



Presentation on Technologies Identified and Project Ideas Developed by the Technology Needs Assessment Project

Outline

- * Background on TNA Project in Sri Lanka
- * Sectors prioritized
- * Technologies prioritized and Project ideas developed
- * Implementation of project ideas and technology action plans
- * The way forward to obtain CTCN assistance

TNA Project in Sri Lanka

Objective: To identify and assess environmentally sound technologies that have synergy between reducing the impact of climate change and GHG emissions in Sri Lanka within national development objectives.

- **Project Cost:** 120,000 US\$
- **Duration:** 2 years (June 2011 – April 2013)
- **Funded by :** UNEP/GEF
- **Technical Support:** Risø Centre of UNEP and AIT
- **Executing Agency:** Climate Change Secretariat, Ministry of Environment & Renewable Energy, Sri Lanka.

Sectors prioritized for TNA

Adaptation

Food
Health
Biodiversity
Coastal
Water

Mitigation

Energy
Industry
Transport

Technology Identification → Technology Prioritization → Barrier Analysis → Enabling Framework → technology action plans → Project Idea development



**Prioritized Technologies and
Project Ideas developed for
Adaptation Sector**

Food Sector

Technology	Project Idea
1. Sustainable Inland Culture Based Fisheries	1. Development of Inland Culture Based Fisheries for Enhancing Livelihood and Food Security of Communities Vulnerable to Climate Change in the Dry Zone of Sri Lanka
2. Sustainable Land Management	2. Restoration and preservation of Highland Productivity Using Sustainable Land Management Practices to Increase Climate Change Adaptability
3. Crop Diversification & Precision Farming	3. Crop Diversification and Precision Farming in Dry Zone of Sri Lanka for Managing Climate Change Vulnerabilities, Livelihood Sustainability and Food Security

Health Sector

Technology	Project Idea
1. Technology for Early Warning Systems and networking for information exchange on Extreme Weather events and other climate change related events	1. Strengthening the existing health sector Early Warning Systems through networking and linking with other sectors and training of health personnel to adapt to adverse health effects of climate change
2. Transfer of knowledge and skills to Health Personnel	2. Capacity building of health personnel to improve performance with regard to climate change related adverse health effects
3. Technology for management of Healthcare Waste	3. Improvement of Health Care Waste Management in all health institutions, to minimize the effects of climate change related adverse health effects

Water Sector

Technology	Project Idea
1. Restoration/ Rehabilitation of Minor Tank net works	1. Rehabilitation/Restoration and maintenance of minor tank network (cascade) systems in the dry zone of Sri Lanka as an adaptation strategy for climate change
2. Rainwater harvesting from rooftops for drinking and household uses	2. Promote roof top rainwater harvesting technology, as an adaptation measure for climate change
3. Boreholes/tube wells as a drought intervention for domestic water supply	3. Promote measures for sustainability of boreholes as an adaptation method for climate change
4. Multiple technologies	4. Improve availability of drinking and irrigation water for the dry zone of Sri Lanka as an adaptation measure for climate change

Coastal Sector

Technology	Project Idea
1. Restoration of Sand dunes	1. Rehabilitation and restoration of sand dunes in North Western, Southern & Eastern Provinces of Sri Lanka as a soft barrier against sea level rise, while improving socioeconomic status of coastal communities.
2. Rehabilitation of Mangroves	2. Rehabilitation of mangroves as soft barriers against sea level rise in the North Western, Eastern and Southern coastal belts of Sri Lanka, while maintaining the ecological balance and sustainability of socioeconomic activities, ,
3. Restoration of Coral Reefs	3. Restoration of coral reefs of southern and south-western coastal belt of Sri Lanka, as a soft barrier against sea level rise and coastal erosion and as a tourist attraction to promote eco-friendly tourism.

Biodiversity Sector (1)

Technology	Project Idea
1. Restoration of degraded areas inside and outside the protected area network to enhance resilience.	1. Study on identifying and prioritizing critical areas for restoration'
2. Increasing connectivity through corridors, landscape/matrix improvement and management	2. Identification of critical areas to be connected and prioritization of required corridors
3. Improve management, and possibly increase extent of protected areas, buffer zones and create new areas in vulnerable zones	3. Awareness programme, capacity building and development of materials to promote coexistence with biodiversity

Biodiversity Sector (2) (Cont..)

Technology	Project Idea
4. Focus on conservation of resources and carryout special management for restricted range, highly threatened species and ecosystems	4. Awareness programme on point endemics and critically endangered species, and the importance of their conservation
5. Ex-situ conservation for highly threatened species and possible reintroduction.	5. Studies to identify and prioritize species for ex-situ conservation, and climate change modeling to identify species vulnerable to climate change
6. Multiple technologies	6. Climate change adaptation for biodiversity: a ridge to reef approach in building climate resilience along the Mahaweli River



**Prioritized Technologies and
Project Ideas developed for
Mitigation Sector**

Technologies	Sub Technologies/Project Ideas
1. Conversion of Biomass and Waste to Energy	i) Co-Firing of Biomass with Coal
	ii) Compact Biogas Digester for Urban Households
	iii) Waste To Energy
2. Smart Grid Technology for Wind, Solar and Small Hydro for Grid Integration	iv) Smart Grid Technology for Wind, Solar and Small Hydro for Grid Integration
3. Building Management Systems	v) LED Lighting
	vi) Solar Assisted Air Conditioning.

Transport Sector

Technologies	Project Ideas
1. Integration of Non-motorized transport methods along with regularized public transport system	1. Non-motorized transport methods with regularized public transport system for better climate benefits in Sri Lanka
2. Promote carpooling and park-and-ride systems during rush hours and on roads with heavy volumes of vehicles	2. Park-and-Ride systems in Colombo and Gampaha districts of Sri Lanka for greener transport
3. Electrification of the existing railway system	3. Electrification of five percent of the existing railways of Sri Lanka for reduced greenhouse gas emissions

Industry Sector

Technology	Project Idea
1. Energy Efficient Motors	1. <u>Facilitation of emission reduction in industries by changing to high efficiency motor drives</u> through availability of financial instruments and loan granting schemes, subsidies and green credit lines.
2. Variable Speed Drives	2. In country capacity development through <u>strengthening of institutions / organizations for reducing carbon emissions in industry</u> through switching to modern green drives.
3. Residue Biomass Combined Heat and Power (CHP)	3. <u>Reduce dependence of fossil fuel and resentment carbon emissions from process industries</u> by building confidence to use CHP for in-situ electrical and thermal energy generation through development of champions

Total Number of Project Ideas Developed

Adaptation:

1. Food Sector -3
2. Health Sector -3
3. Water Sector - 4
4. Coastal Sector - 3
5. Biodiversity Sector – 6

Total for Adaptation - 19

Mitigation:

1. Energy Sector - 6
2. Transport Sector - 3
3. Industry Sector - 3

Total for Mitigation - 12

Total - 31

Technology Action Plan

Technology Action Plan (TAP) is a concise proposal for each technology along with enabling framework for the technology (policy and legal requirements), identification of implementing agencies, priority of the proposed measure/action, the time frame for implementation, estimated cost, possible sources of funding and indicators for the measurement of success

Implementation of project ideas and technology action plans within the country

Distribute project ideas and technology action plans among the relevant institutions identified as implementing agencies for the specific technology to encourage them to incorporate the activities to their annual action plans.

Liaise with International Funds (GEF/UNEP/Green Climate Fund, CTCN etc.) to seek funding for developing project proposals based on project ideas and implementation of potential projects.

Implementation of pilot project on roof top rainwater harvesting technology as an adaptation measures identified under the water sector (Kodiyabendawewa Village - 21 households ,Gurukandegama Village - 69 households in Anuradhapura District)

Technology Development and Transfer under UNFCCC process

- * **1/CP.16** - Established a Technology Mechanism, consisting of Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN).
- * **2/CP.17** - Finalized ToR for CTCN and decision stated that the CTCN will receive requests related to technology development and transfer, "from developing country Parties through the National Designated Entity (NDE).
- * **14/CP18**- Constitution of the Advisory Board of the CTCN, decided that the UNEP, as the leader of a consortium of partner institutions, be selected as the host of the CTC



Thank You

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