



THIRD NATIONAL ENVIRONMENT ACTION PLAN

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Ministry of Housing, Transport and Environment

Government of the Maldives

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Foreword by the Minister of Housing, Transport and Environment

I have great pleasure in presenting the Third National Environment Action Plan (2009-2013). The release of NEAP 3 is the result of government agencies working together for nearly two years to agree on the key actions necessary to protect the fragile environment of our country.

There is agreement on the six results we hope to achieve and all the government agencies will be working together to achieve the goals and targets set out in NEAP 3. The Environment Ministry will provide the impetus and co-ordination necessary to implement the NEAP 3.

With the introduction of a decentralised system of governance based on seven provinces in the Maldives – the thrust of implementation would be at provincial and atoll levels. Environmental management responsibilities would become a key function of provincial offices and atoll offices and the NEAP 3 seeks to build the capacity for environmental management at the local level.

The formulation process of NEAP 3 is only the beginning of a journey. The real task is in implementation and the journey continues. NEAP 3 is results oriented and I am confident that the goals and targets in NEAP 3 are realistic. Midway through the journey we will take measure of progress. I would also like to note that we will be pursuing adaptive environmental planning and management as we go ahead.

The planned actions in NEAP 3 require significant funding. The Environment Ministry would work very closely with the Ministry of Finance and Treasury to secure and deliver public finances for the implementation of NEAP 3. We look forward to support from our international friends and partners to keep the momentum going and for catalytic injections where necessary.

I extend a special thank you to all those who have participated in the formulation of NEAP III. I look forward for active participation by all in the implementation stage as well.

Mohamed Aslam

THIRD NATIONAL ENVIRONMENT ACTION PLAN

This is the third National Environment Action Plan (NEAP 3) of the Government of the Maldives. NEAP 3 sets out the agenda for environmental protection and management in the Maldives for the five year period 2009 – 2013. This plan is targeted to achieve measurable environmental results that matter to the people of the Maldives.

Prosperous, liveable and sustainable places are an integral component of the development vision of the nation. Protection of the natural environment and making people and property resilient is a mission of the Government.

The six strategic results of NEAP3 that are expected are: resilient islands; rich ecosystems; healthy communities; safe water; environmental stewardship; and a carbon neutral nation.

NEAP3 provides the basis for environmental planning, budgeting, performance measurement, and accountability. Every year, annual performance targets and indicators will be presented in the budget request to be made to the Parliament. The performance against these goals and targets will be reported in the subsequent Annual Report on environmental protection.

PRINCIPLES

The following principles shall be adhered to in environment protection and environmental management.

1. Environmental protection is the responsibility of every individual.

Protection of the natural environment and practising environment friendly lifestyles is a responsibility of every Maldivian.

2. Achieve results

The actions, activities, regulations, supervision, reporting, incentives, information and advice for environmental management shall be directed and well co-ordinated to achieve the results the citizens want.

3. Promote and practise sustainable development

In environmental management the principle of sustainable development shall be followed. Conditions shall be created to give equal distribution of environmental goods and services both geographically and between generations including future generations. Special attention shall be given to address the concerns of the most vulnerable groups in the population.

4. Ensure local democracy

In environmental management the actions and decisions shall be taken and authority exercised at the most appropriate level.

5. Inter-sectoral co-ordination and co-operation

Co-ordination and co-operation is essential from all sectors. For environmental management all should work informatively and co-operatively toward the goal of integrating environmental aspects into the goals and actions of all sectors.

6. Informed decision making

Actions for environmental management should be based on documented facts to as great extent as possible and not to pursue self interest or short term gains.

7. Precaution first

Where there is threat of irreversible damage and when the factual basis is inadequate or uncertain, the precautionary principle shall apply.

8. Continuous learning and improvement

Favourable conditions shall be created for continuous learning and improvement in the work with environment management at the national, regional and local level

9. Right to information and participation

The citizens have a right to information about status of the environment as well as the right to participate in decisions affecting their environment. They also have the right to actively participate in protecting the environment.

10. Environmental protection complements development

Environmental protection efforts shall not be portrayed as competing with the development needs and aspirations of the present people. Healthy debate about values as they relate to ecological and social sustainability shall be encouraged.

RESULT 1: RESILIENT ISLANDS

Goal 1: Protect critical infrastructure

Objective 1.1: Protect Male' International Airport (MIA) and the Regional Airports from predicted sea level rise and wave induced flooding

Targets

- > By 2010, undertake technical, financing and engineering studies to protect Male' International Airport, Gan International Airport and 03 regional airports
- > By 2010, develop detailed engineering design of coastal protection measures for MIA
- > By 2011, mobilize resources and initiate coastal protection works required for MIA protection

Goal 2 Protect human settlements

Objective 2.1: Demonstrate innovative coastal protection and flood control measures for Safe Islands

Targets:

- > By 2011, undertake detailed technical and engineering studies for coastal protection in six Safe Islands
- > By 2012, implement coastal protection demonstration projects in six Safe Islands
- > By 2012, implement measures for flood prevention and flood control in Fuvahmulaku and Thinadhoo (G.Dh)

Objective 2.2: Integrate climate change concerns in resilient island development

Targets:

- > By 2010, assess and evaluate the specific vulnerabilities of the proposed host/safe islands to the climate hazards
- > By 2010, complete cost-benefit analysis (CBA) of adaptation measures and technologies for resilient islands

Objective 2.3: Strengthen human, technical, regulatory and institutional capacity for coastal zone management

Targets:

- > By 2010, incorporate climate change concerns into the land use planning laws, regulations and guidelines
- > By 2011, establish environmental surveying units and develop coastal surveying capacity at 7 Province Offices
- > By 2012, train 20 personnel in coastal engineering
- > By 2011, develop curriculum for a coastal zone management training course
- > By 2011, train 100 province/atoll level environmental officers on climate change adaptation
- > By 2011, establish a regular donor assistance coordination mechanism to mobilize funds for resilient island development
- > By mid 2010, develop standards and guidelines for access infrastructure development and land reclamation projects to complement EIA requirements

Objective 2.4: Demonstrate on-the-ground a model resilient island for adaptation to climate change.

Targets:

- > By mid 2010, select an island to be developed as a safe island; mobilize the incremental finance; develop the land use plan; undertake coastal zone management planning; and conduct an environmental impact assessment for the proposed resilient island development
- > By 2011, undertake the coastal protection and flood control engineering works; implement the selected adaptation measures for the island and disseminate the successes and lessons learnt

Goal 3: Increase the resilience of coral reef systems to climate change

Objective 3.1: Increase the knowledge base and understanding of the natural adaptation process in coral reefs.

Targets:

- > By mid 2010, develop a GIS-based national coral reef database to enable the management and analysis of ecological and socioeconomic data on coral reefs.
- > By 2011, synthesize the knowledge on Maldivian reef biology and ecology and its interactions with climate parameters.
- > By 2011, publish research papers on how human induced stresses such as reef fishery, tourism, land reclamation and other developmental activities affect growth and functioning of coral reefs.
- > By 2012, publish research findings on how coral reefs and islands adapt to climate change and measures required to enhance the natural adaptation process.

Goal 4: Reduce climate-related risks to tourism sector

Objective 4.1: Strengthen capacity of the tourism sector to develop policy and plan for, and implement, adaptation activities

Targets

- > By 2010, develop a capacity enhancement plan and initiate capacity building for key players in tourism to coordinate, manage, undertake, monitor and evaluate initiatives that will reduce climate-related risks
- > By 2011, complete a targeted climate risk profile for the tourism sector of the Maldives, with risk conditions such as high sea surface temperatures, and the consequences such as coral bleaching

Objective 4.2: Demonstrate adaptation measures that will reduce climate change risks to tourism

Targets

- > By mid 2010, establish sea level, sea surface temperature, and coral reef monitoring network among tourist resorts
- > By 2011, complete demonstration of beach erosion management in five percent of resorts
- > By mid 2010, develop a climate change adaptation implementation strategy for the sector

Goal 5: Protect human health from climate change-related vector-borne diseases.

Objective 5.1: Undertake integrated vector management (IVM) to prevent climate change related vector-borne diseases.

Targets

- > By 2010, agree on roles and responsibilities of national level government agencies and province/island/atoll councils in IVM.
- > By 2011, strengthen capacity of island, atoll, province and national healthcare services on their respective roles in oversight, management, implementation and/or monitoring of the IVM program.

Objective 5.2: Develop the capacity for early diagnosis and establish effective disease and vector surveillance system for planning and response.

Targets

- > By 2010, develop standard operating procedures on vector-borne diseases and orient all service providers on case definitions, detection, and reporting.
- > By 2011, establish laboratory capacity for early diagnosis of climate related vector borne diseases in five regions.
- > By 2011, train 200 atoll/province level health care workers on vector surveillance.

Goal 6: Build resilience of fisheries and food production to climate change

Objective 6.1: Enhance the knowledge on bait use and utilization, alternative livebait, catching methods and improved holding techniques.

Targets:

- > By mid 2010, complete a comprehensive review of bait biology, bait use and bait utilization in the context of predicted climate hazards.
- > By 2011, evaluate the cost effectiveness of alternatives to bait and alternative methods of bait catching and rank the practical solutions to bait fishery in the context of adaptation to climate change
- > By 2012, disseminate the preliminary findings of the evaluation of mariculture of alternative species of bait

Objective 6.2: Assess community knowledge and practices on local plant species used for food production in the context of climate change.

Targets

- > By 2011, complete an assessment of how the predicted climate change hazards will impact the local plant species used for food production and an examination of how food crops are conserved traditionally and the current farming practices applicable to adaptation.
- > By 2013, identify and test appropriate technologies and good practices to increase adaptive capacity of local plants

Goal 7: Natural disaster preparedness and mitigation

Objective 7.1: Make Maldivians safe and secure from natural disasters through information dissemination and, planning and co-ordination of national response actions.

Targets

- > By mid 2010, establish a national early warning system to disseminate warnings of natural disasters
- > By 2010, establish website and public information systems including fact sheets and awareness materials on natural hazards and disasters
- > By mid 2010, develop a National Disaster Management and Mitigation Plan
- > By 2011, develop a Biological Incident Management Plan
- > By mid 2010, develop an Oil and Hazardous Material Incident Management Plan
- > By 2011, formulate disaster classification standards and risk assessment protocols.

Objective 7.2: Strengthen the information base on hazards and disasters to better inform, educate and protect the public

Targets

- > By 2010 upgrade the existing meteorological database.
- > By 2011 install a weather prediction model for the Maldives.
- > By 2012, conduct hazard mapping for all island of Maldives.
- > By mid 2010, establish instruments and an oceanographic database to monitor and analyze water temperature and ocean currents
- > By 2012, establish a seismological network to monitor magnitude of earthquakes in the Maldives and around the region

RESULT 2: RICH ECOSYSTEMS

Goal 8: Improve scientific knowledge and access to information for biodiversity conservation.

Objective 8.1: Improve the knowledge base for biodiversity conservation by identifying and monitoring status of biodiversity; identifying the economic value of biodiversity; understanding threats to biodiversity; and monitoring effectiveness of management.

Targets:

- > By 2010, identify priorities for biodiversity research
- > By mid 2010, identify and map at province/atoll level the important populations of flora and fauna, significant sites for migratory species, critical habitats for threatened species, ecological communities and centres of endemism
- > By mid 2010, generate a policy research paper on economic value of biodiversity conservation

Objective 8.2: Verify, and make accessible existing knowledge and information on biodiversity

Targets:

- > By mid 2010, make accessible to community, students, teachers, researchers, planners and decision-makers a networked and distributed system of databases containing information about the important components of biodiversity
- > By 2011, make universally accessible, an Internet based, integrated Maldivian biodiversity information system

Objective 8.3: Increase the public awareness and understanding of the concept of biodiversity and the actions that can be taken to conserve species, ecological communities and ecosystems

Targets:

- > By 2013, increase by 100 percent the awareness and understanding of the significance of biodiversity conservation and actions that can be taken to conserve species and threatened ecosystems
- > By 2011, produce multi-media awareness and education material on species conservation, protected areas, and the economic value of biodiversity

Goal 9: Bring institutional and legislative reforms to enable biodiversity conservation

Objective 9.1: Recognize biodiversity conservation as a core business of province, island and atoll offices

Targets:

- > By 2010, identify National Government, Province/Atoll Office, Island Office and Community responsibilities for biodiversity conservation
- > By 2012, integrate biodiversity conservation as a core component in all provincial development strategies, atoll development plans and island land use plans

Objective 9.2: Remove legal impediments to biodiversity conservation

Targets:

- > By 2010, all Ministries review the legislative and regulatory frameworks under their jurisdiction to identify impediments to biodiversity conservation and incentives that encourage biodiversity loss
- > By 2012, Ministries remove the legislative and regulatory impediments to biodiversity conservation, including incentives that encourage biodiversity loss

Objective 9.3: Introduce formal agreements and market based instruments for biodiversity conservation

Targets:

- > By 2010, review legislative and regulatory frameworks to identify impediments to the introduction of formal agreements for biodiversity conservation
- > By 2011, concerned Ministries review their legislative and regulatory frameworks to identify the effectiveness of economic instruments and incentive based policies such as tradeable permit schemes, taxes, charges and subsidies that promote biodiversity conservation

Objective 9.4: Achieve substantial progress in the implementation of the international commitments of the Maldives to conserve globally significant biodiversity

Targets:

- > By 2010, mobilize finance for projects under the Bio-safety framework
- > By end of 2009, accede to RAMSAR convention on wetlands
- > By 2011, accede to Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES)
- > By 2011, accede to Convention on Migratory Species (CMS)

Goal 10: Protect and restore coral reefs

Objective 10.1: Establish and manage MPAs

Targets:

- > By 2011 establish a fully functional Marine Protected Areas System in the Maldives
- > By 2011 ensure that 05 percent of the coral reefs of the Maldives are given protected status
- > By mid 2010 introduce a national comprehensive system for the prevention and management of introduced marine pests
- > By 2011, prepare recovery plans for all marine listed threatened species

Objective 10.2: Develop policy and legal framework to protect and manage coral reefs.

Targets:

- > By 2010 complete a review of the existing institutional framework to identify gaps and barriers in coral reef management and recommend roles and responsibilities for custodians, users and managers.
- > By mid 2010 develop the coral reef regulatory framework that enables the relevant institutions to designate zones, uses and marine protected areas systems.

- > By mid 2010, develop regulations and conflict resolution mechanisms for resource use among competing industries such as fishing and tourism to ensure balance between resource protection and resource usage.
- > By 2010 develop standards and guidelines for high impact coastal development activities, especially land reclamation and island access infrastructure development.

Objective 10.3: Enable the enforcement of existing coral reef management regulations.

Targets:

- > By mid 2010, inform and educate public infrastructure contracting agencies and contractors on coral reef protection regulations relating to design and construction of coastal developments.
- > By 2010, launch the mechanisms for public consultation and inquiry in the EIA process.
- > By mid 2010, conduct capacity building programme covering all island and atoll offices to enforce regulations including training on coral reef management and designation of staff responsible for enforcement and monitoring.
- > By mid 2010, conduct an information dissemination campaign to inform public on all regulations related to coral reef management.

Objective 10.4: Reduce human induced and natural stress on reef environment.

Targets:

- > By 2010, commence environmental impact assessment for all licensed export of reef fisheries
- > By mid 2010, publicize an ecological performance assessment of all export reef fisheries
- > By mid 2010, develop guidelines on different reef resource uses.
- > By mid 2010, develop monitoring plans for reef fishery stock.
- > By 2011, develop and establish best practice guidelines on snorkelling, diving and water sports activities.

Objective 10.5: Develop the capacity of national organizations to manage coral reef environment.

Targets:

- > By 2010, develop the terms of reference, organisational structure and staffing needs for a National Coral Reef Management Authority (NCRMA) with nodal agencies in the atolls.
- > By 2010, complete a training needs assessment to determine the training requirements for the NCRMA and nodal agencies and a strategy for human resource development.
- > By mid 2010, develop a comprehensive training package on coral reef science and management to be integrated into the existing Coastal Zone Management Training Course (CZMTC).

Goal 11: Protect and restore vegetation, terrestrial ecosystems and islands

Objective 11.1: Reverse the decline in natural vegetation, ecological communities and the ecosystem services they provide

Targets:

- > By 2010, mechanisms are put in place, including land use planning regulations that prevent decline in the natural vegetation and communities as a result of land clearance
- > By mid 2010, all islands have programs in place to protect the areas of high quality natural vegetation in their island

- > By 2010, regulations are in place that control the clearing and removal of mature trees
- > By 2011, all atolls have in place vegetation restoration programmes for ecological communities and trees that are nationally listed as critically endangered
- > By 2010, all atolls have in place continuing tree planting campaigns

Objective 11.2: Protect a representative sample of the islands of the Maldives and their terrestrial ecosystems

Targets:

- > By mid 2010, all atolls identify islands and terrestrial ecosystems within their jurisdiction that would be protected as atoll reserves
- > By 2011, 20 representative islands will be designated under Article 4 of the National Environment Protection and Preservation Act as protected areas.
- > By 2011, management plans are developed and implemented for: national protected areas, atoll protected areas and private land covered by formal conservation agreements

Objective 11.3: Protect threatened species and ecological communities

Targets:

- > By mid 2010, all atolls have identified threatened species and ecological communities
- > By 2011, recovery plans are in place for all nationally listed critically endangered species and ecological communities
- > By mid 2010, all atolls have incorporated the recovery of threatened species and ecological communities into their atoll development plans and land-use plans.

Goal 12: Protect and restore wetlands and mangrove ecosystems

Objective 12.1: Manage threats, prevent degradation and maintain the ecological character of the nationally significant wetland dependent, water dependent and mangrove ecosystems

- > Targets:
- > By mid 2010, identify wetlands of atoll significance in all the atolls and determine wetlands of national significance
- > By 2011, prepare management plans for 75 percent of nationally significant wetlands
- > By mid 2011, introduce effective regulations and land use planning guidelines to protect wetlands of national significance

Objective 12.2: Protect significant habitats for migratory water-birds

Targets:

- > By 2011, identify important areas of habitat for migratory waterbirds in all province/atolls
- > By 2013, have programs in place to protect nationally significant habitats for migratory waterbirds

Goal 13: Control invasive species

Objective 13.1: Prevent or control the introduction and spread of invasive species

Targets:

- > By mid 2010, develop a risk assessment process for the import of all new live organisms that identifies the conditions necessary to minimise threats to the environment
- > By 2010, ensure no new non-native terrestrial species are deliberately introduced into Maldives unless assessed as being of low risk to the environment
- > By 2011, put in place programs to manage invasive species that are major threats to biological diversity
- > By mid 2010, approve and publicize quarantine laws and guidelines on import control of alien species, pests and diseases

RESULT 3: HEALTHY COMMUNITIES

Goal 14: Solid waste management

Objective 14.1: Provide locally appropriate solid waste management facilities that covers all islands and island uses

Targets:

- > By 2012, establish and operate five regional level solid waste management facilities
- > By 2012, establish island waste management centres in 75 percent of inhabited islands
- > By 2011, initiate regional waste collection and transfer services to remove hazardous, residual and recyclable wastes from inhabited islands for safe disposal, storage or processing.

Objective 14.2: Create the enabling environment for regional level sustainable waste management

Targets:

- > By 2010, develop a national waste management policy that clearly defines roles and responsibilities of island offices, atoll offices, province offices, tourist resorts, industrial islands and Ministries
- > By mid 2010, prepare 05 regional waste management plans that includes waste collection, transfer, processing and disposal.
- > By 2010, develop the organizational and management framework for regional level waste management in the five regions
- > By mid 2010, develop criteria, standards and guidelines for operation of the RWMFs and transfer system.
- > By mid 2010, develop the regulations necessary to introduce levying of fees for waste management services and to enable private sector participation in waste management services.
- > By 2011, establish an environmental awareness program delivered at national, community and household level that focuses on waste generation rate reduction (reduce, reuse, recycle), sustainability issues for the management of island wastes, and community responsibility for good environmental and waste management practice.

Goal 15: Hazardous waste management

Objective 15.1: Develop the mechanisms for the appropriate management of hazardous wastes including chemicals, healthcare waste and waste oil.

Targets:

- > By end of 2009, establish hazardous waste storage facilities at Thilafushi
- > By mid 2010, develop and begin implementation of an Action Plan for Health Care Waste Management that addresses basic segregation of hazardous and non-hazardous waste within healthcare facilities, standardized sharps management, final treatment and disposal of HCW, capacity building for HCWM and elimination of specific risks of mercury thermometers
- > By mid 2010, initiate a Hazardous Waste Communication (notification and movement) system to meet international standards

Goal 16: Safe use and disposal of chemicals

Objective 16.1: Reduce health risks from chemicals and pesticides

Targets:

- > By 2011, establish a National Chemicals Information System that is accessible online
- > By 2011, develop regulations and guidelines for safe use, handling and disposal of all types of chemicals.

Objective 16.2: Implement obligations under the Vienna Convention and Montreal Protocol

Target:

- > Phase out Ozone Depleting Substances according to schedule stipulated under Montreal Protocol

Goal 17: Clean air

Objective 17.1: Undertake monitoring for ambient air quality and acid rain

Targets:

- > By mid 2010, establish fully equipped Ambient Air Quality Monitoring Stations in North region, South Region and in Male'
- > By 2011, commence Wet Monitoring Programme in the Climate Observatories of the 3 regions; North, Male' and South

Objective 17.2: Undertake monitoring of emissions from point and mobile sources, and establish standards for such sources of pollution

- > Targets:
- > By mid 2010, establish and publicize Emission Standards, and engine specification standards
- > By mid 2010, initiate emissions monitoring programme from mobile sources and enforce penalties for polluting road vehicles

Objective 17.3: undertake air pollution damage assessments to raise awareness among the public and decision-makers

Targets:

- > By 2011, produce Damage Assessment Report on the impacts on human health and ecological systems from air pollution, based on the air pollution and acid rain monitoring programme, and emissions monitoring programme of point and mobile sources.
- > By 2012, produce a cost benefit analysis of air pollution prevention/abatement options for the Maldives

RESULT 4: SAFE WATER

Goal 18: Provide safe drinking water

Objective 18.1: Enable household and community level rainwater harvesting to prevent potable water shortages.

Targets:

- > By 2010, complete an assessment of the rainwater storage capacity in the islands and rainwater harvesting capacity needs.
- > By 2011, provide rainwater tanks free of charge to needy households and assist in roof retrofitting where necessary.
- > By 2011, disseminate guidelines and standards for rainwater collection and storage to every household.
- > By 2010, make it mandatory to harvest rainwater from all public buildings.
- > By 2011 develop policy on community rainwater management and develop protocols for use and management of community rainwater tanks.

Objective 18.2: Improve methods and practices used in rainwater harvesting and storage to ensure the rainwater is safe and of high quality.

Targets:

- > By mid 2010, complete audits of the quality of rainwater harvested in the islands and publicize the quality issues and causes of water contamination
- > By mid 2010, provide water quality testing kits to all islands
- > By 2011, develop and publicize protocols and procedures for regular water testing and quality assurance.

Goal 19: Protect groundwater

Objective 19.1: Strengthen the policy and regulatory framework for groundwater protection and preservation to build adaptive capacity of aquifers.

Targets:

- > By mid 2010, review existing regulations on water resources management and landuse planning to incorporate climate change-related risk management.
- > By mid 2010, develop policies, standards and guidelines for management of groundwater aquifers and water catchments areas in inhabited islands.

Objective 19.2: Acquire and demonstrate sound water technologies suitable to small coral island environment.

Targets:

- > By 2012, demonstrate infiltration gallery technology in Gan International Airport and Kadhdhoo airport.
- > By 2011, complete an in-depth assessment of solar desalination technology and pilot test the technology in a selected location.
- > By 2012, demonstrate aquifer recharging technologies in selected resilient islands.
- > By 2012, report on appropriate technologies to prevent groundwater salinisation in the Maldives.
- > By 2012, document the lessons from demonstration sites and develop replicable Aquifer System Management Guidelines.

Goal 20: Operationalize wastewater treatment to maintain resilience of water resources and coral reef biodiversity in the face of climate hazards.

Objective 20.1: Strengthen institutional arrangements for effective intersectoral coordination and management of wastewater pollution prevention.

Targets:

- > By 2011, develop manuals and guidelines for best practice on wastewater management
- > By mid 2010, develop a Wastewater Policy and Wastewater Treatment Implementation Strategy.
- > By mid 2010 , assess the specific country training needs and undertake initial training for wastewater treatment and management.
- > By mid 2010, establish an interagency committee on Wastewater Policy and Wastewater Treatment Implementation Strategy.

Objective 20.2: Identify and demonstrate on the ground innovative, appropriate and cost-effective wastewater treatment technologies.

Targets:

- > By mid 2010, complete sewage and wastewater treatment technology assessments focusing on coral island needs and priorities including a diagnostic analysis of areas of critical concerns related to climate change adaptation.
- > By mid 2010, complete a study on removal of barriers to implementation of sewage treatment strategies.
- > By mid 2010, develop criteria for sewage and wastewater demonstration projects and select five islands for demonstration projects.
- > By mid 2011, launch five sewage and wastewater demonstration projects.
- > By mid 2011, develop standard indicators and data collection and reporting formats to review performance of demonstration projects.
- > By 2012, review and assess regularly demonstration projects to capture lessons and best practices
- > By 2012, disseminate final results from demonstration projects for assessment and replication.

Objective 20.3: Ensure the financial viability for sustainable wastewater treatment

Targets:

- > By 2012, produce public awareness raising materials to create a better recognition of the value of wastewater treatment.
- > By 2011, complete a review of the legislative reforms required to introduce fees and charges
- > By 2012, develop and test strategies for recovering the costs and empowering private sector and communities to effect their own management strategies for water and wastewater.

Goal 21: Protect the seas

Objective 21.1: Develop the regulatory framework to protect the seas

Targets:

- > By mid 2010, develop and implement regulations and codes of practice for handling, transportation and storage of petroleum products
- > By mid 2010, develop and implement a national oil spill contingency plan
- > By 2011, develop and implement regulations and codes of practice for handling, and transportation of hazardous goods by sea.

RESULT 5: ENVIRONMENTAL STEWARDSHIP

Goal 22: Efficient Environmental Administration - Build, strengthen and coordinate cooperation among all partners and improve performance of organizations

Objective 22.1: Strengthen multi-stakeholder engagement

Targets:

- > By 2010, review the Terms of Reference of the National Commission for Protection of Environment and restructure the Commission to make it effective and accountable to the citizens
- > By 2010, develop the terms of reference for five inter-agency multi-stakeholder co-ordination committees to achieve the five results of NEAP3
- > By mid 2010, establish five technical committees to provide technical guidance to the Ministry of Environment, Energy and Water and co-ordinate the implementation of the NEAP3 activities.
- > By 2010, establish a National Council for Sustainable Development to advise the Minister of Environment on national sustainable development policies and strategies
- > By mid 2010, create post of Province/Atoll Environment Officers for province/atoll level environmental administration and recruit 7 Province and 20 Atoll Environment Officers.
- > By mid 2010, establish a network of province state ministers, atoll chiefs and island chiefs and mailing lists on environmental affairs

Objective 22.2: Harmonize institutional mandates

Targets:

- > By 2010, restructure the organization of the Ministry of Environment, Energy and Water to enable the co-ordinated and effective implementation of NEAP3.
- > By 2010, review the Strategic Plan of the Ministry of Environment, Energy and Water and prioritize the activities in NEAP3.
- > By 2010, compile the mandates and strategic plans of Ministries and Province/Atoll Offices
- > By mid 2010, complete a comprehensive review of mandates to determine overlaps, conflicts and gaps and propose recommendations to the President's Office to improve the institutional mandates and responsibilities

Objective 22.3: Strengthen and promote high performance of organizations

Targets:

- > By mid 2010 conduct training courses on office management skills
- > By mid 2010 conduct training courses on strategic planning
- > By 2010, hire international expertise to develop a performance monitoring and evaluation system
- > By 2011 provide training and support to Province/Atoll Office staff on environmental decision making
- > By mid 2010, provide laptops and high speed broadband internet access to all province/atoll level environment officers
- > By mid 2010, conduct a comprehensive assessment of pay scales and benefits given to professionals in the private sector and international organizations.

Objective 22.4: Increase access to financial resources and financial management accountability

Targets:

- > By 2011, establish an inter-agency finance committee on international convention obligations and environmental management
- > By end 2009, allocate funds through annual government budget to province/atoll offices to implement convention obligations

Goal 23: Environmental legislation - support the development of effective policies and systems and ensure comprehensive enforcement

Objective 23.1: Harmonize existing policies and legislation

Targets:

- > By mid 2010, complete a review of existing policies and legislation relevant to environmental management
- > By 2010, propose recommendations to Attorney General to synchronize existing legislation, regulations and policies

Objective 23.2: Enhance the capacity to develop effective new policies

Targets:

- > By 2011, develop a protocol for public participation and engagement in policy and regulation development
- > By 2011, develop codes of conduct for public information dissemination and awareness raising on new policies and regulations
- > By 2011 conduct training programmes on methods of public policy development with special attention to cost benefit analysis and social impact assessment.

Objective 23.3: Ensure effective preparation for international conventions

Targets:

- > By 2010 conduct training courses on negotiation skills
- > By 2010 conduct workshops and seminars on outcomes of major international conferences and major international convention decisions

Goal 24: Strengthen Environmental Impact Assessment to ensure that all significant impacts associated with new developments is understood and accounted for.

Objective 24.1: Strengthen quality of EIA, decision-making and monitoring

Targets:

- > By 2010, establish a fully staffed EIA unit
- > By 2010, publicize EIA guidelines and regulations
- > By 2010, introduce public participation in EIA evaluation and review
- > By 2011, develop environmental guidelines for selection of islands for industrial use, resort development, agriculture and fisheries

- > By mid 2010, develop guidelines for site selection of island, atoll and provincial level waste management centres
- > By 2011, publicize reports on the level of implementation for all approved EIAs and continue to publish annual reports
- > By mid 2010, establish an environmental information database to track reporting and other performance benchmarks.
- > By 2010, undertake a resources assessment to determine the level of staffing, training and other support required to implement an efficient and effective EIA monitoring and surveillance program.

Goal 25: Strengthen the capacity to plan and manage environmental education and public awareness programmes

Objective 25.1: Enhance quality of education and awareness programmes

Targets:

- > By 2010, develop an environmental communication strategy
- > By 2010, develop a national environmental education strategy
- > By mid 2010, develop a Code of Conduct for public awareness raising
- > By 2011, develop environmental education resource materials for schools
- > By 2011, develop awareness building materials

Objective 25.2: Improve the outreach of awareness programmes

Targets:

- > By mid 2010, identify existing channels and sources of awareness raising
- > By 2010, develop criteria for selection of stakeholders and procedures for inviting stakeholders

Goal 26: Environmental research

Objective 26.1: Support the development of a culture of information based decision making

Targets:

- > By 2011, develop the research agenda and detailed research proposals for the Environment Research Centre and the Marine Research Centre
- > By 2011, develop proposals for the creation of independent science research centres in the Maldives
- > By mid 2010 conduct training in economics for environmental decision making and social impact assessment
- > By 2011 conduct training on state of the environment reporting
- > By 2012 conduct training programmes on taxonomy and ecology
- > By 2011 conduct training programmes on climatology and adaptation to climate change
- > By 2012 conduct training programmes on environmental and analytical chemistry
- > By 2012 conduct training programmes on Geographic Information Systems and satellite technologies
- > By 2011 conduct training programmes on basic computing and statistics

Goal 27: Environmental information

Objective 27.1: Strengthen knowledge services to improve organizational performance

Targets:

- > By mid 2010, develop standards and procedures for environmental data collection and environmental reporting
- > By 2011, develop a Maldives general environment website and specific websites on biodiversity, climate and land
- > By 2012, make available online access to all local environmental reports and publications
- > By 2011, develop methodology for monitoring, observation and reporting to international environmental convention secretariats

RESULT 6: CARBON NEUTRAL NATION

Goal 28: All Maldivians know what carbon neutral is and the importance and advantages of becoming carbon neutral

Objective 28.1: Raise Awareness about the impacts of global warming, climate change and the importance and advantages of becoming carbon neutral

Targets:

- > By mid 2010, produce multi-media awareness and education material on impacts of global warming and climate change and the importance and advantages of becoming carbon neutral
- > By 2011, provide funding and incentives for NGOs, schools, community based organisations and youth groups for carbon neutral advocacy

Objective 28.1: Establish the Policy and Legal Framework to become Carbon Neutral

Targets:

- > By 2010, submit to parliament a bill on reaching carbon neutral by 2020.
- > By 2010, provide incentives for individuals and businesses that want to establish renewable sources of energy or take other steps to become carbon neutral.
- > By mid 2010, establish a policy to provide incentives for businesses involved in providing renewable sources of energy
- > By 2011, develop guidelines about the steps to take to become carbon neutral for tourist resorts, fishermen, agricultural islands, businessmen and all other major development projects
- > By 2011, develop and implement policies, regulations and standards to become carbon neutral for all developments requiring an EIA
- > By mid 2011, ensure that all atolls and sectors have developed an action plan to become carbon neutral

Goal 29: Advance Energy Security

Objective 29.1: Reverse the increasing dependency on diesel powered electricity generation in the Maldives

Targets:

- > By 2012, establish capacity to harness renewable energy in seven the provinces
- > By mid 2012, invest in advanced technologies that make a fundamental improvement in the mix of energy options and improve energy efficiency
- > By 2013, acquire and demonstrate sound water technologies suitable to small coral island environment
- > By 2015, ensure 50% of the electricity is from renewable sources
- > By 2015, provide for reliable delivery of renewable energy and guard against energy emergencies

Goal 30: Establish an Efficient Transport Network

Objective 30.1: Achieve a balanced shift towards environment friendly transport modes to bring about a sustainable transport and mobility system

Targets:

- > By 2011, establish an integrated, energy efficient public passenger transport service.
- > By 2011, establish bicycle lanes on all developed roads and advocate cycling
- > By 2015, reduce the transport sector greenhouse gas emissions by 25%
- > Goal 31: Informed decision making on becoming carbon neutral

Objective 31.1: Information dissemination about latest technologies and options to become carbon neutral

Targets:

- > Ongoing research and information delivery through multi-media
- > Annual reporting on actions taken, progress and lessons learnt.