National Capacity Needs Self Assessment for Global Environmental Management

THEMATIC ASSESSMENT REPORT

ON

LAND DEGRADATION

Ministry of Environment & Natural Resources
Battaramulla, Sri Lanka.

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Anura Jayatilake
National Project Coordinator
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Acronyms and Abbreviations

APN	-	Asia Pacific Network for Global Change Research
ARPEEC	-	Asian Regional Research in Energy, Environment and Climate
AusAID	-	Australia Government's Overseas Aid Programme
AIACC	-	Assessment of Impacts and Adaptation to Climate Change
BOI	-	Board of Investment
CCCS	-	Centre for Climate Change Studies
CCD	-	Coast Conservation Department
CCS	-	Climate Change Secretariat
CDM	-	Clean Development Mechanism
CEA	-	Central Environmental Authority
CEB	-	Ceylon Electricity Board
CEPOM	-	Committee on Environment Policy and Management
CIEDP	-	Committee on Integrating Environment and Development Policy
CLICOM	-	CLImate COMputing
COP	-	Conference of Parties
CRI	-	Coconut Research Institute
DEA	-	Department of Export Agriculture
DLELEC	-	District Level Environment and Law Enforcement Committee
DNP	-	Department of National Planning
DNZG	-	Department of National Zoological Gardens
DOA	-	Department of Agriculture
DoFAR	-	Department of Fisheries and Aquatic Resources
DOM	-	Department of Meteorology
DWLC	-	Department of Wildlife Conservation
ECF	-	Energy Conservation Fund
ENPHO	-	Environment and Public Heath Organization
ERD	-	External Resources Department
ET	-	Emission Trading
FD	-	Forest Department
FCCISL	-	Federation of Chambers of Commerce and Industry of Sri Lanka
GEF	-	Global Environmental Facility
GDP	-	Gross domestic Product
GHG	-	Greenhouse Gas
GIS	-	Geographical Information System
GSMB	-	Geological Survey and Mines Bureau
IEC	-	Information Education and Communication
IGBP	-	International Geosphere -Biosphere Programme
INC	-	International Negotiations Committee
IPCC	-	Intergovernmental Panel on Climate Change

ISB	-	Industrial Services Bureau
JI	-	Joint Implementation
LOICZ	-	Land-Ocean Interactions in the Coastal Zone
MEAs	-	Multinationals Environmental Agreements
MIND	-	Munasinghe Institute for Development
MoAL	-	Ministry of Agriculture and Livestock
MoENR	-	Ministry of Environment and Natural Resources
MoCD	-	Ministry of Community Development
MoEDIPIP	-	Ministry of Enterprises Development, Industrial Policy and Investment Promotion
MoEPA	-	Ministry of Environment and Parliamentary Affairs
MoFAR	-	Ministry of Fisheries and Aquatic Resources
MOH	-	Medical Officer of Health
MoHNW	-	Ministry of Heath, Nutrition and Welfare
MoHPI	-	Ministry of Housing, Plantation and Infrastructure
MoIWM	-	Ministry of Irrigation and Water management
MoL	-	Ministry of Land
MoPDI	-	Ministry of Policy Development and Implementation
MoPE	-	Ministry of Power and Energy
MoPI	-	Ministry of Plantation Industries
MoRE	-	Ministry of Rural Economy
MoST	-	Ministry of Science and Technology
MoT	-	Ministry of Tourism
MoTHA	-	Ministry of Transport, Highways and Aviation
MPPA	-	Marine Pollution Prevention Authority
NAPCC	-	National Action plan for Climate Change
NAQDA	-	National Aquaculture Development Authority
NARA	-	National Aquatics Research Agency
NBRO	-	National Building Research Organization
NCPC	-	National Cleaner Production Centre NCSA National Capacity Self Assessment
NEAP	-	National Environmental Acton Plan
NEP	-	National Environmental Policy
NERD	-	National Engineering Research and Development
NGOs	-	Non-Governmental Organizations
NIE	-	National Institute of Education
NSF	-	National Science Foundation
NSS	-	National Strategy Study
PCCE	-	Parliament Consultative Committee on Environment
PECC	-	Provincial Environmental Coordinating Committee
PHI	-	Pubic Health Inspector
RRI	-	Rubber Research Institute
SAD	-	Department of State Accounts
SLAAS	-	Sri Lanka Association of the Advancement of Science
SLPA	-	Sri Lanka Ports Authority
SRI	-	Sugarcane Research Institute
START	-	global change SyeTem for Anaysis, Research and Training
STC	-	State Timber Cooperation
TAR	-	Third Assessment Report
TRI	-	Tea Research Institute

TSU	-	Technical Support Unit
TWAS	-	Third World Academy of Sciences
UDA	-	Urban Development Authority
UNDP	-	United Nations Development Programme
UNEP	-	United Nations Environmental Programme
UNFCCC	-	United Nations Framework Convention on Climate Change
USAID	-	United States Agency for International Development
WB	-	World Bank
WG III	-	Working Group III
WMO	-	World Meteorological Organization
WRB	-	Water Resources Board
WSSD	-	World Summit on Sustainable Development
WTS	-	Wildlife Trust Fund

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establishing long-term policies and action programmes.

2.5 Action programmes (Articles 9, 10 and 11)

Articles 9, 10 and 11 spelt out basic approach to action programmes, and activities of national action programmes and subregional/regional action programmes. In carrying out their obligations pursuant to article 5, affected developing country Parties and any other affected country Party in the framework of its regional implementation annex or, otherwise, that has notified the Permanent Secretariat in writing of its intention to prepare a national action programme, shall, as appropriate, prepare, make public and implement national action programmes, utilizing and building, to the extent possible, on existing relevant successful plans and programmes, and subregional and regional action programmes, as the central element of the strategy to combat desertification and mitigate the effects of drought. Such programmes shall be updated through a continuing participatory process on the basis of lessons from field action, as well as the results of research. The preparation of national action programmes shall be closely interlinked with other efforts to formulate national policies for sustainable development.

In the provision by developed country Parties of different forms of assistance under the terms of article 6, priority shall be given to supporting, as agreed, national, subregional and regional action programmes of affected developing country Parties, particularly those in Africa, either directly or through relevant multilateral organizations or both.

The Parties shall encourage organs, funds and programmes of the United Nations system and other relevant intergovernmental organizations, academic institutions, the scientific community and nongovernmental organizations in a position to cooperate, in accordance with their mandates and capabilities, to support the elaboration, implementation and follow-up of action programmes.

2.5.1 National action programmes

1. The purpose of national action programmes is to identify the factors contributing to desertification and practical measures necessary to combat

desertification and mitigate the effects of drought.

2. National action programmes shall specify the respective roles of government, local communities and land users and the resources available and needed. They shall, *inter alia:*

(a) incorporate long-term strategies to combat desertification and mitigate the effects of drought, emphasize implementation and be integrated with national policies for sustainable development;

(b) 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;

(c) give particular attention to the implementation of preventive measures for lands that are not yet degraded or which are only slightly degraded;

(d) enhance national climatological, meteorological and hydrological capabilities and the means to provide for drought early warning;

(e) promote policies and strengthen institutional frameworks which develop cooperation and coordination, in a spirit of partnership, between the donor community, governments at all levels, local populations and community groups, and facilitate access by local populations to appropriate information and technology;

(f) 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 national action programmes; and

(g) require regular review of, and progress reports on, their implementation.

3. National action programmes may include, *inter alia,* some or all of the following measures to prepare for and mitigate the effects of drought:

(a) 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;

(b) strengthening of drought preparedness and management, including drought contingency plans at the local, national, subregional and regional levels, which take into consideration seasonal to interannual climate predictions;

(c) establishment and/or strengthening, as appropriate, of food security systems, including storage and marketing facilities, particularly in rural areas;

(d) establishment of alternative livelihood projects that could provide incomes in drought prone areas; and

(e) development of sustainable irrigation programmes for both crops and livestock.

4. Taking into account the circumstances and requirements specific to each affected country Party, national action programmes include, as appropriate, *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.

2.5.2 Subregional and regional action programmes

Affected country Parties shall consult and cooperate to prepare, as appropriate, in accordance with relevant regional implementation annexes, subregional and/or regional action programmes to harmonize, complement and increase the efficiency of national programmes.

2.6 Research and development (Article 17)

1. The Parties undertake, according to their respective capabilities, to promote technical and scientific cooperation in the fields of combating desertification and mitigating the effects of drought through appropriate national, subregional, regional and international institutions. To this end, they shall support research activities that:

   (a) contribute to increased knowledge of the processes leading to desertification and drought and the impact of, and distinction between, causal factors, both natural and human, with a view to combating desertification and mitigating the effects of drought, and achieving improved productivity as well as sustainable use and management of resources;

   (b) respond to well defined objectives, address the specific needs of local populations and lead to the identification and implementation of solutions that improve the living standards of people in affected areas;

   (c) protect, integrate, enhance and validate traditional and local knowledge, know-how and practices, ensuring, subject to their respective national legislation and/or policies, that the owners of that knowledge will directly benefit on an equitable basis and on mutually agreed terms from any commercial utilization of it or from any technological development derived from that knowledge;

   (d) develop and strengthen national, subregional and regional research capabilities in affected developing country Parties, particularly in Africa, including the development of local skills and the strengthening of appropriate capacities, especially in countries with a weak research base, giving particular attention to multidisciplinary and participative socio-economic research;

   (e) take into account, where relevant, the relationship between poverty, migration caused by environmental factors and desertification;

   (f) promote the conduct of joint research programmes between national, subregional, regional and international research organizations, in both the public and private sectors, for the development of improved,

affordable and accessible technologies for sustainable development through effective participation of local populations and communities; and

(g) enhance the availability of water resources in affected areas, by means of, *inter alia,* cloud-seeding.

Research priorities for particular regions and subregions, reflecting different local conditions, should be included in action programmes. The Conference of the Parties shall review research priorities periodically on the advice of the Committee on Science and Technology.

2.7 Transfer, acquisition, adaptation and development of technology (Article 18)

1. The Parties undertake, as mutually agreed and in accordance with their respective national legislation and/or policies, to promote, finance and/or facilitate the financing of the transfer, acquisition, adaptation and development of environmentally sound, economically viable and socially acceptable technologies relevant to combating desertification and/or mitigating the effects of drought, with a view to contributing to the achievement of sustainable development in affected areas. Such cooperation shall be conducted bilaterally or multilaterally, as appropriate, making full use of the expertise of intergovernmental and non-governmental organizations. The Parties shall, in particular:

(h) fully utilize relevant existing national, subregional, regional and international information systems and clearing-houses for the dissemination of information on available technologies, their sources, their environmental risks and the broad terms under which they may be acquired;

(i) facilitate access, in particular by affected developing country Parties, on favourable terms, including on concessional and preferential terms, as mutually agreed, taking into account the need to protect intellectual property rights, to technologies most suitable to practical application for specific needs of local populations, paying special attention to the social,

cultural, economic and environmental impact of such technology;

(j) facilitate technology cooperation among affected country Parties through financial assistance or other appropriate means;

(k) extend technology cooperation with affected developing country Parties, including, where relevant, joint ventures, especially to sectors which foster alternative livelihoods; and

(l) take appropriate measures to create domestic market conditions and incentives, fiscal or otherwise, conducive to the development, transfer, acquisition and adaptation of suitable technology, knowledge, know-how and practices, including measures to ensure adequate and effective protection of intellectual property rights.

2. The Parties shall, according to their respective capabilities, and subject to their respective national legislation and/or policies, protect, promote and use in particular relevant traditional and local technology, knowledge, know-how and practices and, to that end, they undertake to:

(a) make inventories of such technology, knowledge, know-how and practices and their potential uses with the participation of local populations, and disseminate such information, where appropriate, in cooperation with relevant intergovernmental and nongovernmental organizations;

(b) ensure that such technology, knowledge, know-how and practices are adequately protected and that local populations benefit directly, on an equitable basis and as mutually agreed, from any commercial utilization of them or from *any* technological development derived there from;

(c) encourage and actively support the improvement and dissemination of such technology, knowledge, know-how and practices or of the development of new technology based on them; and

(d) facilitate, as appropriate, the adaptation of such technology, knowledge, know-how and practices to wide use and integrate them with modern technology, as appropriate.

2.8 Capacity building, education and public awareness (Article 19)

Article 19 of the Convention, contains various ways and means for promoting capacity building to implement the Convention.

1. The Parties recognize the significance of capacity building - that is to say, institution building, training and development of relevant local and national capacities - in efforts to combat desertification and mitigate the effects of drought. They shall promote, as appropriate, capacity building:

    (a) through the full participation at all levels of local people, particularly at the local level, especially women and youth, with the cooperation of non-governmental and local organizations;
    (b) by strengthening training and research capacity at the national level in the field of desertification and drought;
    (c) by establishing and/or strengthening support and extension services to disseminate relevant technology methods and techniques more effectively, and by training field agents and members of rural organizations in participatory approaches for the conservation and sustainable use of natural resources;
    (d) by fostering the use and dissemination of the knowledge, know-how and practices of local people in technical cooperation programmes, wherever possible;
    (e) by adapting, where necessary, relevant environmentally sound technology and traditional methods of agriculture and pastoralism to modern socio-economic conditions;
    (f) by providing appropriate training and technology in the use of alternative energy sources, particularly renewable energy resources, aimed particularly at reducing dependence on wood for fuel;
    (g) through cooperation, as mutually agreed, to strengthen the capacity of affected developing country Parties to develop and implement programmes in the field of collection, analysis and exchange of information pursuant to article 16;
    (h) through innovative ways of promoting alternative livelihoods, including

training in new skills;

(i) by training of decision makers, managers, and personnel who are responsible for the collection and analysis of data for the dissemination and use of early warning information on drought conditions and for food production;

(j) through more effective operation of existing national institutions and legal frameworks and, where necessary, creation of new ones, along with strengthening of strategic planning and management; and

(k) by means of exchange visitor programmes to enhance capacity building in affected country Parties through a long-term, interactive process of learning and study.

2. Affected developing country Parties shall conduct, in cooperation with other Parties and competent intergovernmental and non-governmental organizations, as appropriate, an interdisciplinary review of available capacity and facilities at the local and national levels, and the potential for strengthening them.

3. The Parties shall cooperate with each other and through competent intergovernmental organizations, as well as with non-governmental organizations, in undertaking and supporting public awareness and educational programmes in both affected and, where relevant, unaffected country Parties to promote understanding of the causes and effects of desertification and drought and of the importance of meeting the objective of this Convention. To that end, they shall:

(a) organize awareness campaigns for the general public;

(b) promote, on a permanent basis, access by the public to relevant information, and wide public participation in education and awareness activities;

(c) encourage the establishment of associations that contribute to public awareness;

(d) develop and exchange educational and public awareness material, where possible in local languages, exchange and second experts to train personnel of affected developing country Parties in carrying out relevant

education and awareness programmes, and fully utilize relevant educational material available in competent international bodies;

(e) assess educational needs in affected areas, elaborate appropriate school curricula and expand, as needed, educational and adult literacy programmes and opportunities for all, in particular for girls and women, on the identification, conservation and sustainable use and management of the natural resources of affected areas; and

(f) develop interdisciplinary participatory programmes integrating desertification and drought awareness into educational systems and in non-formal, adult, distance and practical educational programmes.

4. The Conference of the Parties shall establish and/or strengthen networks of regional education and training centres to combat desertification and mitigate the effects of drought. These networks shall be coordinated by an institution created or designated for that purpose, in order to train scientific, technical and management personnel and to strengthen existing institutions responsible for education and training in affected country Parties, where appropriate, with a view to harmonizing programmes and to organizing exchanges of experience among them. These networks shall cooperate closely with relevant intergovernmental and non-governmental organizations to avoid duplication of effort.

3. Objectives of the thematic assessment on land degradation

The broad objective of the thematic assessment for the UNCCD convention is to develop a thematic profile that addresses the major needs, challenges and opportunities for capacity development in a country in order to be able to implement the Convention requirements. Therefore, the following specific objectives of the thematic assessment of land degradation are noted:

- Identification of priority issues (priority requirements) under the land degradation thematic area.
- Identification of capacity constraints on the implementation of UNCCD activities in Sri Lanka.
- Analysis of the capacity constraints and the intervention points to overcome the constraints.

4. Priority setting of the requirements of UNCCD

4. 1. Methodology adopted for prioritization

Priority setting of the 13 requirements of UNCCD for Sri Lanka was done at a workshop with the active participation of the Project team, the thematic working group and key stakeholders. " Prioritization Matrix" suggested in the Guide for Self-Assessment of Country Capacity Needs for Global Environmental Management was used as a tool for priority setting (Annex 1). The scale of a problem was considered at local, national, regional or global levels. "Level of concern" given to each UNCCD requirement was evaluated as low, medium or high. Similarly ability to adequately address the issue was evaluated and ranked considering the expert opinions expressed at the workshop.

4. 2. UNCCD requirements for prioritization

The obligations described in the Convention have been summarized in to 13 statements of requirements. These requirements are as follows:

1. Establishing national strategies within the framework of sustainable development plans/ or policies [Art.5b].
2. Implementing National Action Programmes [Art. 10,13].
3. Strengthening relevant legislation, enacting new laws, and establishing long term policies and action programmes [Art.5e].
4. Promoting education and public awareness [Art.19(3),5d].
5. The transfer, acquisition, adaptation and development of economically, socially and environmentally appropriate technology [Art.12, 18].
6. Training and technology regarding alternative, renewable energy sources, promoting alternative livelihoods, including training in new skills [Art18, 19(1)].
7. Training for collection and analysis of data for disseminating and using early warning information systems, covering drought and food production [Art.19(1)].
8. Systems to collect, analyze and exchange information and technical and scientific corporation [Art. 16, 12].
9. Establishing effective early warning and advance planning for periods of adverse climatic variation [Art.10].
10. Systems for research and development [Art.17, 12].
11. Joint research programmes for development of appropriate technologies [Art. 17].
12. Involving in capacity assessment activities [Art.19(2)].
13. Regional and international cooperation [Art.11, 12, 14, 19(4), Annex II (Art.5,6)].

4. 3. Prioritized UNCCD requirements relevant to Sri Lanka

Table1. Prioritization Matrix for the UNCCD requirements

No	Issue	Scale of Problem[1]	Level of Concern[2]	Ability to Adequately Address Issue[2]	Priority Ranking[3]
1	Establishing national strategies within the framework of sustainable development plans/ or policies	N	M	L	1 (1)
2	Implementing National Action Programmes	N	M	L	1 (2)
3	Strengthening relevant legislation, enact new laws, and establish long term policies & action programmes	N	H	L	
4	Promoting education and public awareness	L/N	H	M	
5	The transfer, acquisition, adaptation and development of economically, socially and environmentally appropriate technology	L/N/R/G	M	L	1 (3)
6	Training and technology regarding alternative, renewable energy sources, promoting alternative livelihoods, including training in new skills	L/N	L	L	2 (7)
7	Training for collection and analysis of data for disseminating and using early warning information systems, covering drought and food production	N/R	L	L	
8	Systems to collect, analyze and exchange information and technical and scientific corporation	N/R/G	L	L	
9	Establishing effective early warning and advance planning for periods of adverse climatic variation	N/R/G	H	L	2 (6)
10	Systems for research and development	L/N	L	M	1 (5)
11	Joint research programmes for development of appropriate technologies	N/R/G	L	L	
12	Involvement in capacity assessment activities	L/N	L	L	
13	Regional and international cooperation	N/R/G	M	M	1 (4)

1. (L) local (N), national,(R) regional or (G) global
2. (L) low, (M) medium, (H) high
3. Priority ranking based on the severity of the problem being faced by the country (1= most severe problem(s), 2 = second most problem(s) etc. Prioritized issues are given in parentheses.

Table 1 is the prioritization matrix used for the prioritization of 13 requirements of UNCCD that are relevant to Sri Lanka. The first column indicates the scale of problem. "Level of concern" was evaluated by using the three levels; low, medium and high. Similarly the ability to adequately address the issue is given in the 3rd column of the Table where, the ability has been evaluated using three levels. The last column indicates

the severity of the problem and the priority ranking that is given in parenthesis. The most important 7 requirements have been further ranked based on the severity of the problem starting from 1 to 7. The prioritized 7 requirements are given in Table 2.

Table 2. The prioritized 7 requirements for Sri Lanka

Ranking No	Requirement/Issue
1	Establishing national strategies within the framework of sustainable development plans/ or policies
2	Implementing National Action Programmes
3	The transfer, acquisition, adaptation and development of economically, socially and environmentally appropriate technology
4	Regional and international cooperation
5	Systems for research and development
6	Establishing effective early warning and advance planning for periods of adverse climatic variation
7	Training and technology regarding alternative, renewable energy sources, promoting alternative livelihoods, including training in new skills

5. Capacity constraints pertaining to the prioritized requirements of UNCCD relevant to Sri Lanka

To identify capacity constraints and possible opportunities (needs) in relation to prioritized requirements, a two- day workshop was conducted with the participation of the Project team, the thematic working group and key stakeholders. The tool used here in identifying capacity constraints and needs was the "Root Cause Analysis". Capacity constraints were assessed at the systemic, institutional and individual levels using the "Capacity Constraints Matrix" (Annex 2).

Table 3. Capacity Constraint Matrix of prioritized requirements

Priority Issues	Capacity Constraints		
	Systemic	Institutional	Individual
1. Establishing national strategies within the framework of sustainable development plans/ or policies	1. Weak link between the central government and the provincial authorities. 2. Absence of a nationally responsible authority to address land degradation issues. 3. Lack of strong consistent policy on land use. 4. Lack of political interest or political will, changing political situation and political manifestoes. 5. Implementation of development programs/projects without adequate concern on environment. 6. Weak implementation of the Soil Conservation Act. 7. Low priority given by developing countries for combating land degradation.	1. Overlapping mandates of different institutions. 2. All relevant stakeholders are not consulted and the views of some stakeholders are not respected. 3. Fragmented nature of responsibilities. 4. Limited natural resources and negligence of some agencies that control those resources. 5. Inability to fully implement existing policies. 6. Weak accessibility to new technologies. 7. Inadequate appreciation on gravity of land degradation problem in Sri Lanka by policy planners and decision makers. 8. Complex nature of information and scattered nature of available data among different agencies.	1. Lack of immediate benefits to the farmer. 2. Lack of causes and impact accountability. 3. Lax attitudes of stakeholders and their general lack of awareness. 4. Complexity of land ownership and land tenure. 5. Treating land as an unlimited resource. 6. Lack of knowledge on new farming systems and lack of accessibility to new technologies. 7. Low priority given to land resources management.

2. Implementation of National Action Programme (NAP).	1. Insufficient rules and regulations to implement NAP. 2. Frequent change of a). Government Ministerial portfolio and b). Change of subject area and institutions. 3. Lack of financial resources.	1. Weak coordination and communication among institutions/agencies. 2. Overlapping mandates and priorities among different institutions. 3. Weak relationship between NAP and priorities of the institutions. 4. Lack of proper coordination mechanism and a coordination body. 5. Inadequate involvement by local government authorities. 6. Poor private sector involvement in implementing NAP activities.	1. Inability to formulate project proposals. 2. Inability of farmers to perceive potential economic gains. 3. Weak concern on land degradation issues given by the community.
3.a. Acquisition, adaptation and transfer of appropriate technology. 3.b. Development of economically, socially and environmentally appropriate technology.	1. Weak linkages with other country parties on technology transfer. 2. Weak bilateral agreement on technical cooperation. 3. Lack of consistent political support. 4. Inadequate resource flow from center to peripheral areas.	1. Inadequate mechanism in missions abroad to promote technology transfer. 2. Weak extension service. 3. Insufficient coordination between provincial councils and line agencies. 4. Irrational resource allocation among institutions.	1. Lack of incentives for adaptation. 2. Lack of recognition for research initiatives. 3. Inadequate farmer training and education. 4. Inadequate funds and the lack of competent officers.

4. Regional and international cooperation.	1. Insufficient international and regional cooperation.	1. Slow and inadequate flow of funds from developed countries to Sri Lanka on combating land degradation. 2. Inadequate focus given by South Asian countries on land degradation issues. 3. Limited resources availability within the region.	1. Shortage of competent skilled officers in relevant subjects. 2. Lack of opportunities to enhance the skills of technical personnel addressing land degradation issues.
5. Systems for research and development	1. Low priority given by the government to research and development on land degradation issues.	1. Low priority given at the institutional level to research and development on land degradation issues. 2. Shortage of physical and human resources. 3. Weak cooperation among research institutes and other relevant agencies.	1. Low priority given by research workers to land degradation issues of Sri Lanka.
6. Establishing and strengthening effective early warning and preparing advanced planning for periods of adverse climatic variation.	1. Weak and inadequate access to appropriate technologies.	1. Inadequate physical and human resources. 2. Inadequate new technologies and shortage of skilled personnel on forecasting climate changes. 3. Failure to consider and use traditional and indigenous knowledge. 4. Weak coordination bet... different inst...	1. Inadequate trained personnel on forecasting climate changes and on formulating plans for periods of adverse climatic variation.(i.e. contingency plans).

7. (a)Training and technology regarding alternative, renewable energy sources, (b) promoting alternative livelihoods, including training in new skills	(a) 1. Weak technology transfer mechanism for alternative, renewable energy sources. 2. Lack of sustainable fuel wood plantations. 3. Lack of commercial scale technologies.	(a) 1. Lack of training and skills development to establish sustainable fuel wood plantations. 2. Inadequate research and development programmes on commercial scale technology. (b) 1. Inadequate promotions of off farm employment opportunities. 2. Inadequate training and awareness programmes on sustainable agricultural practices and post harvesting technologies.	(a) 1.Lack of training and skills development to establish sustainable fuel wood plantations. (b) 1. Absence of alternative livelihoods for farmer communities.

Capacity constraints and the possible solutions for the prioritized 7 requirements are discussed in the following section in relation to the four capacity functions viz. capacity to conceptualize and formulate policies/legislation/strategies and programs, capacity to implement policies, legislation, strategies and programs, capacity to mobilize information and knowledge and capacity to monitor, evaluate and report.

5.1 Requirement No 1- Establishing national strategies within the framework of sustainable development plans/ or policies

Establishing national strategies and priorities within the framework of sustainable development plans and or policies to combat land degradation and mitigate drought in Sri Lanka was considered a very high priority area even though, GOSL has to a certain extent taken initiatives to enact legislation and to formulate policies, plans and strategies that directly or indirectly address land degradation issues. Since there is no desertification as such in Sri Lanka, the focus has been directed towards the land degradation issues.

As the national focal point the Ministry of Environment (MOE) is committed to fulfill the requirements and accordingly has taken actions for "establishing national strategies

within the framework of sustainable development plans/or policies". The MOE has played a key role in implementing the requirements of UNCCD by (a) organizing workshops commencing with the 1st awareness workshop and ending with the workshop on SRAP, (b) the preparation of NAP and contributing to the preparation of SA-SRAP and (c) preparing policies and plans such as the National Forestry Policy – 1995, National Environmental Policy and Strategies – 2003, National Watershed Management Policy – 2004, National Environmental Action Plan-1992, Biodiversity Action Plan-1998, Sri Lanka Forestry Sector Master Plan-1995 all of which address land degradation issues in the country.

Clearly, there are number of policies, strategies and plans prepared by different Ministries, Departments and other Agencies that address various aspects of land degradation in Sri Lanka. They have also introduced environmental safeguards. The Ministry of Industry and Investment Promotion has also prepared policies such as the National Industrial Pollution Reduction Policy and the Industrial Site Selection Policy that also address the land degradation issues. The Department of Agriculture (under the Ministry of Agriculture) has prepared several policies, strategies and plans such as the National Policy Framework - Ministry of Agriculture Lands and Forests-1995, National Land Use Policy (draft) – 2002, National Policy on Agriculture and Livestock- 2003, The National Agriculture, Food and Nutrition Strategy –1984, that address problems such as the mitigation of soil erosion, improvement of soil fertility and the conservation of soil and water all of which are related to land degradation in the country.

Capacity constraints preventing the implementation of the requirement i.e. establishing national strategies within the framework of sustainable development plans/ or policies at systemic, institutional and individual levels are given in the Capacity Constraint Matrix Table 3.

5.1.1 Capacity to conceptualize and formulate policies/legislation/strategies and programmes

At the systemic level, the lack of co-operation between the central government and the provincial governments is one of the capacity constraints that prevent the successful implementation of the UNCCD in Sri Lanka. Formulation of a viable strategy or a

programme to strengthen the links between the central government and the provincial governments will be needed for better co-operation. At the same time there is a need to establish a nationally responsible authority to coordinate among the institutions, implementing strategies, policies and programmes to combat land degradation.

There is no sound policy that addresses land degradation issues in the country. There is an urgent need therefore to formulate such a policy through relevant stakeholder participation (Participation of public/NGO/CBO's/ Stakeholders) and legally adopt it. The policy should be developed within the framework of a sustainable development plan of the country. Preparation of the NAP by the MOE reflects the importance of soil conservation in combating land degradation in the country.

There has to be a scientific input in to the decision-making process that needs to be strengthened. Generally speaking developing countries give low emphasis and a low priority to land degradation issues and Sri Lanka is no exception. Some strategies or programs should be developed in order to create awareness amongst stakeholders and educate them on the importance of combating land degradation.

There is limited political interest and political will to combat land degradation in Sri Lanka. Changes in the political situation and changing political manifestos are also identified as constraints that prevent the implementation of UNCCD. The manifestos of successive governments have not addressed the direct and underlying causes of land degradation although some attention has been focused on the underlying causes such as in organic farming. What are needed therefore are concrete policies and strategies to combat land degradation in Sri Lanka. Hitherto, most of the development programmes and projects of the government and private sectors have been designed and implemented at the expense of environment. Enacting new laws to safeguard the environment could help addressing this problem.

Policies/legislation/strategies and programmes on behalf of the government are generally formulated at institutional level by relevant ministries, government departments and statutory bodies. They are implemented after the approval by the Cabinet of Ministers of the GOSL. However, during the formulation process all relevant stakeholders are not consulted and views of some stakeholders are not respected. As a

result, some over lapping and duplication of activities may take place. These constraints must be overcome through proper consultation and participation of relevant stakeholders during the formulation process. Duplication of mandates and the fragmented nature of the responsibilities of different institutions were also identified as capacity constraints. These constraints could be eliminated by critically reviewing the mandates and responsibilities of the relevant institutions.

At individual level, high-level officers should have the ability and skills to conceptualize and prepare policies/legislation/strategies and programmes. However, many of the high level officers may not have the skills in the preparation and writing of projects proposals and programmes. Their capacity constraints could be overcome by providing proper training, by improving necessary skills, by improving their awareness about the land degradation problem and by changing their attitudes.

5.1.2 Capacity to implement policies, legislations, strategies and programmes

Even through there are number of policies, laws, strategies and programmes, these are not fully implemented. One of the main reasons for this situation is the improper mobilization and management of human and physical resources by the central government institutions and local government institutions. The lack of co-operation between the central and provincial governments in implementing policies and programmes etc is yet another factor that adversely affects and hampers implementation. Furthermore, there is no political interest or political will to combat land degradation in Sri Lanka. This also negatively impacts on the implementation of policies, plans and programmes. Changes in subject areas, portfolios and ministries, relevant focal agencies, and decisions making high-ranking officers etc. also adversely affect on the planned programmes and projects/policies.

Although implementation is the prime responsibility of institutions, there are institutional problems in implementing policies, laws, strategies and programmes. Soil Conservation Act should be implemented immediately. The draft Land Use Policy should be revised to include the provisions to combat land degradation issues in Sri Lanka. Once the Cabinet approves the Land Use Policy, it should also be adopted immediately. Negligence on the part of some agencies who control over the limited

natural resources have to be identified and actions taken to implement effectively the provisions in the existing policies, legislations and strategies. Inadequate human and physical resources and the inability to mobilize them is a major capacity constraint at the institutional level.

There are no immediate impacts/effects from soil conservation activities to the end users of lands such as rural farmers and the community in general at the individual level. As a result, there are problems in implementing the policies, strategies and legislation at the grass root level. These problems could be identified as the underlying causes or capacity constraints that prevent the implementation of the activities of UNCCD. Other underlying causes that prevent the implementation of UNCCD at the individual level are the attitudes and the lack of awareness on land degradation issues, the lack of knowledge and accessibility to new technologies and farming systems, low priority given to soil conservation, treating land as an unlimited resource, land ownership/tenure and the fragmentation of lands. These underlying causes can also be identified as capacity constraints at the individual level. Creating awareness and changing the attitudes of farmers could be the solution to overcome the constraints. Grass root level, officers involved in the process also work ineffectively and hamper the overall implementation of activities related to combating land degradation and the promotion of soil conservation measures in the country. Skills development, increased salaries and training on carrier development etc for the officers involved in the field of land degradation should be enhanced/improved in order to overcome this capacity constraint.

5. 1.3. Capacity to mobilize information and knowledge

Lack of a proper information exchange system is a major drawback in incorporating national strategies in sustainable development plans and policies. This has been highlighted in various forums and national reports. It is necessary to have an effective coordination mechanism among the institutions (government, private and relevant stakeholders) for the exchange and analysis of information and identifying the problems and finding solutions. In this connection it would be very useful to establish a national level coordinating body. Presently, there is no such coordinating mechanism or coordinating body in Sri Lanka. This is one of the major capacity constraints that

prevent or slow down the implementation of the UNCCD activities.

At the institutional level, it is necessary to have a coordination mechanism and a body to mobilize the information and knowledge available with different institutions. Besides, the lack of a proper inventory of experts in the field, the absence of a formal system of collecting information and the lack of proper consultative approach (team approach) inhibit the mobilization of information and the knowledge and thereby prevent the implementation of the requirements of UNCCD.

Attitudes of all stakeholders are very important in mobilizing and sharing the information. Officers especially those in the government sector are generally reluctant to share the information and knowledge with others. This is common not only amongst the scientific community but also at the administrative level where the data and statistics are handled. The reasons for this may be twofold; either the officer does not have the authority to disclose the information, or the officer does not wish to share the information with others (attitudes). At times, the relevant stakeholders are not consulted and their views are not respected in the process of mobilizing and sharing information.

5.1.4. Capacity to monitor, evaluate and report

At the systemic and institutional levels, the measures taken by MOE to establish CEPOMS and the National Expert Committee on Land Degradation represent steps in the right direction towards addressing land degradation issues in Sri Lanka. In fact it is a strength both at the systemic and institutional levels. The CEPOMS and the National Expert Committee on Land Degradation ensure that development programmes and activities pertaining to combating land degradation are monitored and evaluated. However, a clear monitoring, evaluating and reporting mechanism should be developed and strengthened for MOE to oversee the implementation. This is the one of the major capacity constraints in the government sector. The feedback reporting to the donor countries and agencies is also lacking.

5.2. Requirement No 2 - Implementing National Action Programmes [Art.10,13]

The MOE is the principal stakeholder and the national focal point for the preparation and implementation of the National Action Programme (NAP) in Sri Lanka. NAP preparation was done after, reviewing about fifty status reports, holding several workshops/seminars and conducting a series of experts meetings on the land degradation issues in Sri Lanka. Apart from the preparation of the NAP, the MOE has also been actively involved in the preparation of the South Asia Sub-Region Action Programme (SA-SRAP) for the south Asian region through several workshops where the participants included international and local experts and representatives from relevant Ministries, Departments, other Institutions, NGO's and Universities. The NAP clearly identified the development programmes, activities and projects that have to be implemented to meet the requirements of UNCCD. It also identified the implementing agencies.

Capacity constraints preventing the implementation of the National Action Programme at the systemic, institutional and individual levels are given in the Capacity Constraint Matrix Table 3.

5.2.1 Capacity to conceptualize and formulation of policies/legislation/ strategies and programmes

The NAP has already been prepared by the MOE. The identification of priority programmes and projects addressing land degradation issues have also been completed. One project identified in the NAP was further developed and formulated for funding. Another project is in the preparation stage. New rules and regulations should be introduced to translate the programs and projects of the NAP in to action plans in the main programmes of the different institutions that have the mandates to address land degradation issues in Sri Lanka. Changes in ministerial portfolios and changes of subject areas and institutions become serious problems that prevent the implementation of the requirements of UNCCD at the systemic level. In order to have a better enabling environment to carry out the UNCCD activities, a consistent and concrete government policy is necessary. Therefore, a common policy or strategy acceptable to all should be

formulated before implementing the requirements of UNCCD. The other major constraint is the lack of financial resources. Capacity is therefore needed to formulate new laws and policies to allocate more funds to the programmes aimed at combating land degradation. Likewise, capacity is also required to prepare new programmes to obtain foreign funds for the same purpose.

At the institutional level, strategies and programmes should be developed in order to promote better co-operation and communication among the institutions. This will lead to a better link between the different institutions. Hence, there is a need for a coordinating body to coordinate activities conducted by the different institutions (similar to the one described previously). This can be done by the formulation of new rules and regulations. Programmes should also be formulated to have more private sector participation in activities related to land degradation. Therefore this capacity constraint also needs to be addressed.

Individual level, programmes have to be developed to create awareness among the farmer community and to enhance the skills of officers involved in the formulation of projects and programmes on land degradation issues.

5. 2.2 Capacity to implement policies, legislations, strategies and programmes

From the programmes identified in the NAP, MOE selected one and prepared a project proposal on " The rehabilitation, restoration and conservation of degraded agricultural lands in selected two mini watersheds in Randenigala in Upper Mahaweli catchment ". The proposal was basically accepted for GEF funding. The Ministry also recently initiated action for the preparation of a proposal for another project on "early warning system for mitigating drought". These two proposals are directly related to combating land degradation in the country.

Major capacity constraints identified in implementing the NAP and SA-SRAP in Sri Lanka are the poor rules and regulations, changes in ministerial portfolios and changes in subject areas and institutions after every general election, cabinet and ministerial reshuffles and the lack of physical resources especially financial resources.
At the institutional level, a lack of awareness about the NAP and SA-SRAP on the part of

senior officers in different government agencies (Ministries, Departments and Statutory bodies) and private institutions is also a major draw back in implementing the activities of NAP in Sri Lanka. This capacity constraint could be overcome by establishing a proper coordinating mechanism among the institutions.

At the individual level, the lack of trained skill personnel in fields relevant to land degradation and the lack of physical resources such as vehicles etc. are problems inhibiting the implementing of UNCCD activities. The lack of farmer's awareness of the magnitude and consequences of land degradation in Sri Lanka and the inability of farmers to perceive significant gains from activities pertaining to combating land degradation are also factors that prevent the implementing of activities to combat land degradation.

5. 2.3 Capacity to mobilize information and knowledge

At the systemic level, the NAP identified the importance and usefulness of mobilizing and sharing of information and knowledge as a main programme area. At the institutional level, weak coordination and communication among institutions/agencies, the lack of a proper coordination mechanism and a coordination body and the poor private sector involvement have been identified as capacity constraints. These constraints have to be eliminated in order to facilitate the implementation of the requirement. MOE to certain extent, has a strength to mobilize the information and knowledge and transmit to the relevant stakeholders.

5. 2.4 Capacity to monitor, evaluate and report

As the programmes exclusively identified in the NAP are not implemented so far, the question of monitoring, evaluating and reporting issues has not arisen. The CEPOMS and National Expert Committee have a role to play in monitoring and evaluating the projects and programmes outside the NAP and to report to the relevant authorities. MOE also reports on the progress and current situation of projects and programmes to the relevant donor country parties at the institutional level. No such system is available at the individual level.

5.3. Requirement No 3 - 3.a. Acquisition, adoption and transfer of appropriate technology and 3.b. Development of economically, socially and environmentally appropriate technology [Art.12, 18].

According to Articles 12 and 18 "Affected country Parties in collaboration with other Parties and the International Community should cooperate to ensure the promotion of an enabling international environment in the implementation of UNCCD. Such cooperation should also cover fields of technology transfer, scientific research and development, information collection and dissemination and financial resources. The Parties also as mutually agreed and in accordance with their respective national legislation and/or policies to promote finance and /or facilitate the financing of the transfer, acquisition, adoption and development of economically viable, environmentally sound, and socially acceptable technologies as well as promote and use of relevant traditional and local technologies to combat land degradation."

In Sri Lanka almost all activities i.e. awareness workshops, expert meetings, preparation of position papers, preparation of NAP, contribution to SA-SRAP and follow up work shops of NAP/SA-SRAP related to the implementation of UNCCD were carried out in collaboration with international communities, funding agencies and the participation of international and local experts. In these activities all stakeholders successfully exchanged and shared ideas and experiences and helped to disseminate knowledge in the field of land degradation. Especially during the preparation of SA-SRAP a significant contribution was received from Experts in SAARC countries. The UNDP Colombo Office and the UNCCD Secretariat have contributed substantively to the successful completion of all activities related to UNCCD in the country.

Under the SA-SRAP programme, five programmes were proposed namely Early warning system, Integrated ecosystem management, Information network, Capacity building and resource mobilization and partnership building for the South Asia Sub-Region through which there could be a very useful exchange, acquisition and adoption of technologies among countries in the future. This link must be strengthened to achieve the above requirement of UNCCD.

The above requirement of UNCCD is met to some extent by many agencies engaged in

various soil and water conservation activities using traditional as well as local technologies. The Ministry of Plantation Industries implements soil rehabilitation and crop diversification programmes in estates regularly in order to control and arrest soil erosion and improve soil water storage and water resources. Department of Agriculture (DOA) in general and the Natural Resources Management Division in particular are heavily involved in addressing land degradation issues. Recommendations pertaining to soil conservation activities and the implementation of agricultural and other relevant policies related to control of land degradation are some of the activities conducted by the DOA in collaboration with other institutions such as Hadabima Authority, Upper Watershed Management Project, Provincial Department of Agriculture, Ministry of Up country Development etc. Use traditional and local technologies to combat land degradation.

The Department of Forests contributes to the control of soil erosion and conservation of water resources through the use of traditional and /or local technologies partly by implementing activities detailed in the Forestry Master Plan and partly through projects such as the Forest Resource Management Project and the South-West Rain Forest Conservation Project. The Department of Export Agriculture implements a number of programmes that are closely linked with soil conservation and the improvement of land productivity.

Development of technology to minimize soil erosion, moisture conservation, optimization of fertilizer use efficiency, implementation of productivity improvement programmes at field level, promotion of integrated soil fertility management measures, promotion of agroforestry systems and proper management of such systems for optimization of resource utilization, implementation of farmer level programmes for crop productivity improvement through soil and moisture conservation, development of an optimum ground cover by filling vacancies etc. are some of the major programme areas of the Department of Export Agriculture in relation to the control of soil erosion, moisture conservation and soil fertility improvement through the use of traditional as well as local technologies.

Mahaweli Authority of Sri Lanka (MASL) also contributes in fulfilling the above requirement under the provisions of relevant acts such as the Mahaweli Authority Act,

the National Environmental Act, the Soil Conservation Act and policies such as the National Watershed Management Policy even though it does not have a mandate to implement activities under UNCCD. MASL uses traditional and/or local technologies i.e. biological, chemical and agronomical soil conservation measures and cropping systems to control soil erosion and to conserve water resources especially in the up and mid country areas of Sri Lanka. In the past MASL has obtained the services of international experts to address the issues such as soil erosion, conservation of water resources, rehabilitation of degraded lands etc. in the Mahaweli watershed areas.

The Hadabima Authority of Sri Lanka is engaged in various development programmes in mid country area. Programmes are conducted through a participatory approach. These include soil conservation and watershed management, home garden development, soil rehabilitation and rainwater harvesting in the mid country. The officers of the Authority educate farmers and use traditional as well as available local technologies in controlling soil erosion and the conservation of water in the area. Research institutes such as the Rubber Research Institute and Tea Research Institute adopt measures for the conservation of soil and water in rubber and tea lands. As local technologies, agro forestry systems and ground cover management introduced by the Rubber Research Institute are being used in rubber plantations.

Capacity constraints preventing the implementation of the required acquisition, adaptation, transfer, and development of economically, socially and environmentally appropriate technology - at the systemic, institutional and individual levels are given in the Capacity Constraint Matrix Table 3.

5.3.1 Capacity to conceptualize and formulation of policies/legislation/ strategies and programmes

Weak linkages with other country parties on technology transfer and the lack of bilateral agreements on the technical co-operation are considered as capacity constraints. Programmes have to be formulated in order to establish linkages with other country parties on technology transfer for addressing land degradation issues. In this regard, GOSL has to establish the bilateral agreements pertaining to the combating of land degradation and mitigation of drought using diplomatic missions in Sri Lanka

and Sri Lankan missions abroad. MOE as the national focal point on implementing the activities of the agreements can also play a significant role in this regard.

Economically, socially and environmentally appropriate technology is needed for the sustainable development of natural resources of Sri Lanka. Development of such technology is impeded by political interferences and also through low priority accorded by politicians. Furthermore, the formulation of strategies and programmes are adversely affected by problems associated with resources mobilization at the district level.

At the institutional level the lack of coordination between provincial councils and line agencies of the government is one of the constraints identified in developing economically, socially and environmentally appropriate technologies. This link can be established by formulating suitable and effective strategies and programmes.

At individual level the lack of incentives, lack of farmer training and education, and inadequate funds and the absence of competent officers are some of the capacity constraints identified. These constraints could be overcome by instituting awareness programmes and through the formulation of programmes for skills development.

5. 3.2 Capacity to implement policies, legislations, strategies and programmes

At the systemic level, an enabling environment is essential required for the effective implementation of the UNCCD requirements in Sri Lanka. Political influences and interferences that have been identified as capacity constraints should not adversely affect the activities related to the implementation of UNCCD. At the institutional level, (a) the acquisition, adoption and transfer of appropriate technologies and (b) the development of economically, socially and environmentally appropriate technologies in order to combat land degradation and mitigation of droughts could not be achieved due to a number of underlying causes that have been identified as capacity constraints and presented in the Table 3.

In the acquisition, adoption and transfer of appropriate technologies, shortcomings in Sri Lankan foreign missions have been identified as a capacity constraint. There is a

need to develop a suitable mechanism to acquire and transfer the appropriate technologies from the other countries that can combat land degradation. The feasibility of establishing a cell or a division to address island's environmental issues including land degradation in the relevant foreign missions should be looked into.

In the development of economically, socially and environmentally appropriate technologies, the strengthening of the extension service and improved coordination between provincial councils and the line agencies of the government are required at the institutional level. At the same time GOSL should have a sound mechanism to allocate funds and physical resources among the relevant institutions. However, it is noteworthy that large number of government institutions have their mandates to combat land degradation and to conduct programmes and projects focusing on land degradation issues in the country. Few examples have been given in the introductory section under this requirement. Lack of incentives for farmers, lack of farmer training and education, limited funds and the lack of competent officers are some of the capacity constraints that directly prevent the implementation of the said requirement of the UNCCD at the individual level. Hence programmes for farmer education and awareness creation and training of the field officers as given in the section 5.3.1 should be formulated as given in the section 5.3.1 in the implementation process.

5. 3.3 Capacity to mobilize information and knowledge

As mentioned under other requirements, a national agency or a body should be established to coordinate information gathering and data collection among the relevant stakeholders at the institutional level. This will facilitate the exchange of information and knowledge at that level. At the same time there should be a mechanism to access the best available technologies of the other country parties. At the individual level, the mobilization of information and knowledge to develop economically, socially and environmentally appropriate technologies can be enhanced by recruiting competent officers working on the land degradation and by giving them incentives. Farmer education and awareness creation also contribute to enhance knowledge sharing and the exchange of information.

5.3.4 Capacity to monitor, evaluate and report

The capacity to monitor, evaluate and report on the activities pertaining to the above requirement is not satisfactory at all three levels. The proposed national authority or body for the coordination of all the activities connected with UNCCD implementation in Sri Lanka may be the solution to the problem especially at the institutional level. Presently some institutions have their own monitoring, evaluating and reporting systems for the on going programmes and projects. At the individual level also there is a capacity for monitoring, evaluating and reporting.

5.4 Requirement No 4 - Regional and international cooperation [Art.11, 12, 14, 19(4), Annex II (Art.5,6)]

Regional and international cooperation on land degradation issues is outlined in UNCCD under several of Articles. As far as international cooperation is concerned, the MOE as the focal point to implement activities of UNCCD in Sri Lanka has direct coordination and links with the UNCCD Secretariat. The countries of the Sub-Region have formulated an action programme (SA-SRAP) to address the issues related to drought and land degradation in the region. Implementation of this programme would therefore represent the best available solution to mitigate drought and combat desertification and land degradation in the region.

Capacity constraints preventing the implementation of the requirement - Regional and international co-operation - at the systemic, institutional and individual levels are given in the Capacity Constraint Matrix Table 3.

5.4.1 Capacity to conceptualize and formulate policies/legislation/ strategies and programmes

Inadequate regional co-operation in relation to the requirement of regional and international co-operation of UNCCD is the main factor that prevents implementation of the UNCCD activities at the systemic level. There is a need for a mechanism to promote better co-operation amongst regional countries. Formulation of suitable programmes or strategies to address land degradation issues in the region may help to

resolve this problem and at the same time enhance the co-operation amongst regional countries. Recently, the countries in Asian Sub-Region formulated action programme (SA-SRAP) to address the issues related to drought and land degradation in the region. It has been observed that not enough funds from developed countries are being diverted to Sri Lanka to combat land degradation. One reason for this situation is the lack of sound proposals and projects prepared by Sri Lanka. Projects and proposals on prioritized issues pertaining to land degradation should be prepared for consideration by international funding agencies.

Lack of competent skilled officers on relevant subjects and the lack of opportunities to enhance the skills of technical personal addressing land degradation issues are identified as capacity constraints at the individual level. There should be opportunities for the technical personnel engaged in addressing land degradation issues to pursue higher studies and to obtain the required skills from developed as well as regional countries. In this regard the preparation of link programmes and bilateral agreements with other countries would be a noteworthy step.

5.4.2 Capacity to implement policies, legislations, strategies and programmes

At the systemic, institutional and individual levels, inadequate funds and lack of competent skilled officers have been identified as two major reasons that prevent the implementation of the requirement of UNCCD. Continuity in the office of skilled officers in the relevant subject areas is essential and guarantees the successful implementation of UNCCD activities in the country.

5. 4.3 Capacity to mobilize information and knowledge

GOSL along with the MOE, which is the focal point of the implementation of UNCCD in Sri Lanka, have the sole responsibility in mobilizing information and knowledge. The mobilization and exchange of information in Sri Lanka related to UNCCD activities internationally and regionally by the MOE as the national focal point, is facilitated by the fact that Sri Lanka is a signatory country and has a UNDP country office in Colombo. The mobilization and exchange of information in the country is therefore, somewhat satisfactory and needs further strengthening. At the institutional level, one

underlying cause for improper mobilization of information and knowledge is the inability of relevant stakeholders to gain access to the decisions taken at the COP and other international meetings of UNCCD. At the regional level, SA-SRAP has identified and developed some programmes for the region. The need for information sharing has also been emphasized. The capacity of regional country parties to access information should be strengthened.

5. 4.4 Capacity to monitor, evaluate and report

At the systemic and institutional levels, MOE with the UNDP Colombo office has the capacity to monitor, evaluate the regional and international co-operation related to the activities of UNCCD. MOE has the mandate to report regularly to the donor countries and agencies on matters relating to the Convention. The reporting is done by the Natural Resources Division of MOE.

5.5 Requirement No 5 - Systems for research and development [Art.17, 12]

Article 17 of UNCCD spells out about the research and development activities that should be implemented in the affected country Parties. The departments of Agriculture, Forestry, Export Agriculture, Meteorology; Research Institutes, the Land Use Policy Planning Division, the National Building and Research Organization and Universities are the major institutions that carry out research programmes to address all the aspects of land degradation in the country. However, these institutions conduct research activities in isolation and they have their own sets of objectives. There is no mechanism as such to evaluate and monitor the progress of all research and development activities conducted in various institutions. Joint research programmes with other countries on land degradation issues are sadly missing.

Capacity constraints preventing the implementation of the requirement - Systems for research and development - at the systemic, institutional and individual levels are given in the Capacity Constraint Matrix Table 3.

5.5.1 Capacity to conceptualize and formulate policies/legislation/ strategies and programmes

It is clear that the GOSL has given a low priority to research and development on land degradation issues. This attitude of the government should be changed in the light of the magnitude and consequences of land degradation in Sri Lanka. GOSL should create an enabling environment to implement the requirements of UNCCD by formulating necessary laws and amending the acts where required. Another reason for the failure to implement the requirement is the incapability of decision/policy makers to understand the gravity of the problem. The problem can be resolved by formulating and conducting awareness programmes among the policy makers.

At the institutional level low priority is given for research and development on land degradation issues. There is also a lack of co-operation among research institutes and other relevant institutions on such issues. All of these factors prevent the implementation of the activities of UNCCD. Therefore, programmes and strategies should be formulated at the institutional level, in order to create an awareness of the issues. At the individual level too, low priority has been given to land degradation issues.

5.5.2 Capacity to implement policies, legislations, strategies and programmes

At the systemic level, the creation of an enabling environment by formulating laws and amending relevant acts would help the implementation process as indicated in the section 5.5.1. At the institutional level, one of the major factors that prevent the implementation of the UNCCD requirement is the lack of physical and human resources. Hence inadequate funds (physical) and lack of skilled personnel may be treated as major capacity constraints on the successful implementation of research and development programmes in Sri Lanka related to land degradation. The capacity constraint identified at the individual level is the low priority given by the researchers to the land degradation issues. Giving incentives such as short- term training to the researchers, allocation of more funds to the land degradation research etc. would improve the research capability on land degradation. This in turn would enhance the implementation of research and development programmes effectively.

5.5.3 Capacity to mobilize information and knowledge

There are numerous ways of utilizing research findings and disseminating information among relevant stakeholders. Research information and findings are disseminated in Sri Lanka through research journals, newsletters, symposiums, and workshops. Electronic media is also widely used at all three levels in sharing the information.

5.5.4 Capacity to monitor, evaluate and report

There is sufficient capacity to monitor, evaluate and report on research and development programmes. The National Science Foundation and the Council for Agricultural Research Policy are the leading institutes for the funding of research, monitoring the progress and evaluating the research work carried out in the country. In addition institutes such as Universities have their own monitoring and evaluating mechanisms for research.

5.6 Requirement No 6 - Establishing effective early warning and advance planning for periods of adverse climatic variation [Art.10]

This requirement comes under the Article 10 of UNCCD that outlines the preparation of NAP for the countries. The establishment of an effective early warning system and advance planning for periods of adverse climatic variation have been incorporated as a programme area in to the NAP prepared by the MOE and as well as in the SA-SRAP. However, these programmes have not been implemented due to the lack of funds and lapses in coordination shortcomings in institutional arrangements etc.

Capacity constraints preventing the implementation of the requirement - Establishing effective an early warning system and an advance planning for periods of adverse climatic variation - at the systemic, institutional and individual levels are given in the Capacity Constraint Matrix Table 3.

5.6.1 Capacity to conceptualize and formulation of policies/legislation/ strategies and programmes

The main capacity constraint identified at the systemic level, is the inaccessibility to appropriate technology related to the establishment of an early warning system and an advance planning system for periods of adverse climatic variations. At the institutional level, the neglect of traditional and indigenous knowledge and the lack of coordination among different institutions are the major factors that prevent the implementation of the said requirement of the UNCCD.

To overcome the capacity constraints identified at the systemic and institutional levels, initiatives have to be taken by GOSL to formulate strategies and programmes addressing the above requirement. At the individual level, the lack of trained skilled personnel is the capacity constraint in implementing this requirement. As mentioned in the previous sections, training programmes should be developed to address this issue.

5.6.2 Capacity to implement policies, legislations, strategies and programmes

An enabling environment is required to access and implement appropriate technology for the establishment of an early warning system and for undertaking advance planning system for periods of adverse climatic variations. Inadequate physical and human resources including funds and equipment are also identified as capacity constraints at the institutional level that prevent the implementation of UNCCD activities. This capacity constraint is applicable to other prioritized requirements as well. The lack of trained skilled personnel, a capacity constraint identified at the individual level hampers the successful implementation of the requirement. This capacity constraint was identified with other requirements.

5.6.3 Capacity to mobilize information and knowledge

Mobilization of information and knowledge is weak and capacity should be developed to overcome this situation. At the institutional level, the neglect of traditional and indigenous knowledge and the lack of coordination among different institutions are the major causes that weaken information sharing and mobilization. As indicated in the

section 5.6.2, the lack of trained skilled personnel is the capacity constraints that adversely affect the mobilization of information and knowledge in this regard and as such, training programmes should be developed to address this constraint.

5.6.4 Capacity to monitor, evaluate and report

The question of monitoring, evaluating and reporting issues did not arise as this requirement is not met effectively in the country at all three levels of capacity.

5.7 Requirement No 7 - Training and technology regarding alternative renewable energy sources, promoting alternative livelihoods, including training in new skills [Art18, 19(1)]

The requirement basically addresses the capacity building – i.e. institutional building and the training and development of relevant local and national capacities- as part of the effort to combat desertification/land degradation and mitigate the effects of drought. Capacity building should be promoted through the participation of the local community especially women and youths (participatory approach), the strengthening and training of relevant officers and managers, promotion of alternative livelihoods, promotion of research capacity at the national level, improvement of the extension service, the use of environmentally and socially accepted technology and the adoption of more effective operation of existing national institutions and legal framework.

Government and non-governmental agencies are involved in activities related to the above requirement of UNCCD. Capacity building through the adoption of effective operation of national institutes and legal framework had been continuing from the past. The establishment of the Central Environmental and Mahaweli Authorities under the Environmental Act and Mahaweli Authority Act respectively is a good example. The revision and amending of legal documents (i.e. Soil Conservation Act and National Environment Act) and the introduction of new laws has been a continuing process in the country. The training of officers at all levels in different institutions is also continuing. Specific institutions have been established to train officers locally.
The MOE established the National Expert Committee on Combating Land Degradation

in Sri Lanka with the participation of local experts. The committee gives advice and recommends measures to combat land degradation. Committees on Environment Policy and Management (CEPOMs) were established in order to coordinate sustainable development strategies to address policy issues. The ministry also conducts awareness workshops and seminars periodically amongst rural communities to develop capacity at the grass roots level. The Central Environment Authority (CEA) through its four divisions conducts environmental education and awareness programmes especially for youths and relevant stakeholders. The CEA is also involved in institutional and human resources capacity development activities in relation to the conservation of the environment.

The Alternative Energy Division of Ministry of Science and Technology is involved in the promotion of alternative energy technologies and the establishment of sustainable energy plantations on marginal and degraded lands. The Division has also proposed the utilization of agro-based residues for methane production to be used as automobile fuel. Through these activities, the Division contributes to the improvement of the livelihoods of rural communities and the rehabilitation of degraded lands.

Among the activities conducted by the Department of Agriculture, the extension and consultancy services to prevent land degradation, the training of individuals serving as resource personnel, and the conducting of research and monitoring programmes related to land degradation issues are more related to the transfer of technologies and capacity building among different stakeholders. The Department of Forests is involved in the implementation of reforestation programmes under the Integrated Rural Development Projects and the reforestation of degraded lands under Participatory Forestry Project with the full participation of the local community and village farmers in various districts.

The Department of Export Agriculture, Hadabima Authority and Mahaweli Authority are also engaged in promoting capacity building at various levels and contribute to the improvement of livelihoods of local communities by conducting training programmes on the prevention of land degradation, the conservation of soil and water resources and integrated soil fertility management by introducing sustainable cropping systems etc. NGO's are also actively engaged in promoting capacity building amongst communities

by conducting awareness campaigns on soil erosion, protection of watersheds, wetlands and the conservation of forests.

Some underlying causes preventing the successful implementation of the requirement have been identified as capacity constraints at the systemic, institutional and individual levels.

Capacity constraints preventing the implementation of the requirement - Training and technology regarding alternative renewable energy sources, promoting alternative livelihoods including training in new skills - at the systemic, institutional and individual levels are given in the Capacity Constraint Matrix Table 3.

5.7.1 Capacity to conceptualize and formulation of policies/legislation/ strategies and programmes

(a) There is no formal technology transfer mechanism available for alternative, renewable energy sources in Sri Lanka. Lack of sustainable fuel wood plantations and commercial scale technologies for alternative energy sources are considered as capacity constraints that prevent the implementation of the requirement at the systemic level.

(b) In promoting alternative livelihoods, including training in new skills, the lack of a policy on the regularization of encroachments has been identified as a major capacity constraint at the systemic level. In order to overcome these capacity constraints at the systemic level, programmes, policies, strategies have to be conceptualized and formulated.

At the institutional level, the lack of sound strategies and programmes has been identified as underlying causes. Strategies and programmes have to be formulated whenever required and existing strategies and programmes should be regularly revised and strengthened. However, a few agencies such as the Alternative Energy Division of Ministry of Science and Technology, the Hadabima and Mahaweli Authorities, the Departments of Agriculture, the Department of Export Agriculture and the Department of Forests have programmes that address the requirement of the UNCCD as mentioned

in the introductory section under this requirement.

(a) The training and skills development to establish sustainable fuel wood plantations and, (b) the absence of alternative livelihoods for farmer communities, non-adoption of good agricultural practices, encroachment and cultivation on fragile lands and continued chena cultivation have been identified as capacity constraints at the individual level. These capacity constraints underline the necessity of a strategic approach to tackle the problems. In order to overcome these capacity constraints strategies and programmes focusing on the training and skills development, the promotion of off farm employment opportunities and creating awareness on appropriate agricultural practices should be formulated (This could be done at the systemic and institutional levels as well).

5.7.2 Capacity to implement policies, legislations, strategies and programmes

Once the policies, strategies and programs are established, the implementation process should be strengthened at the systemic level by creating an enabling environment. This provides a platform to implement the policies, strategies and programmes to address the land degradation issues within the existing legislative framework in the country.

At the institutional level, at present there is some government as well as non-governmental agencies engaged in activities to implement the requirement. Government agencies such as the Alternative Energy Division of the Ministry of Science and Technology, the Hadabima Authority, the Mahaweli Authority, the Department of Agriculture, the Department of Export Agriculture and the Department of Forests are implementing programmes that address the said requirement of UNCCD. However, the institutional capacity in relation to human and physical resources in the relevant institutions should be strengthened to successfully implement the policies, strategies and programmes.

At the individual level, the training and skills development of farmers and officers directly involved in addressing land degradation issues and also of other relevant stakeholders should be enhanced. The capacity constraints identified under (b) at the individual level can be resolved by making farmers aware of good agricultural

practices and the importance of combating land degradation, by creating off farm employment opportunities, by imposing penalties on the encroachment of fragile land for cultivation and by giving incentives to farmers contributing to soil conservation.

5.7.3 Capacity to mobilize information and knowledge

As mentioned earlier at the systemic level, the major capacity constraints are the lack of a technology transfer mechanism for alternative, renewable energy sources and the lack of commercial scale technologies. The underlying cause for these capacity constraints is the weak mobilization of information and knowledge at the systemic level. At the institutional level, the report of the inter-ministerial working committee on dendro thermal technology and its recommendations provides valuable information and knowledge on technology transfer for alternative renewable energy and the promotion of alternative livelihoods.

The mobilization of information and knowledge on the technology transfer for alternative renewable energy and the promotion of alternative livelihoods can be improved by providing the training and skills for the officers involved in the renewable energy sector at the institutional and individual levels. Further research and development programmes on commercial scale fuel wood plantations and renewable energy technologies will enhance the utilization of information and research findings by the relevant stakeholders. At the individual level, the mobilization of information and knowledge by the farmers as well as field officers is lacking. This capacity constraint may be overcome partly by enhancing the awareness of farmers and field officers and also by improving their education.

5.7.4 Capacity to monitor, evaluate and report

As mentioned in the introductory section the different agencies addressing land degradation issues have the capacity to monitor and evaluate the programmes and projects that they are conducting and to report the outcomes to the relevant authorities. For example, the alternative Energy Division of the Ministry of Science and Technology has the capacity to perform this key function. At the individual level, the capacity in relation to monitoring, evaluating and reporting can be enhanced by creating awareness and by improving the skills of field officers.

6. Recommendations

The interventions that have to be made at the three capacity levels in order to overcome the bottlenecks and constraints in relation to the implementation of UNCCD activities in Sri Lanka are summarized below:

(A) Systemic level

1. Establish a national level high-powered body to coordinate the activities related to combating land degradation in Sri Lanka. Therefore necessary laws and regulations should be enacted.

2. Formulate appropriate strategies and programmes to promote firm links and coordination between government line agencies and Provincial Councils to implement the activities of related to combating land degradation under UNCCD.

3. Enforce the relevant laws to safeguard the environment and act on development programmes that are planning and implementing at the expense of environment.

4. Formulate and implement a sound land use policy with proper emphasis on the land degradation issues.

5. Create an enabling environment to implement the Soil Conservation Act.

6. Strengthen the linkages with other country parties for the acquisition of funds and new technologies, human resource development and the exchange of experts in relation to the combating of land degradation.

(B) Institutional level

7. Strengthen CEPOM's, establishing environmental cells/divisions in relevant ministries and appointing environmental officers to implement NAP activities in the country.

8. Strengthen the capacity and authority of district environmental and land use committees.

9. Develop the capacity of high-level officers involved in decision making and policy planning in the relevant ministries pertaining to the addressing of land degradation issues with required scientific background.

10. Formulate policies to accommodate programmes and projects of NAP as action plans in the development programmes of different institutions that have the mandate to address land degradation issues in Sri Lanka.

11. Strengthen the institutional capacity in terms of both physical and human resources for research and development on combating land degradation in the country.

12. Strengthen the extension service and promote off farm employment opportunities for farmers.

(C) Individual level

13. Develop capacity among the officers in different subject areas related to land degradation.

14. Formulate and implement strategies and programmes to create awareness and skills development of field level officers as well as among farmers.

7. Annexes

Annex 1

Priority setting of the requirements under UNCCD Convention for capacity needs

As for Priority setting requirements under UNCCD Convention for the capacity needs covering all three levels (Systemic, Institutional and Individual), one-day workshop was held on 23rd December 2005 at the Institute for Construction Training and Development (CETRAC), Pelawatta with the Project team, Thematic working group and with key stakeholder participation. Mr. R. Semasinghe, Director, Natural Resource Management Division, MOE welcomed the participants and delivered introductory remarks about the workshop. Mr. Watson, NCSA National Project Manager, NCSA project, MOE gave an introduction of the NCSA project and presented the objectives of the workshop. Dr. K.A. Nandasena, thematic consultant on land degradation explained the workshop objectives and procedure to be followed to prioritize the UNCCD requirements relevant to Sri Lanka. " Prioritisation Matrix" suggested in the Guide for Self-Assessment of Country Capacity Needs for Global Environmental Management was used as a tool for priority setting.

For thirteen UNCCD requirements, "Scale of the problem" was considered at local, national, regional and global levels. The "level of concern" was evaluated by using three levels; low, medium and high. Similarly ability to adequately address the issue was also evaluated using three levels. At the workshop the most important 7 requirements out of 13 UNCCD requirements relevant to Sri Lanka were identified. The most important 7 requirements have been further ranked based on the severity of the problem and the consultation of stakeholders at the workshop starting from 1 to 7.

Following stakeholders participated at the priority setting workshop.

1. Mr. R. Semasinghe
   Director (NRM), MOE

2. Mr. M. Watson
   National project Manager, NCSA Project.

3. Dr. K.A Nandesena
   Thematic Consultant- Land degradation

4. Mr. .K.M.A.Kendaragama
   NRMC, Department of Agriculture, Peradeniya.

5. Mr. R.M.S Bandara
   Head, NBRO.

6. Dr. Percy Silva
   National Physical Planning Division

7. Mr. T.H Karunathilake
   Capacity Development Expert

8. Mr. J. Jayasinghe
   Former Director LUPPD

9. Mr. D.P. Munaweera
   Upperwatershed Management Project.

10. Mr. P. Munasinghe
    Upperwatershed Management Project.

11. Mr. Asitha Senaviratne
    Ministry of Industry and Investment promotion.

12. Mr. P.G Joseph
    Director, Ministry of Science & Technology.

13. Dr. W.K.B.N Prame
    Assistant Director, GSMB.

14. Mr B. A. Jayananda,
    Deputy Director, LUPPD.

Annex 2

Identification of capacity constraints and possible opportunities (needs)

A two day workshop was held on 20th and 21st January 2006 at Palm Village Hotel, Uswetakeiyawa to identify capacity constraints for prioritized issues and to identify possible opportunities (needs) for building the capacity needed. Since this was the most important part of the assessment after priority setting, Project team, Thematic working group and key Stakeholder were invited to attend the workshop. The tool used in identifying capacity constraints was "Root cause Analysis". In assessing capacity constraints at systemic, institutional and individual levels, "Capacity Constraints Matrix" was used as suggested in the Guide for Self-Assessment of Country Capacity Needs for Global Environmental Management.

Steps in identifying Capacity Constraints and Needs using Root Cause Analysis (RCA).

1. Identify major problems/conditions (Should be few) that affect immediately each prioritized Requirement (Brainstorming).
2. Find the root causes (Constraints) for each problem/condition.
3. Categorize the root causes in to Systemic, Institutional and Individual levels.
4. Identify Capacity Needs to overcome the root causes/ constraints.
5. Indicate which of the following capacity function or functions to be performed for each identified Capacity Need.
    (a) Capacity to conceptualize & formulate policies, legislation, strategies and programmes (A)
    (b) Capacity to implement policies, legislations and strategies (B).
    (c) Capacity to mobilize information and knowledge (C).
    (d) Capacity to monitor, evaluate and report (D).

Solution/Intervention	Root Causes	Main Causes	Problem
Identify possible solution/intervention for each root cause ⇐	Elaborate the main cause to number of Root Causes ⇐	Main causes for it ⇐	Identify the problem ⇐

Following stakeholders participated in the priority setting workshop.

1. Mr. R. Semasinghe
   Director (NRM), MOE.

2. Mr. Anura Jayathilaka,
   Director, Global affairs Division, MOE

3. Mr. M. Watson
   National project Manager, NCSA Project.

4. Dr. K.A Nandesena
   Thematic Consultant- Land degradation, NCSA Project.

4. Mr. .K.M.A.Kendaragama
   NRMC, Department of Agriculture, Peradeniya.

5. Mr.L. Gunarathne,
   Director, Department of Export Agriculture.

6. Dr. Percy Silva
   National Physical Planning Division

7. Mr. T.H Karunathilake
   Capacity Development Expert NCSA Project.

8. Mr.B.A. Jayananda,
   Deputy Director, LUPPD.

9. Mr. E.S. Silva,
   Deputy director, Department of Meteorology.

10. Mr. M.M Weerakoon Banda,
    Deputy Director, Hadabima Authority.

11. Mr. Asitha Senaviratne
    Ministry of Industry and Investment promotion.

12. Mr. P.G Joseph
    Director, Ministry of Science & Technology.

13. Dr. A. Thennakoon,
    CRI, Lunuwila.

14. Dr L. Samarappuli,
    Head, Dept. Plant nutrition, RRI, Agalawatta.

15. Prof. C. S. Weerarathne,
    Chairman, SRI.

16. Dr. M.A. Wijerathne,
    OIC, TRI, Rathnapura.

17. Prof. A. Gunawardena,
    University of Ruhuna.

18. Mr. H.W. K. Jayathilaka,
    Forest Department.

19. Mr. A.M.K.B. Attanayaka,
    Urban Development Authority.

20. Mrs. K.R.M.D. Fernando,
    Coast Conservation Department.

21. Mr. S.D. Mahinda,
    NCSA Project.

22. Mr. Sagara
NCSA Project.

23. Mr. S. Manthrinayaka,
Ministry of Power and Energy.

Annex 3

Questionnaire used to collect information related to capacity building activities

Section 1 General Information

1. Name of the Ministry/Department/Institute/Organization

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2. Address

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3. Telephone_____ Fax_____

Section 2 Activities related to land degradation

4. Your involvement in implementing programmes and activities related to UNCCD
(Mark "X" in appropriate box)
Direct involvement and have a mandate for it ☐

No mandate for implementing activities under UNCCD, but play a subsidiary role ☐

No mandate for implementing activities under UNCCD, play an insignificant role ☐

5. If you have a mandate and primary responsibility to implement programmes and activities, what are the legal instruments/policies/ strategies and plans that are relevant to the UNCCD with special reference to the land degradation?
Legislations

_____
_____
_____
_____

National Policies

_____
_____
_____
_____

National Strategies

_____
_____

- United Nations Convention to Combat Desertification (UNCCD) is one of the Rio Conventions signed and ratified by Government of Sri Lanka to implement programs and activities related to Land Degradation issues in the country. Land Degradation means temporally or permanently loss of productivity due to soil erosion, deterioration of soil's physical, chemical and biological or economical properties, and loss of natural vegetation.

National Plans

6. If you have a mandate and primary responsibility to implement programmes and activities, what are the past, existing and proposed projects, activities and programme relevant to the UNCCD with special reference to the land degradation.
   Past projects/activities/programmes conducted

   Existing projects/activities/programmes

   Proposed projects/activities/programmes

7. Give any specific responsibilities to meet the requirements of UNCCD related to the land degradation problem in Sri Lanka by marking "X" .

Requirement/Obligation	Responsibility			
	High	Mod.	Low	No
1. Establishing national strategies within the framework of sustainable development plans/or policies				
2. Implementing National action programme				
3. Strengthening relevant legislation, enact new laws, and establishing long term policies & action programs				
4. Promoting education and public awareness				
5. Transfer, acquisition, adaptation and development of economically, socially and environmentally appropriate technology				

6. Training and technology regarding alternative, renewable energy sources, promoting alterative livelihoods, including training in new skills				
7. Training for collection and analysis of data for disseminating and using early warning information systems, covering drought and food production				
8. Systems to collect, analyze and exchange information and Technical and scientific corporation				
9. Establishing effective early warning and advance planning for periods of adverse climatic variation				
10. Systems for research and development				
11. Joint research programmes for development of appropriate technologies				
12. Involving in capacity assessment activities				
13. Regional & international corporation				

Section 3 Activities related to capacity development

8. Are there any past and existing activities and programmes on capacity development related to land degradation at individual, institute and systemic levels? Indicate at which level the activities/programmes conducted marking on appropriate column with "X". (Indicate the nature of the activities/programmes marking 1 - 5 in the last column. 1 = Organizing and formulating of policies, legislations, strategies and plans, 2 = Implementing and enforcing of policies, legislations, strategies and plans through projects notably by mobilizing and managing all required resources, 3 = Building of consensus and partnerships among all stakeholders, 4 = Mobilizing of information and knowledge, 5 = Monitoring, evaluating, reporting and learning)

Past activities/programmes	Systemic level	Institutional level	Individual level	Nat ure
Existing activities/programmes	Systemic level	Institutional level	Individual level	Nat ure

9. What are the past and existing collaborative works carried out with other stakeholders such as NGO's, Private sector, and other institutes on capacity development related to land degradation at individual, institute and systemic levels. (Indicate the nature of the work marking 1 – 5 in the first column. 1 = Organizing and formulating of policies, legislations, strategies and plans, 2 = Implementing and enforcing of policies, legislations, strategies and plans through projects notably by mobilizing and managing all required resources, 3 = Building of consensus and partnerships among all stakeholders, 4 = Mobilizing of information and knowledge, 5 = Monitoring, evaluating, reporting and learning)

Past collaborative works at systemic level

Name of the collaborative work & nature	With whom

Past collaborative works at Institutional level

Name of the collaborative work & Nature	With whom

Past collaborative works at Individual level

Name of the collaborative work & Nature	With whom

Existing collaborative works at systemic level

Name of the collaborative work & Nature	With whom

Existing collaborative works at Institutional level

Name of the collaborative work & Nature	With whom

Existing collaborative works at Individual level

Name of the collaborative work & Nature	With whom

10. What are the outcomes of past and existing capacity development activities and programme - Reports of workshops

Other relevant documents (Status/Consultancy /Survey reports etc)

11. If any capacity needs, capacity constraints for implementation of programmes related to land degradation have been identified, mark appropriate column with "X".

Capacity needs	Systemic level	Institutional level	Individual level
1. 2. 3. 4. 5.			
Capacity constraints	**Systemic level**	**Institutional level**	**Individual level**
1. 2. 3. 4. 5.			