**Mid-Term Evaluation of Strategic Action Plan (2009 – 2013) of the Government of Maldives**

**Water and Sewerage**

1. **Sector Overall Progress (500 words)**

***{A description of the extent to which the Sector Outcomes as specified in the policy goals were realized in the period under review}***

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| In Maldives people have access to drinking water primarily from rainwater harvested and in some cases desalinated water and groundwater abstracted from shallow dug wells.  Desalinated water supply is used primarily in the capital, Male’, (including Villingili and Hulhumale) where the whole population has access through a piped distribution system. In the Capital both drinking water and sewerage services are provided by Male’ Water and Sewerage Company functioning on a cost recovery basis. Demand for desalinated water supply in Male’ has increased tremendously and at present more than 10,000m3 per day is produced for distribution. A total of 35 % of the Maldivian population has access to desalinated water (Census 2006). Before this period other than the capital only Sh. Komandoo has a desalinated water supply network installed and operational with household connections  Desalinated water supply network has been completed in 3 other islands, namely K. Maafushi, Hdh.Kuludhufushi and Gdh.Thinadhoo between 2009 and 2011.  A programme for provision of 2500 litres water tanks to each household in the atolls started in 2005. A total of 40,532 water tanks have been distributed by 2010 to each household in the atolls.  The prevailing systems of sewerage disposal in most islands are onsite sanitation systems using septic tanks and soak-pits. These systems are causing various environmental health problems and contamination of groundwater due to unsafe disposal of sewage and waste water. Government of Maldives with assistance from external agencies and the private sector is working to improve the sanitation facilities in the islands. Installation of new sewerage systems across the country is under way. Sewerage systems have been installed in 27 islands from 2005 -2011 (May 2011). During the period, 2009 – 2011 (May 2011) 13 sewerage systems have been completed in different islands. The new systems consist of sewerage network for the whole island, with pump stations, sewage treatment facilities and sea outfalls.  The Ministry is encouraging private sector to participate and invest in the provision of water supply and sanitation services. As such the Ministry has prepared tender documents to build water supply and sewerage systems under contractor finance. 11 water supply projects and 38 sewerage projects have been tendered through Ministry of Finance under contractor finance scheme. These projects are yet to be implemented. A water purchase agreement has been signed between Southern Utilities Limited with Biwater International limited from UK. Installation of desalination plants with water supply network and sewerage system will be provided to Addu City and Fuahmulah under this agreement.  The completed water supply systems and sewerage systems have been handed over to the 6 utility companies for operation, maintenance and management. Before the utility companies were formed the systems were managed by island offices.  Regional development project phase 2 is underway. Work is ongoing to install sewerage systems in Adh. Mahibadhoo and L. Fonadhoo. Solid waste disposal equipments will be provided to the islands in the region and equipments such as trucks and shredders have been procured and ready to be dispatched. Overseas training in the field of surveying (10 people) and land use management (2 people) is ongoing and will be complete by June 2011. |

* 1. **Progress on Key Sector Outcomes**

***{For each sector outcome briefly describe the achievement made and the extent to which implementation was carried out as envisaged by the Strategies / Intervention List of the SAP. If there were any deviations what were they and the causes}***

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| Outcome | | Progress | Issues |
| 1. | Access to safe drinking water improved, including vulnerable groups | * 4 islands provided with water network * 100% of islands provided with rainwater storage tank * 85% of islands with emergency desalination plants installed are functioning. | * Limited funding * Limited technical capacity |
| 2. | Drinking water safety measures improved | * Water safety plan proposal submitted to WHO | * Funds not available * Technical support limited |
| 3. | Emergency water supply response improved | * Desalination plants are installed in 25% islands * Community water tanks are also installed | * Funds not available to provide facilities for all islands and for maintenance |
| 4. | Access to sanitation facilities improved | * 13 islands with improved sewerage systems | * Funds not available to improve facilities |
| 5. | Effective operation and maintenance procedures established for water supply and sanitation system | * MWSC and 6 provincial utility companies engaged in Operation and maintenance procedures | * Limited technical capacity |
| 6. | Private Sector Investment in the water and sanitation sector increased | * Works Corporation Limited (WCL), 6 provincial utilities, Biwater International Limited(UK) and MWSC involved from the private sector (limited private sector) | * Limited resources and technical support from the private sector |
| 7. | Institutional Capacity covering technical, legal financial and human resource needs strengthened to enhance sector performance | * 7 graduates working in the government in related areas (number increased even though limited) | * Limited Funds * Limited courses available locally |
| 8. | Community and Civil Society participation in the water and sanitation sector enhanced | * Community engagement during project implementation increased | * Awareness programmes limited |
| 9. | Water resource management improved | * One year local course conducted by JBIC to sector staffs | * Limited capacity and limited fund |
| 10. | Enforcement of water and sanitation act of Maldives | * MOU signed for technical assistance for drafting water act and financial support received from UNICEF for water act. * Draft WQ standards available * Draft water tariff system developed | * Limited technical capacity and limited funds |

* 1. **Institutional Achievements in relation to the Sector Outcomes**

**{Briefly d*escribe the role of key institutions in relation to the key sector outcomes and their achievements*}**

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| **Name of Institution(s)** | | **Major Responsibilities towards outcomes** | **Achievement** |
| 1. | Water and Sanitation Department, MHE | Policy and Planning, implementation, coordination, supervision | Improve access to safe drinking water, sanitation and well-being and improve groundwater quality |
| 2. | Water and Sanitation Section, Environment Protection Agency | Development of guidelines, regulations and standards, monitoring groundwater quality, design approval , EIA | Designs checked an approved and EIA statements provided |
| 3. | Ministry of Finance and Treasury | Coordination and execution resource mobilization, and budget, project tendering evaluation | Fund allocation and budgeting achieved |
| 4. | Department of National Planning | Provide statistics, and monitoring of projects, approve projects from NPC | Availability of data, and project approval |

1. **Overall Assessment of Sector Performance related to key aspects**

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| Operational Progress(300 words)  **{*Explain the Extent to which implementation was carried out as envisaged by the Strategies / Intervention List of the SAP. If there were any deviations why was this and what where they.*}** |
| Throughout the country 27 islands have been provided with sewerage facilities and 5 islands have access to desalinated piped water system with household water connections. From the year 2009 – 2011 (May 2011), 13 sewerage systems and 3 water supply projects have been completed.  A programme has been prepared for implementation of water and sewerage projects in different phases through contractor finance. Funding has been allocated for 11 islands from the contractor finance project through Government budget 2011. The payment will be made to the contractor monthly by the government and will be completed within 10 year period from the start of the project.  Under the contractor finance scheme 27 islands have been advertised for tendering of the construction of sewerage facilities in the islands. 10 sewerage projects and 10 water supply projects were advertised under design and build basis. From design and build projects, 8 islands for the provision of water supply facilities and 6 islands for the construction of sewerage systems have been signed with WCL.  Currently the preparation of a draft Water Act is underway with assistance from Attorney General Office. Financial support is provided by UNICEF and UNDP, technical support from Ministry of Water Supply and Drainage of Sri Lanka.  Lack of institutional, technical and financial capacity for establishment, operation and management of water and sanitation services have caused delays in implementation of the projects.  Research work on water and sanitation has not been carried out due to technical and financial constraints. |
| Financial Performance (200 words)  **{*To what extent was the budget allocation utilized and if budgetary shortfalls were encountered what were the likely causes what impact did it have in regard to pursuing the Strategies / Intervention List of the SAP*}** |
| Water and sanitation budget from the Government has been limited. However under the Tsunami assistance through external loans and grants, water supply and sewerage projects have been implemented from 2005 onwards. Civil works for project continued on some islands under this Tsunami assistance program.  Projects implemented during this period (2009-2011)for construction and design of Sewerage projects:   * Construction of Kulhudhufushi: Govt budget * Design Utheemu and Fuahmulah: IDB loan * Design and consruction Sh.Funadhoo, B. Eydhafushi, M. Muli: JBIC Loan * Design of sewerage system 26 islnands : Govt budget * Design and construct Hinnavaru and Thimarafush: Kuwait Fund * Design of sewerage system in Gdh. Thinadhoo, N. Holhudhoo, N. Velidhoo, L. Gan: AFD Loan   Projects implemented during this period (2009-2011)for water projects:   * Water network system Thinadhoo: Govt budget * Water tanks for the islands: Govt budget * Desalination plant installation work for the islands: Govt budget   **There have been major shortfall in the budget and some sewerage projects which have been designed have not been constructed due to funding constraints.**  Desalination plants have been donated by external Agencies for more than 40 islands. Water tanks have been provided for each household with assistance from donors and Government budget. Installation work for desalination plants which has not been completed continued as well as water tank provision and installation of tanks on some islands. |
| Institutional Linkages (100 words)  **{If *any institutional linkages were expected to be developed during the implementation, to what extent were they achieved. If not what were the main causes and what was the affect on the implementation.*}** |
| * **Ministry of Economic Development:** integrating water and sewerage delivery through public private partnership (PPP) scheme has been achieved for sector needs. * **Ministry of Finance and Treasury:** resource mobilization and budgeting has been achieved through project coordination and execution, project tendering, evaluation and selection. * **Department of National Planning/ Statistical Department:** water and sewerage services integrated into national plans and collection of relevant data, and approval of projects from NPC * **Housing/land and planning Department (Ministry of Housing and Environment):** water and sewerage services integrated with new housing development projects. Land allocated for sewerage facilities during land use planning has been achieved with support from Housing/ land management Department. * **Ministry of Agriculture and Fisheries:** ground water resource management; safe disposal of agricultural pesticides and use of fertilizers; promotion of water conservation practices and use of efficient alternative technologies has not been achieved due to insufficient funds and lack of technical support. * **Ministry of Health** * **Centre for Community Health and Disease Control (CCHDC):** water related diseases and infections monitoring has been reported. Monitoring of water quality not achieved due to funding and institutional constraints * **Maldives Food and Drug Authority (MFDA):** quality and safety of imported and locally bottled water and ground water is being monitored * **Ministry of Tourism:** facilitate regulation of water and sanitation services by EPA in the resorts * **National Disaster Management Centre:** provision of water and sanitation services and coordinate with the ministry to ensure water security of islands during emergencies has been carried out through emergency water supply provision during dry season. * **Ministry of Education:** promoting good hygiene practices and ensure provision of safe water and sanitation services to students, will be implemented with the support from UNICEF and WHO. * **Male’ Water and Sewerage Company:** delivery of water and sanitation services in Male’, and other regions is carried. |
| Sustainability (100 words)  **{*To what degree could the operational aspects; including institutional linkages if any can be carried forward and describe any essential criteria required to facilitate this*}** |
| * Utility companies provide services for operation and maintenance of water and sewerage services in the islands. For sustainable O&M of these services the government must develop and finalize a tariff system and EPA can provide their full support in this regard. * Attorney General Office can provide technical assistance in developing the water act. * Local council, secretariat council, utilities and MHE to have clear mandates. * Build technical capacity and strengthen EPA in monitoring and developing guidelines. * Strengthen and develop technical capacity of the utility companies in operation, maintenance and management of water and sewerage systems. * Develop management skills in project management staffs. |

**3.0 Key Issues encountered**

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| *Institutional (200 words)*  ***{Discuss the Strategic position of the Lead Agency and how it affected the Implementation of Strategies/ Operational Performance}****:* |
| Ministry of Housing and Environment is responsible for developing water and sanitation policy of the country, facilitating and cording resource mobilization and utilization.  Projects where funding have been available MHE has completed the projects. However, due to technical and financial constraints provision of these facilities have been difficult. Projects have also been delayed. Project management skills are limited in the sector and water and sanitation Engineers required for designing and supervision is lacking throughout the sector. A local contractor to carry out Civil work in the sector is limited and most of the work is carried by foreigners. Private sector is yet to be developed to work in this sector. Resource mobilization is still required for the sector in terms of loans and grants from international funding Agencies. Government need to allocate more funding to develop the sector in term s of training and implementation  Regulatory Body: Environmental Protection Agency is responsible for setting standards and regulations for water quality in the Maldives, for enforcing the regulations, and for monitoring water quality. |
| *Implementation (200 words)*  **{*Matters relating to implementation finances, human resources, monitoringand oversight*}** |
| Financial constraints: Funding for water supply and sewerage projects is limited . Contractor finance project not yet implemented. Private sector has challenges in obtaining financial resources from financial institutions and organizations  Human resources : Technical capacity in the sector is lacking in areas such as Engineering, project management and procurement, designing and project supervision, legal experts, hydrologists and GIS specialists  Monitoring: (EPA) |
| *Environmental :(100 words)*  **{*Environmental 9including Operational aspects) aspects which were encountered and need to be addressed*}** |
| Environmental aspects encountered during implementation of water and sewerage projects are with regard to dredging and dewatering for pipe laying and pump stations, cutting down trees, reef dredging for sea out fall. **Contaminants and chemicals from disposed treated sewage water may have varying impacts to the marine ecosystem. Prior to implementation of these projects it is mandatory to carry out and EIA and to be approved by EPA.** |
| *Political(100 words)*  **{*Political considerations encountered and to be addressed*}** |
| To Enforce and implement the key standards and regulations guiding in developing water and sanitation projects, an act such as the water law is still at planning stage.  For a sustainable development and operation, maintenance of these projects a clear mandate has to be in place for Utilities, Secretariat Councils and other stakeholders from the Government.  A tariff system has to be in place for a sustainable operation and maintenance of the water and sewerage system implemented in the islands.  Financial and Technical resources required for the implementation of such projects in all the islands need to be considered. |
| *Socio/ Cultural(100 words)*  **{*Socio Cultural considerations encountered in respect of operation and implementation*}** |
| All water and sewerage projects are implemented after community consultations which are highlighted in the EIA report. All the possible options is discussed during the stakeholder meetings and addressed at technical level for the most appropriate system to be implemented. |
| *Gender (100 words)*  **{*Gender related issues encountered during operation and implementation*}** |
| Water supply and sewerage services are considered for the whole community of the island under provision. Such problems have not been encountered during the implementation. |
| Statistical and Data Collection (100 words)  **{*All the data sources used. Other factors which surfaced in the operation and implementation*}** |
| Relevant data in prioritization of the islands for the provision of water and sanitation facilities is found to be limited. The data collection has not been carried regularly and the information available has not been compiled. Hence the required data cannot be used appropriately for planning and designing of projects. The data commonly utilized is mainly from census data published by the DNP. However the data lacks detail information required by the sector.  The GoM is planning to develop a National GIS system of Maldives incorporating the water and sanitation data. External support from UNICEF to develop the water and sanitation data base which would be integrated to the National GIS system. The system would enhance and facilitate in recognizing urgent areas that need provision of water and sanitation facilities through a monitoring mechanism. |

1. **Lessons Learnt (300 words)**

**{Discuss the Lessons Learnt in the process of carrying out interventions relevant to realization of the Sector Outcomes as specified in the SAP. Focus on the involved agencies and other stakeholders (including beneficiaries) and their willingness and capability to continue the interventions. If not what additional measures would need to be taken to strengthen them}**

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| Private sector involvement for the development of the sector has improved. The private/utility companies operating in different provinces can engage with the communities more closely in providing water and sewerage services. The communities will be ensured that the operation and maintenance services will be carried out in a smooth manner.  If the island communities/beneficiaries are more involved during the implementation of the project it would facilitate and speed up the work and complete the work on time. Interruption to the work by the communities have been encountered during some projects, in such cases donor funding may be held or terminated.  Local capacity in the water and sanitation sector for designing and project management is limited therefore dependence on foreign consultants is high. As some consultants have limited experience locally, the project implementation has been delayed.  Lengthy administrative procedures in procurement of funds delay project completion and progress. Lack of coordination between stakeholder agencies cause problems in project implementation. This maybe due to high staff turnover rate at the stakeholder agencies and implementing agencies.  Strategies and polices addressed by the SAP 2009-2013 is found to be resourceful in planning projects/activities, technical and financial support and budgeting. |

1. **Partnerships (200 words)**

**{*Describe any partnerships established with a donor, private sector of civil society organization to achieve an outcome(s)*}**

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| For the development and implementation of the water and sanitation projects, private sector companies such as utility companies, WCL, Biwater International Limited (UK) and MWSC have been engaged for development, implementation, operation and management of water and sewerage. Cooperation Limited is currently undergoing implementation of water and sewerage projects under the contractor finance scheme.  For the drafting the Water Act of Maldives, external funding have been received from UNICEF and UNDP. Currently a MoU have been signed between the GoM and Sri Lankan Government in assisting in drafting the water act via technical means. A water and sanitation data base is planned to be developed under UNICEF assistance, which would be finally integrated into the National GIS system. WHO support will be provided for conducting awareness programs in the atolls. |

1. **Follow-up Actions & Recommendations (400 words)**

**{Recommendations for strengthening, reorienting and/or revising the implementation mechanisms and strengthening the key agencies and other stakeholders for achieving Sector Outcomes in future periods}**

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| **Constraints and emerging issues in the sector**   * Costly to provide, monitor and manage services effectively for all islands due to dispersed population. * Cost-recovery and sustainability of services prove to be challenging – government has to provide subsidies. * Lack of institutional and financial capacity for establishment, operation and management of water and sewerage services. * Inappropriate treatment and disposal of sewage are increasingly contributing to groundwater pollution which arises the immediate need of a WSP plan and a water act/water legislation. * Lack of trained personnel in the sector delays project implementation and hiring an expert is costly (is not a long term solution to improve the sectors technical capacity). * In many islands, extraction of groundwater exceeds the sustainable yield, which is accelerating saline water intrusion into freshwater aquifer, a solution would be to do research regarding groundwater recharging methods and creating awareness among community * Lack of regulatory framework, guidelines and standards are needed for the prevention of waste, undue consumption, misuse, erroneous measurement or contamination of water. * Lack of capacity to respond in an emergency and in mitigating the impacts of climate change (water shortages during dry periods) |

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