAO documents, were used to develop a discussion of general land management concepts and their implications for Grenada. There is little formal literature concerning land use issues in Grenada. Some texts such as Jessemy’s (1999) provide some discussion of the threats and status of land management on the Island.

Information was also available from various unpublished Government reports but much of this is descriptive rather than a source of quantitative information about the status of land management in Grenada.

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1.4.2 Consultation with institutions, individuals and communities

An attempt was made to have discussions with as many institutional and individual stakeholders as possible while compiling this report. A full list of entities and people who gave their time, shared their knowledge and voice their concerns is shown in Appendix 2. It was felt that a wide variety of stakeholders should be contacted during the data collection period, in order to take advantage of the wide range of expertise and opinions that exist in Grenada. The consultant therefore attended the consultation workshop to rehabilitate five (5) critical watersheds on the Island and hosted two consultation workshops for the elaboration of Grenada’s commitment under the Convention. The process of consultation was useful to begin developing awareness and to help create a feeling of ownership of the National Action Programme. A list of those attending the 1st and 2nd Consultation Workshops is shown in Appendix 3.

1.5 Scope of the study

This study examines the land management issues confronting Grenada, Carriacou and Petit Martinique. Although there are some areas of overlap with other studies, such as the National Biodiversity Strategy and Action Plan, it is necessary to at least refer to these areas in this study as they influence the ability to effectively implement recommended programmes. This study will cover the threats, challenges and opportunities that exist for effective land management, but does not plan on being a panacea for the land management issues that confront Grenada.

1.6 Desertification and Sustainable Land Management Concepts

1.6.1 Desertification

According to Article 1 of the Convention, desertification is defined as:

“land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities.”

Clearly, it has relevance to Grenada having included the concept of land degradation, which if not arrested can indeed lead to desertification.

1.6.2 Land Degradation

Land degradation in the broad sense implies the impoverishment of the land by human activities and by natural causes (such as climate). Land is considered "degraded" when its productivity is diminished.

Land degradation has affected, according to experts on the Island, approximately 50 percent of land resources in Grenada. The rate at which arable land is being lost is increasing and has been worsened by the recent hurricanes, Ivan in 2004 and Emily in
2005 that severely affected the Island’s vegetation among other things. The loss of potential productivity due to soil erosion is severe.\textsuperscript{6}

The understanding of the extent and causes of this phenomenon, however incomplete, is now far too clear for Grenadians to ignore. In some cases the cause could be solely natural or purely human, but it is more likely that both human and natural causes combine to accelerate the process. The issue of land degradation is particularly important in the Grenadian context as a preliminary assessment of the status of lands in the country completed during the National Biodiversity Strategy Action Plan (NBSAP) process found that anthropogenic activities are a major contributing factor to land degradation, and that the natural resource base is under extreme pressure from activities associated with settlement, tourism development, agriculture and forestry. The extent of degradation is most severe on the smaller islands of Carriacou and Petite Martinique, primarily as a result of improper farming practices, but the extent of degradation on each island is dependent on such factors as climate, relief, soil type and land tenure system. Land degradation on the island is said to be manifested through deforestation, biodiversity loss, increased soil erosion, chemical misuse, instability in water supply, decrease in agricultural productivity and poverty. Hence there is an urgent need to have programmes that not only address these, but also seek to establish synergies between other programmes currently being pursued.

### 1.6.3 Drought

Drought is a normal, recurrent feature of climate. It occurs in virtually all climatic zones, but its characteristics vary significantly from one region to another. Drought is a temporary aberration; it differs from aridity, which is restricted to low rainfall regions and is a permanent feature of climate.

Drought is an insidious hazard of nature. It originates from a deficiency of precipitation over an extended period of time, usually a season or more. This deficiency results in a water shortage for some activity, group, or environmental sector. Drought should be considered relative to some long-term average condition of balance between precipitation and evapotranspiration (i.e., evaporation plus transpiration) in a particular area, a condition often perceived as “normal”. It is also related to the timing (i.e., principal season of occurrence, delays in the start of the rainy season, occurrence of rains in relation to principal crop growth stages) and the effectiveness (i.e., rainfall intensity, number of rainfall events) of the rains. Other climatic factors such as high temperature, high wind, and low relative humidity are often associated with it in many regions of the world and can significantly aggravate its severity.

But drought should not be viewed as merely a physical phenomenon or natural event. Its impacts on society result from the interplay between a natural event (less precipitation than expected resulting from natural climatic variability) and the demand people place on water supply. Human beings often exacerbate the impact of drought. Recent droughts in both developing and developed countries and the resulting economic and environmental

impacts and personal hardships have underscored the vulnerability of all societies to this “natural” hazard. Much of this is similarly applicable to the case of Grenada.

1.6.4 Sustainable Land Management

Land provides an environment for agricultural production, but it also is an essential condition for improved environmental management, including source/sink functions for greenhouse gases, recycling of nutrients, amelioration and filtering of pollutants, and transmission and purification of water as part of the hydrologic cycle. The objective of sustainable land management (SLM)\(^7\) is to harmonise the complimentary goals of providing environmental, economic, and social opportunities for the benefit of present and future generations, while maintaining and enhancing the quality of the land (soil, water and air) resource.\(^8\) Sustainable land management is the use of land to meet changing human needs (agriculture, forestry, conservation), while ensuring long-term socioeconomic and ecological functions of the land.

Sustainable land management is a necessary building block for sustainable agricultural development in Grenada, and it is a key element in AGENDA 21’s goal of sustainable development (Chapter 10). SLM combines technologies, policies, and activities aimed at integrating socioeconomic principles with environmental concerns, so as to simultaneously:

- maintain and enhance production (productivity)
- reduce the level of production risk, and enhance soil capacity to buffer against degradation processes (stability/resilience)
- protect the potential of natural resources and prevent degradation of soil and water quality (protection)
- be economically viable (viability)
- be socially acceptable, and assure access to the benefits from improved land management (acceptability/equity)

The attainment of the goal of SLM is faced with a vicious circle of interdependence in the developing countries. For example, there is a whole web of interdependence in the technological, economic, social and political spheres, as well as heterogeneity in ecology and geography. It is therefore suggested that public participation, governmental and non-

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\(^7\) The concept of sustainable land management (SLM) grew out of a workshop in Chiang Rai, Thailand, 1991. This workshop recommended forming an international working group of the International Society of Soil Science (ISSS) to refine the concept, develop a definition, and to recommend a procedure to monitor and evaluate our progress towards sustainable land use systems. A second workshop (Lethbridge, Canada, 1993), emphasized development of indicators of sustainable land management as instruments for monitoring and evaluation. The results of these experiences were brought together at the XVth Congress of Soil Science, Acapulco, 1994. Subsequent international workshops (Cali, Colombia, 1995; Nairobi, Kenya, 1995; Washington, D.C., 1996; Naurod, Germany, 1997) focused on indicators of land quality as part of the suite of required SLM indicators. A third workshop (Enschede, 1997), set the stage for the "next steps" in the development and application of sustainable land management.

governmental entities, bilateral and multinational organizations should join in a comprehensive approach to this problem of national and international dependencies for SLM in Grenada.

1.6.5 **Who Are Responsible?**

An integrated approach to planning the use and management of land resources in Grenada entails the involvement of all stakeholders in the process of decision making on the future of the land, and the identification and evaluation of all biophysical and socio-economic attributes of land units.

A purely sectoral approach to the planning of land resources should be avoided, as this may lead to their irreversible degradation. Concern about the environment has been highlighted by the recent devastation of Hurricanes Ivan and Emily, the increasing socio-economic interdependence of the activities in the Island, and the growing awareness of the value of natural ecosystems. An integrated rather than sectoral approach is a means to prevent or resolve conflicts related to land and water use, as it optimizes the planning process and creates an enabling environment for mediation between, and decision making by, all stakeholders at early stages.

The responsibility for land management lies with various parties: the Government of Grenada, the people of Grenada, and the aid agencies. Private land management organizations can serve as “watchdogs” and pressure groups raising consciousness of the public and politicians about the Convention and SLM practices. Further, the Convention makes provision for a larger share of responsibility to be vested in the people, communities and governments. The main argument is that the cycle of rapidly growing populations, increasing poverty, and environmental degradation should be tackled at more decentralized levels, hence there should be a shared responsibility between various groups in a country.
CHAPTER 2: CONTEXT AND OBJECTIVES

2.1 Why Seek To Manage Land Sustainably?

The justification for managing the land resource of Grenada sustainably lies in its value and the impacts of its loss on the livelihoods and man, ecosystems and biosphere. The basic needs of food, water, fuel, clothing and shelter must be met from the land, which is in limited supply (FAO, 1996) (Box 2). As population and aspirations increase, so the land on the Island will become an increasingly scarce resource.

The suitability of the land for these functions varies greatly over the Island. Landscape units, as natural resources units, have a dynamism of their own, but human influences affect this dynamism to a great extent, in space and time. The qualities of the land for one or more functions may be improved (for instance, through erosion control measures), but more often than not the land has been or is being degraded by human action.

Land degradation has been exacerbated due to inefficient land use planning, the absence of a land policy, and insufficient enforcement of the requisite laws. As a consequence the result has often been misery for large segments of the local population and destruction of valuable ecosystems. Such narrow approaches should be replaced by a technique for the planning and management of land resources that is integrated and holistic and where land users are central. This will ensure the long-term quality of the land for human use, the prevention or resolution of social conflicts related to land use, and the conservation of ecosystems of high biodiversity value.

2.2 Context of the Action Programme

The Terms of Reference for the National Land and Land Use Policy identifies the national position relating to land management (Box 3). It sets out the parameters for the development of actions to promote the national objectives relating to land management through the identification of priorities and the enunciation of policies and strategies.

Box 2: Benefits of the Land (FAO, 1996)

- It is the basis for many life support systems, through the production of biomass that provides food, fodder, fibre, fuel, timber and other biotic materials for human use, either directly or through animal husbandry including aquaculture and inland and coastal fishery (the production function).
- Land is the basis of terrestrial biodiversity by providing the biological habitats and gene reserves for plants, animals and micro-organisms, above and below ground (the biotic environmental function).
- Land and its use are a source and sink of greenhouse gases and form a co-determinant of the global energy balance - reflection, absorption and transformation of radiative energy of the sun, and of the global hydrological cycle (the climate regulative function).
- Land regulates the storage and flow of surface and groundwater resources, and influences their quality (the hydrologic function).
- Land is a storehouse of raw materials and minerals for human use (the storage function).
- Land has a receptive, filtering, buffering and transforming function of hazardous compounds (the waste and pollution control function).
- Land provides the physical basis for human settlements, industrial plants and social activities such as sports and recreation (the living space function).
- Land is a medium to store and protect the evidence of the cultural history of mankind, and a source of information on past climatic conditions and past land uses (the archive or heritage function).
- Land provides space for the transport of people, inputs and produce, and for the movement of plants and animals between discrete areas of natural ecosystems (the connective space function).
Given the important role that land plays in supporting the activities carried out in the Grenadian economy, environment, and society it would be wise to plan, manage and control the use to which this resource is being put in order to guarantee the various services, goods and values derived from it, either in actuality or potentially are maintained as far as possible in perpetuity. Additionally, while having sovereign rights over its land resources, Grenada has international obligations relating to the use and protection of this resource. Some of these obligations were formally adopted with the ratification of the Convention to Combat Desertification and Drought.

Legal mandate for land management in Grenada falls to the Physical Planning Unit, Ministry of Finance under the Physical Planning Act. However, the Focal Point for the UNCCD is the Ministry of Agriculture, Forestry Division (MoA/FD). The effort to develop a national programme for land management, aimed at, inter alia, reducing land degradation, is both a step towards the execution of the mandate of the FD and the furtherance of the national land management strategy. In consideration of the importance of the objectives of the Programme to the various national interest groups, and in recognition of the importance of public support and commitment to its implementation, this Programme was of necessity be developed through a participatory process, involving inputs from non-governmental, community, private sector, civic, governmental entities and other entities. The effort was led by a Technical Planning Team commissioned by the FD and was to be completed over a period of three (3) months. This Programme is intended to be the first in a cyclic process in which adaptation and further experience will help improve the process. The exercise of developing this Programme, as in the case of a number of other countries, has led to capacity building and increased public awareness. The Programme is not expected to be exhaustive, but to be modest, yet realistic, in its attempt at addressing some of the issues relating to land management that are of greatest priority. It is envisaged that subsequent cycles of planning will add to the actions aimed at addressing the issues relating to land management in Grenada.

2.3 Goals and Objectives of Grenada’s NAP

The development of the NAP constitutes a significant step in the process of sustainable land management practices in Grenada. It is informed by a number of other outputs in the planning cycle, such as the Land Use and Environmental Planning Study (Jessamy, 1999), the Agricultural Policy and Programme: 1997 – 2010, the Integrated Physical Development and Environmental Management Plan for Carriacou and Petite Martinique (UNDP/CDB/GoG Project) and the draft diagnostic National Capacity Self Assessment (NCSA) survey. It is a key component of Grenada’s strategy to achieve sustainable
development. The underlying element of the action plan is a recognition of the importance of land management to the environment, economy and society and the need to take action to safeguard the availability, quality and functional value of land management to the development process and the maintenance of the quality of the natural environment in Grenada. The objectives of the National Action Programme are set out in **Box 4**.

**Box 4: OBJECTIVES OF GRENADA’S NATIONAL ACTION PROGRAMME UNDER THE UNCCD**
(modified from Article 10 of the UNCCD)

1. The purpose of the national action programme is to identify the factors contributing to land degradation and physical measures necessary to combat land degradation and mitigate the effects of drought
2. To specify the respective roles of government, local communities and land users and the resources available and needed. It shall, *inter alia*:
   - Incorporate long-term strategies to combat land degradation and mitigate the effects of drought, emphasize implementation and integration of national policies in this sector for sustainable development
   - Allow for modifications to be made in response to changing circumstances and be sufficiently flexible at the local level to cope with different socio-economic, biological and geo-physical conditions
   - Give particular attention to the implementation of preventive measures for lands that are not yet degraded or which are only slightly degraded
   - Enhance national climatological, meteorological and hydrological capabilities and the means to provide for drought early warning
   - Promote policies and strengthen institutional frameworks which develop cooperation and coordination, in a spirit of partnership, between donor community, government, local population and community groups, and facilitate access by local populations to appropriate information and technology
   - Provide for effective participation at the local, national and regional levels of non-governmental organizations and local populations, both women and men, particularly resource users, including farmers and pastoralists and their representative organizations, in policy planning, decision-making, and implementation and review of the NAP
   - Require regular review of, and progress reports on, their implementation

3. The National Action Programme will include, *inter alia*, the following measures to prepare for and mitigate the effects of drought:
   - Establishment and/or strengthening, as appropriate, of early warning systems, including local and national facilities and joint systems at the subregional and regional levels, and mechanisms for assisting environmentally displaced persons
   - Strengthening of drought preparedness and management, including drought contingency plans at the local, national, subregional and regional levels, which take into consideration seasonal to international climate predictions
   - Establishment and/or strengthening, as appropriate, of food security systems, including storage and marketing facilities, particularly in rural areas
   - Establishment of alternative livelihood projects that could provide incomes in drought prone areas
   - Development of sustainable irrigation programmes for both crops and livestock

4. Taking into account the circumstances of Grenada, the NAP will include, *inter alia*, measures in some or all of the following priority fields as they relate to combating desertification and mitigating the effects of drought in affected areas and to their populations; promotion of alternative livelihoods and improvement of national economic environments with a view to strengthening programmes aimed at the eradication of poverty and at ensuring food security; demographic dynamics; sustainable management of natural resources; sustainable agricultural practices; development and efficient use of various energy sources; institutional and legal frameworks; strengthening of capabilities for assessment and systematic observation, including hydrological and meteorological services, and capacity building, education and public awareness
CHAPTER 3: STATUS AND ASSESSMENT OF LAND MANAGEMENT IN GRENADA

3.1 OVERVIEW OF LAND MANAGEMENT ISSUES IN GRENADA

Land degradation occurs mainly in the mountainous areas of Grenada. Degradation is caused mainly by poor farming practice, wind erosion, poor physical planning, and over-grazing. It is most serious in the transitional and marginal agriculture and animal husbandry zones of Grenada and Carriacou respectively. Physical, chemical and biological processes of soil degradation and related economic activities are responsible for further degradation on sandy areas with poor drainage. This is most pronounced in areas surrounding irrigated zones.

Plate 3: Physical Structures Occur Largely Along the Mountainous Areas of Grenada

Land degradation management is essential for a number of reasons. Apart from the protection of land value in the Island it is clear that there are various thematic areas in which land degradation is linked to the three focal areas, such as (1) Land Degradation and Biodiversity, (2) Land degradation and Climate Change, and (3) Land Degradation and International water.

In some cases the relationships that link land degradation and biodiversity loss may be simple and straightforward, such as habitat loss leading to species extinction, while in other cases they may be complex and less obvious. For example, land degradation can
lead to occurrence of alien invasive species that are able to compete better than endemic species, and therefore lead to local extinctions of endemic species.

In addition, it is sometimes difficult to separate land degradation due to short-term human actions, from long-term ecological or climatic processes. For example, we know that perturbations such as fire and grazing have been part of many native savanna ecosystems for thousands of years, and species diversity and composition have adapted to them. If management decisions disregard these long-term processes, then decline in biodiversity are likely to occur. Other areas in which land degradation affects biodiversity are:

- **Ecosystem:** Land degradation is linked to biodiversity at the ecosystem level where it decreases the productivity of the habitat, decreases resilience and integrity of the watershed and aquifer, increases soil erosion and sedimentation of aquatic ecosystems, increases the severity of floods and droughts, and enhances desertification
- **Species:** Land degradation and biodiversity are linked at the species level because a reduction in habitat productivity and availability places severe stress on plant and animal populations and frequently results in local and/or permanent extinction.
- **Genetic:** Land degradation can affect sub-species of plants or races of animals differentially, particularly when there are genetic differences in resilience and vulnerability to land degradation-related stress

The importance of land management and how it impacts on climate can be viewed in the following contexts:

- **Carbon sequestration:** Widespread deforestation and desertification reduces local, regional, and global carbon sequestration and potentials for carbon sinks. Deforestation of organic soils leads directly to increased carbon emissions.
- **Energy efficiency:** Introducing fuel efficient technologies and renewable energies to local communities reduces both LD by eliminating dependencies on local forests, and climate change by improving carbon sinks.
- **Control of emissions and waste management** has indirect benefits for reducing land degradation in industrial environments
- **Vulnerability and adaptation:** global warming can contribute to land degradation particularly in ecosystems that are more vulnerable and less adaptable.

Global climate change, particularly enhanced greenhouse effect, will result in changes in land use systems as well as directly affect vegetation. For example, there will be species migration to higher latitudes and altitudes as a result of warming. This is already visible for example in some tropical mountains. Sea-level rise will adversely affect aquatic ecosystems, and saline incursion can cause salinization of surface soils.

With regard to its impact on water management, the effects of land degradation can be viewed in the following context:

- **Upstream soil erosion leads to sedimentation and siltation downstream (including coastal zones), which can affect water flow as well as biodiversity and agricultural potential.**
• Pollution from organic (e.g. agricultural) and inorganic wastes (e.g. industries) can be transported across national boundaries, affect fisheries and other freshwater biodiversity, and accumulate in estuaries.

Water Quantity:

• Large water demanding schemes upstream (e.g. irrigation, dams) can affect water flow downstream and lead to desiccation and land degradation
• Land Degradation upstream can affect water flow downstream, often leading to flooding, and changes in watershed characteristics (e.g. river trajectories) downstream, and impact coastal zones.

Shared basins
Land Degradation due to inappropriate land uses and excessive exploitation of the vegetation can result in siltation of shared basins, pollution build-up, lowering of water levels, and major impacts on fisheries, tourism and other uses of the shared basins.

Part of the responsibilities for Grenada under the UNCCD is:

• To give priority to combating desertification and mitigating the effects of drought by allocating adequate resources to combat existing threats and avoid future dangers
• To establish strategies and priorities within the framework of sustainable development plans and or policies
• To address the underlying causes of land degradation paying particular attention to socio-economic factors to combat the process
• To promote awareness to facilitate the participation of local communities in efforts to combat desertification
• To strengthening of appropriate existing legislation, enacting new laws and establish long-term policies and action programs

To elaborate the UNCCD the Grenadian Government established the National Coordinating Body (NCB) that has responsibility to oversee the implementation of the UNCCD. The Body is composed of representatives from Governmental and non-Governmental Agencies, the Private Sector, Community groups, Environmentalists and the Public in general.
3.2 ANALYSIS OF THREATS TO GRENADA’S LAND RESOURCE

3.2.1 Land Use Planning

Land tenure in Grenada falls into two categories (1) State lands, and (2) Private freehold lands. Furthermore, the Grenadian economy is primarily natural resource-based and is dominated by tourism, agriculture, and forestry that account for more than 70 percent of the Island’s GDP (Ministry of Finance, 2004). In the agricultural sector, nutmeg cultivation and other cash crops are carried out largely on privately owned lands, but in the main, effective land use planning is virtually nonexistent.

This type of public-private division has brought its own set of challenges. For example, lands held within the public domain are often subjected to poor management, due to a less than efficient land registry system and illegal occupation mainly by poor households. Whereas, on the privately own lands, threats arise from unclear ownership of the land due to cultural factors, lack of enforcement policies, and irrational land uses.

As a result, land use conflicts remain a reality in Grenada. Furthermore, the fact that a significant proportion of the land on the Island is still under the control of the State, the root cause for these conflicts are issues related to the institutional and legal framework, lack of proper coordination and communication, and insufficient resources allocated for land management. Furthermore, given the reported 50-50 public-private land ownership arrangement land use planning becomes an even more complicated issue. As such, any future development policy will need to be cognizant of these issues and be aware of the nuances likely to be aggravated by the development in the land use arena unless effective measures are adumbrated to redress these.

Based on the evidence it appears that land use planning has never been seriously pursued in Grenada, though some areas have been identified for specific purposes (see Map 2). But as the economy is resuscitated and developed after the two recent devastating hurricanes, and the pressure on the landed resource increases, the need for a national policy and plan on land use will become even more crucial, especially since such a national policy can be a strategy for attaining optimum land use towards national development. Proper land use planning though would require, inter alia, an acceptable skills base and an enabling legislative framework to encourage enforcement and sufficient monitoring to foster compliance with the requisite regulations.

3.2.2 Urban Development and Construction

One of the fastest growing economic sectors in Grenada is the construction industry, having grown further in importance after Hurricanes Emily and Ivan. Much of this

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9 This is a process by which land is put to its most appropriate use and provides a context for resource management, conflict resolution and decision-making at local and regional levels, consistent with national policies and priorities (FAO, 2005)

10 The authorities for example need to be aware that transport development is likely to lead to more land use conflicts through the provision of greater accessibility in previously inaccessible areas, possibly aggravating the process of soil erosion. Additionally, in the pursuit of rapid wealth accumulation, lands may not be put to their best use unless a policy and regulations are enacted and enforced.
construction is to replace homes for those who have been displaced as well as erecting new structures for private residences, often of Grenadians returning from abroad, or through the development of commercial properties such as hotels. These developments have necessitated the construction of additional infrastructure such as roads, ports and electricity. However, much of the construction is concentrated in a few ‘desirable’ areas, i.e., River Road, D’arbeau, Telescope, Grand Anse Valley and Mt. Toute, although admittedly, such developmental works are taking place throughout Grenada.

Apart from some building occurring on highly unsuitable areas, there seems to be little guidance available to developers about using less-damaging practices. It is reported that frequently building plots are carried out on very steep, previously wooded slopes, totally cleared of vegetation, and burnt before construction work begins. Although it is understood that this is a highly political issue, one would want to believe that via the Physical Planning Unit, there will be an attempt to develop and enforce some controls so that there can be orderly development with fewer damaging effects to the environment and the landed resource on which such developments depend.

3.2.3 Agriculture

By the nature of Grenada’s terrain many farmers, often on a subsistence basis\textsuperscript{11}, have little or no option but to cultivate steep slopes as this may be the only land they own, i.e., Mt. Hartman. But the practice often of total clearance of all ‘wild’ vegetation before cultivation of cash crops exposes the soil and leaves it vulnerable to the agents of erosion, especially with the first rainfalls of the wet season. Admittedly, some farmers attempt to plant their crops to alleviate the soil erosion threat, but effective soil conservation techniques such as terracing or contour-bunding are uncommon on the Island.

Apart from encouraging soil loss, poor farming practices may also adversely affect the water supply. Many farms are located on slopes in upland watersheds that are above where water is abstracted by dams to provide piped water. The soil that is lost from the slopes ends up in the watercourses and eventually leads to the rapid siltation of water courses. This in turn increases water charges as much time and effort is expended to continually clear the dams of silt build-up. Silt is also washed out to sea and can badly damage the biodiversity of reefs.

Intercropping is common throughout the agricultural sector with 76\% of permanent and 33\% of temporary crops being intercropped. This, however, is useful for soil conservation as it implies the absence of large areas of monoculture, thus likely to encourage less use of agro-chemicals and reduce the chemical composition of the soil.

Furthermore, only a small number of high yielding variety (HYVs) crops are reportedly used in Grenada (Peters et. al., 1999). This can be viewed as an advantage in Grenada’s agricultural sector as the use of HYVs can often create a need for greater use of agro-chemicals, which are potentially damaging to land quality and watersheds. During

\textsuperscript{11} An agricultural census carried out in 1995 found that the average farm size is 2.6 acres and that 83\% of farms are 5 acres or less. Therefore, it may be said that the small-scale farmer dominates the agricultural sector in Grenada.
stakeholder consultations it became evident that the feeling in Grenada is that many traditional or wild crop varieties or strains are becoming harder to find or have already been lost, thus the need to construct more propagation centres. Crop improvement practices in Grenada are, on the whole, confined to selection and breeding using simple techniques such as budding, grafting and layering.

**Map 2: Land Use Concepts Applied In Grenada**

Grenada has a wide diversity of fruit trees, both in species and variety. Many species are indigenous to Grenada and it is thought that some of the varieties that exist are endemic, i.e., Sapodilla and Golden Apple varieties. Work is carried out by the Agronomy
Division, MoA annually to identify fruit trees that produce large quantities of good quality fruits from which to produce propagation material for distribution to farmers. For example the Sapodilla (*Manilkara achras*) has many different varieties. These trees have been used to breed good local hybrids and an attempt was being made before the devastating Hurricanes to develop an orchard of indigenous 'minor' fruit trees, especially those which are less frequently grown and which many of the older farmers suggest are becoming scarce. But this project has come under serious threat since 2004 and planting material was reportedly in short supply. However, under a project submitted to the European Union, there is a proposal to rehabilitate five (5) critical watersheds on the Island and construct propagation centres that will provide planting material to assist farmers secure sustainable livelihoods while simultaneously protecting the watersheds.

Finally, the uncontrolled grazing of livestock is another agricultural practice that can adversely affect land quality. In some instances the number of livestock reared has exceeded the carrying capacity of the area, thus leading to rapid depletion of the grazing material. This leads to exposure of the soil and subsequent erosion. Additionally, where animals are allowed to roam freely, for example as is common in Carriacou\(^\text{12}\), woodland and forest areas especially can become degraded over time as livestock rapidly consumes new and emerging seedlings.

### 3.2.4 Agro-Chemical Usage and Abuse

In recent times, the MoA has been seeking to downplay the reliance on agro-chemicals to increase agricultural output and reduce the pest risk. In fact, it has been pursuing an integrated pest management (IPM) system. Despite these efforts, it was reported in the consultation workshop that the use of pesticides is still common and in many cases ecologically devastating, such as the use of Gramoxone in rivers to collect crayfish and monocrotophos to reduce pest infestation. Furthermore, impact of weedicides and pesticides on land – the high level of use of chemicals for controlling weeds and pests have killed the vegetative cover and exposed the soil to wind and water erosion. Finally, agro-chemicals can also adversely affect the water supply through the leaching of pesticide and fertilizer residues, some of which are highly toxic and which can damage the biodiversity of streams and rivers, as well as the reefs. A combination of environmental education and the development and enforcement of stricter controls needs to be implemented to combat the adverse effects of pollution of the environment.

### 3.2.5 Waste Disposal

According to the World Bank (2003)\(^\text{13}\) Grenada has improved its collection coverage and frequency, as well as improved disposal practices. The National Water and Sewerage Authority (NAWASA) have contracted out all collection services to private operators, who service five (5) collection zones covering the entire island. Waste continues to be collected at the old Perseverance site and the new Dumfries sanitary landfill in Carriacou. However, given the setback suffered at the Perseverance sanitary landfill site in 2001

\(^\text{12}\) This is particularly pronounced in the locally termed ‘leggo’ season.

when a landslide damaged the active disposal cell, there is now open burning and disposal fairly close to this site and in close proximity to the Mt. Hartman National Park and the Perseverance Sanctuary, a protected habitat for the Grenada Dove.

With significant rubble generated after the recent Hurricanes, the problem of land-based waste disposal was aggravated. In fact, burning of domestic waste was reported to be prevalent on the Island, particularly in the southern part of the Island during the dry period from January to May. This has often resulted in spontaneous fires, destroying dry shrublands. A significant amount of this is accidental, caused mainly by households burning domestic matter.

While this may be a temporary situation, the need to find acceptable means for the disposal of Grenada’s solid waste remains a priority as the current form of disposal threatens the integrity of the surrounding land and bio-physical environment.

3.2.6 Mining

According to the Draft Sectoral Report (2000): The Environment, prepared by the PPU, Grenada’s shoreline is 121 km long, with rocky geomorphology and diverse ecosystems, including mangrove swamps, coral reefs, sea grass beds, beaches and lagoons. Beaches are widespread along the coastline of Grenada and its dependencies. Typically they are located in small pockets within bays and are have active profile widths varying from 14m to 45m (Peters, 2000). The longest and most known is Grand Anse which is 2.7 km long. Chambers (2000) indicated that extensive sand mining, which has caused serious erosion, was observed at Beausejour, Palmiste, Conference and Telescope Bays.

For many years, beaches on the windward coast of Grenada have been extensively mined for sand as demand for aggregate and sand has been on the rise in the midst of a national construction boom that commenced before the two most hurricanes and have been further encouraged after these natural disasters. For example, rapid growth in tourism, building of private homes and businesses and the laying down of new agricultural roads have generated a marked increase in the demand for beach sand that witnessed an increase between 1997 and 2000 from approximately 76,000 cubic yards to 95,000 cubic yards. Beach sand accounts for 100% of the fine aggregate used for construction purposes. The high cost of imports is often cited as a reason for continuing sand mining; but there is also little experience with large volume imports.

Presently, sand mining is only authorized at three sites in Grenada. The sites in Grenada are Pearls, Telescope and Galby. At present only the Pearls site is used for official sand mining activities. Responsibility for the mining of sand was given to the Gravel and Concrete Corporation a statutory body. The high cost of obtaining sand, mainly due to the haulage, has led to smaller scale illegal sand mining at almost all beaches throughout the state.

But Sand mining has however, been identified as one of the main contributing factors to beach degradation. This increased demand for beach sand on the one hand and the heightened appreciation of the value of beaches as habitats, protective barriers and places of recreation among others have served to concentrate the attention of both resource
managers and the general public on the urgent problems associated with beach degradation (Issacs, 1997).

The earliest *Beach Monitoring* in Grenada dates back to 1985 with a coastal monitoring programme in response to severe erosion problems identified in Grand Anse and other beaches (Chambers 1996). Early studies showed that the erosion had greater seasonal variation (up to 34% beach profile area) than long-term variation (up to 10.5% beach profile area), particularly in the West Coast. For Grand Anse, annual erosion was about 11% during 1984 to 1986.

Application of the Bruun rule to beach erosion analysis shows that for a 50 cm rise in sea level, up to 60% of Grenada’s beaches would disappear in some areas (Peters, 2000). These beaches include Grand Anse, Morne Rouge, Harvey Vale and Paradise all of which are important tourist attractions. It is therefore necessary that the existing legislation be enforced.

### 3.3 Recent Developments

A number of recent actions by the current government indicate its commitment and determination to provide the enabling environment for sound regulation of the land resources and to strengthen the institutional apparatus for its management. Grenada is a signatory to the UNCCD (and Agenda 21), the Government ratified the OECS Declaration of St. George’s and recently established the National Coordinating Body for the elaboration of the Island’s commitment under the UNCCD. The Government has drafted an *Agricultural Strategy and Corporate Plan* for the period 2005 – 2010 which is currently under discussion and is being used as one the foundations on which sound land use policy can be designed and implemented. This document places great emphasis on conservation and sustainable use of land and indicates an awareness of the need for sensitive and sustainable development.

Having recognized the importance of tackling poverty while meeting the challenges of a global marketplace, the document sets out as its vision the need to replant vital species with an aim to support agro processing. This it is expected will foster the process of agricultural industrialisation. Central to this goal therefore will be the need to increase the productivity and efficiency of agricultural production to ensuring a competitive agricultural sector and its development. However, there is still no agricultural policy for the Island.

Recognizing that threats to the land resources also comes from the built environment, the Government commissioned the development of National Physical Development Plans (NFDP) for Grenada, Carriacou and Petit Martinique. The plans are intended to provide a framework for rational Utilization of the finite land resource to minimize adverse effects of socio-economic development on terrestrial, marine and atmospheric environments. To this end therefore, the Tourism Master Plan approved in 1998 seeks to ensure that tourism development is consistent with the protection and conservation of the country’s natural and cultural resources, built environment and the nation’s moral values.
CHAPTER 4: OVERVIEW OF POLICY AND INSTITUTIONAL CAPACITY FOR LAND MANAGEMENT IN GRENADA

4.1 Overview of National Capacity

Within the agricultural sections of the MoA there appears to be some technical capacity in some areas such as agronomy, pest management and livestock and there is a well established Agricultural Extension Division with offices in St. Andrew’s, St. David’s, St. Patrick’s and St. John’s. Many farmers make regular contact with the Extension Officers and some participate in programmes. However, there is not a high number of staff in agriculture so it would not be possible for many extra duties to be taken on with the development of land management programmes.

The above notwithstanding, within the field of land management in Grenada there is a scarcity of persons trained and skilled in many of the areas that are essential for the necessary development of the sub-sector. In this context, some of the human resources weaknesses occur in the following sectoral and thematic areas: agriculture, forestry, information, public awareness and training, and policy and legislation. With the exception of agriculture and, to some extent, information and public awareness, there is severely limiting shortage of skilled human resources to address relevant problems and perform planning, management and monitoring.

While land management has emerged internationally as a unified area of focus, many developing countries are still grappling with pre-existing problems of inadequate expertise and financial resources in the sectoral areas and fall well short of the requirement for adequate professional capacity in some ‘new’ areas falling within the realm of land management. Grenada’s situation is no better. In Grenada’s circumstances given its Island State status and vulnerability to sea level rise and natural disasters, the need for effective land management are met by drawing on the limited pool of specialists in many of the sectoral areas listed above. Even in the traditional sectoral areas, however, expertise is very limited, to the extent that it threatens the ability of the Island to address what ought to be her long-term strategic needs for planning the use, management and conservation of her land resources.

The human resources weakness is exacerbated by low institutional capacity to carry out the traditional mandates. A significant part of the weakness relates to the small size of the Island. This weakness could prove to be a significant undermining factor in efforts to carry out the transformation to integrated planning, management and monitoring of the manner in which the land resources are being utilized in the various sectors and at the relevant administrative levels. As such, in so far as the goal of land management is concerned, human resources development and institutional strengthening would rank as priority issues to be addressed in Grenada.

4.2 Policy, Legislation and Administrative Overview

National policy in the land management sector and its component sub-sectors is an area that has not received regular and concentrated attention, and in areas where it did, this hardly yielded new or revised policy positions. While the following indicates some policy
and planning in particular sectors, the same is not true for other sectors, in which there is
a pattern of gaps in planning over a long period of time. Integrated policy planning, such
as is required for the unified area of land management, would be novel to many of the
sectors as well as the regional and sub-regional bodies. For this reason, training,
centralized coordination by the NCB and adaptive planning, all proposed in the Plan
would appear appropriate.

Analysis of the legislation on land management and related fields reveals that there are
several pieces of legislation in Grenada with relevance to this particular area.
Governmental responsibility for agriculture, forestry and terrestrial wildlife in Grenada
falls mostly under the remit of the Ministry of Agriculture, Lands, Forestry and Fisheries
(MOALFF). However, there seems to be little coordination between the various arms of
government and even less so with farmer organizations and non-governmental
organizations.

The programme for developing the National Action Programme has in the main been
monitored and guided by the Sustainable Development Council (SDC). This is a group of
people from government, private sector and the NGO sector who possess a wide range of
knowledge and expertise, though in the latter stages it fell under the aegis of the Focal
Point. However, it is envisaged that the SDC will continue to act as a Steering Committee
to monitor and encourage the implementation of land-related activities resulting from the
NAP.

There are a number of Non-Governmental Organisations (NGOs) currently operating in
Grenada. The largest and most active are the Agency for Rural Transformation (ART)
and GRENCODA. Both develop and facilitate the implementation of community-based
projects, some of which have had a direct impact on land management issues. These
NGOs would be a good base from which to develop community-led land management
initiatives. There are other small NGOs which may be useful participants in the
programmes, but which tend to be run by volunteers with few or no paid staff.

4.3 Land Use and Land Use Policy

Land use planning plays an important role in the conservation and wise use of natural
resources such as land by creating a suitable framework within which these uses can
occur. There is no national land use plan nor is there a land use policy. Instead, there is a

The responsibility for land management in Grenada is dispersed among several
Government Ministries and Departments: Land Use Division in MOALFF, Lands and
Survey’s Division, Forestry and National Parks Department, the Ministry of Health and
the Environment, the National Water and Sewage Authority, the National Housing
Authority, the Ministry of Communication and Works, the Industrial Development
Corporation and the Grenada’s Port Authority.

Clearly, there is need for greater coordination and harmonization of actions to combat
land degradation. This was expressed as a central issue at the UNCCD’s national
consultation seminar conducted in Grenada in August 2005. Furthermore, Jessamy (1999)
has covered this issue in greater detail a document entitled ‘Land Use and Environmental Planning Report’. However it should be noted here that there is currently no National Land Use Policy for Grenada. This was highlighted throughout the consultation awareness seminar and workshop by a wide range of stakeholders as a serious limitation to the wise use of Grenada’s natural resources. In fact, the need for such a policy has been recognized as one of the priorities for sustainable development, and more specifically land management in Grenada. According to the National Environmental Policy and Management Strategy for Grenada:

“in the absence of such a policy and of specific policy instruments, current trends towards the excessive concentration of development on the south-west of the island of Grenada are likely to continue, with resulting patterns of congestion, migration and inequity.’

NEPMS (2005:14)

The inefficiency of the land market and the inability of some social actors, i.e., mainly the poor, to access land resources for economic production further puts the resource under threat. Conversely, lands that are best suited to agricultural production are being converted into housing and urban uses, with detrimental impacts on the economy and food security in the medium and long term.

Hurricanes Ivan and Emily have served to exacerbate these issues as housing construction (and reconstruction) has become more acute. Land resources represent one of the main assets available in its quest for reconstruction and sustainable development, and these resources must be managed wisely and strategically. There is a need for a comprehensive framework land use policy and plan that makes such management possible.

Once developed a Land Use Policy should allow individual sectors to more effectively develop policies related to their particular discipline. In this context, for example, the Land Use Division of the MoA is responsible for policies relating to use/management of agricultural and forest lands.

A UNDP/CDB/GoG-funded project to develop an ‘Integrated Physical Development and Environmental Management Plan for Carriacou and Petite Martinique’ was recently completed, and it is hoped that a similar plan may also be prepared for Grenada.

The National Physical Development Plan aims at establishing an integrated and coherent framework to promote and guide development in Grenada, Carriacou and Petite Martinique in a sustainable manner. The plan is expected to provide the context for making strategic land use and investment decisions and to facilitate the achievement of a higher quality of life for the national community through sustainable development and management of the physical environment.

4.4 Agriculture Policy

The MoA currently has no Agricultural Policy. Efforts to remedy this have taken place recently with the development of a number of documents which aim to ‘fill the policy gap’. These include:
• The ‘Agricultural Policy and Programme of the Ministry of Agriculture 1997 - 2010’ was released in January 1998, but is yet to be adopted and/or acted upon.
• A draft ‘Agricultural Strategy and Corporate Plan’ for the Agricultural Sector’ (2005) has been developed and is being discussed.

4.5 Physical Planning and Development Policy

In December 2004, after consultations with a wide cross section of organizations and individuals, the GOG released its Emergency Housing Policy (EHP) that was expected to be implemented between January and June of 2005. The EHP shall be used to guide all agencies that will be involved in the task of providing housing in the immediate aftermath of Hurricanes Ivan and Emily. The EHP must be seen in the wider context of the National Development goals, objectives, and priorities, plans and procedures that will be implemented by the Agency for Reconstruction and Development (ARD). Against this background therefore, the EHP’s goal is to reduce the suffering, inconvenience, and vulnerability of the people of Grenada by assisting them to repair and replace houses damaged or destroyed by the Hurricanes in the shortest possible time.

The Agency for Reconstruction and Development was established by the GOG as the Island’s coordinating and monitoring body to facilitate effective implementation of the recovery and rebuilding process, following the widespread devastation caused by Hurricane Ivan in September 2004.

While the above appear to be short-term interventions, Grenada has a set of building codes and building guidelines of 1999 that would require enforcement. This Code and Guidelines are administered by the Land Development Authority under the Land Development Control Act.


Additionally, there is the Carricacou Land Settlement and Development Act CAP 42. Under Section 3 (1) of this Act it has created a body called the Carriacou Land Settlement and Development Authority with power to regulate, control and develop land settlement in Carriacou.

4.6 Forest Policy

Grenada’s forestry sector is currently going through a period of considerable change which began in May 1997 when the Forestry Department concluded that in order to serve Grenada’s public and manage its forests more efficiently, a new forest policy was required. Thus a process of forest policy development began in June 1997, facilitated by the Forestry Department, but with the aim of involving as many members of the public and institutions as possible in its development. This highly consultative and participatory
Process resulted in the collection of large quantities of data through questionnaires, community meetings and individual consultations and the production of a set of studies relating to many different aspects of forests and forestry. A new National Forest Policy was developed over the course of approximately 18 months, and was formally approved by Cabinet in March 1999. In response to this, and as the main facilitators of the implementation of the Forest Policy, the Forestry Department is currently developing a strategy for carrying out its new responsibilities and effectively respond to this challenge.

Many issues raised by the public during the policy development process are addressed by the policy. During a nation wide questionnaire survey, most of the respondents saw the need to conserve soil and water as the most critical issues for the Island, i.e., 4.9/5.0. Clearly members of the public are conscious of the importance of these resources. This level of awareness should be built upon to ensure the necessary information is reaching those who can make a significant change to the manner in which land is currently managed on the Island.

4.7 Legislation issues

There is a wide variety of legislations which are relevant to land management in Grenada. However, it became clear during a recent review of land-related legislation (Oderson, 2004) that although the existing legislations are often adequate, they are frequently unknown or un-enforced by those institutions that could use them in their work. The following is a summary of the major laws which currently exist relating to forestry/agriculture/physical development issues:

_The Beach Protection Act of 1979:_ This is an Act to prohibit the unauthorized removal of sand, stone, shingle and gravel from the seashore. The Beach Protection Act is a useful tool for the protection of beaches and the prevention of erosion of beaches on the island of Grenada and a useful tool for the prevention of loss and change in user activity. The Act is of recent vintage thus the concern over coastal erosion, particularly due to anthropogenic factors is evident.

The Act is adequate for implementation with Section 2 of the Act noting that unauthorized removal of sand from the seashore an offence. While there have been recommendations for the authorized removal of sand from certain areas for building and other construction purposes or for economic reasons in depressed areas where that form of activity may be the only means of livelihood, it is the belief that before any such authorization is issued, the Minister should be properly advised by the National Environmental Council accordingly. Furthermore, proper enforcement by the granting of permits to specific persons would allow for proper monitoring and the collection of data.

_The Carriacou Land Settlement and Development Act of 1955 – CAP 42:_ Establishes and empowers a body corporate to regulate and control land settlement and development in Carriacou. Given the date when this legislation was enacted it is doubtful whether the Act is still applicable. That is, whether or not there is in existence a Land Settlement and Development Board carrying out the functions of regulating, controlling and developing land development and settlement of small holders on the island of Carriacou.
If that is the case, the Act could be an applicable tool for land management on the island in at least two aspects

(i) preventing loss; and
(ii) relocation.

The interpretation of this Act suggests that only public purposes connected with the establishment of small-holdings are considered. However, the time may be right for the Act to be revised, including land management concerns.

_Crown Lands Act of 1896– Cap:_ The Act vests the Governor-General with the power to make rules for the management of the crown lands, for the sale or letting thereof, for the prevention of squatting and encroachment thereon and of spoil and injury to the woods thereon. While the Act makes indirect reference to environmental concerns, the Act could be more specific as currently it is fairly ambiguous.

_Forest, Soil and Water Conservation Act of 1949:_ This act makes provision for the conservation of the forest, soil, water and other natural resources of Grenada, and is one of the most important of laws relating to land management on the Island. Under this act State land is protected, and if deemed necessary, any private land may also be declared protected and compensation paid to the owner.

_Grenada’s Building Code of 1999:_ The Grenada Building Code is administered under the Land Development Control Authority established under the Land Development Control Act and sets the standards by which the Authority will use to determine the suitability of any building or development plan. The Code was developed to establish standards for safety of buildings in a region, which is historically subject to frequent hurricanes. Thus in all respects the Grenada Building Code addresses adequately, the problems, which may arise from that type of disaster.

The Code provides details on all aspects of construction and health and safety standards to be used in buildings. The safety requirements specifically focus on hurricane and fire resistant buildings. There are also specific design criteria for the construction of sea walls and bulkheads. This Code is comprehensive and detailed enough to cover all the requirements of an appropriate building standard for Grenada. The Code was recently updated to provide standards for buildings, which can effectively withstand hurricane and flooding.

_Land Development Control - Cap 160 of 1988:_ The Act seeks to bring about the orderly and progressive development of land in Grenada. A Development Control Authority whose responsibility it is to permit development in Grenada administers the Act. Any development must have the prior permission of the Authority before commencement. This Act allows the Authority to determine where and what type of development could be carried out in any part of Grenada.

In exceptional cases, the Act provides for the Minister to intervene to restrict the grant of permission or to refer a particular application to Cabinet in the interest of national security or general economic policy. Again this is a general safeguard for ensuring
development fits with the general policy of the Government and could be used as a safeguard for ensuring development is compatible also with environmental policy.

The major challenge though, seems to be the ability of the Authority to properly administer this Act, even though it seems to have most of the important tenets for the orderly control of development throughout Grenada that can have a positive impact on sustainable land management.

**Pesticides Control Act - Cap 238:** The Act provides for the control of the importation, sale, storage and use of pesticides throughout the state. This Act could be an appropriate tool for managing and preventing the introduction of hazardous substances into Grenada for the purpose of farming. A Pesticides Control Board under the general supervision of the Minister of Agriculture administers the Act.

**Town And Country Planning Of 1946- Cap 322:** This Act makes provision for the orderly and progressive development of land, towns and other areas whether urban or rural, to preserve and to improve the amenities thereof and for connected purposes. The Central Housing Authority has the responsibility for the administration of the Act including the enforcement of any scheme.

The Act makes it mandatory that one must obtain permission in writing to develop land, construct, demolish, alter or extend, repair or renew any building. In that section, the Authority has the right to impose prohibitions either to prohibit absolutely or prohibit the further proceeding with such work otherwise than in accordance with the conditions specified in such prohibition. Any contravention of a prohibition constitutes and offence under the Act.

The tenor of the legislation speaks to the physical planning and the use of land for development purposes. The Authority with the approval of the Minister are in a position to determine how and where land is to be developed for building purposes and thus is appropriate for to enforce effective land management principles, with the major recommendation being the proposal to make an EIA mandatory for all development projects likely to have a significant impact on the environment and which can compromise the integrity of the land on which such developments are likely to take place.

Given the above therefore, it would appear that some of the laws in Grenada are both outdated and ineffectively enforced (Oderson, 2004). After consultation with various stakeholders the following recommendations are posited:

- There is a need for a national land policy in Grenada
- The current set of laws be reviewed and amended to ensure that there is rationalization across these laws
- Legislation regarding development of land needs to be reviewed, with the accompanying creation of a national development plan
- Punitive sanctions imposed by the current legislation should be revised to make the fines more realistic and enforceable
• In general greater enforcement of existing legislation needs to take place, through the provision of the necessary support from relevant government agencies
• The need to make EIAs mandatory for all projects likely to impact significantly on the environment

4.8 Biosafety

Biosafety consists one of the ‘new’ thematic areas that needs to be considered under the Convention. Biosafety is a real issue, considering the rapid pace of the development and applications of biotechnology in recent years, such as the use of genetically modified organisms for the production of food, medicine, etc. The use, handling and movement of living organisms present risks since their release into the natural environment may cause damage to humans, ecosystems and organisms, or threaten of humans, crops, livestock, or cause economic dislocation.

The first step in addressing biosafety issues in Grenada is to establish the prerequisite that EIAs are automatically required for all projects that involve the importation of modified organisms to be used in the agricultural sector or that will enter the food chain. This must be complemented by national legislative provisions that specifically deal with biosafety. The Animals (Diseases and Importation) Act Cap 15, Plant Protection Act Cap 242, Public Health Act Cap 263 serve to protect agriculture and public health, but given that these pieces of legislation were crafted sometime ago they do not address the issue of biosafety.

There will also be the need to draft regulations and guidelines and a regulatory/advisory mechanism to address biosafety as an issue of national priority established.

4.9 Research

The research institute of St. George’s University, the Windward Islands Research and Education Foundation (WINDREF) has been operating since 1994. It has recently broadened the scope of its research projects, and is including more environmental subjects. St. George’s University as a whole is attempting to become more integrated with Grenadian society and is keen to carry out work that would be useful to the nation. However, there is no known research being conducted on the Island to address land degradation issues.

4.10 Monitoring and Impact Assessment

A combination of factors, such as the terrain of the island, limitations of human and other resources, and insufficient infusion of land management issues into public policies have contributed to a situation in which there has been little monitoring of land degradation in Grenada. The historic reality of a lack of monitoring makes it difficult to establish benchmark positions and therefore the need exists for the adoption or establishment of baseline conditions for the monitoring of land degradation on the island.
The passage of the Environmental Policy and Management Strategy (2005) introduced the requirement for environmental monitoring, including impacts on land degradation, by means of mandatory environmental impact assessment procedures. The need for developing procedures, guidelines and policies for monitoring land degradation, including results/findings obtained through EIA procedures is a potential collaborative opportunity for public regulatory agencies and research institutions.

The EIA process should be viewed with much importance as far as land management is concerned. This process will meet the critical need of screening development projects based on the use of land or other natural resources, in a way that will encourage sustainability in land use, as well as in conservation. The process considered important in helping to regulate the types of activities that are undertaken which might have an impact on sustainable land management.

### 4.11 Public Awareness and Education

To date, the level of activity in sustainable land management practices has been low, though the level of public awareness, as indicated in the drafting of the Forest Policy, is fairly high. Additionally, public understanding of the land as a major resource seems fairly high, even if this is not matched by complementary attitudes towards land conservation practices. These notwithstanding, it appears that public perception of the value of land is largely one based on direct use. The natural outcome of this is that land that cannot currently be used with the prevailing level of resources is viewed as having little value, or land likely to bring a higher rate of return in the short term on a specific investment is often preferred to those to which the land is best suited. This perception can be viewed as an indirect driving force of inefficient utilization of land since it provides the justification for siting investments on lands that are marginally suited for these and to undervalue the resource generally.

Within the last few years, some steps have been taken to address the need for awareness building and to improve public perception of the wider environment. Some bold steps at building capacity for promoting conservation awareness have been undertaken, especially by the Forestry Division. Despite these efforts, capacity to achieve this objective remains low and insufficient at all levels. A positive development resides in the interest of the local NGOs to promote awareness activities and programmes nationally. These efforts are being supported by those of the Friends of the Earth, an international environmental advocacy group. What is needed is an integrated approach to address the challenges confronting those charged with the responsibility to ensure that the public is fully aware and understands the importance of the land on which they reside and depend for their livelihoods.

### 4.12 Incentive Measures

Grenada’s national Environmental Policy and Management Strategy states that:

*Fiscal incentives and tax breaks will be provided to individuals and individual households to promote environmentally-friendly behaviour and*
technology, such as the production of renewable energy, or the construction of storage tanks in residential and tourism facilities

These statements imply a recognition of the likelihood that some activities can serve to threaten the conservation and rational use of natural resources, a deduction which would be difficult to challenge. Appropriate areas of action would be identify and phase out policies that serve as disincentives to achieving the above stated goal, and to develop new incentives for sustainable management of natural resources, inclusive of land. The development of incentives for the sustainable use of land as a resource would require knowledge of the value of this resource. This can be achieved from exercises that determine the value of the components of land management. Such valuation is itself the subject of study by resource economists and is a developing area. Efforts aimed at determining economic value of Grenada’s land resource are needed and some work should be diverted in this area. Valuation would better advise policy-making and help in the pricing of components based on the true value of the component.
CHAPTER 5: THE NATIONAL VISION FOR LAND MANAGEMENT

5.1 The Value/Opportunities Of Effective Land Management

Grenada’s policy position on the value of its land resource, as contained in the National Physical Development Plan gives some guidance on how this resource is viewed when it indicates that:

“Vast improvement in the quality of life in Grenada, Carriacou, and Petite Martinique (will accrue) through sustainable management of the physical environment.” (NPDP: 2)

The NAP recognizes and supports the values identified in the NPDP. While not intended to differentiate between or subordinate any of the values identified, the economic role of land resources in Grenada, places it high among the group of natural resources with which Grenada is endowed. Land is therefore seen as an essential component of the Island’s economic development thrust. For it to contribute to national development it would be necessary to use it in a way that would allow an acceptable quality long into the future with viable representative units of its components being managed as part of the Island’s development strategy.

5.2 National Targets For Land Management

The commitment to manage and use sustainably Grenada’s land resources dictates that information on threats to land be identified on the one hand, and information on the Island’s land be available to inform efforts to use the resource in pursuit of sustainability on the other hand. The national targets for land management are based on the raising of awareness, development of capacity, generation and dissemination of information, and the development of policy, legislative, and financial environment to achieve these targets.

5.3 The Approach to Attaining the Land Management Targets

The long term plan for achieving effective land management is based on informed, concerned and participatory involvement of the relevant stakeholders and the general public in the task of conserving and managing wisely the land resource. This objective will in part be achieved through the promotion of multiple uses and values, the encouragement of the philosophy of sustainable use, the implementation of incentives and disincentives, and the development of integrated planning, management and monitoring through the adoption of an inter-sectoral approach. An essential component of the Plan is the adoption and commitment of meeting the targets by government and other parties.

The generation of information on land management issues through research, the facilitating of access to information for decision-making, the improving of conservation awareness, and support from legislation and incentives are also part of the national plan to use land resources wisely. The long-term plan will see the undertaking of new initiatives where necessary, and the adaptation of current approaches in the furtherance of the objective of sustainable land management.
5.4 The Guiding Principles Of The Programme

The UNCCD affirms that the sustainable use of land is of common concern to all. Further, it recognizes the importance to economies, society and the environment. The Convention, either explicitly or implicitly, suggests certain principles for advancing towards the goals of sustainable use, fair and equitable sharing of benefits, and orderly development on land resources. Among these are the greater involvement of the citizenry and the private sector, the creating of an enabling environment, the use of incentives, and the adoption of precautionary principles.

Across the areas of activity of the Plan four underlying principles are identifiable: the participatory approach, (ii) the ecosystem approach, (iii) the cyclical/adaptive planning approach, and (iv) the precautionary principle, will be encouraged and adopted. Each of these principles are addressed in succeeding sections of this document.

5.4.1 The participatory approach

The participatory approach is based on the recognition that sustainable use of land resources requires collaboration and commitment from individuals, groups, agencies and sectors are stakeholders in land management. These entities either:

- use or depend on land
- impact on land through their activities
- are responsible for planning and regulating the use of land
- are interested in land in some way

The participatory approach was adopted in the preparation of this Programme. The value of this approach lies in the fact that it strengthens the planning process and draws upon the wisdom of various stakeholders. A further advantage is that it supports understanding and acceptance by the total stakeholder group and a commitment from them to partake in relevant actions identified in the Programme. Understanding and commitment are particularly important for the successful implementation of land conservation plans and measures at various sub-national levels.

Already some precedence of integrated, participatory decision-making exists. For example, the recently developed Forest Policy was developed after a reported exemplary participatory approach. It has also been the process chosen in recent years for refining a number of national policies.

Apart from the implementation stage, participation of the relevant stakeholder groups is important at other phases, including those of information gathering, and monitoring and evaluation. It is the objective that the Programme engenders a sense of ownership by the relevant stakeholders whose involvement and commitment will increase with each planning cycle.

The adoption of the participatory approach is linked also to the objective of introducing inter-sectoral, regional and local planning for land resources. These are processes which are new in the Grenadian context, but are necessary in any integrated approach to
realizing the national goals relating to land management. These processes will not be free of challenges such as those posed by the newness of land use planning as an exercise, a small pool of land management specialists, and logistical difficulties associated with organizing for the participation of the various interest groups, sectors and other actors. Despite all of these, and bearing in mind the likelihood of improvement in planning with experience, the processes are considered too critical to be ignored.

5.4.2 The cyclical/adaptive planning approach

National-level planning addresses medium-term development requirements of a State. Cyclical/adaptive approach to planning is an approach to planning that is designed to meet this medium-term objective but has the distinction of two essential mechanisms – it is cyclic in nature and it is adaptive to change in circumstances and national policy. An additional feature of the cyclical planning approach is that it allows for the inclusion of new information and lessons learned from implementation into the planning process.

In cyclical planning, each plan is for a given implementation span, which is followed by evaluation of the implementation of activities during that period. After this evaluation, a new plan is developed and executed, to be followed by evaluation exercises and the crafting of a new plan, thereby continuing the cyclic process.

Given that this Programme represents the first attempt to be made in the development of a national plan for land management, and likewise in the development of a national cross-sectoral plan, adaptive planning is seen as suitable approach, national planning can still be undertaken despite the absence of adequate information on land use. Implicit in adaptive planning is the expectation that successive planning cycles will lead to progressive improvement because each exercise will be adjusted on the basis of experience gained during its predecessor.

This Programme recognizes the limitations of first-instance planning and supports the view that the first Programme should not be too ambitious. Many other actions may be necessary in land management but not all can realistically be undertaken in the first five years. The achievement of adequate capacity for the implementation of a national Programme on land management will require time and resources, the strengthening of institutional capacity and the gaining of experience. The process can be represented diagrammatically as in Figure 1 overleaf.
5.4.3 The Ecosystem Approach

The Ecosystem Approach to land use planning and land management is based on the identification of the ecosystem as the basic unit of planning and management. It is based on the linking of the social, economic and environmental aspects of land management. It is applicable across sectors and can be adopted at the regional and local levels for purposes of both planning and management.

Among the supporting reasons for the use of the Ecosystem Approach are as follows:

- Ecosystem functioning is vitally important to people, the economy, land use planning, overall environmental quality, and economic development
- The influence and role of land are not merely site-specific, but extend to the dynamic, functional complex that is the ecosystem. Land management is inextricably linked to ecosystem processes and contributes to their functioning and resilience
- The Ecosystem Approach allows for integrated planning and use of natural resources in functional rather than arbitrary units in which the role of humans is integrated
• This approach to management is compatible with integrated watershed management
• The Ecosystem Approach allows for the planning and use of all of the components of land use planning

5.4.4 The Precautionary Principle

The precautionary principle was introduced in the Convention on Biological Diversity and is applicable under the UNCCD. The CBD states that: ‘where there is a threat of significant reduction or loss of biodiversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat.’

The case for applying the precautionary principle hinges especially on Grenada’s present state of knowledge in which the risks or magnitude of land degradation from not acting to conserve it are unknown. The value of Grenada’s land has not been quantitatively determined, nor have risks associated with certain activities, or impacts been studied. The precautionary principle is based on a recognition of the fact that land degradation can lead to desertification and that forfeiture of significant future benefits and opportunities could accompany this land degradation when certain risks are taken. The exercising of caution in cases of uncertainty is unintended to prevent such irreversible processes.

5.5 Roles of Stakeholders in Land Management

The land resources of Grenada account for arguably the largest component of natural resources on the Island. It underpins the economy at all levels, is a source of livelihood, and supports a number of other life forms. Each citizen is a stakeholder in land management either because he depends on the land in a variety of ways, it shapes or affects his life in some way or the other, or his livelihood is impacted upon by land resources. This is true irrespective of whether that person is a farmer, fisherman, or other member of society. The involvement of each individual, corporation, government organisation, or group in taking action and responsibility would therefore contribute in significant ways towards maintaining, safeguarding and responsibly using this major part of the national patrimony. By extension of this responsibility, each stakeholder will have a role to play supporting the implementation of this Programme, and his/her own contribution towards the achievement of the objectives of national policy relating to land management.

5.5.1 Public Agencies

Public agencies have a responsibility to promote and facilitate the development of policies, programmes and plans relating to land management over which they have responsibility. These agencies are expected to take legislative and administrative steps to ensure that land management as an objective is met, and to facilitate the creation of an enabling environment for other partners to play their part. Public institutions also play an important role in the area of monitoring and enforcement.
5.5.2 The Private Sector

The private sector has been singled out for mention in the Convention which calls for the encouraging of partnerships between governments and the private sector. Since the private sector owns a substantial proportion of land in Grenada, no programme can adequately plan for land management without including this main player. In meetings held with private landowners in the compilation of this document, there were clear signs of interest from these individuals in the Programme that would allow them to participate and to benefit from its implementation. These include financing, institutional and human resources capacity building, research, information and monitoring, and incentive measures.

5.5.3 Regional Bodies

As part of the integration objectives of the Programme, Regional Bodies will be responsible for integrating land management into their regional plans. These authorities can play a very important role in the effort to bring about higher awareness, conservation and responsible use at the fundamental levels of resource use.

5.5.4 The General Public

Arising from the participatory principle, each citizen would have a role and responsibility to contribute to decisions on the sustainable management of land in Grenada. The public is the largest stakeholder group and has a powerful voice which can be very effective in achieving the goal of sustainable land management.
CHAPTER 6: PROPOSED PROGRAMMES FOR LAND MANAGEMENT

This Programme considers the process of national land use planning and land management as a long term one which will be institutionalized, cross-sectoral and multi-level in nature. This Programme is therefore the first of several of a repeated process in which the MOALFF, and other authorities, will develop and commit capacity and experience over a period of time in planning, implementation and monitoring. It is not the objective of this Programme that all of the national needs in the area of land management will be addressed in the first planning cycle, rather this will be achieved over the longer term through a number of planning cycles. Continuous, cyclic planning is proposed because of various advantages associated with it. The Programme takes the view that full and successful adoption of the principles described in Chapter 5 and the integration of land management into planning at various levels can only come with time. Likewise the accumulation of experience, the taking of stock, and the execution of monitoring and adaptation require time which the opportunity of repeated, cyclic planning offers.

The additional cost resulting from the adoption of the cyclical and participatory approaches has not escaped consideration. This Programme is advised by the view that this increment in cost will pay dividends in the long term. Succeeding planning cycles could, as a cost saving strategy, utilize a more targeted approach to consultation, in which specific stakeholder groups are involved in a more direct way. In time also, planning will be carried out as part of the substantive responsibilities of institution staff who would have gained experience during earlier cycles. Apart from this, if planning habit is adopted at various levels the extent of consultation and the time required for the preparation of a national programme will be lessened because ultimately the planning process will be transformed to a bottom-up process. Basically, if people, agencies and enterprises at the regional and sectoral levels know what their needs are, they can collectively agree on a set of actions to satisfy those needs.

In the Programme, a number of projects or other activities are clustered under individual programme areas in a five (5) year cycle. Many of the actions identified in the Programme will require additional financial resources and technical support, both from external sources and from local inputs. The majority of the actions and project-oriented, but are non-project in nature.

6.1 Programme Areas

Programme Area 1: Mobilization of Financial and Technical Resources

Given the present status of Grenada’s human and financial resources significant additional financial and technical resources will be required to develop the capacity necessary to elaborate the UNCCD and implement the Action Programme. The achievement of this state will require the mobilization of considerable financial and technical resources to develop the required capacity; hence this Programme Area is highly critical for the implementation of the entire Programme and should be given absolute priority in the early stages of the Programme.
Programme Area 2: Human Resources and Institutional Capacity Building

Grenada’s public, private and NGO sectors experience shortages of expertise in the areas relevant for effective land management. Institutional capacity is generally weak throughout the sectors that make up this area. Together they combine to present a serious obstacle to the achievement of national goals relating to land management.

The programme will address these weaknesses by developing human resources and institutional capacity for the management of land. This capacity development will be conducted at the central and regional levels and will be complemented by the programme on public awareness and education, as well as career guidance efforts. A more fundamental purpose of the activities under this programme area is to help ensure that capacity is available for the implementation of the Action Programme.

Programme Area 3: Establishing an Enabling Policy Framework for Land Management

Prior to the passing of hurricane Ivan the growth and development of the agricultural sector had been constrained by an inadequate policy framework and the new WTO agreements especially the liberalization of markets, and sanitary and phyto-sanitary measures. The destruction of the agriculture sector by hurricane Ivan has exacerbated the situation and is further likely to negatively impact on the agricultural sector. It is therefore necessary that the right policy framework be provided to encourage agricultural practices that conserve the land resource.

As a result, this component will look to encourage the pursuance of projects to correct the policy dimension, such as formulation of land and agricultural policies consistent with the goal of sustainable land management.

Programme Area 4: Improving the Agricultural Sector

The agricultural sector is said to be faced with a number of challenges that restrict the ability of policymakers to modernise the sector and reduce the negative externalities resulting from the absence of effective land use planning. The challenges include weak institutional framework, the absence of adequate and appropriate information to support planning and policy decisions and the lack of coordination among local, regional and international institutions resulting in a duplication of activities.

This programme aims to seek to encourage the use of indigenous species for the re-vegetation of critical watershed, to rehabilitate watersheds and improve the sustainable livelihoods of the populace that depend on the land.

Programme Area 5: Research and Information

Lack of local expertise and weak institutional and financial capacity have contributed to a generally low level of research undertaking locally. Also, the identification of areas for research has not been conducted in any systematic way, so that many of the national priorities are still to be addressed. This weakness in research achievement has contributed to a low level of information on Grenada’s land resource. Research and information are
integral to planning, management, identification and monitoring and are identified as a priority area. The programme will set priorities for land related research, indicators for monitoring, and mechanisms for the collection, analysis and dissemination of information.

Programme Area 6: Consolidation of the Policy, Legal and Administrative Framework

The policy framework on land management at the sectoral level is incomplete, with policy absent in many areas. The legislation relating to land management is old, incomplete in coverage, and inadequate in so far as recent developments in the field are concerned. The policy and legal foundations are basic to the development of other initiatives and therefore would require to be addressed as a matter of priority.

The programme involves actions that will address protection and compensation of local knowledge, access and benefit sharing of public lands, the development of land and land use policy and agricultural policies and projects.

Programme Area 7: Public Awareness and Education

Levels of public awareness in Grenada are fairly high when viewed comparatively with other Caribbean Islands. However, there is still some way to go and unless these are addressed, will pose a threat to the realization of the general objectives related to land management. Such awareness is needed, not only for the wider adoption of the conservation ethic, but also for reducing threats to land resources, and for encouraging human resources development in the area.

The programme will support activities leading to the preparation of instructional material, formal and informal training of citizens, the training of trainers and career guidance exercises.

Programme Area 8: Incentive Measures and Alternatives

The use of incentive measures is complementary to legislative and administrative measures for the conservation and sustainable utilization of land resources. Whereas incentives can be used to encourage conservation of land resources, some policies may serve as perverse incentives contributing to land degradation. On the other hand, the development of viable economic alternatives can serve to reduce poverty-based threats to the land resource.

The programme contains initiatives leading to the review of national policies relating to land management, the identification and removal of perverse incentives, and an examination of the possibility of using incentive measures as a mechanism to encourage responsible use of land. It will also lead to the identification of economic alternatives to replace poverty-driven threats to land management.
Programme Area 9: Monitoring, Evaluation and Reporting of the Implementation of Programme Areas 1 thru 8

The successful implementation of the plan and its appropriateness to changing circumstances and needs will be enhanced by monitoring and evaluation of implementation and effectiveness. Monitoring and evaluation are seen as essential parts of the cyclical and adaptive planning approach.

6.2 The Interventions

A total of 20 projects and other activities have been proposed in the Action Programme. Projects and other actions are linked in clusters under programme areas. Details of the individual actions are given as follows:

**FOUNDATION PROGRAMMES (YEARS 1 –5 OF THE PROGRAMME)**

This Phase is comprised of the following Programme Areas:

Programme Area 1: Mobilization of Financial and Technical Resources

**Introduction**

The ability to mobilize financial and technical resources quickly and sustainably is absolutely vital to the successful implementation of Grenada’s Action Programme. Hence, this Programme Area is extremely critical and should be given highest priority in the early stages of Phase I of the Programme. Existing strategies for obtaining financial and technical resources will be consolidated. In addition, there is the recommendation that a spectrum of new approaches be adopted. These will be generally based on the principle that those who benefit from land deserve to have the opportunity to protect their future by investing in its management.

**PROJECT 1: Recruiting Resource Mobilization Specialist**

**OBJECTIVES:**

- To design and implement a spectrum of sustainable financing mechanisms for Programme implementation
- To develop the human capacity to ensure short and long-term financing and sustainability of the NAP

**ACTIVITIES:**

- Create the position of Fund Raising Specialist at the FD. The responsibilities of this position are to identify and obtain financial and technical support for projects under the NAP
- Determine the technical resources available in Grenada to fill this post by utilizing the information contained in the NCSA for the elaboration of the UNCCD
✓ Shortlist and select the Fund Raising Specialist, and identify a counterpart
✓ Up-grade skills of the Fund Raising Specialist and his/her counterpart through participation in key fora and/or training workshops (e.g., CDB, IADB, GEF, EU)
✓ Strengthen the ability of members of the NCB, agencies and groupings involved in land management and regional and local groupings (including public, private and community based groups) to seek their own funding for land management activities. This will include convening a series of proposal preparation and fund raising workshops
✓ Develop a succession plan for others to follow once this specialist leaves

**DURATION:**

Immediate and throughout the life of the Programme

**LOCAL AGENCY/PARTNERS:**

National Coordinating Body

**BUDGET (in US$):**

US$275,000

**PROJECT 2: Mobilization of financial resources from the regional and international donor community**

**OBJECTIVES:**

- To develop a visionary and clear negotiating platform for encouraging donor investment in the management of Grenada’s Land Resources
- To use the above as a basis for developing a spectrum of creative and innovative project documents for the priority elements of the Programme
- To use the project documents to mobilize financial and technical resources

**ACTIVITIES:**

✓ Develop a visionary and clear negotiating platform for encouraging donor investment in the management of Grenada’s Land Resources
✓ Review of regional and international funding context by Fund Raising Specialist
✓ Identify regional, multilateral, bilateral, regional and private donor agencies to be targeted
✓ Convene meetings with financial and technical assistance agencies to match their interests with project priorities such as a:
  - Roundtable with Grenadian-based representatives
  - Follow up meetings with individual agencies
  - Roundtable at COP meetings with Internationally based representatives
✓ Develop the following categories of initiatives:
- Mobilization of financial resources from regional and international donor community, the public and the private sector
- Mobilization of financial resources from national sources
- Establishment of a Land Trust Fund
- Mobilize technical assistance from regional and international sources

✓ Design and utilize methodologies and indicators for monitoring and evaluating project progress
✓ Follow up communications/meetings with agencies
  - Prepare project proposals
  - Access and administer funds

**DURATION:**

Immediate and throughout the life of the Programme

**LOCAL AGENCY/PARTNERS:**

National Coordinating Body

**BUDGET:**

US$100,000

**PROJECT 3: Mobilization of financial and technical resources from national inputs**

**OBJECTIVES:**

- To obtain the necessary financial support for land initiatives
- To encourage local investment in land management as a complementing measure to foreign donor support

**ACTIVITIES:**

✓ Review of opportunities by Fund Raising Specialist. Areas to be examined may include:
  - Community inputs: in-kind contributions (knowledge, information, labour)
  - Private sector: funds and in-kind contributions (e.g. sponsorship activities and land trust fund)
  - Establishment of a land degradation bond to be lodged by potential developers
  - Non-governmental: in-kind contribution, such as dissemination of information and providing technical competence in land management issues
  - Government: adequate government subvention to land management issues and in-kind contribution as well
✓ Build on the activities in Project 2 on strengthening ability of various groups to access funds
✓ Develop demonstration projects to test selected priorities
✓ Accessing and administering funds
✓ Upgrading and streamlining activities and strategic actions to ensure maximum mileage from minimum investment by the NCB Coordinator
✓ Design and utilize methodologies and indicators for monitoring and evaluating impacts

DURATION:

Should commence six months after the implementation of the programme and continue throughout the life of the programme

BUDGET:

US$44,000

Programme Area 2: Human Resources and Institutional Capacity Building

This programme area addresses the development of capacity to meet the new and additional requirements in the area of land management. It would be significantly informed by the assessment of human resources capacity and training needs to be undertaken under the project “Development of human resources for implementation of land management activities.”

PROJECT 4: Strengthening of the National Coordinating Body

Introduction

The project will give statutory status to the NCB and with the complementary support of the next project will improve the administrative support available to the NCB for the execution of its role. The project will strengthen the NCB.

OBJECTIVES:

• To enable the NCB to fulfill its objectives and responsibilities
• To prepare an entity to become the major vehicle for inter-sectoral land use planning and land management, and the integration of land issues into sectoral and national plans
• To increase the ability of institutions with responsibilities for certain aspects of land management to implement land management actions

ACTIVITIES:

✓ Establish the NCB as a statutory body
✓ Establish of an NCB secretariat
✓ Work in close association with the Regional Office for the implementation of the PISLM
✓ Review the guidelines for the NCB and up-grade them appropriately
✓ Improve administrative and other support services (by the MoA officers) to create better systems of disseminating information, servicing meetings, tracking project status, record keeping, etc.
✓ Initiate incentives for increased levels of participation by members and expanded use of the pool of expertise in the NCB (e.g. honoraria, CoP, etc)
✓ Improve rate of attendance of key meetings, level of preparation prior to attendance, and reporting afterwards
✓ Document interest and competence of the NCB members and match their responsibilities, tasks and accountability
✓ Establish requirements for continuity of attendance at meetings, the implementation of tasks and the development and management of projects
✓ Organize orientation and training workshops for members of the NCB, such as sustainable land use planning, project development and management, and negotiating
✓ Under the NEMS, give the SDC legal status and make it the entity responsible to be responsible for inter-sectoral land use planning and land management
✓ Develop a communications strategy for the NCB

DURATION:

This project is for immediate implementation. Some activities will last the duration of the programme.

LOCAL AGENCY/PARTNERS:

MoALFF

BUDGET:

The budget for this project will be met by the GoG with support for activities to be accessed from available sources. No formal budget can be presented at this time.

PERFORMANCE INDICATORS:

- NCB established by statute
- Guidelines for NCB reviewed and officially adopted
- Develop strategy plan for the operationalization of the NCB
- Orientation and training workshops for members of NCB held
- Members of the NCB playing a wider role, such as representing Grenada at meetings under the UNCCD, NCB work to become part of the annual work plans of the MoALFF
- The SDC legally established and guidelines for its operations developed
- Communications strategy developed
MEANS OF VERIFICATION

- Work plan and Progress Reports of the MoALFF
- MoALFF legislation/subsidiary provisions
- Guidelines of the NCB
- Reports from meetings under the UNCCD
- Legal documentation

RISKS/ASSUMPTIONS

- Participating agencies and MoALFF will not endorse the functions of the NCB
- Rapid turn over of delegates to the NCB
- Incentives are created for functioning members of the NCB

PROJECT 5: Strengthening Local Institutions and indigenous NGOs

Introduction:

The project will aim to strengthen the local organisations and NGOs’ capacity to enable them to better appreciate the need for sustainable land use planning and to integrate land management as part of the regional planning agenda. These entities will also serve as focal points for public awareness and implementation activities contained in the Programme.

OBJECTIVES:

- To strengthen the capabilities of local agencies and indigenous NGOs to plan and implement their land management priorities identified in their own plans
- To strengthen the capabilities of local agencies and NGOs to assist in the implementation of projects identified in the Action Programme
- To encourage the formation of community based groups
- To create strategic alliances between the NCB and a group of Partners
- To facilitate the two-way sharing of knowledge, expertise and experiences between the NCB and this group of Partners

JUSTIFICATION:

The need for effective land management in Grenada rests heavily with local and community based organizations. Therefore, Programme implementation at these levels, largely through local and NGO type organizations will be absolutely critical to the success of the Programme.

ACTIVITIES:

Specific activities under the project are to:
✓ Use lessons learnt from strengthening other national entities to refine actions in this area
✓ Conduct the technical abilities of the existing NGOs to implement the NAP by using the NCSA report
✓ Design programme to strengthen the NGO and community-based organizations
✓ Where gaps may exist, the NCB will work with community-based stakeholders to establish community-based organizations and farmers’ groups
✓ Convene meetings on the Action Programme (for the purposes of education, orientation, implementation and sharing of knowledge) with:
  – Representatives of the various islands and local Parishes most affected by land degradation
  – Local organisations and NGOs like ART and GRENCODA
✓ Develop a social marketing approach to ‘sell’ the NAP to grassroots, community-based and NGO stakeholders
✓ Convene short project planning workshops for agencies
✓ Conduct a demonstration project on integrating land management considerations into regional planning.

LOCAL AGENCY/PARTNERS:

NCB, NGOs and CBOs

DURATION:

This project should commence at the end of year 1

BUDGET:

US$222,000

PERFORMANCE INDICATORS:

By the end of year 2, the completion of at least one of the following:

- Convene meetings with stakeholders
- Workshops
- Demonstration project

RISKS AND ASSUMPTIONS

- Lack of interest at the local and community levels
- Insufficient capacity within the local organizations, CBO, and NGOs
- Insufficient political support for this project
Programme Area 3: Establishing an Enabling Policy Framework

PROJECT 6: Formulating a National Land and Land Use Policy

Introduction

According to NEPS/NEMS (2005) the need for a National Land and Land Use policy has been espoused as one of the pillars in the pursuance of sustainable development in Grenada. In its absence, the Island has seen the over-concentration of infrastructural development in the south-west of the main Island, leading to congestion, migration and inequity among Grenadians.

OBJECTIVES:

- To promote land use development on the Island that provides for a full range of land uses and intensities of use, consistent with the goals, objectives and policies of the Grenadian economy
- To protect natural resources including primary agricultural lands, surface waters, wetlands, and biological diversity, including critical ecosystems as well as endangered, endemic and locally important species
- To develop linkages between the various sectors of economic activity
- To improve the land market
- To minimize land use compatibility problems between competing uses
- To correct existing land use compatibility problems on the Island
- To coordinate land uses with the availability of facilities and services
- To rationalize the land administration and management instruments and institutions

ACTIVITIES:

- Review and assess the current housing policies and schemes
- Review the land taxation system
- Formulation of zoning guidelines and plans
- Establishment and management of conservation areas
- Rationalise the institutional arrangements for land management and administration, through, inter alia, establishing a land authority within the Ministry of Agriculture

JUSTIFICATION:

Social and economic development objectives are presently curtailed by the inefficiency of the land markets and by the scarcity of agricultural land, particularly for poor and young farmers. At the same time, there is no land use planning thus leading to less than efficient utilisation of the resource in Grenada.
According to the NEPS/NEMS, land resources represent one of the main assets available to Grenada in its quest for reconstruction and sustainable development, hence it is imperative that these resources be managed wisely and strategically.

DURATION

This project should be informed by the ARD’s land utilization survey and therefore commence one year in after the implementation of the Programme

LOCAL AGENCY/PARTNERS:

Inter-sectoral Environmental Committee

BUDGET

US$200,000

PERFORMANCE INDICATIONS:

By the end of year 2, the completion of at least one of the following:

- Land policy legislation reviewed and new legislation being drafted
- Land use evaluation being conducted
- Workshops being hosted with farmers, housing developers, and other stakeholders

MEANS OF VERIFICATION:

- Land policy drafted
- Zoning plans being prepared
- Minutes from workshops

RISKS AND ASSUMPTIONS:

- That there is the political will to pursue this policy and implement its various components
- That resources will be available to conduct this exercise

PROJECT 7: Formulating a National Agriculture Policy

Introduction

The absence of a national agricultural policy has meant that Grenada is not currently prepared for the threats that are likely to arise from a more globalised world. At the same time, it has encouraged weak institutional capacity and support for the sector. The development of agricultural policies remains central in the pursuance of a sustainable and profitable agricultural sector.
OBJECTIVES:

- To develop appropriate farming systems for the replanting of nutmeg, cocoa and bananas capable of supplying raw materials to industries in Grenada
- To establish a non traditional tree crop (fruits) sector capable of supplying raw materials to industries, and to the local and regional markets
- To establish a modern livestock sector that will provide quality meat to the local market
- To establish a modern fishing sector through productivity and management of the fish resources
- To improving the food security status nationally
- To enhance the capacity of staff to provide a more effective service to the agricultural sector
- To industrialise all components of the agricultural sector through value added
- To upgrade all agricultural infrastructure such as nurseries, farm roads, irrigation systems etc.

ACTIVITIES:

- Conduct market based studies to ascertain the type of products that should be encouraged
- The new Grenada agricultural policy will be discussed with stakeholders involved in agricultural related activities
- The policy will be submitted to cabinet for approval
- The policy will be submitted to regional and international agencies providing Technical Corporation to the sector in order to inform the nature of assistance required
- The policy will guide the development of all projects in the agricultural sector
- Pass legislation to strengthen and establish new regulatory functions
- Review existing legislation that governs the sector and seek to rationalize same
- Where gaps exist, enact new legislation to encourage greater private sector involvement in the cocoa and nutmeg industry and other spices
- Enact legislation to rationalize the use of agricultural land

JUSTIFICATION:

An effective and efficient agricultural policy is central to the development, modernisation and the sustainable growth of the Grenadian agricultural sector.

DURATION

This project should commence one year after the implementation of the programme
LOCAL PARTIES:

MOALFF

BUDGET

Government’s budget

PERFORMANCE INDICATIONS:

By the end of the Programme, the completion of at least one of the following:

- A wide level consultation on the new Agricultural policy legislation is held
- Agricultural policy submitted to Cabinet for approval
- The new agricultural policy is reviewed, amended and implemented

MEANS OF VERIFICATION:

- Minutes from workshops and meetings held
- Cabinet sees new draft policies
- New policy in circulation

RISKS AND ASSUMPTIONS:

- That there is the political will to pursue this policy and implement its various components
- That resources will be available to conduct this exercise

PROJECT 8: Improving the Institutional Arrangement for the Implementation of the National Land and Agricultural Policies

Introduction

There is need for new and improved institutional arrangements that are efficient and effective, and that are based on the principles of collaboration, social participation and partnerships. In particular, it will be necessary to improve the coordination and the integration of agricultural policies and concerns into all relevant sectors and programmes

OBJECTIVES:

- To promote the MOALFF as a business-friendly and policy oriented organization
- To make the MOALFF more current to deal with issues of bio-safety and meet best practices with regards to sanitary and phytosanitary standards.
- To improve the public/private cooperation in the sector
ACTIVITIES:

- Rationalize the operations of the MOALFF by giving up an array of services that can be carried out more efficiently by the private sector, and make the Ministry responsible for policy, planning and regulatory activities, research and development and delivery of service
- Organize the MOALFF to become a more market-led department of government to meet the needs of clients
- Establish a National Agricultural Health and Food Safety Agency that will provide the technical and coordination service in:
  1. Facilitating safe agricultural trade.
  2. Strengthening food safety systems.
  3. Meeting WTO/SPS requirements; and
- Strengthening public/private sector cooperation
- Conduct willingness and ability to pay surveys and analyses

JUSTIFICATION:

The need to restructure the MoALFF is premised on the fact that to increase the efficiency of the Ministry to undertake its modernizing role it will be necessary for it to become more relevant and current.

DURATION

Throughout the life of the Programme

LOCAL PARTIES:

MOALFF

BUDGET

Government’s budget

PERFORMANCE INDICATIONS:

By the end of year 2 there should be the completion of at least one of the following:

- Reforms have commenced and consultations being held with the Private sector
- The necessary policy measures to support the restructuring is being reviewed and amended accordingly

MEANS OF VERIFICATION:

- Various policy documents prepared and Cabinet memos
- Policies with the Legal Division
RISKS AND ASSUMPTIONS:

- Serious institutional rivalry and ‘turfism’ can affect the implementation of this necessary measure
- Lack of political will and less than effective involvement of the private sector

Programme Area 4: Improving the Agricultural Sector

PROJECT 9: Develop programme to improve output and productivity from the agricultural sector

Introduction

After the devastating Hurricanes in 2004 and 2005 much of the traditional crops have been destroyed. This is threatening the sustainable livelihood options available to farmers. At the same time, insufficient propagation centres have seriously restricted the volume of replanting material available to farmers.

OBJECTIVE:

- To develop a programme for the propagation and replanting of traditional crops
- To increase the output and productivity of farmers
- To improve the sustainable livelihood of rural households in particular

ACTIVITIES:

- Upgrade and modernise propagation centres, and if the need exists, build new propagation centres
- Review the ARD land utilisation survey results
- Conduct a marketing studies on produce selected traditional and non-traditional products
- Develop a programme for the replanting of cocoa, nutmeg, and bananas mixed with spices such as the lucrative crop of vanilla, cinnamon etc.
- Shift the production of nutmeg towards supplying local and regional industries such as cosmetic, pharmaceutical, and others could be identified. The medium term approach should be to develop and expand local industries.
- Shift the production of cocoa towards supplying local and industries that are in the production of chocolate, and other cocoa based products such as cocoa butter.
- Spices such as vanilla and cinnamon could be used in the chocolate industry, but could also be exported as a finished product to niche markets
- Conduct studies on the technical and economic feasibility for value added spice products and spice based products.
- Conduct studies in key regional and international markets of the potential for value added nutmeg products including cosmetics.
- Explore and evaluate the likely benefits of developing a Grenadian brand around the “Isle of Spice” for Grenada agricultural products.
• Upgrade the drying facility under marketing board to produce dried banana and other dried fruits for niche markets regionally and internationally. Other large private sector driers should be supported.
• Develop training programmes for personnel of the Marketing Board and the private sector currently involved in ripening for bananas and other fruits.

JUSTIFICATION:

While it will be necessary in the medium term for the Grenadian economy to diversify away from its traditional base, and possibly follow a path like Dominica in seeking innovations to take advantage of market trends, in the short term, rehabilitation of cash crop is a necessity.

DURATION

Commencing toward the end of year 2

LOCAL PARTIES:

MOALFF

BUDGET

Government’s budget, Assistance from donors (at this point in time it is not possible to provide a figure for this project)

PERFORMANCE INDICATIONS:

• At least 3 of the 5 propagation centers upgraded and modernized throughout the Island
• Training programme on propagation techniques, best planting methods, post-harvest care and dehydrating fruits for farmers and other stakeholders developed
• More that 300 acres being re-vegetated by the end of the programme

MEANS OF VERIFICATION:

• Propagation centres erected and in place
• Minutes from workshops and meetings held
• Training manuals indicating BMP in place

PROJECT 10: Rehabilitating and Protecting the critical watersheds

Introduction

It is estimated that approximately Ninety one percent of the forest lands and watershed now lay bare and stripped of the vegetation due to a combination of natural and
anthropogenic factors. These areas once supported an ecosystem where much fauna and flora benefited directly or indirectly.

OBJECTIVES:

- To restore at least 10 of the 71 watershed in the country to sustain the provision of environmental services
- To increase awareness of the importance of the watershed and water resource management
- To improve the understanding of the effects of land degradation on ecosystems and livelihoods
- To develop appropriate institutional and technical frameworks for integrated water resources management through participatory approaches
- To train persons in the community and the public sector in areas of plant propagation, nursery management, use of specific technologies and equipment, collaborative management and watershed management

ACTIVITIES:

- Conduct rapid appraisal assessment to determine the status of the country’s watershed and allocate some measure of prioritisation
- Rebuild the forest nursery to produce a wide variety of forest plant that could withstand a higher degree of stress.
- Introduce fast growing species as well as economic plants, and suitable fruit trees.
- Rehabilitate at least 10 of the critical watersheds in Grenada in order to prevent soil erosion as a result of the destruction of all canopies of vegetation along the slopes of watersheds and road sides.
- Train farmers in good agricultural practices and BMP
- Establishment of a botanical garden to determine the different types of vegetation that may be best for propagation
- Formulation of community approach to Integrated Water Management and Livelihood alternatives
- Establishment of a monitoring mechanism
- Develop capacity, as indicated in the NCSA report, for watershed management

JUSTIFICATION:

Protection of the country’s water resources through watershed rehabilitation, the implementation of an adequate monitoring and evaluation framework, improved strategies, policy and legal frameworks; improved management system’s and people’s participation and development. These actions have become even more urgent after the ravages of Hurricane Ivan and Emily.

DURATION

Throughout the project
LOCAL PARTIES:

MOALFF, Forestry Division and Communities

BUDGET

Government’s budget and assistance from EU Funded project

PERFORMANCE INDICATIONS:

- By the end of the project approximately 10 watersheds replanted and 25% of watershed areas registered
- Reduction in land degradation
- Increased access to resources to support livelihood strategies
- Training conducted

MEANS OF VERIFICATION:

- Evaluation of quality, availability and timing of water supply
- Watershed committees established

RISKS AND ASSUMPTIONS:

- Privately owned lands in the watersheds will be made available for the project implementation
- Targeted communities and other stakeholders will participate in the project
- Appropriate resources are made available
- A legal draftsman is employed to facilitate and develop appropriate legislations and guidelines

Programme Area 5: Research and Information on Land Related Issues

PROJECT 11: Preparation and implementation of a prioritized programme of land related research for Grenada

Introduction

The project entails the NCB coordinating land related research at a national level. This would involve bringing together the various researchers and research institutions, local and international, in order to establish research needs and priorities at the national level in respect of sectoral and inter-sectoral issues, and to produce sub-projects based on the priorities. The NCB, via the fund raising specialist would then have to secure funding and identify research institutions interested in implementing the sub-projects. Contractual mechanisms should ensure that research institutions obtain equipment and provide researchers to complete sub-projects on time. In this way, continuity of themes
involving sub-projects can be maintained, eventually placing the country on the cutting edge of land related research.

**OBJECTIVES:**

- To establish national needs and priorities of land related research
- To produce sub-projects for the prioritised national needs of land related research
- To secure funding and research bodies to implement sub-projects

**ACTIVITIES:**

- Conduct a rapid assessment of the research pieces done and where they are located
- Design a system to have all research material centralized
- Determine, via needs assessment, the areas for priority research
- Develop ToR and seek to establish collaboration with national, regional and international research institutions
- Seek funding and resources generally for the conduct of researches where possible

**JUSTIFICATION**

Research on land related research in the country has never been coordinated before, hence the efforts have been superficial and lacking continuity. This project established the NCB as the primary coordinating body which will determine the thrust of land related research in collaboration with the PISLM Secretariat in Trinidad, and they would be the caretakers of this undertaking ensuring there is no discontinuity. Adequate funding, lack of scientific equipment and commitment of researchers and their institutions have been, and are still, constraints of implementation of research projects. The provision of finances and obtaining the commitment of implementing institution in a more systematic manner by a centralised body (NCB and the SDC) would ensure the successful completion of sub-projects.

**TIMING/DURATION**

Throughout the duration of this Programme

**LOCAL PARTIES:**

- NCB and SDC
- All local and international research institutions involved in land related research in the country
- Sectoral agencies
- Private sector representatives in the respective sectors
BUDGET

US$50,000 (mainly for coordination of activities, hosting workshops and training sessions, etc.)

PERFORMANCE INDICATORS

- At the end of the three months of the beginning of the project, a number of workshops would have been held
- At the end of six months of the beginning of this project, a number of workshops/consultations would have been held
- At the end of this Phase of the programme, a number of sub-projects would have been completed and some others would be under progress

MEANS OF VERIFICATION

- Report on national needs and priorities on land related research
- Proposals of sub-projects based on prioritised needs
- Funding contracts; research contracts; research findings; monitoring and evaluation report

RISKS/ASSUMPTIONS

- Willingness of stakeholders to work together
- Availability of funding and scientific equipment
- Availability of local researchers

PROJECT 12: Preparation and maintenance of a national database on land related issues

Introduction

This project is intended to establish the ground rules for the responsibility for land management data and information.

OBJECTIVE

- To establish guidelines on the responsibilities of storing, access, sharing and use of land related information among local institutions involved in land management
- To obtain the physical and human requirements for establishing a computer network between institutions involved in land related issues
- To build on the work of the Land Use Unit within the MoALFF and where absent, procure and install the physical infrastructure for the network and to train personnel for operating it within the stipulated guidelines.
ACTIVITIES:

- Determine the available information on land related issues in Grenada that is electronically stored
- Develop protocol for the storage of this and future electronic databases
- Design and establish data storage bank
- Recruit and train those needed to make the system operable
- Devise strategy to inform the general public about the information contained in the database

JUSTIFICATION:

Currently, information on land related issues, including research information, is scattered among the various sectoral and private institutions in land management work, and there is no policy or guidelines for the responsibilities of storing, access, sharing and use of land based information. This project is intended to establish the ground rules for solving this problem. In order to operate the databases at a national level, there is need to link the institutions through a network and to have trained personnel to operate it. The requirements for linking the various types of computer systems at the institutions and the training of personnel for implementing the project within the stipulated guidelines, are therefore essential steps.

TIME/DURATION:

The first two years of the Programme

LOCAL PARTIES

- NCB and SDC
- All local institutions with computerised land based data
- Private bodies with computerised land based data, wishing to be a part of the process

BUDGET:

US$75,000

PERFORMANCE INDICATORS:

- At the end of the three months, a number of workshops and consultations would have been held
- At the end of nine months, a number of consultation and workshops would have been held, and a number of persons would have been trained
- At the end of year two the network would have been installed and operational.
MEANS OF VERIFICATION:

- Guidelines would be available
- Report on the specification of the network; list and cost of equipment; location of equipment; training contracts
- Monitoring and evaluation report

RISKS/ASSUMPTION:

- Participation of stakeholders
- Availability of funds

PROGRAMMED AREA 6: Consolidation of the Policy, Legal and Administrative Framework

PROJECT 13: Developing a legal regime for promoting the protection, compensation for local knowledge, innovation and techniques relating to land management

Introduction:

The project will review and upgrade current legislation to provide for the protection of local intellectual knowledge and the equitable sharing of benefits from the use of such knowledge

OBJECTIVES:

- To upgrade national legislation to enable the protection and effective management of land resources and to promote the use of prior informed consent in the granting and obtaining of access to land resources and knowledge on land.

ACTIVITIES:

- Develop ToR for consultant to review existing legislation on land related issues and indigenous knowledge, and seek to harmonise these where they may exist with other national and regional policies
- Recruit consultant

JUSTIFICATION:

Much of Grenada’s land resources that have come under threat are on elevated landscape where many poor communities exist. Local communities possess a wealth of information relating to land related issues and its use which knowledge is potentially of trade and other economic advantage to the nation and the owners of such knowledge. However, in the absence legislation to protect such knowledge, there is a risk of its uncompensated use resulting in the loss of its economic value to the nation and local communities.
Further, such knowledge is often treated as lay knowledge and therefore its value is distorted.

**TIMING/DURATION:**

Commencing 6 months during the life of the programme

**LOCAL PARTIES:**

NCB and Attorney General’s Chambers

**BUDGET:**

US$50,000

**PERFORMANCE INDICATORS:**

- Locating and committing funds
- Recruiting of consultants
- Number of consultants

**MEANS OF VERIFICATION:**

- Consultant’s Report
- Legislation

**RISKS & ASSUMPTIONS:**

The support and agreement of developed countries, their agencies and organisation would be required.

**PROJECT 14: Comprehensive review and updating of national legislation relating to land access and benefit sharing**

**Introduction**

The project will contract the services of a specialist to map out a strategy to control access and provide for benefit sharing and draft corresponding legislation to support the strategy. A high level of consultation would be required.

**OBJECTIVES:**

To upgrade national capability to regulate access to land resources and benefit-sharing
ACTIVITIES:

- Develop ToR for consultant to review existing legislation on how to access land in the Island and benefit sharing
- Advertise, short-list and recruit consultant
- Appoint local counterpart to work with the consultant

JUSTIFICATION:

Current national policy, as articulated in the national environmental policy, is to promote the sharing of knowledge and benefits resulting from the use of public lands under equitable terms. Current legislation however, does not provide a sufficient framework to monitor and determine access to land nor for enforcing equitable sharing of benefits arising from the use of public lands.

TIMING/DURATION:

Six (6) months during the first part of the programme

LOCAL PARTIES:

NCB and Attorney General’s Chambers

BUDGET:

US$50,000

PERFORMANCE INDICATORS:

- Identification and Commitment of funds
- Recruitment of Consultant
- Number of workshops/stakeholders participation

MEANS OF VERIFICATION:

- Consultant’s Report
- Implementation of Recommendations
- Legislation

RISKS AND ASSUMPTIONS:

Acceptance by the developed countries, their agencies and institutions.
PROJECT 15: Comprehensive review and upgrading of national legislation on natural resources

Introduction

Under the project a consulting firm will be appointed to review, rationalize and expand all legislation dealing with natural resources. It will result in the definition of an administrative regime for ambiguities, overlaps and other weaknesses. The legislation will also reflect land management considerations.

OBJECTIVE:

• To review and update the national legislation to ensure complementarity in sustainable resource use and the incorporation of land management considerations.

ACTIVITIES:

• Develop ToR for consulting firm to review existing legislation on natural resources management on the Island
• Advertise, short-list and recruit consulting firm

JUSTIFICATION:

Conservation and sustainable utilization of Grenada’s natural resources is at present guided by inadequately defined policies and a wide array of pieces of legislation that overlap in some cases or have noticeable deficiencies. When put together, they still do not address some issues. These limitations must be addressed through improved and updated legislation in order to ensure better implementation, enforcement and management of land resources on the Island.

TIMING/DURATION

The first year of the Programme

LOCAL AGENCIES/PARTNERS:

Sectoral Agencies and NCB

BUDGET:

US$150,000

PERFORMANCE INDICATORS:

• Recruitment of consulting agency
• Stakeholders participation
• Legislative drafts
MEANS OF VERIFICATION

- Consultant’s report
- Pieces of legislation produced

RISKS AND ASSUMPTIONS:

Government’s commitment to the process through assignment of responsibilities to agencies.

Programmed Area 7: Public Awareness and Education

INTRODUCTION

Any attempt to promote an understanding of the nature of land management and of the ways it is impacted by use or by human activity has to be situated in a broader environmental context. The education process seeks to impart knowledge of the existing land management issues, i.e., causes and threats for land degradation. Based on this knowledge, it becomes possible to create or to heighten awareness of the status of land degradation and the need for effective management on the Island.

In the sensitization and consultation workshops it was generally agreed that an education and awareness programme should be developed to promote land management through its responsible use in the development process.

It was recommended that the programme target all levels of the population, with particular emphasis on children in the nursery and primary sector of the formal education system, and including also special instruction for various categories of adults, the whole process to be supplemented by non-formal methods of instructions.

The sessions also provided insights on local concerns relating to land degradation, pointing to potential conflicts between conservation and development, and the need, therefore, for public awareness and education on economic aspects of land use, and the importance of conservation measures to ensure sustained livelihood. To give effect of these recommendations, a cluster of mutually supporting projects has been designed to encompass the following elements:

- Survey of curricula and syllabuses of educational institutions to identify topics which can be integrated into a subject/course to be designated Land Resource Management;
- Training of teachers of appropriate levels to teach the designated course (s);
- Preparation of appropriate instructional materials;
- Development of non-formal methods of instruction

14 The Project Coordinator will coordinate the projects in this programme area
Project 16: Incorporating studies on Land Resources Management into curricula of schools

Introduction

A survey of curricula of schools will be undertaken to determine the extent to which land management and environmental issues are addressed, and to recommend changes which would help to achieve project objectives.

Recommendations will take into account level of educational development and time-table constraints. With regard to the latter, the possibility of coalescing relevant elements syllabuses into a unit course or subject area will be explored.

With the collaboration of the Ministry of Education and other appropriate agencies, pilot will be instituted to ensure viability of the proposed course/ subject offering.

OBJECTIVES:

The objective of this project is to ensure that pupils/students of all school receive formal instruction on the nature and value of managing land effectively, and on the inter-relationship between land and biodiversity, land and water resource management, and land and sustainable livelihood.

Non-formal approaches may also be pursued, where these may help to reinforce concepts covered in the formal syllabuses.

ACTIVITIES:

- Prepare a ToR for curriculum development specialist to review the present primary and secondary school curricula, inclusive of CXC and CAPE examinations, on natural resources management and land in particular
- To have the consultant, where necessary, include material and design programme to have land management issues infused into current schools’ curricula
- Advertise, shortlist and hire a curriculum development specialist
- Conduct knowledge, attitudes and perception (KAP) survey among school children and policymakers and utilize the findings from the ARD and Forestry Policy consultation surveys for adults and other stakeholders
- Publish texts as necessary on land management issues or have sections incorporated into existing texts
- Devise system for specialist review and updating of the project

JUSTIFICATION:

Grenada, as part of the Islands in the Caribbean Sea, has limited land resource which, unfortunately, is under increasing threat of decimation resulting mainly from destruction in the pursuit of economic development and the impact of nature. The population in
general pays scant attention to the importance of land management, though benefiting from its use in fundamental ways.

To correct this situation, it is considered essential to instill into the minds of children at the earliest possible age a proper regard for land resources, so that they will grow with the conviction that land needs to be conserved through responsible use.

**TIMING/DURATION:**

It is intended that this project will be introduced from the inception of the programme and will cover a period of two years.

**LOCAL PARTIES:**

Ministry of Education (MoE) and NCB

**BUDGET:**

US$300,000

**PERFORMANCE INDICATORS:**

- Constitution of task force drawn from local parties
- Progress Reports on development of curricula and Syllabuses

**MEANS OF VERIFICATION:**

- Task force constituted; periodic reports of Task Force submitted; progress reports on curriculum and syllabuses reforms.

**RISKS AND ASSUMPTION:**

- It is assumed that the local parties will be supportive. It is further assumed that funding will be available in a timely manner and that training of project staff will be satisfactorily undertaken
- There is a risk that in the absence of incentives such as examination credits, the project may not elicit sustained interest of pupil/students or teachers.

**PROJECT 17: Training of Teachers to Infuse Land Management Issues into their Curricula**

**Introduction**

Syllabuses for teachers will be examined to identify courses which may be upgraded or modified to provide the training requirements for implementation of Project No. 16 described above. Teaching modules prepared jointly by the NCB, Friends of the Earth,
Conservation International and MoE will be used as a framework for institution of teacher trainees to prepare them to teach the courses developed earlier under Project No. 16 in the schools to which the teachers are assigned after completion of their training.

**OBJECTIVES:**

- To train teachers to teach the course(s) on environment and land management as adumbrated in Project No. 16 above.

**ACTIVITIES:**

- Review the present training modules for teachers
- Where gaps may exists, develop specific modules, assignments and project related work to take cognizance of land management issues
- Hold teachers’ workshops, seminars, and discussions to stress environmental and land management issues
- Review the training modules periodically, i.e., every three years

**JUSTIFICATION:**

Implementation of the proposed project: To incorporate studies on land management and environment in the curricula of schools (project No.16 above), will require teachers with specialised training in the relevant subject areas.

It is envisaged that such training will be dovetailed with the preparation of syllabuses, so that the latter can be tested and refined in the classroom, while ensuring that a complement of trained teachers will be available to take the process forward.

**TIMING/DURATION:**

Implementation of this project will be contingent on the preparation and adoption of a syllabus, a process which is estimated to take 1 year. The project should therefore start in the second year of the NAP. It is expected to last a duration of 18 months though training of teachers will be continuous.

**LOCAL PARTIES:**

NCB, Friends of the Earth, Conservation International (CI), and Ministry of Education (MoE)

**BUDGET**

US$75,000
PERFORMANCE INDICATORS:

Syllabus for training of teachers on issues of the environment and land management implemented by MoE

MEANS OF VERIFICATION:

- Progress report on performance of teacher trainees submitted in a timely manner;
- Adjustments to syllabus based on Progress Reports.

RISKS AND ASSUMPTIONS:

- The underlying assumption here is that funding has been secured.
- It is also expected that the syllabus can accommodate this new development

PROJECT 18: Developing non-formal methods of promoting land resource education and awareness

Introduction

Sectoral agencies will be assisted to host workshops and seminars for occupational groups within the respective sectors. The same process will be promoted at regional and local levels, to include administrative and other interest groups.

Information will be disseminated through flyers, pamphlets and brochures; and appropriate contributions will be solicited from electronic and printed media. Local communities will be encouraged to participated by preparing resource inventories and other data on their neighbourhoods.

A recommendation which will be pursued is to urge the NCB to train local “facilitators” of land management awareness and to supply audio-visual materials.

OBJECTIVES:

- To provide a vehicle for the rapid and effective dissemination of information on the role of land management in maintaining the natural world and on the ways of reducing land degradation.
- To complement formal programmes of instruction in the same theme, so that the general population may become aware of land management issues and thereby contribute to conservation and responsible use of land in Grenada.

ACTIVITIES:

- Development of a web page that links into the Grenada Ministry of the Environment and Health website
• Design programme to involve the media in public service announcements, message development and dissemination, and discussion themes
• Utilise existing mechanisms for the translation of formal and informal messages to policymakers and members of the public at large, inclusive of theatre dramatizations, poetry competition, calypsos competition, jingles, etc.
• Seek the business sector’s involvement, inter alia, in the areas of sponsorship, running advertisements, donating prizes, and presenting themselves as good corporate citizens
• Development of an education campaign showing the acceptable and unacceptable behaviour for land management
• Develop resource materials/products such as fliers, brochures, bumper stickers, calendars, posters, newsletters, exercise books and pencils.

JUSTIFICATION:

While the major thrust of this programme is formal education in schools and other institutions, it is recognised that the majority of adults will not have access to such instruction although they are engaged in the use of land in their daily lives. Moreover, development policies which impact land management are made by adults who are largely unaware of these impacts.

To curb further destruction of land resources, it was recommended by the recent regional workshops that non formal methods also be used to heighten awareness among the adult population, as well as to reinforce formal approaches.

TIMING/DURATION:

The project is recommended for immediate implementation and will continue for the duration of the Programme

LOCAL PARTIES:

NCB, Sectoral Agencies (especially natural resources), Friends of the Earth and Conservation International

BUDGET:

US$150,000

PERFORMANCE INDICATORS:

• Reports on workshop and seminars conducted by sectoral agencies, regional and local administrations
• Preparation and distribution of flyers, brochures, posters and other public education campaign materials, use of electronic and print media in propagation of information to public
• Efforts of NCB to train local “facilitators” and produce visual aid to promote awareness at the level of communities; and involvement of community members in preparation of land resource inventories

MEANS OF VERIFICATION:

• Workshop and seminars conducted
• Information literature prepared and distributed, and media participation secured
• Community involvement stimulated by “facilitators” trained by NCB

RISKS AND ASSUMPTIONS:

• Failure to secure collaboration of sectoral agencies, and regional and local administrations
• Inability of media to accommodate planned awareness programmes
• Obstacles to training of community agents by NCB, or in participation of local communities
• Adequate funding should be available

Programme Area 8: Incentive measures

PROJECT 19: Review of incentives and disincentives for conservation and sustainable use of land and the identification of sustainable economic alternatives to activities but threaten their effective management

Introduction

This intervention will lead to the listing and analysis of the effect of the array of incentives and disincentives that exist in relation to the sustainable use of land, to determine their appropriateness and to make amendments or recommend new ones.

OBJECTIVE

• To put in place incentive measures that would be economically and socially beneficial and contribute to the conservation of land

ACTIVITIES:

• Prepare a ToR for consultant to review current fiscal and other incentive and disincentive schemes toward sustainable land management
• Hold consultations with communities and responsible stakeholders on revising the incentive scheme and taking away the disincentives
• Advertise, shortlist and hire consultant
• Identify counterpart to work with the consultant in updating or developing a new incentive regime
JUSTIFICATION:

Grenada’s land resources are most abundant in the remote areas of the country where one’s existence could be harsh and necessity based on the use of these resources. Alternative opportunities to the use land should be offered.

TIMING/DURATION:

This intervention will be undertaken during the last six months of the first year

LOCAL PARTIES:

NCB, Ministry of Finance, Sectoral Agencies

BUDGET:

Government’s Budget

PERFORMANCE INDICATORS:

- Locating and committing resources
- Recruitment of Consultant
- Participation of Stakeholders

MEANS OF VERIFICATION:

- Consultant’s report
- List of incentives/disincentives

RISKS AND ASSUMPTIONS:

Government’s commitment to implementation of recommendations

Programme Area 9: Monitoring, Evaluation and Reporting of the implementation of Programme Areas 1 to 8 above

PROJECT 20: Participatory Monitoring, Evaluation and Reporting on the implementation of Programme Areas

Introduction

The NCB will identify the external evaluator(s) who will pursue a set of activities to ensure programme implementation.
OBJECTIVES:

- To identify and commission an external independent evaluator(s) to evaluate the implementation of programme

ACTIVITIES:

- Working with the communities to develop guidelines, indicators and methodologies for evaluating the implementation of the Programme, taking into consideration:
  - The goals and objectives of the Programme
  - The targets set out in the Programme
  - The objectives and activities and timetables specified under each project
  - Conduct an external review of analysis of monitoring data prepared in the monitoring activities
  - Apply the indicators for monitoring and evaluation
  - Prepare and submit evaluation report(s) to the Permanent Secretary of the Ministry of Agriculture
- Train community members to become monitors for the programme
- Use community groups, NGOs and similar bodies to conduct monitoring of the implementation of programme at the micro-level

JUSTIFICATION

The effective evaluation of the Plan will require the involvement of an external independent evaluator(s). This person/team will bring an objective and fresh perspective to the cyclical and adaptive land use planning process.

TIMING/DURATION

Evaluation will take place towards the end of the first two years

LOCAL PARTIES

The NCB and all of the stakeholders in the Plan

BUDGET:

US$130,000

PERFORMANCE INDICATORS

- Recruitment and orientation of consultant
MEANS OF VERIFICATION

• Guidelines, indicators and methodologies for evaluating implementation
  Evaluation reports

RISKS AND ASSUMPTIONS

• Appropriate evaluator(s) can be identified and commissioned
• Cooperation and participation by all of the stakeholders
CHAPTER 7: IMPLEMENTATION PROGRAMME

7.1 INSTITUTIONAL REQUIREMENTS FOR IMPLEMENTATING THE PROGRAMME

Implementation of the Programme is as important as the planning phase and is one of the most important determinants of the fruitfulness of the planning effort. The NCB as the body responsible for the coordination and implementation of the Programme will require greater capacity in order to mobilize resources, coordinate activities, facilitate integration and monitor progress. This requirement should be met under Programme area 1 of the NAP. The entity will also be working in close collaboration with the PISLM and will receive some degree of technical assistance to carry out its mandate.

7.2 MOBILIZATION OF FINANCIAL AND TECHNICAL ASSISTANCE

A priority step in the support strategy is the creation and filling of a specialist position of Land Management Fund Raising Specialist working with the NCB. The responsibilities of this post are to identify sources of financing, “market” the Programme, liaise with donors, and coordinate funding and other support for projects. This will possibly be a long term position.

7.3 ENSURING LONG-TERM FINANCING AND SUSTAINABILITY

The ability to mobilize financial and technical resources on a sustainable basis will be critical to the successful implementation of the Grenadian NAP and the longer term objective of realizing and maintaining responsible management of land resources.
CHAPTER 8: MONITORING, EVALUATION AND REPORTING

8.1 MONITORING

The successful implementation of the NAP and its appropriateness to changing circumstances and needs will depend on the monitoring and evaluation of effectiveness. Monitoring and Evaluation are both essential elements of the adaptive planning process.

Monitoring and evaluation will be conducted during and after the implementation phase. The full methodology will be developed and finalized upon completion of the Programme. Some key issues for consideration in relation to monitoring is that there is commitment and cooperation from all sectors of society that can play a supportive role and for the process to be institutionalized and cost effective.

8.2 EVALUATION

This is to be undertaken on an annual basis. Evaluation will be conducted by independent evaluators who would report to the SDC.

8.3 REPORTING

Reports on implementation of projects will be prepared and presented to the NCB by the coordinator. The overall process will be the responsibility of the NCB which will report of overall Programme implementation under existing arrangements. The report of the Evaluators will be presented directly to the SDC.

Progress in implementing the Programme and upgrading the implementation of Grenada’s obligations under the UNCCD will inform the National Report to the CoP. Reporting by sectoral and regional bodies will be used to facilitate the integration of land management planning into sectoral and national planning and inform other planning and reporting processes such as the National Development Strategy and reporting to the SDC.
BIBLIOGRAPHY

2. FAO (1995) *Planning for sustainable use of land resources Towards a new approach,* Rome
3. FAO (1996) *Guidelines for land-use planning,* Rome
## APPENDIX 1

### MEMBERS OF THE NATIONAL COORDINATING BODY AS APPOINTED BY CABINET

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Mason</td>
<td>Land Use Division, Ministry of Agriculture</td>
</tr>
<tr>
<td>George Phillips</td>
<td>Extension Division, Ministry of Agriculture</td>
</tr>
<tr>
<td>John Auguste</td>
<td>Energy Department, Ministry of Agriculture</td>
</tr>
<tr>
<td>Gordon Patterson</td>
<td>Forestry and National Parks Division</td>
</tr>
<tr>
<td>Christopher Joseph</td>
<td>Ministry of Health and the Environment</td>
</tr>
<tr>
<td>Judy Williams</td>
<td>GRENCODA</td>
</tr>
<tr>
<td>Sandra Ferguson</td>
<td>Agency for Rural Transformation</td>
</tr>
<tr>
<td>Joycelyn Paul</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>Carlton Fredricks</td>
<td>Science and Technology Council</td>
</tr>
<tr>
<td>Cosmos Joseph</td>
<td>Inter-American Institute for Cooperation on Agriculture</td>
</tr>
<tr>
<td>Christopher De Riggs</td>
<td>Chamber of Industry and Commerce</td>
</tr>
<tr>
<td>Valma Jessamy</td>
<td>Environmentalist</td>
</tr>
<tr>
<td>Bernard McIntosh</td>
<td>Carriacou and Petite Martinique</td>
</tr>
<tr>
<td>Malachy Dottin</td>
<td>Plant Biotechnologist</td>
</tr>
<tr>
<td>Augustus Thomas</td>
<td>UNCCD Focal Point and Chairman of the NCB</td>
</tr>
<tr>
<td>Representative</td>
<td>National Emergency Disaster Management Agency</td>
</tr>
<tr>
<td>Representative</td>
<td>Community-based Organization</td>
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<tr>
<td>Representative</td>
<td>Farmers Representative</td>
</tr>
<tr>
<td>Representative</td>
<td>Point Salines Meteorological Unit</td>
</tr>
<tr>
<td>Representative</td>
<td>GRENCASE</td>
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## Appendix 2

### List of Persons and Organizations Consulted

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Cosmos Joseph</td>
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<tr>
<td>Judy Williams</td>
<td>GrencoDA</td>
</tr>
<tr>
<td>Kelvin Dottin</td>
<td>UNDP (MoH)</td>
</tr>
<tr>
<td>Jason Robertson</td>
<td>Meteorologist Tech. Met Office</td>
</tr>
<tr>
<td>Anthony Jeremiah</td>
<td>Forrester, MoALFF</td>
</tr>
<tr>
<td>Allan Joseph</td>
<td>Focal Point (former) and Chief Forest Officer</td>
</tr>
<tr>
<td>Augustus Thomas</td>
<td>Chairman of the NCB</td>
</tr>
<tr>
<td>Michael Mason</td>
<td>Land Use Officer, MoALFF</td>
</tr>
<tr>
<td>Simone Lewis et al</td>
<td>Agency for Reconstruction and Development</td>
</tr>
<tr>
<td>Joycelyn Paul</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>Francis Robertson et al</td>
<td>Ministry of Tourism</td>
</tr>
<tr>
<td>Mr. Fredricks</td>
<td>Physical Planning Unit</td>
</tr>
<tr>
<td>George Phillips</td>
<td>Agricultural Officer, Extension, MoALFF</td>
</tr>
<tr>
<td></td>
<td>European Union</td>
</tr>
<tr>
<td></td>
<td>CARDI</td>
</tr>
<tr>
<td></td>
<td>NAWASA</td>
</tr>
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## APPENDIX 3

**LIST OF PARTICIPANTS AT FIRST CONSULTATION WORKSHOP ON AUGUST 19, 2005 HELD AT TROPICANA HOTEL, ST. GEORGES GRENADA**

<table>
<thead>
<tr>
<th>NAME</th>
<th>POSITION</th>
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<tbody>
<tr>
<td>Yolande Lord-Telesford</td>
<td>Veterinary Division</td>
</tr>
<tr>
<td>Joseph John</td>
<td>Farmer (Concord)</td>
</tr>
<tr>
<td>Lauriston Hosten</td>
<td>Civil Engineer (NAWASA)</td>
</tr>
<tr>
<td>Rawle Charles</td>
<td>Agricultural Extensionist</td>
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<tr>
<td>Bernard Mc. Intosh</td>
<td>Agricultural Officer (C’cou)</td>
</tr>
<tr>
<td>Alison Miller</td>
<td>Public Officer (Tourism)</td>
</tr>
<tr>
<td>Imhotep Mawauto</td>
<td>Forester (Forestry)</td>
</tr>
<tr>
<td>Judy Williams</td>
<td>Grencoa</td>
</tr>
<tr>
<td>Kelvin Dottin</td>
<td>UNDP (M.O.H)</td>
</tr>
<tr>
<td>Desmond Mc. Queen</td>
<td>Forestry</td>
</tr>
<tr>
<td>Everest Ferguson</td>
<td>Ministry of Agriculture</td>
</tr>
<tr>
<td>Jason Robertson</td>
<td>Meteorologist Tech.</td>
</tr>
<tr>
<td>Anthony Jeremiah</td>
<td>Forester</td>
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<tr>
<td>Samuel Joseph</td>
<td>Nutmeg Association</td>
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<tr>
<td>Mc Leish Laingaigne</td>
<td>Farmer</td>
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<tr>
<td>Joseph Gill</td>
<td>Farmer</td>
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<td>Alvin Forsyth</td>
<td>Teacher</td>
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<td>Michael Mason</td>
<td>Land Use Officer</td>
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<td>Michael Jessamy</td>
<td>Heritage Officer</td>
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<td>George Phillip</td>
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<tr>
<td>Alban Chase</td>
<td>Farmer</td>
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<tr>
<td>Simone Lewis</td>
<td>Project Develop. Manager</td>
</tr>
<tr>
<td>Daniel Lewis</td>
<td>Agronomist</td>
</tr>
<tr>
<td>Beverly Chase</td>
<td>GREP</td>
</tr>
<tr>
<td>Jerome Romain</td>
<td>Journalist/Farmer</td>
</tr>
<tr>
<td>Mark Bynoe</td>
<td>Consultant (Guyana)</td>
</tr>
<tr>
<td>Derrick Oderson</td>
<td>Consultant (Barbados)</td>
</tr>
<tr>
<td>Reuben Raymone</td>
<td>Agricultural Tech. (CARDI)</td>
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<tr>
<td>Kenneth Morgan</td>
<td>Grenada Bureau of Standards</td>
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<tr>
<td>Gordon Patterson</td>
<td>Forestry</td>
</tr>
<tr>
<td>Crafton Isaac</td>
<td>Fisheries</td>
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<tr>
<td>Malachy Dottin</td>
<td>Biotechnologist</td>
</tr>
<tr>
<td>Lindy-Ann Francis</td>
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<td>Alan Joseph</td>
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<td>Wilan Hamilton</td>
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<tr>
<td>Jocelyn Paul</td>
<td>Project Office M.O.F</td>
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<tr>
<td>Benson Patrice</td>
<td>Forestry (C’cou)</td>
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<tr>
<td>Valma Jessamy</td>
<td>Environmentalist, JECO</td>
</tr>
<tr>
<td>Leon Charles</td>
<td>Facilitator/Consultant</td>
</tr>
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</table>
# LIST OF PARTICIPANTS AT THE SECOND CONSULTATION WORKSHOP
# ON NOVEMBER 10, 2005 HELD MELVILLE STREET MARKET
# CONFERENCE CENTRE, ST. GEORGES GRENADA

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Position</th>
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<tbody>
<tr>
<td>Patrick Moore</td>
<td>Grenada’s Solid Waste Management Authority</td>
<td>Field Management Manager</td>
</tr>
<tr>
<td>Crafton J. Isaac</td>
<td>Fisheries Division, MoALFF</td>
<td>Fisheries Biologist</td>
</tr>
<tr>
<td>Aden Forteau</td>
<td>Forestry Division, MoALFF</td>
<td>Forester I (Ag.)</td>
</tr>
<tr>
<td>Andrew Alleyne</td>
<td>Lands and Surveys, MoALFF</td>
<td>Director</td>
</tr>
<tr>
<td>George Phillip</td>
<td>MoALFF</td>
<td>Agriculture Officer</td>
</tr>
<tr>
<td>Cosmos Joseph</td>
<td>IICA</td>
<td>Agronomist/Coordinator</td>
</tr>
<tr>
<td>Francis Robertson</td>
<td>Ministry of Tourism</td>
<td>Technical Officer</td>
</tr>
<tr>
<td>Raphael Brathwaite</td>
<td>Grenada Chambers of Commerce and Industry</td>
<td>Member</td>
</tr>
<tr>
<td>Carlson Griffith</td>
<td>Forestry Division, MoALFF</td>
<td>Forest Ranger</td>
</tr>
<tr>
<td>Dr. Alan Halner</td>
<td>Ministry of Finance</td>
<td>Consultant</td>
</tr>
<tr>
<td>Imhotep Mawauto</td>
<td>Forestry Division, MoALFF</td>
<td>Watershed Officer</td>
</tr>
<tr>
<td>Kelly Patrick</td>
<td>MoALFF</td>
<td>Supervisor</td>
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<tr>
<td>Kelvin Dottin</td>
<td>Ministry of Health</td>
<td>Env. Laison Officer</td>
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<tr>
<td>Benny Langaigne</td>
<td>GRENCODA</td>
<td>Programme Manager</td>
</tr>
<tr>
<td>Judy Williams</td>
<td>GRENCODA</td>
<td>Secretary General</td>
</tr>
<tr>
<td>Frank Philbert</td>
<td>RGPF</td>
<td>&quot;ASP&quot; Head of PRO</td>
</tr>
<tr>
<td>Anthony Jeremiah</td>
<td>Forestry Division, MoALFF</td>
<td>Forest Conservation Officer</td>
</tr>
<tr>
<td>Lindy-Ann Francis</td>
<td>Forestry Division, MoALFF</td>
<td>Clerk/Typist</td>
</tr>
<tr>
<td>Gordon Patterson</td>
<td>Forestry Division, MoALFF</td>
<td>Watershed Officer</td>
</tr>
<tr>
<td>Dan Twyman</td>
<td>Dry Forest Project</td>
<td>Dove Biologist</td>
</tr>
<tr>
<td>Kitwana Folkes</td>
<td>Agency for Reconstruction and Development</td>
<td>Housing Coordinator</td>
</tr>
<tr>
<td>Shahirah Baldeo</td>
<td>MoALFF</td>
<td>Agronomist</td>
</tr>
<tr>
<td>Yolande Lord-Telesford</td>
<td>MoALFF</td>
<td>Veterinarian</td>
</tr>
</tbody>
</table>
Appendix 4

List of Policies and Legislation that Influences Land Management in Grenada

Policies

MAFLF – Policies & MEAs
- Convention to Combat Desertification and Land Degradation (1992)
- Cartagena Convention (1983) and its Protocols concerning SPAW
- Tropical Forestry Action Plan (1985)
- Convention on Wetlands of International Importance (RAMSAR, 1971)
- Convention on the Protection of Migratory Species of Wild Animals (1972)
- Agricultural Policy and Programs of the Ministry of Agriculture (1997-2010)

MH&E – Policies
- SIDS BPOA
- OECS/ESDU St. George’s Declaration: Principles on Environmental Sustainability
- OECS/ESDU Environmental Management Strategy
- National Environmental Management Policy and Strategy
- International Convention for the Prevention of Marine Pollution MARPOL (ANNEX IV)

MCW - Policies
- Integrated Watershed Management Policy (in development stage)
- Guidelines for EIA in infrastructure projects

MOF - Policies
- National Physical Development Plan
- Integrated Physical Development and Environmental Management Plan for Carriacou and Petit Martinique
- UNFCC (1992, 1997); CCBD (1992)
- National Initial Communications on Planning for Adaptation to Climate Change
- UNCLOS
Legislation

Land Use and Land Tenure (MAFLF – Legislation)

- Crown Lands Ordinance CAP. 78 (1896)
- Crown Land Rules SRO No. 36 (1934)
- Crown Lands Forest Produce Rules (1956)
- Protected Forest Rules SRO No. 87 (1952)
- Forest, Soil and Water Conservation Act. CAP. 116 (1949)
- Forest, Soil and Water Conservation (Amendment) Ordinance No. 34 (1984)
- Beach Protection Act CAP. 29 (1979)
- Botanical Gardens Act CAP. 35 (1968)
- Grenada Botanical Gardens and Zoological Gardens Rules SRO. 55 (1968)
- National Parks and Protected Areas Act CAP. 206 (1990)
- Pesticides Control Act CAP. 238 (1973)
- Pesticides Control Regulations SRO. 10 (1979)

MH&E – Legislation

- Public Health Act CAP. 263 (1925)
- Public Health Regulations Sec.15 (1958)
- Public Health Ordinance CAP. 237 (1925) and Amendments SRO No. 218 (1957)
- Abatement of Litter Act CAP. 1 (1974)
- Environmental Levy Act CAP. 5 (1997)
- Solid Waste Management Act CAP. 11 (1995)
- Waste Management Bill

MCW – Legislation

- Beach Protection Act CAP. 29 (1979)
- Gravel Concrete and Emulsion Production Corporation Act CAP 125
- National Water and Sewerage Authority Act CAP. 208 (1991)
- National Water and Sewerage Authority (draft amendment) Act (1999)
- National Water and Sewerage Authority Regulations SRO 40 (1993)

NADMA – Legislation & Policies

- Disaster Management Legislation (model Caribbean legislation to be adopted)
- National Disaster Management Plan
- National Hazard Mitigation Policy
- Shelter Management Policy
- Disaster Management Legislation (to be adopted)
• Agreement Establishing CDERA
• ACS Natural Disasters Agreement

**MOF – Legislation**

• LDCA Act (1968) and Amendments (1983)
• Land Development Control Regulations SRO No. 13 (1988)
• Physical Planning and Development Control Act 25 (2002)
• Grenada Building Codes and Standards (2000)
• Town and Country Planning Act CAP. 293 (1958) and Amendments Act 3 (1963), CAP. 339 (1990)