



INTERNATIONAL AFRICA WATER CONGRESS AND EXHIBITION



WATER AND SANITATION: PERSPECTIVES AND CHALLENGES

LAKE VICTORIA WATER AND SANITATION (LVWATSAN) INITIATIVES

Speke Resort Munyonyo, Kampala, Uganda
15th – 18th March 2010

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EAC-LVBC





Background



“ Basin Challenges on WATSAN:

- “ Unplanned, spontaneous and unsustainable growth
- “ Run-down and non-existent basic infrastructure and services
- “ Significant negative impacts on environment, and importantly, the fragile ecosystem of the Lake Basin
- “ High Population Growth rate
- “ Lake is major-transboundary resource for EAC countries
- “ There is need for Intervention on WATSAN challenges and Environmental Protection
- “ Infrastructure to meet demands and appr tech





Background (Cont 'd)



- “ **Consultations done with national and local authorities and local stakeholders on needs;**
- “ **Initial assessment undertaken to identify WATSAN investments and related capacity building needs in preselected secondary towns,**
- “ **The assessment concluded that the towns needed urgent strategic environmental mitigation and WATSAN Initiatives**





atives of LVWATSAN



- “ To support secondary urban centres in the Lake Victoria Region to address environmental degradation and enable them to achieve the water and sanitation related MDGs
- “ To contribute to an equitable and sustainable development – economic, social and environmental – for the benefit of the people living in the area and,
- “ To replicate and extend Phase I while mitigating against negative lessons





owns Selected



Phase I:

- a) Kisii, Homa Bay and Bondo (**Kenya**)
- b) Masaka, Kyotera and Bugembe (**Uganda**)
- c) Bukoba, Muleba and Bunda (**Tanzania**)
- d) Mutukula (**Tanzania – Uganda** Border)

Phase II:

- a) Kericho, Keroka and Isebania (**Kenya**)
- b) Mayuge, Kayabwe and Ntungamo (**Uganda**)
- c) Geita, Sengerema and Nansio (**Tanzania**)
- d) Nyagatare, Kayonza and Nyanza (**Rwanda**)
- e) Musinga, Ngozi and Kayanza (**Burundi**)





undi Focal Towns





Kenya Focal Towns







Tanzania Focal Towns







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ject Components



- ” Water Supply
- ” Sanitation
- ” Solid Waste Management
- ” Storm Water Drainage
- ” Capacity Building and Training





Project Management



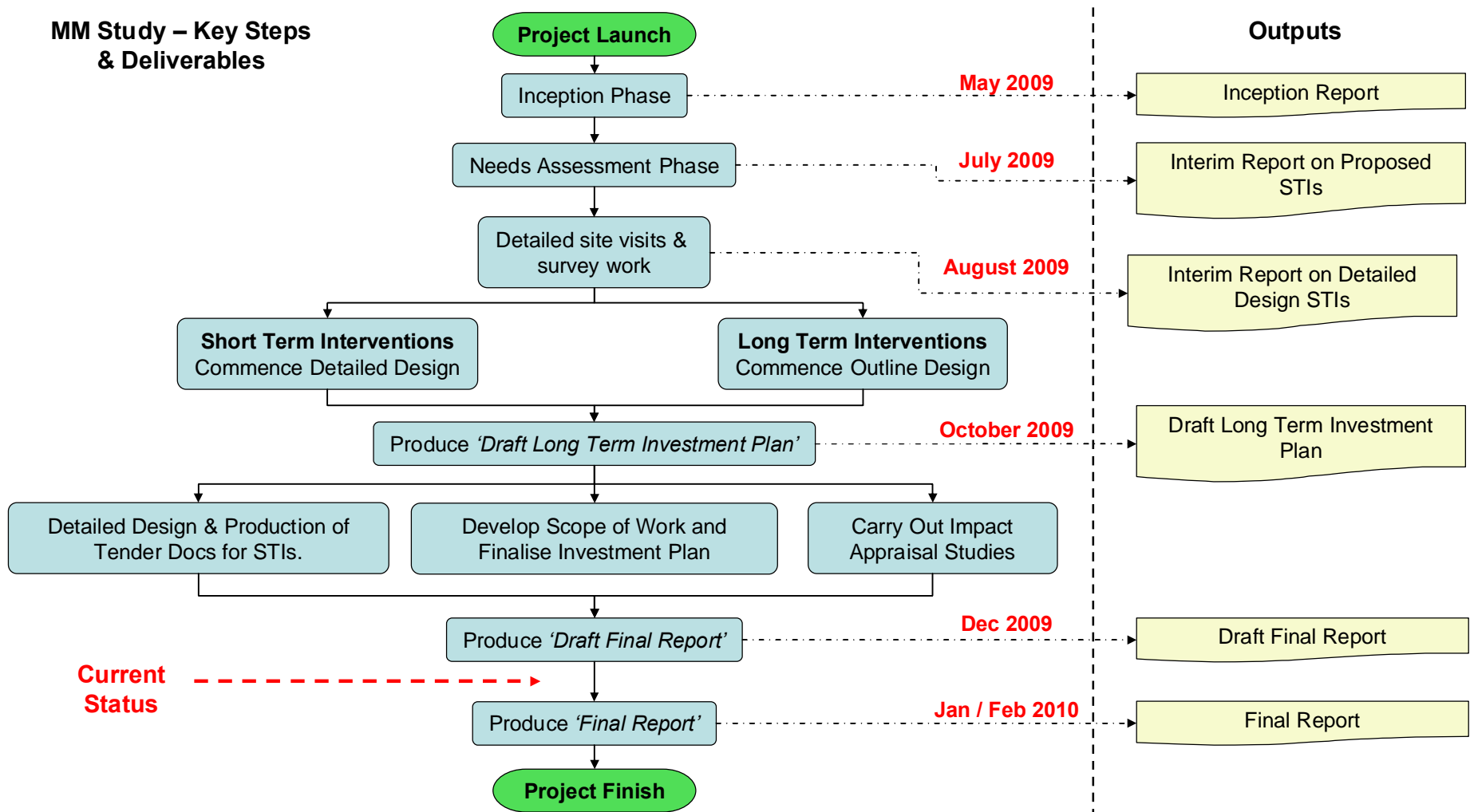
- “ LVBC as the apex institution of EAC responsible for WATSAN projects in LV Basin, is the Executing Agency
- “ A Project Steering Committee has been constituted consisting of:
 - . The Five Partner States of EAC
 - . LVBC
 - . UN-HABITAT
 - . ES of LV Fisheries Organization
 - . ES of East African Development Bank
 - . ES of LVRLAC (LV Regional Local Authority Cooperation)
- “ The respective governments have established the PMUs, PIUs and MSFs for national and focal towns coordination



Project Reporting



MM Study – Key Steps & Deliverables





How we got Here



- **Establishment of Existing Situation and needs**
- **Immediate Requirements and Designs to meet some of those needs**
- **Long Term Needs**
- **Strategy to Meet Future Requirements**
- **Willingness to Pay For Services**
- **Proposed Schemes, Other Actions Required, Costs**
- **Analysis of Impact of Proposed Schemes**
- **Project Implementation**
- **Next steps and bridging to implementation**



Country Proposals





anda Proposals



“ Water:

- “ **MAYUGE:** Option 1: Jinga . Iganga pipeline, tapping off at Musita; or Option 2: Lake Victoria intake at Lwanika.
- “ **KAYABWE & BUWAMA:** Common water system, taking water from Lake Victoria.
- “ **BUKAKATA:** Intake at Lake Victoria, supplied via public standpipes.
- “ **NTUNGAMO:** Motorise existing and new boreholes.

“ Sanitation:

- “ **MAYUGE:** Continue existing on site sanitation; 30ha of waterborne sewerage area.
- “ **KAYABWE & BUWAMA:** On site sanitation (septic tanks, pit latrines) in both towns.
- “ **BUKAKATA:** On site sanitation (septic tanks, pit latrines) only.
- “ **NTUNGAMO:** On site and waterborne sanitation (20ha).





Wanda Proposals



“ Water:

- “ **NYAGATARE:** Water intake from Muvumba, treatment and distribution.
- “ **KAYONZA:** Option 1: a new independent supply system from L.Muhazi , or Option 2: extension to Rwamagana treatment works.
- “ **NYANZA:** Construction of a new dam and intake structure.

“ Sanitation:

- “ **NYAGATARE:** Waterborne sewerage (300ha) in central area, on site sanitation away from the centre. Includes 11/15 no. public latrines.
- “ **KAYONZA:** On site sanitation (septic tanks, pit latrines) only, including 11/15 no. public latrines.
- “ **NYANZA:** On site sanitation (septic tanks, pit latrines) only, including 11/15 no. public latrines.





rundi Proposals



“ Water:

- “ **MUYINGA:** Water intake from R.Ruvubu, trans mission pumping to new treatment works and transmission mains.
- “ **KAYANZA:** As Musinga
- “ **NGOZI:** As Musinga

“ Sanitation:

- “ **MUYINGA:** Waterborne sewerage (160ha) in central area, on site sanitation away from the centre. Includes 18/22 no. public latrines.
- “ **KAYANZA:** Piped sewerage system (200ha) and on site sanitation, including 19/23 no. public latrines.
- “ **NGOZI:** On site sanitation (septic tanks, pit latrines) only, including 21/27 no. public latrines.





enya Proposals



“ Water:

- “ **KERICHO:** Option 4: Construction of a dam across R.Timbilil, intake structure, reservoir & 15km gravity main, or Option 5: construction of a new intake structure at R.Kimungu with pump station & 8km transmission main.
- “ **KEROKA:** Option 2: Existing transmission route, with new treatment works at Ichuni, or Option 5: development of a new source by Itangi spring with earth dam.
- “ **ISEBANIA:** New intake structure, pump station, treatment works and transmission mains for existing source.

“ Sanitation:

- “ **KERICHO:** Scenario A: existing waterborne sewerage in CBD with no expansion of network, or Scenario D: existing network expanded into extension areas. On site sanitation includes 4/6 no. public latrines.
- “ **KEROKA:** Separate sewage networks with separate treatment works for CBD either side of main road. On site sanitation includes 4/6 no. public latrines.
- “ **ISEBANIA:** Waterborne sewerage in CBD, with waste stabilisation pond and additional discharge pipework. On site sanitation includes 3/5 no. public latrines.





Kenya Proposals



“ Water:

- “ **GEITA:** Stage 1: Development of ground water potential in Lwenge Spring area; Stage 2: Water supply system abstracting, treating & pumping water from L.Victoria..
- “ **SENGEREMA:** Utilise existing source & intake, with new storage tank. Transmission pipelines replaced.
- “ **NANSIO:** Utilise existing source & intake, with new assets, including: intake structure, pump station, treatment works, transmission pipeline, storage facilities.

“ Sanitation:

- “ **GEITA:** Waterborne sewerage cannot be implemented until 2025, but will include new connections, sewer network and waste stabilisation ponds. On site sanitation to include 12/18 no. communal latrines.
- “ **SENGEREMA:** Improve on site sanitation at household level & provision of services for collection, transport & treatment of sewage. Includes 14/20 no. communal latrines.
- “ **NANSIO:** Improve on site sanitation at household level & provision of services for collection, transport & treatment of sewage. Includes 12/18 no. communal latrines.





All Countries



” SOLID WASTE

- ” Provision of skips, machinery & landfill site in all towns.

” STORM WATER

- ” Lined channels on tarmaced roads;
- ” Unlined channels on murram roads.

” CAPACITY BUILDING AND TRAINING

- ” Needs Identified and included in Investment Plan.





Cost Estimates for Investment Plan



Component	Costs (US\$ 000)			Distribution	Foreign
	Foreign	Local	Total	(%)	Exchange (%)
Short Term	0	5,676	5,676	2.6%	0%
Main Works					
Water	40,132	62,371	102,503	46.3%	39%
Wastewater	2,767	14,553	17,320	7.8%	16%
Sanitation	1,310	10,308	11,618	5.2%	11%
Solid Waste	0	9,438	9,438	4.3%	0%
Stormwater	600	16,879	17,479	7.9%	3%
Sub-total Main Works	44,808	113,551	158,359	71.5%	28%
Indirect Costs	8,962	22,710	31,672	14.3%	28%
PMU & LVBC Costs	900	1,660	2,560	1.2%	35%
Institutional		3,163	3,163	1.4%	0%
Total - Base Costs	54,670	146,759	201,429	90.9%	27%
Physical Contingencies	5,467	14,676	20,143	9.1%	27%
Total - Constant Prices	60,137	161,435	221,572	100.0%	27%
Price Contingencies	6,317	22,398	28,715	13.0%	22%
Total – Current Prices	66,453	183,833	250,287	113.0%	27%





Financing Plan



Component						Distribution	
	2010	2013	2014	2015	Total	(%)	
Foreign Costs							
AfDB	Grant	0	11,906	17,690	13,599	43,195	17%
	Loan	0	6,410	9,525	7,323	23,258	9%
Government	Grant	0	0	0	0	0	0%
Sub-total - Foreign Costs		0	18,316	27,215	20,922	66,453	27%
Local Costs							
AfDB	Grant	3,393	28,400	42,538	32,702	107,033	43%
	Loan	1,634	13,677	20,489	15,750	51,550	21%
Government	Grant	791	6,712	10,032	7,712	25,247	10%
Sub-total - Local Costs		5,818	48,789	73,059	56,164	183,830	73%
Total Costs							
AfDB	Grant	3,393	40,306	60,228	46,301	150,228	60%
	Loan	1,634	20,087	30,014	23,073	74,808	30%
Government	Grant	791	6,712	10,032	7,712	25,247	10%
Total Costs		5,818	67,105	100,274	77,086	250,283	100%





Mitigation - Financial and Economic



- “ **Capital costs over-runs** Tight procedures management & procurement
- “ **Donor funding** Close relationships, understand requirements
- “ **Government funding** Early Commitments
- “ **Tariffs**
 - basic lifeline rates;
 - effective metering;
 - rising block tariff structures;
 - commit to regular, realistic reviews.
- “ **Financial Sustainability**
 - clear demonstration & commitment by Government agencies & target towns to the long-term financial sustainability of municipal enterprises;
 - commitment to sound financial management and debt repayment.





Risk Mitigation - Social



- “ **Affordability** Account for local situation esp. poor & disadvantaged
- “ **Uptake & engagement**
 - education and hygiene promotion programmes;
 - prior commitment to advancement of proposals
- “ **Participation & Ownership** Effective community participation (e.g. CBOs for standpipes, toilet blocks, etc.)
- “ **Gender & Child Impact** ensure aspects are built into the project framework





mitigation - Environmental



- “ **Lake Victoria & basin degradation** - concerted & sustained action required
- “ **Health & environment waterborne disease** - activate education & hygiene promotion programmes
- “ **Living environment & housing conditions** - secure & demonstrate improvements, esp. the poor
- “ **Construction Activity** - ensure EMP is in place & properly executed





Mitigation - Institutional



- “ **Implementation delays** - clear action & implementation plan support by all stakeholders & participating governments
- “ **Project management issues** - strong & effective leadership ensure that projects are implemented on time and on budget
- “ **Organisation & management issues & weaknesses**
 - Effective and appropriate structures;
 - staffing . quality, salaries & training;
 - effective budget control & revenue collection;
 - control of non-revenue water;
 - effective maintenance, planning and implementation.





Immediate Interventions

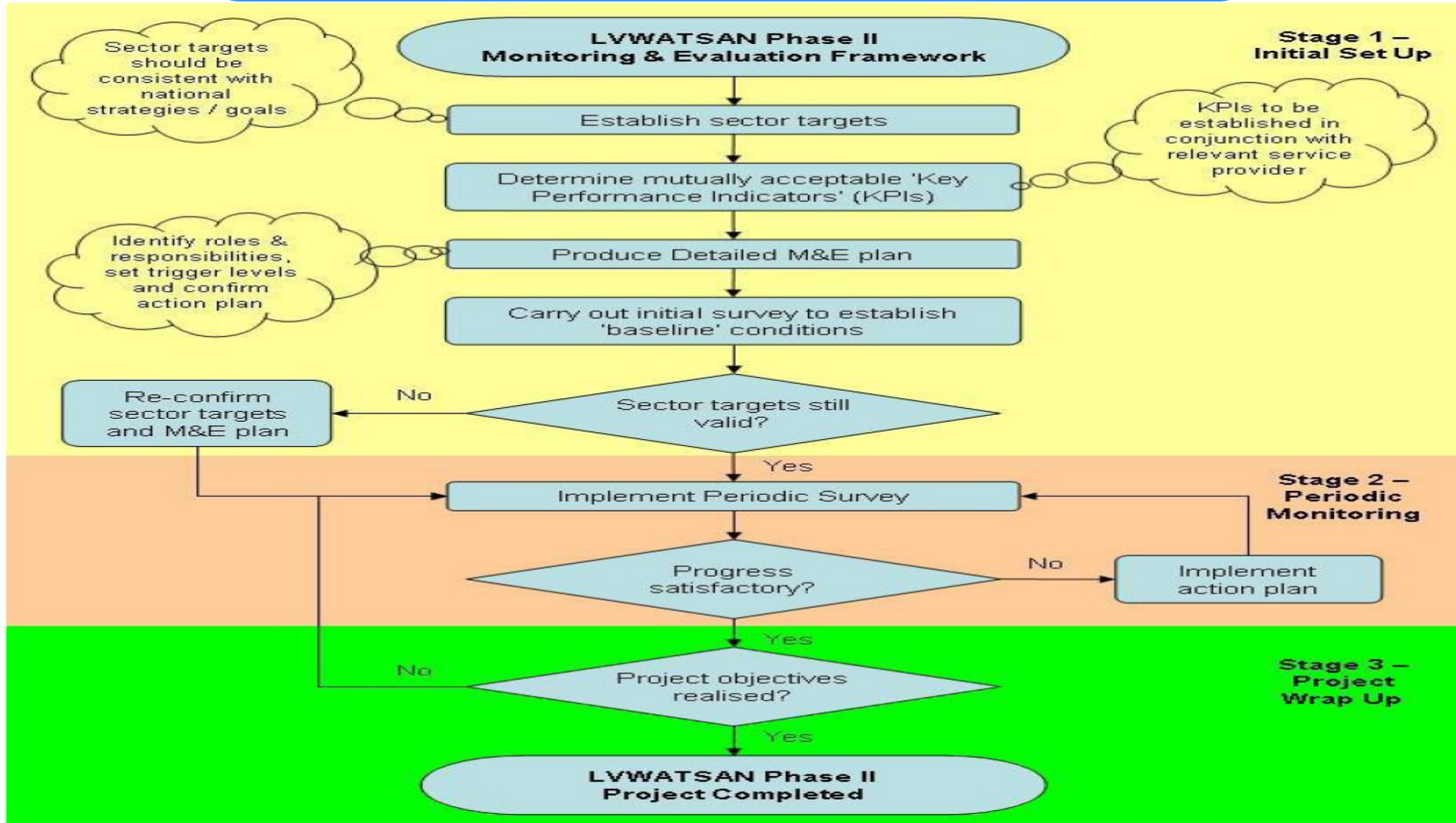


- **List of Immediate Needs from Engineering and Social Surveys**
- **Prioritised List Based on the Agreed Criteria**
 - “ **Visibility** Intervention provides an immediate, tangible benefit;
 - “ **Quick wins** Can be implemented rapidly to provide an immediate benefit;
 - “ **Feasible** Detailed design & tender documents is feasible within the given timeframe & project context;
 - “ **Timeframe** Can be tendered, built & commissioned within one year period.
- **Detailed Design Drawings and Tender Documents**





M&E Framework





Next Steps



“ Final Report

“ Bridging Activities

- . Preparation of Project Appraisal Report and Release of Implementation Funding
- . Procurement Process . Long and Short Terms, Regional and Country, Consultants and Contractors
- . PMUs, PIUs and MSFs Formation and Strengthening

“ Physical Infrastructure and Soft ware Implementation (S<Is)





Schedule of Activities and Timeframe



Short Term Interventions

Tasks	2010	2011	
Funding Approval	■		
Programme Planning	■		
Consultant Appointment		■	
Tender Process		■	
Contractor Appointment		■	
Construction/Implementation		■ ■	
Facility Operation			■





Schedule of Activities and Timeframe (Cont'd)



Long Term Interventions

Tasks	2010	2011	2012	2013	2014	2015	2016	2017
Funding Approval	█							
Programme Planning	█							
Consultant Appointment		█						
Feasibility Studies		█	█					
Environmental Impact Studies		█	█					
Design & Procurement Documents			█	█				
Tender Process			█	█	█			
Contractor Appointment				█	█			
Construction/Implementation				█	█	█		
Facility Operation					█	█	█	█
Commissioning & Handover					█	█	█	
Training and Capacity Building			█	█	█	█	█	█





Project Benefits



■ Formulation

- . Identifies appropriate actions to be taken to address various challenges around LVB
- . Facilitates mobilization of financial and material resources from both local and external support partners
- . Focus on pro-poor interventions in secondary urban towns

■ Physical Infrastructure

- Addresses Environmental Degradation
- Meet WATSAN MDGs





Conclusions and Recommendations



- “ Proposals to meet WATSAN demands for the secondary towns and meet MDGs
- “ Appropriate technologies adopted to reduce Running Costs
- “ Catchment protection to reduce production costs
- “ Participatory operations to enhance success of service delivery
- “ Affordability a challenge but subsidy and conservation measures to be applied for mitigation



END

