

PROJECT PROFILES

National Adaptation to Climatic Change

Maldives Partnership Forum III
23-24 March 2009

PROJECT SUMMARY

Project Title: Integration of Future Climate Change Scenarios in the Development of Selected Population Centres or Islands to Adapt Sea Level Rise and Extreme Weather Risks Associated with Climate Change		
Executing Agency: Ministry of Housing, Transport and Environment		
Geographic Coverage: National	Start Date: Immediate	Target Groups: National
Goal: Ensure climate change concerns are addressed in the Development of Selected Population Centres or Islands in the Maldives		
Objectives <ol style="list-style-type: none"> 1. <i>Undertake detailed hazard and vulnerability assessment for 7 Selected Population Centres or Islands.</i> 2. <i>Develop a hazard mitigation and vulnerability reduction action plan</i> 3. <i>Develop the human resource and institutional capacity at atoll and island levels to manage coastal zones and Enhance the technical capacity to design coastal modifications suitable for small coral islands</i> 	Activities <ol style="list-style-type: none"> 1. Undertake a hazard and vulnerability assessment which includes risks from climate change 2. Undertake a composite risk assessment and action plan for hazard mitigation and vulnerability reduction 1. Develop a coastal zone management training kit specifically on the environmental conditions of Maldives 2. Review existing practices in land reclamation and conduct detailed studies on how they increase the vulnerability of islands to short term severe weather events and climate change 1. Establish environmental surveying units and develop basic coastal surveying capacity at Atoll or Regional level 2. Train coastal engineers or Environmental Officers to be based in seven Regional Offices 3. Develop environmental guidelines for land use planning at island level to address future climate change scenarios 	
Financial Resources: <i>US\$3.7 million</i>		

PROJECT SUMMARY

Project Title: Improve and Promote Eco-friendly Sustainable Housing Technology	
Executing Agency: Ministry of Housing, Transport and Environment	
Geographic Coverage: National	Start Date: Immediate
Goal: Promote Energy Conservation and introduce new and affordable housing technology with Climate Change variability	
<p>Objectives</p> <p>1. <i>Promote resource conservation, including energy efficiency, renewable energy, and water conservation features including environmental Impacts; create a healthy and comfortable environment</i></p> <p>2. <i>Develop and demonstrate Eco-friendly building methodology that would demonstrate model housing to be replicated in island communities</i></p>	<p>Activities</p> <p>1 Review existing designs and methods used for building designs and compile methodology and guidelines for resource conservation including energy efficiency, renewable energy, water conservation and waste minimization.</p> <p>2 Develop a comprehensive plan for model eco-island including all features of eco-friendly technology in small islands</p> <p>3 Develop plans for different model houses with four categories of designs that could be replicated in small island communities</p> <p>4 Translate and publish the building methodology and guidelines for replication purposes</p> <p>1. Develop costs and benefits of traditional building methodology with new eco-friendly technology</p> <p>2. Construct and demonstrate four types model houses in a selected island.</p> <p>3. Develop and disseminate public awareness materials on development of eco-friendly housing</p>
Financial Resources: <i>US\$ 3.95 million</i>	

PROJECT SUMMARY

Project Title: Build Resilience of Fisheries		
Executing Agency: Ministry of Fisheries and Agriculture		
Geographic Coverage: National	Start Date: Immediate	Target Groups: Fishermen
Goal: Better bait fishery management and exploration of alternative techniques of live bait catching, culture and storage.		
Objectives <i>1: Enhance the knowledge on bait use and utilization, alternative live bait, catching methods and improved holding techniques.</i> <i>2: Strengthen the policy, regulatory and institutional framework for bait fishery management</i>	Activities 1. Undertake a comprehensive review of bait biology, bait use and bait utilization in the Maldives. 2. Identify, catalogue and map popular bait fishing grounds in each atoll 3. Undertake scientific and technical evaluations for alternatives to bait and alternative species 4. Study and evaluate the potential for mariculture of alternative species of bait. 5. Conduct bait fishing trails in various regions of the Maldives in different periods to investigate efficacy of attracting live bait using different methods 6. Conduct bait fishing trails using submersible lights in the open ocean to investigate the potential for use of mycophids as live bait 7. Evaluate the cost effectiveness of alternatives to bait and alternative methods of bait catching 8. Identify and rank the practical solutions to bait fishery in the Maldives 1. Develop manuals and guidelines for best practice on bait fishery 2. Develop the policies, rules and standards to regulate bait fishery in the Maldives 3. Prepare a stakeholder and public participation plan for bait fishery management 4. Conduct education and outreach programmes for fishermen on rational utilization of live bait 5. Develop a bait fishery research implementation strategy 6. Undertake training on research methods to investigate bait catching options	

<p><i>3. Demonstrate innovative, appropriate and cost-effective mariculture for breeding alternative live bait species</i></p>	<ol style="list-style-type: none"> 7. Training on mariculture for the existing research staff; establish collaborative research programme with appropriate overseas institutions 8. Identify methods/techniques for measuring bait catch and utilization <ol style="list-style-type: none"> 1. Undertake in-depth assessment of mariculture technology focusing on the specific needs of the fishermen and the future vulnerabilities of coral reef ecosystems to climate change and human induced stresses. 2. Develop criteria for the selection of mariculture demonstration species and sites 3. Select species and sites for mariculture demonstration based on selection criteria, and national priorities. 4. Implement mariculture demonstration projects in the existing fisheries extension service centres
<p>Financial Resources: US\$ 2.92 million</p>	

PROJECT SUMMARY

Project Title: Protect Human Settlements: Innovative Coastal Protection for Development of Selected Population Centres or Islands		
Executing Agency: Ministry of Housing, Transport and Environment		
Geographic Coverage: National	Start Date: Immediate	Target Groups: National
Goal: 1. Provide innovative coastal protection for development of selected Population Centres or islands		
Objectives <i>1. Demonstrate on-the-ground the practicality of shore protection measures on selected 7 islands as adaptation to climate change.</i>	Activities 1 Using the selection criteria, select islands to be developed as population centres 2 Evaluate existing and new coastal protection options suitable for small islands 3 Develop the land use plans for the selected islands in-cooperating future climate hazards 4 Conduct an environmental impact assessment for the proposed safer island development 5 Undertake shore protection works in severely affected selected islands by climate change and sea level rise 6 Implement the selected adaptation measures for the island 7 Review and report on the successes and lessons learnt	
Financial Resources: <i>US\$ 14.5 million</i>		

PROJECT SUMMARY

Project Title: Strengthen Agricultural Production and Increase Food Security	
Executing Agency: Ministry of Fisheries and Agriculture	
Geographic Coverage: National	Start Date: Immediate
Goal: Improve local food production for food security	
Objectives <i>1: Assess community knowledge and practices on local plant species used for food production.</i> <i>2: Identification and testing of appropriate technologies and good practices to increase adaptive capacity of local plants.</i> <i>3: Develop the policy, institutional and regulatory framework to ensure food security</i>	Activities <ol style="list-style-type: none"> 1. Develop a framework of analysis to assess different types and scales of local food production and gather data about different species cultivated in different scales. 2. Identification of traditional food varieties and their management. 3. Assess how the predicted climate change hazards will impact the local plant species used for food production. 4. Examine how food crops are conserved traditionally and identify current farming practices applicable to adaptation. <ol style="list-style-type: none"> 1. Develop mechanisms to manage local plants genetic diversity. 2. Establish a seed and planting materials network to support informal exchange of seedlings and rootstocks. 3. Demonstrate appropriate irrigation technologies suitable for different local crop species. 4. Explore technologies applicable to agriculture in small tropical islands. 5. Communications and capacity-building to disseminate and integrate proven methodologies into relevant farming communities. <ol style="list-style-type: none"> 1. Provide technical assistance for the formulation of National Food Security Strategy that includes review of existing mandates, designating a national focal agency, defining roles and responsibilities and, strengthening food storage and distribution. 2. Review the existing laws on land, uninhabited islands and land use planning and recommend improved land allocation measures for food production.

<p><i>4: Strengthen the links between farmers and markets to ensure sustainable local food production.</i></p> <p><i>5: Enhance agricultural production through enabling integrated pest control and better quarantine of imports.</i></p>	<ol style="list-style-type: none"> 3. Secure preferential trade agreements with major bilateral, regional and international trade partners to ensure food security for essential food items. 1. Provide technical assistance for the formulation of National Food Security Strategy that includes review of existing mandates, designating a national focal agency, defining roles and responsibilities and, strengthening food storage and distribution. 2. Review the existing laws on land, uninhabited islands and land use planning and recommend improved land allocation measures for food production. 3. Secure preferential trade agreements with major bilateral, regional and international trade partners to ensure food security for essential food items. 1. Develop guidebooks and manuals on pest and disease identification for farmers 2. Demonstrate appropriate integrated pest and disease control measures in agricultural service centres 3. Undertake technical studies for development of a pest and disease laboratory at Male' International Airport. 4. Draft regulations to protect the farmers, natural resource base, and biological diversity from pesticide imports and use. 5. Develop the policies, regulatory framework and plans necessary to establish plant and animal quarantine system.
<p>Financial Resources: US\$ 925,000</p>	

PROJECT SUMMARY

Project Title: Acquire Technologies and Appropriate Tools to Manage Water Resources	
Executing Agency: Ministry of Housing, Transport and Environment	
Geographic Coverage: National	Start Date: Immediate
Goal: 1. Operationalize wastewater treatment to maintain resilience of water resources and coral reef biodiversity in the face of climate hazards.	
Objectives 1: <i>Strengthen institutional arrangements for effective intersectoral coordination and management of wastewater pollution prevention.</i> 2: <i>Identify and demonstrate on the ground innovative, appropriate and cost-effective wastewater treatment technologies.</i> 3: <i>Develop mechanisms to learn the lessons and best practices from the project and share the knowledge gained</i>	Activities 1. Develop manuals and guidelines for best practice on wastewater management 2. Develop a Wastewater Policy and Wastewater Treatment Implementation Strategy. 3. Assess the specific country training needs and undertake initial training for wastewater treatment and management. 4. Establish an interagency committee to regularly review implementation of Wastewater Policy and Wastewater Treatment Implementation Strategy. 1. Undertake 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. 2. Undertake a study on removal of barriers to implementation of sewage treatment strategies. 3. Develop criteria for demonstration projects and select islands for demonstration based on criteria. 4. Implement the demonstration projects. 1. Develop standard indicators and data collection and reporting formats to review performance of demonstration projects. 2. Review and assess regularly demonstration projects to capture lessons and best practices 3. Disseminate final results from demonstration projects for assessment and replication. 4. Implement information sharing with other Small Island Developing States

<p><i>4. Ensure the financial viability for sustainable wastewater treatment</i></p>	<ol style="list-style-type: none">1. Raise public awareness to create a better recognition of the value of wastewater treatment.2. Review the legislative reforms required to introduce fees and charges3. Develop and test strategies for recovering the costs.4. Position and empower private sector and communities to effect their own management strategies for water and wastewater.
<p>Financial Resources: US\$ 2.56 million</p>	