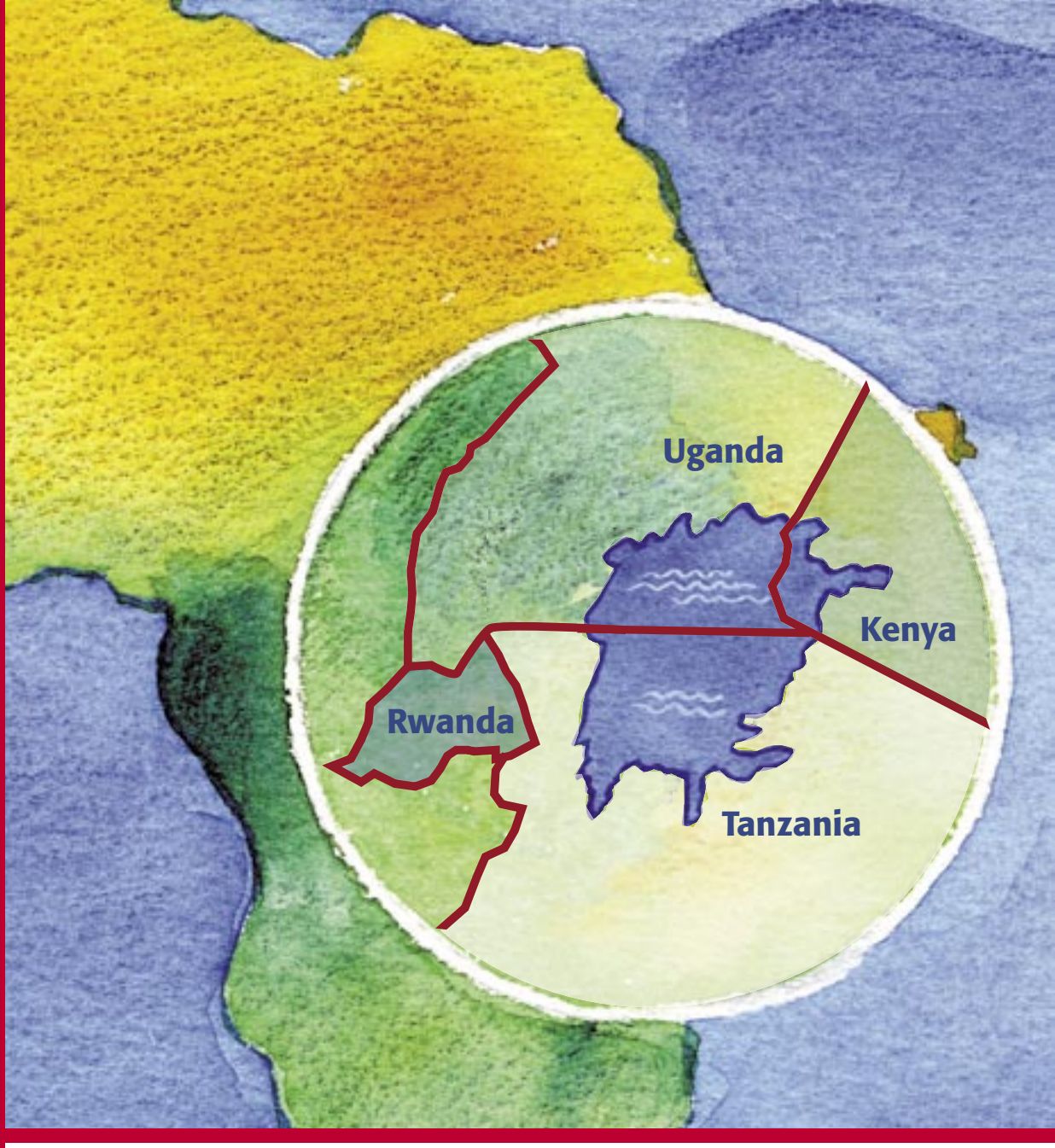
SIWI



Integrated Water, Sanitation and Natural Resources Initiative in the Lake Victoria Region

Fact finding report based on activities at the national and local levels

Per Bertilsson and Anders Jägerskog
with Rebecca Löfgren

Stockholm, June 2006

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Abbreviations and Acronyms

ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
CBO	Community Based Organisation
CDTF	Community Development Trust Fund
Danida	Danish International Development Agency
DFID	Department for International Development, UK
EAC	East African Community
EDPRS	Economic Development and Poverty Reduction Strategy
EPS	Environmental Programme Support
ERS	Economic Recovery Strategy
EU	European Union
GBI	Green Blue Initiative
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
ICRAF	International Centre for Research in Agroforestry
IWRM	Integrated Water Resources Management
JAS	Joint Assistance Strategy
LVBC	Lake Victoria Basin Commission
LVEMP	Lake Victoria Environmental Management Project
LVI	Lake Victoria Initiative
MDGs	Millennium Development Goals
MoENR	Ministry of Environment
MoWLD	Ministry of Water and Livestock Development
NALEP	National Agricultural and Livestock Extension programme
NBI	Nile Basin Initative
NEAP	National Environmental Action Plan
NELSAP	Nile Equatorial Lakes Subsidiary Action Programme
NEMA	National Environment Management Authority
NEMC	National Environmental Management Council
NGO	Non Governmental Organisation
PRSP	Poverty Reduction Strategy Paper
RWSSP	Rural Water Supply and Sanitation Programme
SADC	Southern African Development Community
SANA	Sustainable Aid in Africa International
Sida	Swedish International Development Agency
SIWI	Stockholm International Water Institute
SWAp	Sector Wide Approach
TNA	Training Needs Assessment
UNDP	United Nation Development Programme
UNEP	United Nation Environment Programme
UNICEF	United Nations Children's Fund
WHO	World Health Organisation
WSS	Water Supply and Sanitation
WSTF	Water Service Trust Fund
WUA	Water User Association

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Executive Summary

Lake Victoria is the largest lake in Africa and the second largest fresh water lake in the world. The lake constitutes an important resource for the countries in the lake basin. Around 80 % of the people that live in the basin in Uganda, Kenya, Tanzania and Rwanda are dependent on the lake for the provision of their livelihoods. The areas around the lake are at the same time one of the poorest in the world. Among the people that live around Lake Victoria close to 15 million (or roughly 50 %) live in poverty.

Through the Swedish regional Lake Victoria Initiative (LVI), which was launched in 2000 and has a 20-year time frame, Sida has made a long-term commitment to the Lake Victoria region. The LVI aims at supporting activities that will contribute to integrating issues of poverty alleviation, development and sustainable resources management and enhance participatory management and democratic governance of natural resources.

Sida has decided to explore the opportunities for increased support to water, sanitation, and natural resources management in the basin. A first study investigating mechanisms/initiatives at the regional level has been undertaken by SIWI: "Integrated Water, Sanitation and Natural Resources Initiative in the Lake Victoria Region – Fact Finding Report, August 2005". The present study analyses programmes and initiatives at the local and national level with a view to understand the linkages (or potential linkages) that they have to the regional level. The present study has documented a total number of approximately 90 programmes/organisations on national and local level.[1]

The findings in the report is based on literature review and analysis of documents sourced from government ministries, donor agencies, key actors and personal interviews with individuals running institutions of interest in the Lake Victoria Basin. During January 11-20 2006 the consultants visited Kenya, Uganda, Tanzania and Rwanda and liaised with local consultants that have contributed to the report as well had meetings with Sida staff, key national and local organisations and programmes.

From a donor perspective a central conclusion is that there is need for increased focus on donor alignment and coordination at regional level. At present different donor agendas interfere with the interests of the countries in the region too a large extent. This diminishes chances for true ownership as well as decrease the aid effectiveness. In light of the Paris Declaration on Aid Effectiveness from 2005 there should be increased focus on issues such as donor harmonisation through alignment and coordination. Acknowledging that work is already ongoing to accomplish this, it is recommended that Sida step up its efforts in promoting this at country as well as on regional level.

Uganda, Kenya, Tanzania, whom are all members of the East African Community (EAC), have all started to align their protocols and strategies to that of the EAC. The report also includes the member to be; Rwanda, which has started to align its policies and frameworks to those of EAC. This creates opportunities for increased development in the basins since barriers (legal, trade etc.) between countries are gradually decreasing.

National bodies for linkage and coordination with regional policy and programmes are being established in all countries. These are often placed in a strategic Ministry/ Department of the

[1] Some programmes are documented in more detail than others.

Government. Tanzania's new Government has appointed a Minister of EAC. Another example is that the new Water Resources Authority in Tanzania will have a dedicated department that deals with transboundary issues.

In Kenya and Tanzania Basin Structures/Authorities covering the whole country has been established. Thus, there is a potential for the regional Basin Commission, the LVBC to coordinate directly with the Basin Authorities within the Lake Victoria Basin in the respective countries.

Policy and institutional reform has been undertaken in all of the cooperating countries in the area of Integrated Water Resources Management (IWRM) and water and sanitation sector. There is policy harmonisation between the various regional initiatives and in particular in SADC, EAC and NBI.

New legislation and investment plans are in place. The challenge is to build capacity of the new decentralised structures and in particular human resources capacity at the decentralised/ basin level. It is difficult to attract and retain qualified and competent staff.

The other requirement is investment in Water Resources Infrastructure without which policies and plans will not have a real impact. In both these areas regional programmes can contribute towards realisation of plans within the Lake Victoria Basin. In this context it is also important that national IWRM Plans are consistent with regional plans.

At national level in all countries there is a need for increased storage capacity. Due to population growth in the region the storage capacity has shrunk considerably per capita in the last decades. However, due to the sensitive nature of large-scale water infrastructure and in light of the World Commission on Dams report the countries should embark on national consultations to reach a consensus on how to approach this area. Lessons learned could be drawn from the South African experience as well as the Swedish experience in these processes.

The prevailing trend of decentralisation in the respective countries to Basin Authorities and to local environmental authorities can facilitate the development of small-scale infrastructure and water resources structures such as small dams and rain water harvesting structures which are much needed.

Corruption is wide-spread in the countries concerned. Continued focus on these issues at local, national and regional level is recommended. Support for "watchdog" organisations/networks shall be sought.

Continued support to capacity building is needed both at national as well as local level. Sida´s international training programmes could play a role in this regard. A strengthening of the training capacities of middle level institutions is required to ensure availed middle level technical expertise at the local level.

The green water potential in the region could usefully be explored through the planned Green Blue Initiative (GBI) being considered for support by Sida. In general, a blue water perspective has prevailed in ideas and policies concerning water management. Blue water refers to water that is available in rivers, lakes and aquifers. This liquid water can be stored, conveyed and allocated to various use(r)s. Contrary to the blue water perspective, which

focuses on water "at the end of the hydrological cycle through the landscape", a green water concept starts with the precipitation that falls over the landscape. A large part of the rainfall will never reach blue water sources, but is extremely important in "greening" the landscape. A strategy for a more efficient and worthwhile use of the rainfall that is available in the region will release the pressure on the water that is available in rivers, lakes and the aquifer, i.e. the blue water. Through rain water harvesting techniques and an integrated land and water management, the total water resource - the combined blue and green water resources - may be enhanced and livelihood conditions improve. That would link the national level to the overall water availability discussions in the region.[2]. Sida should consider supporting national initiatives aimed at stronger green water focus at national levels and preferably link that to a regional knowledge exchange. Colleagues at ASARECA, for instance, have the required competence and insights into the requirements of a systematic introduction of the GBI in the region.

While some of the specific recommendations for respective countries are found in the respective country part of the study some recommendations are general such as the need to improve cooperation/coordination between the regional organizations and national actors to increase impact. While institutional capacity has been strengthened in regional organisations/ programmes there is limited capacity to support delivery and implementation of activities as opposed to collecting information and conducting research.

[2] One of the basins addressed in the proposal for the Green Blue initiative by SIWI/SEI is the Kagera basin.

Table summarising key recommendation

	Regional	Kenya	Rwanda	Tanzania	Uganda
Coordination of Support	There is a need for donor coordination in alignment with the Paris Declaration at regional level.	There is a need for continued coordination of support from the donor community in alignment with the Paris Declaration at national and local level.	There is a need for continued coordination of support from the donor community in alignment with the Paris Declaration at national and local level.	There is a need for continued coordination of support from the donor community in alignment with the Paris Declaration at national and local level.	There is a need for continued coordination of support from the donor community in alignment with the Paris Declaration at national and local level.
Capacity Building	Capacity building should be a focus area. There is a need to support networks, exchange of strategic character such as support for EcoSan network, knowledge exchange on green-blue water issues etc.	Strengthening of training capacities of national and district level institutions/governments to ensure an integrated implementation of reforms at all levels.	Strengthening of training capacities of national and district level institutions/governments to ensure an integrated implementation of reforms at all levels.	Strengthening of training capacities of national and district level institutions/governments to ensure an integrated implementation of reforms at all levels.	Strengthening of training capacities of national and district level institutions/governments to ensure an integrated implementation of reforms at all levels.
			It would be useful to study WUA possible role in Rwanda	The WUAs need to be strengthened in their new role as legal owners of their water supply systems.	It would be useful to study WUA possible role in Rwanda
Environmental Management			Support to the Kagera Basin Project to fight the spreading of water hyacinth in the basin.		
		Waste water treatment and solid waste collection is needed from growing urban areas.	Waste water treatment and solid waste collection is needed from urban areas, especially Kigali, which would reduce the pollution load of the Kagera River.	Waste water treatment and solid waste collection is needed from growing urban areas.	Waste Water Treatment efficiency needs to be increased from the urban areas, especially Kampala which is situated on the beach of Lake Victoria.
	A stronger green water focus should be considered in discussions on water availability in the basin on regional	The green water potential is not fully explored and need to be integrated in national and local frameworks and policies.	The green water potential is not fully explored and need to be integrated in national and local frameworks and policies.	The green water potential is not fully explored and need to be integrated in national and local frameworks and policies.	The green water potential is not fully explored and need to be integrated in national and local frameworks and policies.

	level. Regional knowledge sharing on national implementation of green water focus need to be developed.	Sida should consider supporting national initiatives aimed at stronger green water focus at national levels and preferably link that to a regional knowledge exchange.	Sida should consider supporting national initiatives aimed at stronger green water focus at national levels and preferably link that to a regional knowledge exchange.	Sida should consider supporting national initiatives aimed at stronger green water focus at national levels and preferably link that to a regional knowledge exchange.	Sida should consider supporting national initiatives aimed at stronger green water focus at national levels and preferably link that to a regional knowledge exchange.
Institutional Reforms	The sub-regional initiatives/programmes need support to harmonise legislation, share knowledge and strengthen its institutions to live up to the expectations built up by the stakeholders	Support to local and national civil society organisations working to fight corruption and increase accountability from actors working with WSS and natural resources management.	Support to local and national civil society organisations working to fight corruption and increase accountability from actors working with WSS and natural resources management.	Support to local and national civil society organisations working to fight corruption and increase accountability from actors working with WSS and natural resources management.	Support to local and national civil society organisations working to fight corruption and increase accountability from actors working with WSS and natural resources management.
		Strengthen the NWSRBs to help them institute community based programmes and act as the national coordinating and monitoring body. This is already supported through KWSP in Kenya.	Support to the process of development of the new "Economic Development and Poverty Reduction Strategy" is needed, especially to align the strategy with the policies and protocols of the EAC as Rwanda soon will become a member.	Support of the new secretariat of the Joint Assistance Strategy for improved coordination of regional and national agendas.	
		Environmental Management needs to be strengthened as well as the institutions responsible.	Environmental Management needs to be strengthened as well as the institutions responsible.	Environmental Management needs to be strengthened as well as the institutions responsible.	Environmental Management needs to be strengthened as well as the institutions responsible.
		Gender mainstreaming of all policies and frameworks is needed. Women's role in decision making processes need strengthening at all levels.	Gender mainstreaming of all policies and frameworks is needed. Women's role in decision making processes need strengthening at all levels	Gender mainstreaming of all policies and frameworks is needed. Women's role in decision making processes need strengthening at all levels	Gender mainstreaming of all policies and frameworks is needed. Women's role in decision making processes need strengthening at all levels
Investment and	Storage capacity and hydroelectricity need to be	Continued investment in small-scale infrastructure,	Investment in small-scale infrastructure, ex.	Investment in small-scale infrastructure, ex.	Investment in small-scale infrastructure, ex.

Development Needs	further explored in the region and when appropriate this can be done through the regional institutions, like the Nile Basin Regional Power Trade Project, place in Tanzania.	ex. rainwater harvesting is needed. Also support for sustainable sanitation and Green-Blue water management approaches is needed.	rainwater harvesting is needed. Also support for sustainable sanitation and Green-Blue water management approaches is needed.	rainwater harvesting is needed. Also support for sustainable sanitation and Green-Blue water management approaches is needed.	rainwater harvesting is needed. Also support for sustainable sanitation and Green-Blue water management approaches is needed.
	Sharing experiences from the national consultation processes on large scale infrastructure through regional initiatives, for ex. The Nile Basin Regional Power Trade Project.	National consultations to reach consensus on how to approach large scale infrastructure is needed. (Ongoing work through Sector Investment Plan will also serve as a base for a SWAp)	National consultations to reach consensus on how to approach large scale infrastructure is needed.	National consultations to reach consensus on how to approach large scale infrastructure is needed.	National consultations to reach consensus on how to approach large scale infrastructure is needed.
	Reliable data on the Lake Victoria Basin and the distribution of such data is needed throughout the basin.				
		Structures need to be set up for more effective cooperation between line ministries (environment, water, agriculture and private sector).	Structures need to be set up for more effective cooperation between line ministries (environment, water, agriculture and private sector).	Structures need to be set up for more effective cooperation between line ministries (environment, water, agriculture and private sector).	Structures need to be set up for more effective cooperation between line ministries (environment, water, agriculture and private sector).
Private sector		Support is needed to the private sector, both large scale and the small scale informal sector to build their awareness on how they are affected by new environmental legislation. (Partly role by NEMA to be supported under the new Environmental Programme Support (EPS) cofunded with	Support is needed to the private sector, both large scale and the small scale informal sector to build their awareness on how they are affected by new environmental legislation.	Support is needed to the private sector, both large scale and the small scale informal sector to build their awareness on how they are affected by new environmental legislation.	Support is needed to the private sector, both large scale and the small scale informal sector to build their awareness on how they are affected by new environmental legislation.

		Danida start oct 2006)			
		Monitoring of the compliance of the private sector is needed by governmental agencies.	Monitoring of the compliance of the private sector is needed by governmental agencies.	Monitoring of the compliance of the private sector is needed by governmental agencies.	Monitoring of the compliance of the private sector is needed by governmental agencies.
	Improved and harmonised market opportunities for sustainably produced products in the region.	Support to the private sector to develop profitable products produced in a sustainable way.	Support to the private sector to develop profitable products produced in a sustainable way.	Support to the private sector to develop profitable products produced in a sustainable way.	Support to the private sector to develop profitable products produced in a sustainable way.
Water Supply and Sanitation	EcoSan Network could be supported as a way to increase knowledge on a regional level. A regional Trust fund for ecological sanitation could be initiated.	Low-cost and non-polluting technologies (such as EcoSan) for water supply and sanitation is needed in both rural and urban areas.	Low-cost and non-polluting technologies (such as EcoSan) for water supply and sanitation is needed in both rural and urban areas.	Low-cost and non-polluting technologies (such as EcoSan) for water supply and sanitation is needed in both rural and urban areas.	Low-cost and non-polluting technologies (such as EcoSan) for water supply and sanitation is needed in both rural and urban areas.

1. Background

Lake Victoria, the world's second largest fresh-water lake and the largest lake in Africa, is the most important shared resource for the partners of the East African Community (EAC): Kenya, Tanzania, Uganda and of two other countries in the basin: Rwanda and Burundi. It is estimated that about 50 % of the more than 30 million people living around the lake live in poverty. Approximately 80 % of the population in the basin draws their livelihoods directly or indirectly from agriculture and fisheries. Agricultural and fisheries activities within the lake basin are often based on unproductive and environmentally damaging methods and are hence degrading to the water and land resources. These, at the same time deepen poverty. The lake is threatened by overexploitation of resources, industrial pollution, untreated municipal wastewater and increasing pollutant loadings from unsustainable agriculture and forestry due to erosion and land degradation.

The Swedish International Development Cooperation Agency (Sida) has made a long-term commitment to support the sustainable development of the Lake Victoria region. The Swedish regional Lake Victoria Initiative (LVI) was launched in 2000 and has a 20-year time frame. The LVI aims at supporting activities that will contribute to integrating issues of poverty alleviation, development and sustainable resources management and enhance participatory management and democratic governance of natural resources. Special attention will be given to capacity development of relevant institutions. In addition, a strategic partnership agreement was entered by the three countries in the EAC, Sida and other donor organisations in April 2001. This commitment was also reinforced at the Johannesburg summit in 2002. Sweden will cooperate with stakeholders in the region with the objective to reduce poverty in the Lake Victoria region, through sustainable development.

The Swedish strategy for Sustainable Development of the Lake Victoria Region 2004-2006 for cooperation in the region (defined as the catchment area to the Lake Victoria) takes its departure in the EAC joint Vision, the Millenium Development Goals (MDGs), and the Swedish commitment from Johannesburg. The overall guiding strategies for Swedish development co-operation such as the Swedish "Policy for Global Development" and "Perspectives on Poverty" also apply. Furthermore, the strategy states that regional cooperation around the Lake Victoria should be complementary to the Swedish cooperation with the three riparian countries. The importance of East African ownership is clearly stated in the regional strategy. There are also plans to use the Nordic experience from the Baltic Sea co-operation for the benefit of Lake Victoria. Five priority areas are identified in the Swedish Lake Victoria Strategy:

- Capacity Building for Sustainable Development
- Empowering Communities and Individuals
- A sound Environment and Sustainable use of Natural Resources
- Combating HIV/AIDS
- Private Sector Development for Economic Growth

Sida has decided to explore the opportunities for increased support to water, sanitation, and natural resources management in the basin. The purpose is to explore how Sweden can increase its support in integrated rural and urban water resources management interventions within the already existing frameworks, projects and programmes and to furthermore assess the most appropriate form of supporting regional rural and urban water and sanitation interventions in the lake basin. A first study investigating mechanisms/initiatives at the

regional level has been undertaken by SIWI: "Integrated Water, Sanitation and Natural Resources Initiative in the Lake Victoria Region – Fact Finding Report, August 2005".

The issue of donor harmonisation and alignment is a central concern in the region. In order to increase aid effectiveness the potential gains from a more coherent approach in this regard is essential. The process of achieving harmonisation and alignment drawing on the Paris Declaration on Aid Effectiveness from 2005 shall be a priority.

1.2 Purpose and objectives of the assignment

The purpose of this assignment is to explore how Sweden can increase its support into water, sanitation and natural resources using primarily existing channels at national and local levels. Using the regional fact-finding report of August 2005 and the *Road Map* as guiding documents, this assignment aims at identifying mechanisms/initiatives at the national and local levels with bearing on the regional level. The immediate objectives of the assignment are to:

- map out programmes, mechanisms and organisations at the national and local levels of relevance to the development of the Lake Victoria region;
- determine gaps and opportunities for Swedish involvement in these initiatives in the light of the Swedish Lake Victoria Strategy and the Road Map document;
- explore the linkages between these national and local initiatives in relation to Regional programmes relevant for implementation under Swedish Lake Victoria Initiative and the Swedish country programmes and strategies;
- in the context of LVI analyze relevant experiences of past and present Sida bi-lateral projects including innovative projects such as Kusa;
- indicate possible strategies for increased Swedish involvement in cooperation mechanisms at the national and local level for sustainable development of Lake Victoria.

1.3 Methodology

The report is based on findings from literature review and analysis of documents sourced from government ministries, donor agencies, key actors and personal interviews with individuals running institutions of interest in the Lake Victoria Basin. During January 11-20 2006 the consultants visited Kenya, Uganda, Tanzania and Rwanda and liaised with local consultants that have contributed to the report and had meetings with Sida staff, key national and local organisations and programmes. Discussion and feedback on a draft report in a regional workshop with Sida personnel in Dar es Salaam, May 10-11 2006, also contributed to the report.

1.3.1 Overview of existing and future national programmes and institutions

A documentation and analysis of the four countries key national and local co-operation programmes, organisations and other mechanisms and community based water and sanitation projects were undertaken using a standardised template provided in the ToR. A full list of these is provided in the Appendix. The following aspects are covered:

- Main objective(s), focus areas for activities, outputs and outcomes for the programme/ organisation/mechanism;
- Institutional (legal) status and arrangement for the programme/organisation/ mechanism;
- Geographical and thematic delineations;
- Main beneficiaries, main stakeholders and principal actors in implementation;
- Decision-making process and operational structure;

- How the programme/organisation/mechanism is financed;
- Co-ordination between the programme/organisation/mechanism and regional, national and local frameworks and priorities;
- Relevance of the programme/organisation/mechanism for the Swedish Lake Victoria Strategy and for the country programmes/strategies in the region;
- Track record of the programme/organisation/mechanism and stage of progress, and planned activities;
- Potential gaps and opportunities for further funding of the programme/organisation/ mechanism. (This point will be included only when there are clear indications in e.g. programme/project documents of needs for further funding.)

2. Overall Strategic Analysis – Challenges, Opportunities and Recommendations

This section will draw on the national analysis made and identify some challenges, opportunities and recommendations at an aggregated level. Below are also specific recommendations given for interventions at country level.

2.1 Status

All four countries included in this study have a good framework of policies and strategies from which to start of the implementation of effective management of water resources and water and sanitation. Relevant considerations are taken in most of the national strategies like the Poverty Reduction Strategy Papers (PRSPs) and Water Resources Policies adopted by the country governments. The three lakeside countries Kenya, Tanzania and Uganda have also adopted the strategies and protocols of the EAC, and as a member-to-be, Rwanda is also aligning its own strategies to that of the EAC. The development of the Lake Victoria Basin Commission (LVBC) is presently happening and should be supported.

There is a lot of information and data gathered concerning the status of the Lake Victoria through various programmes and research investigations. Specific information on programmes is provided in the Appendix.

The focus of development activities in the Lake Victoria basin is shifting towards implementation of activities and delivery of tangible benefits for the population in the basin and impact on the ground in the form of an improved environment and management of natural resources.

2.2 Challenges

All countries are struggling with implementing the new policies and strategies. There is a great lack of capacity at all levels of government. Many of the programmes and initiatives also lack coordination with programmes and initiatives at other levels. There is also a need for a more integrated approach to the issues within the programmes and initiatives.

Data and information about Lake Victoria are biased towards academic research outputs with very little in terms of designs and execution plans. The information base is also weak. The information/data available is not being used for planning and development work by development agencies due to the format in which they are presented.

In addition the issue of corruption is hampering reform and implementation in the water sector all across the region.

A challenge is also to make increased use of the green water potential. Traditionally in all the countries the focus has been on the blue water while there is a need to also include the actual and potential use of green water for livelihoods in strategies and policies.

Worth mentioning is also the challenge to implement investments in water and sanitation infrastructure in the region, especially on a national level. However, this is not a challenge that has to do with linkages between regional and national/local levels but it is still worth highlighting, since the investments backlog is so vast that it affects the potentials for other programmes and initiatives. This situation affects the possibilities for effective poverty reduction in the Lake region and is one of the main obstacles to reach the MDGs. When planning regional initiatives it is important to keep this situation in mind.

Furthermore, in relation to the water, sanitation and sewerage side there are today unclear responsibilities in the sanitation field in Uganda and Kenya. In urban areas, for example, there are unclear responsibilities between local authorities (normally mandated for "sanitation") and water utilities (normally mandated for "sewerage"). In rural areas there exist unclear responsibilities between line ministries such as Ministry for Water and Ministry for Health. In terms of financing, the unclear responsibilities also imply a situation of unclear funding mechanisms (and subsequently insufficient funding).

A specific challenge is how the Swedish support to the Lake Victoria region on water, sanitation and natural resources can be situated within the new aid architecture wherein the countries surrounding the Lake are developing Joint Assistance Strategies (JAS) in which only a limited number of donors are requested to support a certain sector. In most cases (except for Kenya) it seems as Sweden will probably not be working in the water sector. How can then the support emanating from the Lake Victoria Initiative contribute? How this materialises in the end remains to be seen but the regional focus seems to be the way this challenge shall be addressed.

2.3 Opportunities

There is great potential in the new policies and frameworks and with enough resources and strengthened capacity the management of the countries water resources would improve considerably. There are many structures for implementing new strategies and policies at all levels in the region if coordination between sectors, countries and donors would improve.

Information and data concerning the lake exists in abundance, but needs to be transformed to a format which is useful for a broader group of stakeholders than the academia. Thus, to focus support on capacity building on various levels (including knowledge exchanges on matters such as Integrated Water Resources Management (IWRM), Green-Blue Water issues etc.) seem to be a feasible way forward.

2.4 Linkages between the national and regional level

2.4.1 Coordination mechanisms

National bodies for linkage and coordination with regional policies and programmes are being established in all countries. These are often placed in a strategic Ministry/Department of the Government. Tanzania's new Government has appointed a Minister of EAC. Another

example is that the new Water Resources Authority in Tanzania will have a dedicated department that deals with transboundary issues.

In Kenya and Tanzania Basin Structures/Authorities covering the whole country has been established. Thus, there is a potential for the regional Lake Victoria Basin Commission, the LVBC, to coordinate directly with the Basin Authorities within the Lake Victoria Basin in the respective countries. A more elaborated discussion on the LVBC is found in the previous study focusing on the regional level.

It is essential for regional programmes to maintain a close coordination with national authorities and to fit into national policy and planning frameworks. One example is the Nile Equatorial Lakes Subsidary Action Programme (NELSAP) and the Kagera Project Management Unit. The project should work closely with relevant national authorities and contribute towards building national capacity.

For effective co-ordination between bilateral level and regional level in there is a need for Sida to address the regional perspective in the country strategies.

Furthermore there is definitely scope for increased donor alignment and coordination.

2.4.2 Thematic linkages

Policy and institutional reform has been undertaken in all of the cooperating countries in the area of IWRM. There is substantial policy harmonisation between the various regional initiatives and in particular in the Southern African Development Community (SADC), EAC and the Nile Basin Initiative (NBI).

New legislation and investment plans are in place or under preparation and the water sector reforms are in line with the decentralisation processes that have started in the countries. The ability to develop and maintain water and sanitation infrastructure is a local rather than a national responsibility. The challenge is to build capacity of the new decentralised structures and in particular human resources capacity at the decentralised/basin level. It is difficult to attract and retain qualified and competent staff.

The other requirement is investment in water resources infrastructure without which policies and plans will not have a real impact. The countries in the region all have strained public sector budgets and have limited possibility to provide funding for water and sanitation infrastructure, which is much needed in the growing urban areas around the Lake. The high risk of investment in the sector has made it difficult to attract international private investors, as well as local investors which also battle with poor funding and low technical skills. Here credit funding from international financing institutions and development banks will play a key role. Financial institutions and bilateral donors need to coordinate these initiatives to create sustainable financing solutions. Local interventions in the urban areas need to have a regional approach to be able to improve sustainability in the whole lake region. In this context it is also important that national IWRM Plans are consistent with regional plans.

The prevailing trend of decentralisation in the respective countries to Basin Authorities and to local environmental authorities can facilitate the development of small-scale infrastructure and water resources structures such as small dams and rain water harvesting structures which are much needed.

A regional power master plan includes the connection of transmission lines around Lake Victoria. Future power sources such as the Rusumo Falls hydro power project can be connected. It will also facilitate rural electrification projects such as the ones being supported by Sida including the rural electrification project on one of the islands of Lake Victoria. There seems to be a potential for this type of project also in the other countries around the Lake.

At national level in all countries there is a need for increased storage capacity. Due to population growth in the region the storage capacity has shrunk per capita in the last decades. However, due to the sensitive nature of large-scale water infrastructure and in light of the World Commission on Dams report the countries should embark on national consultations to reach a consensus on how to approach this area. Lessons learned could be drawn from the South African experience as well as the Swedish experience in these processes.

There are successful pilot projects implemented at national/local level which has the potential to be replicated at the national and regional levels. One example is components of the Kusa project, such as the rain water harvesting and the on farm soya and water conservation. Lessons should be learned from this project.

One of the successes of regional cooperation around Lake Victoria is the reduction of water hyacinths in the lake. However, water hyacinths are still a major problem in the Kagera River, the biggest tributary to Lake Victoria, which discharges water hyacinths into the lake. This is an example of a national issue which has a regional impact. A joint national/regional approach to solving this problem is advocated and the Kagera Basin Project is well placed to take the lead. Financing to resolve this problem does not seem to have been committed. Therefore Sida is recommended to provide support to this activity.

The Nile Basin Capacity Building Network on River Engineering with cluster nodes in Kenya (Flood and Catchment management), Uganda (Environment) and Tanzania (Hydro-power) has a review programme that is meant to look at all research outputs on Water Supply and Sanitation (WSS), environment and natural resource development and package them in formats useful to actors in the region. The team will also offer strategic training to Non-Governmental Organisations (NGOs), middle level training institutes lecturers and technicians and government officers and initiate the mainstreaming of new knowledge into school and college curricula.

The question of sanitation is largely seen as a local or perhaps national issue. But since one of the results of poor sanitation is wastewater draining into the Lake Victoria, there is a regional component of the issue that needs to be urgently addressed. The development of sustainable solutions at local and national level is imperative since that will contribute to an increased water quality of the lake. There is a small network on Ecological Sanitation in East Africa. Through Stockholm Environment Institute and others this network should (and will) expand. This approach does also have the potential to address one of the main problems surrounding the lake which are water quality degradation as a result of insufficient waste-water management. Since piped solutions are not reasonable there is a need to address the problems through an environmentally sounds system.

The green water potential in the region could usefully be explored through the planned Green Blue Initiative (GBI) being considered for support by Sida. To achieve a sustainable water future, a strategy for the strengthening of green water initiatives in food and other water consuming systems (forests, wetlands, etc) need to be incorporated into frameworks and

policies. That would link the national level to the overall water availability discussions in the region.[3] Sida should consider supporting national initiatives aimed at stronger green water focus at national levels and preferably link that to a regional knowledge exchange. Regional institutions like Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) and ICRAF can be called upon to design a practical approach for how to involve extension service, financial institutions, and training programmes in a functional Green and Blue water development vision and implementation process.

2.5 Regional policies and strategies

- The EAC Vision and Strategy Framework for Management and Development of Lake Victoria Basin, adopted January 2004;
- The EAC Protocol for Sustainable Development in Lake Victoria, adopted November 2003;
- Partnership Agreement on Sustainable Development of Lake Victoria Basin signed by EAC with the Government of France, Norway and Sweden, the World Bank and the East African Development Bank.

2.6 Recommendations on linkages

While the linkages between the natural and local programmes to the regional level do not always exist or are clear there is potential to increase linkages. This can be done both at a government level as well as between communities in the basin states.

LVBC has the potential of being a regional node for a lot of issues in and around the lake. Support for the development of and capacity building of the Human Resources of the LVBC should be a main area for support. National focal points for LVBC should also be considered for support.

Corruption is wide-spread in the countries concerned. Continued focus on these issues at local, national and regional level is recommended. Support for "watchdog" organisations/networks shall be sought.

Capacity building on a regional level is important and necessary for the achievement of the MDGs. This is also something that the Lake Viktoria Initiative could usefully focus on in the future. The capacity building support could (and perhaps should) be focused on comparative advantages of the Swedish resources base such as ecological sanitation and green and blue water management. The support could take the form of support to networks, knowledge exchanges, training programmes etc. It is important to try to utilise existing channels and networks that are existing (for example through CapNet).

From a regional perspective it would be useful to support a regional network of capacity building on sustainable sanitation which would potentially inform and improve the sanitary practices in the countries as well as spreading useful approaches practiced in one country to others. That would also link a national and local issue with the regional level as it could contribute to an enhanced water quality in the Lake Victoria.

In efforts to achieve a larger degree of sustainable sanitation solutions, which would have obvious regional impacts such as enhancement of the water quality of Lake Victoria since

[3] One of the basins addressed in the proposal for the Green Blue initiative by SIWI/SEI is the Kagera basin.

today a lot of wastewater drains into the lake, there could be a scope for the establishment of a regional trust fund for ecological sanitation.

Support for national consultations on large-scale water infrastructure can be supported in all countries and preferably also some mechanism to share experiences on a regional level.

3. Kenya

3.1 Background

In Kenya 12 million people are living within the Lake Victoria Basin. Over 80% of this population depend on agriculture and fisheries for their livelihoods. Kenya's share of the Lake's 69,000 km^2 surface area is only 6%, with the community living within the basin constituting some of the poorest people in the world. The percentage of the population living on less than 1 dollar per day is 61%. The Lake, however, remains an important resource for Kenya with great investment opportunities.

The area faces severe environmental problems. The greatest of these is land degradation, which poses a threat to sustainable food production. The destruction of indigenous forests has not only contributed to soil erosion and loss of biological diversity but has also had an adverse effect on water catchments and river flow. The growing population is placing further pressure on land, forests, water and biological resources. The basin's natural resources have been severely ravaged and the environmental problems are directly linked to mismanagement and widespread corruption.

The Lake is threatened by industrial pollution, untreated municipal wastewater and increasing pollutant loadings from unsustainable agriculture, industrial systems and destroyed forest cover that accelerate erosion and land degradation.

Water and sanitation coverage in the Kenyan part of the basin is less than 40% and 20% respectively and the citizens in the area experience high morbidity (30%) and mortality (60%) caused by water related and water borne diseases like typhoid and cholera. The area also has the highest prevalence rate of HIV/AIDS in East Africa. Women and children are the most vulnerable.

Agricultural production remains low with combined food deficit scenarios that occur annually. The area is a net importer of food even though it has rich agricultural land, abundant rainfall and water bodies that could be harnessed in a sustainable manner to improve production. Kisumu City, situated on the lake shore, is reported to have the highest number of chronically under nourished people in the country; 53 % compared to the national average of 20-30 %.

The towns in the basin area are experiencing a rapid growth leading to a significant negative impact on living conditions, natural environment and the fragile ecosystem of the lake. The local authorities seem overwhelmed by the rapid development of these towns and lack the capacity or resources to address the widening demand-supply gap.

At the wider regional and national level, data has been collected and research undertaken on the status of Lake Victoria. However, no reference is made by the sectoral ministries on the modalities required to incorporate the existing knowledge in their implementation programmes. The National Poverty Reduction Strategy Paper (PRSP), in Kenya the Economic Recovery Strategy (ERS), is silent on how the national and sectoral institutions will link with the LVBC and regional programmes, such as the NELSAP.

3.1.1 Frameworks and structures

At the national focal point, vision and strategy for development of the water and sanitation, environment, natural resource and biodiversity sectors exist and are captured in the structural

reforms being implemented by the Government. Implementation of the Water Act 2002 in Kenya has a drive towards the establishment of district and trans-district water service providers and community based water users associations. There is however, an acute lack of human resource capacity for the proposed and already established institutions to effectively deliver.

The Ministry of Water & Irrigation has developed a new institutional framework for the water sector over the last years in close cooperation with various donors in the sector, especially Sida, Danida and GTZ. The new organisation structure is based on a vertical division between water services (supply) and water management. For both services and management, national and basin boards have been established and are responsible for regulation and supervision. At local level the consumers and service providers play their respective roles. In the WSS sector, structures have been established at the national and basin levels. In the Lake Victoria Basin, Lake Victoria South Water Service Board and Lake Victoria North Water Service Board are in place. The Water Service Boards are the sole authorities mandated to obtain the licenses for provision of water services and appointment of Water Services Providers. They are responsible for efficient and economical provision of water and sewerage services. Locally, Water Service Providers are being formed at the urban council level, which will operate and maintain facilities, as well as be responsible for billing and revenue collection while community based Water Users Associations are being formed in rural areas to ensure community participation in managing water resources within each catchment area.

For mechanisms on capacity building at national and local levels, the operationalisation of the Water Service Boards, the Water Service Trust Fund (WSTF) and community based Water Users Associations (WUAs) are important. The WSTF will provide funding for areas without adequate water services. The WSTF is financed by the government and different donors. This should lead to a more effective service delivery in WSS. Basin level programmes exist that are geared to develop and then link local level programmes to national level strategies in the WSS sector.

There are a number of NGOs and Community Based Organisations (CBOs) in the basin area, some of whom are already involved in the WSS sector. Some CBOs have the capacity to run their projects without depending on NGOs while others require NGOs to build their capacities.

3.1.2 Swedish development objectives in Kenya

The primary goal of Swedish development cooperation is to contribute to Kenya's efforts to reduce poverty with a geographic focus in the Lake Victoria region. The present strategy for Swedish development cooperation with Kenya (2004 - 2008) is based on the ERS and plans for poverty reduction produced by the government, elected in 2002. A common feature of this cooperation is the support through the country's poverty alleviation strategies and plans. The Swedish country strategy for Kenya identifies lack of democratic governance and respect for human rights as basic causes of poverty in the country. Sweden is supporting the country's strategy programmes in the areas that promote:

- democracy and human rights
- sustainable economic and social development
- improved living conditions for the rural poor
- sustainable use of natural resources

The bulk of programme support is extended to five principal sectors; agriculture, democratic governance, health, rural roads and water and sanitation. 20-30% of the funding in the water supply programme was directed to the Lake Victoria basin. Kenya also co-operates with a number of other bilateral development partners in the water sector including Germany, France, Japan, Belgium and Denmark as well as multilateral agencies (World Bank, the European Union, African Development Bank and the International Monetary Fund). The multi- and bi-lateral agencies mostly focus on the urban sector with the exception of Sweden that focuses on rural areas.

Sida decided to explore the opportunities for increased support to water, sanitation and environmental and natural resources management in the Lake Victoria Basin using existing mechanisms at regional, national or local levels. This is in recognition of the high priority on WSS as a mean of reducing poverty in Kenya's ERS.

3.2 Overall Strategic Analysis – Challenges and Opportunities

3.2.1 Challenges

Kenya is classified as a chronically water scarce country, with an annual renewable fresh water supply of only 647 m^3 per capita. The National Master Plan indicates that water demand for essential uses will increase significantly from 2,073 MCM/year in 1990 to 5,817 MCM/year in the year 2010. This will mean that 15 % of the available resources would be used. Only 12.6 % of gross run-off in rivers can be obtained without regulation works in rivers such as dams and reservoirs. The policy direction is to make every effort to conserve water when and where it occurs and regulate its utilisation as to benefit as many people and sectors as possible. One major activity in this plan will be the design of comprehensive operational plans for harmonizing abstraction records.

Catchment degradation, hydrological variability, deterioration and under investment in water storage capacity affect water security. Per capita storage capacity has been reduced from 11 m^3 in the 1960's to the current level of 4.5 m^3. The policy direction is to maintain strategic storage of water through construction of conservation works. Rehabilitation of all existing storage facilities and infrastructure assets and implementation of artificial groundwater recharge are some of the strategies and activities identified for implementation.

Limited expansion of existing infrastructure and inadequate investment in development of new schemes to match a rapidly growing population is leading to low access to safe water supply. The investment needs up to 2015 for urban water supply have been calculated at $1.8 billion and those for the rural water supply at $775 million in Kenya; this level of investment will also address the challenge of widespread collapse of infrastructure due to lack of investment in maintenance.

There are few programmes that strategically address the basin issues on environment and natural resource development. Lack of mainstreaming of environment in development planning is an often-mentioned issue. The Ministry of Environment receives low priority and funding in the government system, which does not induce other line Ministries to give environment high priority. Although there is an Environmental Management and Coordination Act (EMCA), there is no overall environmental policy or strategy. The National Environmental Action Plan (NEAP) should be prepared every 5 years, but the last version dates 1994. There is need to define criteria and regulations to intervene on environmental protection and enforce them at the national level.

The National Environment Management Authority's (NEMA's) capacity is still minimal at this moment, while the needs of this new institute are enormous. The various departments under NEMA (such as education and compliance) all need immediate strengthening to cope with their tasks. Local authorities/districts, cities, municipalities and townships are in the same position and need to be strengthened and their planning and development activities linked to the basin level for effective management of the environment and natural resources. The Fisheries Department, the Forestry Department and ministries of agriculture and local governments need to restructure their programmes to answer to the basin level.

A further challenge is that donors pursue different agendas and interests and there is potential for more co-ordination in terms of approaches, reporting procedures etc. That should be strengthened in light of the Paris Declaration on Aid Effectiveness among other things.

There is little awareness among the population about the link between community and individual action and the direct impact on the environment and the status of the Lake Victoria both in terms of negative impact as well as potential benefits to be derived for individuals/communities from positive developments. There is also little awareness at the community level of the sectoral reforms that are being implemented in the environmental and water sectors.

There are no structures that link community programmes to the regional programmes either through basin- or national programmes. However, all national programmes on WSS, environment and natural resource development recognise the need for community participation and provide for stakeholder forums to achieve this.

Marshalling the green water potential in this region is a major challenge. Since most of the poor rely on rain-fed agricultural practices this needs to be taken into account to a larger extent. While there is a need also for infrastructure to increase water storage capacity, which could be used for irrigation among other, there is also the need to develop strategies that acknowledge the green water potential.

Though Kenya has a large research capacity, it has been mainly created through donor support. Domestic funding remains extremely low, being on average less than 0.01 % of the annual government budget. In addition, there are too many small institutions, which are not well coordinated, undertaking research on varying activities.

Information on low-cost technologies for e.g. water supply and sanitation have not been pursued and implemented as thoroughly as required. There is a need for more active private sector and mass media involvement to popularise the technologies especially on sustainable sanitation, the potential of rainwater harvesting for blue and green water supplies, and environmental conservation through artificial ground water recharge.

3.2.2 Opportunities

The current level of development of the water resources is very low; only 15 % of the safe yield of renewable fresh water resources has been developed so far. There remains an opportunity to exploit the balance of 85 %. This might sound like a strange situation in a water scarce country like Kenya but like a recent World Bank report states: "There is no contradiction in the country being simultaneously water-scarce and able to safely exploit many times the current water usage. It simply means that not only does Kenya receive one of

the world's lowest per capita water replenishment rates each year, but that it has also not developed the limited amount of water available. This, together with the long-term degradation of the existing water resources, makes the country very vulnerable to perturbations in water supply, particularly from climate variability." (WB 2006).

The vision and strategies are generally in place and the Lake Victoria region is given high priority in the national ERS. What is needed now is action and investment plans to be developed further.

In the water and environment sectors, Sida and Danida are currently funding the WSTF which is a funding mechanism where the Water Service Boards make the first selection to target locations (previously selected through a poverty mapping). Sweden will fund CDTF/Environment fund through Environmental Programme Support (EPS) starting October 2006 where community and advocacy/awareness projects will be the priority. There appears to be a further need to harmonize and simplify development partner funding modalities as has been suggested, by establishing an external aid policy under the Ministry of Planning. This shall be seen as an opportunity to translate the principles of the Paris Declaration on Aid Effectiveness into concrete practice.[4] Considering the population density and the possibility of economic recovery, loans would be better suited for urban areas while rural areas would benefit better from grants.

The Kenyan private sector capacity is relatively well developed, which can help the WSS, environment and natural resource sectors benefit from market competition if good rules for procurement are put in place and if enforcement mechanisms are activated.

On a regional level a network exists (that is in need of strengthening) of EcoSan approaches which could assist in the spreading of environmentally sustainable practices in Kenya.

3.2.3 Linkages between national and local levels

At the national and local levels, the Western NGO networking forum, which coordinates the activities of over 500 NGOs in the region covering various themes, could provide a forum for reaching and linking local NGOs and CBOs.

The key NGOs that play major roles in the development of the water sector in Kenya's Lake Victoria Region include: SANA, Action Aid, Catholic Arch Diocese, Africa Now, Kisii Network for Ecological and Agricultural Development, Rural Water Development, Transmara, Care, Community Rehabilitation of Environmental Protection, EI-Agroforestry, World Vision, Plan Kenya, KWAHO, Agha Khan Foundation, Lake Basin Development Authority and the Anglican Church. Their programmes need to be linked to the Water Service Boards to ensure conformity to the needs of IWRM and the general populace.

3.3 Overview of existing and future national programmes and institutions

3.3.1 Policies and frameworks in place

<u>National Policies and Strategies</u>

- Poverty Reduction Strategy Paper

[4] This process is already ongoing in that Sweden is already working towards a Sector Wide Approach (SWAP) in the water sector as well as pushing for a Joint Finance Arrangement (signed as for now Sida, Danida, GTZ) though being extended to other donors for water.

- Kenya, Investment Programme for the Economic Recovery Strategy for Wealth and Employment Creation, 2003 – 2007
- Natural Resources and Environmental Strategy
- National Environmental Action Plan (NEAP) for Kenya
- Water Resources Policy for Kenya
- First National Water Resources Management Strategy
- Strategy for Revitalizing Agriculture 2004 – 2014
- Ministry of Agriculture Strategic Plan 2005 – 2009
- Strategic Plan for Lake Victoria South Service Board
- Strategic Plan for Lake Victoria North Service Board
- National Agricultural Extension Program
- The study on the National Water Plan
- 1996 Forestry Policy (The Forestry Master Plan)
- The Forest Bill 2000
- National Biodiversity Strategy and Action Plan
- Strategic Plan for Ministry of Planning and National Development
- Lake Victoria Basin Development Authority Act

International Environmental Conventions ratified by Kenya

- The Convention on Biological Diversity (CBD)
- The UN Convention to Combat Desertification (CCD)
- The UN Framework Convention on Climate Change (UNFCCC)
- The Ramsar Convention on Wetlands
- The Convention on Persistent Organic Pollutants (POP)

The Kusa Project

The Kusa initiative stands out, as a success story with the Rainwater initiative having a potential to supply 30% of the community's water needs. To date, it has achieved a penetration level of 30% i.e. there is one tank in every three homes. Rainwater harvesting correctly sized and run could be a simple entry point to community action, economic development and redefined gender roles and responsibilities. However, this must be linked to productive water use beyond domestic needs to ensure economic, financial and social sustainability. The implementation of the Kusa rainwater pilot project is being replicated at the Sauri Millennium Village in Siaya. There is need to undertake systematic documentation of such projects for future referencing. The Kusa project prides itself of a number of relevant and scientifically documented study reports. Given Sida's recent focus on policy development continuation of funding of "Kusa-like" projects does not seem to be particularly relevant. However, important lessons could be learnt from a deeper analysis of the Kusa experience.

3.4 Recommendations

At present Sweden is supporting the Kenya Water and Sanitation Programme and the EPS. It also contributes to the further harmonisation of the donors active in the water, sanitation and natural resources sector. The strive towards a Sector Wide Approach (SWAp) should be commended and could possibly be further enhanced. Knowledge exchange on Green and Blue water approaches would also potentially inform and complement the current support to EPS.

Further work on a SWAp for the water sector in Kenya is recommended as this would contribute to further integration, harmonisation and co-ordination between the actors in the water sector.

Urban areas in the basin need to expand infrastructure to handle wastewater and disposal of solid waste.

Expectations have been built up among many of the stakeholders such as the public, local communities, media and politicians that the sub-regional programmes will result in delivery of tangible benefits for the population in the basin and impact on the ground in the form of an improved environment and management of natural resources. An increasing emphasis on delivery of projects and activities is being emphasised. It could mean delivery of capacity building, institutional strengthening, harmonisation of e.g. legislation, knowledge sharing, etc. This should take place within existing support to programmes and projects. Continued support should be given to national and sectoral stakeholder organisations/networks to facilitate the active participation of all key stakeholders in the implementation of national programmes.

A systematic documentation of the Kusa project is recommended with a view to highlight lessons learnt from the project.

Close cooperation between the Ministries in charge of Water and Livestock Development, Environment, Agriculture, Tourism, Health and Local Government will be necessary for synergy purposes. A consultative forum bringing together key actors, development partners and institutions involved in the development of the country focal programmes in the basin could be constituted and operationalised. This should preferably be done through existing structures. The Development Partners, Government, private sector and communities should have a role in this process. Sida could play a key role in this process. Experience from the Sida-supported National Agricultural and Livestock Extension Programme (NALEP) in Kenya could be used in community mobilisation and participation.

Sida could support a national consultation on large-scale infrastructure and in particular on dams in light of the pressing need to improve storage capacity.

The high demand of Tilapia and Nile Perch by export factories and sardines for poultry feed has attracted commercial fishing companies making prices of these products out of reach for poor consumers. Development of fish sanctuaries and breeding grounds on cleaned river systems, ponds and irrigation structures is one avenue that Sida should support in this region.

The Ministry of Environment has low government budget allocation and weak policy development capacity. Sectoral approaches prevail, making it difficult to integrate environment. It has established an Environmental Division or Unit, which may assist improved policy development, mainstreaming of environment and coordination. An overall environmental policy and strategy is needed. Coordination between the many different institutions (NEC, NEAP, NET, MoENR) is required. Funding is required to achieve this.

3.4.1 Capacity Building

The capacity building needs are evident, and current programmes (Water Sector Reform Programme supported by GTZ) and Kenya Water and Sanitation Programme (supported by Sida/Danida) have national and regional level focus. The importance of the national and local level planning is evident for integrating environment in planning and implementation of

development activities, with an important role of the Environmental District Officers (under NEMA). An immediate area Sida could be involved in is capacity building of district and provincial environmental officers in order to;

- Conduct Training Needs Assessment (TNA);
- Identify suitable training institutes;
- Development of a training programme and modules;
- Provide training in for example sustainable sanitation solutions such as EcoSan

Other areas in need of support include:

- The set up and capacity building of the Water Appeal Board in Kenya[5]
- Increased support of the Water Trust Fund and Water Service Board
- TNA at national, intermediate and local levels
- Capacity building in IWRM
- Capacity building on Green and Blue Water perspective
- Provide technical assistance on IWRM
- Prepare a capacity building programme on IWRM
- Co-funding the Poverty Environment Initiative of DFID with UNDP and UNEP[6]

A strengthening of the training capacities of middle level institutions is required to ensure availed middle level technical expertise at the local level. Positive experiences gained from the Sida programme on training middle level personnel at the water training institute could be used to launch training programmes at the three institutes in the lake basin (Ramogi Institute of Advanced Technology-RIAT, SIT and MIT).

The capacity building needs at lower levels such as WUAs and CBOs are very important and extensive. These organisations will acquire legal ownership over their water supply systems and need assistance in their new roles.

3.4.2 Investment and Development needs

As mentioned above the total investment needs in the water sector are huge: in Kenya the urban water supply sub-sector needs $ 1.8 billion until 2015 and for the rural water supply sub-sector $ 775 million is needed. Furthermore, the German Development Bank, KfW, and the French Development Agency who chairs the development water sector donor group on water reforms has stressed that more funds are needed to implement the reforms.[7]

Technical issues are not sufficiently addressed. Especially the issue of lack of reliable data on catchment conditions (remote sensing), surface water resources and ground water monitoring (Hydromet system), and climate conditions (meteorological data). Improved governance, institutions, legislation, planning and management can only be done on the basis of access to reliable and up-to-date data. There is a need to have reliable data collection stations. These require funds and Sida could play a role in this.

[5] Total KWSP support is KSh 2,400,000. They have their offices which are now being renovated to start operations sometime in the second half of 2006. Their current "staff" is the chairperson.

[6] This option has been analysed by Sida in Kenya but it was decided not to fund more UN programmes but rather to seek bilateral cooperation which is being done thrrogh "silent support" to the environment programme in which Danida has the lead

[7] It should be noted that it is, in principle, Sida, Danida and GTZ supporting the reforms and not specifically the chairs of the water donor sector group

Mechanisms for eradicating poverty, changing consumption and production patterns, and protecting and managing the natural resource base for economic and social development needs to be developed. This could be done through:

- Development of policy instruments to correct market failure and distortions and to align public and private incentives with the health and well-being of the poor;
- Establishment and development of a market-based agricultural credit inputs system;
- Promotion of domestic processing of agricultural produce in order to provide increased opportunities for value-adding, employment creation and foreign exchange earnings.

3.4.3 Private Sector Development for Economic Growth

The informal industrial sector is an emerging economic base contributing to considerable pollution of the environment from unclean production and disposal systems. There is need for compliance assistance to Small Micro Enterprises and capacity building aimed at:

- Supporting the private sector to comply with the new environmental legislation imposed on them by NEMA, by raising awareness, providing technical tools and manuals on practical solutions related to effluent discharge and solid waste management;
- Capacity building and organisation of the private sector and government institutions involved, which have a responsibility to educate and inform the private sector on environment and pollution issues (NEMA and Ministry of Trade and Industry and the Centre for Cleaner Production).

3.4.4 Combating HIV/AIDS

The rural districts are densely populated and poorest in the country, with very low coverage in water supply and sanitation, highest prevalence of HIV/AIDS, and the highest level of child mortality. Addressing WSS, environment and natural resource and agricultural development will ensure safe water and a good nutritional base to counter the effects of water borne diseases and poor nutrition on HIV/AIDS affected people.

3.4.5 Gender

The issue of gender inequity remains a concern in Kenya and also related to the water/environment sector. The full participation of women in development continues to be hampered by a number of stubborn obstacles. The disparities are in particular noticeable in the fields of income distribution, income opportunities, political participation and socio-economic outcomes. The role of women in decision making processes needs strengthening, with full participation at all levels from WUAs to national level institutions.

4. Tanzania

4.1 Background

Tanzania is one of the poorest countries in the world with an annual per capita income estimated at $257 (World Bank 2003d). It was identified as one of the 'top priority' countries in this year's Human Development Report since it is not making sufficient progress to meet the MDGs in 2015.

Poverty is highest in rural areas of the country, where 39 percent of the population falls below the basic needs poverty line. The largest city in the country, Dar es Salaam, has the lowest level of poverty, with 18 percent below the same line (URT 1993, 2003a).

Clearly linked to this severe hunger situation is falling per capita food production in Tanzania, which reached a peak in the late 1970s and has declined by 32 percent since then (FAOSTAT 2003). In comparison, average per capita food production has also fallen in Sub-Saharan Africa, but only by 11 %. The majority of Tanzania's small-scale farmers rely on rain-fed agriculture with only 3.3 % of the total cropland being under irrigation (FAOSTAT, 2003). Declining per capita agricultural production is one important cause of hunger. In addition, large proportions of Tanzania's population suffer from malnourishment resulting from inadequate intake of nutrients.

49 % the surface area of Lake Victoria is laying in Tanzania and hosts 5.6 million people. The main economic activity and employment is agriculture, fisheries and livestock rearing. Tanzania enjoys the extra benefit of mining in Kahama and Shinyanga districts and tourism (the famous Serengeti National Park is the principal attraction) as valuable sources of foreign earning. However, the local communities derive minimal benefits from this and poverty is still pervasive in the area. The causes of poverty in this area have numerous dimensions. Self generating processes are perpetuated in a vicious cycle of mounting poverty, unsustainable pressure on natural resources, environmental degradation and greater poverty. The lake is threatened by pollution of toxic products from industrial and mining wastes, untreated municipal wastewater from the urban centres of Mwanza, Musoma and Bukoba; and increasing pollutant loadings from unsustainable agriculture, and accelerated erosion and land degradation.

Despite richness in natural resources and biodiversity, Tanzania's environmental resources are deteriorating. The environment is one of the main concerns of the Tanzanian government, even though no environmental targets were set in the current PRSP. Deforestation has been the main problem over decades, as it is estimated that approximately 91,000 ha of forest were destroyed between 1990 and 2000 through unplanned forest clearance for agriculture, forest fires, and other non-sustainable forest resource uses (FAO 2001). The major challenge today is to restore the affected areas and increase participation of key actors in environmental management and suitable use of environmental resources.

Access to improved water supply and sanitation in Tanzania is very low. According to preliminary estimates by WHO/UNICEF, access to improved water supply ranges from 48 % to 86 % in rural and urban areas respectively. The bigger challenge lies in the sanitation field where access is as low as 40 % and 53 % in rural and urban areas, respectively. The pace of progress in extending access to improved water supply and sanitation has been inadequate to meet the corresponding MDGs and the Johannesburg sanitation targets.

4.1.1 Frameworks and structures

An overall national vision and strategy for development of the water and sanitation sector exists and is captured in the Development Vision 2025 for Tanzania, National Water Policy, 2002 complemented by a National Water Sector Development Strategy to support planning and implementation and other related policies and strategy papers. The Water Resources Management Investment Programme and the National Rural Water Supply and Sanitation Programme have been prepared to guide activities in the sector. These will put in place structures for sub-catchment and river basin development, coordination and implementation and community participation. The established autonomous urban water supply and sewerage authorities have registered considerable achievements towards improved services and self-financing. However, there is acute lack of human resource capacities for the proposed and already established institutions to effectively deliver. The PRSP places high priority on WSS as a means of poverty reduction.

Within the new water policy, the old system of sectoral approach to development has been abandoned and planning and implementation has gravitated to integrated water resources management for full realization of benefits. The reform strategy has established 9 basins with Basin Water Office, Catchment Committees and Catchment subcommittees; 2 districts (Pangani and Rufiji) have been implemented on a pilot basis.

The National PRSP is silent on how the national and sectoral institutions link with the LVBC and regional programmes such as the NELSAP. However the Protocol for Sustainable Development signed by the three East African Community countries has indeed set out the basic framework for a joint effort in implementation of development programmes focusing on the Lake Victoria region.

Tanzania became the third country in Africa to qualify for the Heavily Indebted Poor Countries (HIPC) Initiative debt relief towards the end of 1990s. In this context, Tanzania's PRSP was developed in year 2000 through broad consultation with national and international stakeholders.

The Rural Water Supply and Sanitation Programme (RWSSP) is implementing the Rural Water Supply Sub-sector Component of the revised National Water Policy (2002). In line with the National Water Policy, the RWSSP emphasizes:

- Decentralization to district based WSS planning and implementation;
- A demand–driven approach based on Community Ownership and Management (COM) of WSS facilities;
- A 5 % up front contribution to capital costs and the full financing of Operationalisation & Monitoring costs by communities;
- Development and utilization of local private sector capacities in facilitation, design, construction and maintenance for sustained WSS service delivery
- Development and implementation of a strategy for hygiene promotion, improved sanitation, and promotion of HIV/AIDS prevention.

4.1.2 Swedish development objectives in Tanzania

The overall objective of the Swedish support to Tanzania is poverty reduction and the framework for future cooperation will be the Tanzania JAS and the PRSP. Coordination between programmes on all levels will be supported by Sweden and special consideration is given to the Lake Victoria region in the current Swedish strategy. The Swedish Embassy is

streamlining its development cooperation portfolio based on the JAS, phasing out many of the sectors, such as natural resources, urban development.

The future Development Strategy does not include regional cooperation. Tanzania also co-operates with a number of donors such as Germany, Denmark, Norway, Japan, Netherlands and the United Kingdom; as well as other bilateral and multilateral agencies like the World Bank, World Food Programme, International Monetary Fund, the African Development Bank and the European Union.

4.2 Overall Strategic Analysis – Challenges and Opportunities

4.2.1 Challenges

Based on projected population from estimated 32 million in year 2002 to about 59.8 million by year 2025, annual average available water per capita will be reduced by 45 % and Tanzania will be considered a water scarce country. The Ministry of Water and Livestock Development (MoWLD) will be the national focus directing policy, while implementation will be delegated to the basin and sub-basin levels. Linkages with similar programmes in the neighbouring countries will be necessary with respect to shared catchments and transboundary water bodies.

Inefficient water uses, such as low efficiencies of many irrigation schemes, (estimated at 10 % to 15 %); and leakages from domestic water supplies estimated to cause water losses up to 52 % of the water being produced; both of which contribute to reduction in water availability. The implementation of the National Rural Water Supply and Sanitation Strategy and the National Urban Water Supply and Sewerage Services Delivery is aimed at ensuring improved water use both in the rural and urban areas.

There is a need to develop strategies to reduce pollution entering the lake from the production processes; mainly mining and agriculture. Instruments entrenched in the various policies e.g. Industrial Policy, Agricultural Policy and Agricultural Sector Development Strategy, Rural Development Policy and Strategy, Land and Settlement Policy and Forestry Policy should guide efforts aimed at reducing pollution into Lake Victoria.

Inadequate integration of the sanitation sub-sector with the water sub-sector prevents it from desired growth and sustainable development. Inadequate sewerage infrastructure coupled with the rapid growth of unplanned areas in urban centres result in poor sanitation services that increase the incidences of water borne related diseases. Solutions need to be diversified in order to improve the situation. Other options then water borne sanitation solutions need to be further explored. The sector as a whole is still facing a number of inherited problems of financial and human resources required to continue with the task of providing for the majority of the population.

Another challenge is to identify robust and meaningful poverty-environment indicators which can be measured and provide insights into the impact of the poverty reduction policies. Until now, issues of human development and the environment have generally been addressed separately, without due acknowledgement of their inter linkages.

4.2.2 Opportunities

There is adequate water that can be harnessed to address the poverty situation in Tanzania. An integrated approach to water resources management and implementation of a participatory,

multi-sectoral, multidisciplinary river basin management could make good use of the available water resources. It needs to recognize that water is a scarce resource and integrate the linkage between land use and water use and recognize the important role water ecosystems play in the national economy.

The policies, vision and strategies are generally in place, as well as institutional frameworks for WSS, environment and natural resource development including partner coordination units. Examples are the JAS, the Public Expenditure Review, the Water Resources Management Investment Programme (which is under preparation and to be discussed with the World Bank in March 2006) in which government, development partners and the private sector will participate.

There has been a decentralisation of power and responsibilities in Tanzania and strengthening of the knowledge and capacity for water resources management and diversified sanitation solutions of local authorities/districts, cities, municipalities and townships could improve implementation of sustainable practices in these fields.

There is an interest and commitment among e.g. multi- and bi-lateral financiers/donors to continue and possibly increase financial resources to Lake Victoria Basin development. The individual sectoral programmes should link up with the national, regional and sub-regional developmental aspirations of the country. Donor alignment and coordination is imperative in this process.

The vision of the MoWLD for the Urban Water Supply and Sewerage sub-sector is to have autonomous, financially self-sustaining urban water supply and sewerage entities in all 19 urban centres with 100 % water supply coverage and 50 % sewerage coverage by the year 2020. Within the framework of this vision, the National Water Sector Development Strategy, launched 2004, have formulated a comprehensive National Strategy for Urban Water Supply and Sewerage Services Delivery. With adequate funds this together with other sustainable sanitation solutions has the potential to improve the situation in the expanding urban areas. On a regional level there exists a network (that is in need of strengthening) of EcoSan approaches which could assist in the spreading of environmentally sustainable practices in Tanzania.

4.2.3 Linkages between regional, national and local levels

In Tanzania, the JAS is a consultative forum between the government ministries and the partners. There is a need to develop links in this forum between national level and regional level programmes and national and local level implementation strategies, technical support and coordination between ministries and development partners.

4.3 Overview of existing and future national programmes and institutions

4.3.1 Policies and frameworks in place

National Policies and Strategies

- The National Water Policy (2002 to guide the water sector development;
- The Government's Development Vision 2025 sets the agenda and goals for overall improvement of quality of life for all Tanzanians;
- The National Strategy for Growth and Reduction of Poverty sets out strategies for reduction of poverty in line with the aspirations expressed in the Millennium Development Goals;

- The Ministry of Water and Livestock Development has produced the draft National Water Sector Development Strategy for management and development of water resources;
- Tanzania Joint Assistance Strategy (JAS) draft of 2005 is in the process of finalization;
- The National Environmental Policy is in place and has given birth to The National Environment Management Council as the enforcement arm. The World Bank protocols have generally been adopted in environmental assessments;

Other related policies and strategies include the following:

- Health Policy and Strategy
- Agricultural Policy and Agricultural Sector Development Strategy
- Energy Policy
- Local Government Reform Policy
- Rural Development Policy and Strategy
- Land and Settlement Policy
- Forestry Policy
- Industrial Policy
- SADC Regional Water Policy

4.4 Recommendations

Given the ongoing JAS process a main issue in Tanzania for Sida is to analyse how support to the regional level through LVI could be situated in the new aid architecture situation in the country.

The focus of the reforms is at the moment mostly on commercial urban water supply and institutions, while less attention is given to sanitation, water resources management, pollution and rural water supply. It is suggested that preferably (soft) loans should be used to finance the urban water supply sector. Setting up a loaning mechanism and providing funds for the loans is an opportunity worth pursuing.

The institutional framework (at national & regional level) is being built. Reforms are a very complex process, which require flexibility of both government and development partners in implementation. Grant funds should be used to implement the reforms, with a focus on capacity building, especially in the field of integrated water resources management.

There is a need to increase the efficiency of collection and treatment of wastewater discharges into the environment. Wastewater and rainwater disposal infrastructure need to be further developed, especially in the growing urban areas. While these are often local issues a failure to address them might have national and also regional repercussions.

It is recommended to support capacity building activities that at the same time promote integrated approaches to resource management and sub-regional/river basin development. Close cooperation between the Ministries of Water and Livestock Development, The Environment Division (Office of the Vice President) and Agriculture will be necessary for synergy purposes. A consultative forum bringing in key actors, donors and institutions involved in the development of the Tanzania side of the basin could be constituted and operationalised. This should preferably be done through existing structures. The Development Partners, Government, private sector and communities will have a role in this process. Experiences from the Sida-supported NALEP could be used in community mobilisation and participation.

Sida could usefully try to further engage with other donor organisations to promote alignment and coordination.

Sida could support a national consultation on large-scale infrastructure and in particular on dams in light of the pressing need to improve storage capacity.

4.4.1 Capacity Building

The capacity building needs are evident, and current projects (GTZ and Sida/Danida) have a focus on national and regional level. However, the capacity building needs at lower levels such as WUAs and CBOs are very important and extensive. These organisations will acquire legal ownership over their water supply systems and need assistance in their new roles. Capacity building is also needed on integrated water resources management at all levels. The capacity building programme should not be limited to technical and commercial skills, but should cover social and cultural dimensions that would lead to changes in the mindset of people at all levels. The role of extension officers in the agricultural and livestock areas, NGOs, development partners, national government is significant in this area.

Key areas of capacity building where Sida could be involved include:

- Earmark disbursements into the appropriate bodies in Tanzania for capacity building in IWRM: conduct a TNA at national, intermediate and local levels; provide technical assistance on IWRM; prepare a capacity building programme on IWRM;
- Institutional study on operationalizing the reforms in rural water supply: Define institutional requirements at local level with respect to implementation and operationalization of rural water supply following the reforms. Learn from the experience of Kenya;
- Funding development of external aid policy: Support the secretariat under the JAS; improve coordination of various development partner funding initiatives and modalities; improve and harmonize funding procedures;

4.4.2 Investment and Development needs

Technical issues are not sufficiently addressed. This relates especially to the issue of lack of reliable data on catchment conditions (remote sensing), surface water resources and ground water monitoring (hydromet system), and climate conditions (meteorological data). Improved governance, institutions, legislation, planning and management can only be done on the basis of access to reliable and up-to-date data. There is need to have reliable data collection stations. These require funds and Sida could play a role in this.

The total investments in water resources management are much higher than in water supply infrastructure and have been estimated by the World Bank at $ 16 billion until 2030. Much of these investments are needed for increasing the water storage capacity through both biological and structural measures. Sida could scale up programmes on rural water supply and catchment protection in Lake Victoria. Such a programme could be modelled to achieve the following objectives:

- Organise rural WUAs and assist these to establish and maintain access to safe water supply;
- Raise awareness and build capacity of WUAs in soil and water conservation activities of micro catchments, including water harvesting, and in other related issues notably sanitation, gender and HIV/AIDS;

- Develop mechanisms and capacity building on the institutional anchoring of WUAs within the new institutional framework of the water policy and Act.

The major economic activity in the urban centres along the lake is small scale or "jua kali" manufacturing, which has given rise to a proliferation of small industries that consume considerable water and discharge wastes. These wastes constitute point and non-point sources of pollution of the lake. Compliance support could aim at:

- Supporting the private sector to comply with the new environmental legislation imposed on them by the National Environmental Management Council (NEMC), by raising awareness, providing technical tools and manuals on practical solutions related to effluent discharge and solid waste management;
- Capacity building and organisation of the private sector and government institutions involved, which have a responsibility to educate and inform the private sector on environment and pollution issues (NEMC).

Environmental pollution and contamination is rather serious and needs more attention. The development partners should support NEMC. It needs technical support to change their way of operation and production. Biodiversity conservation is also an issue of concern. It is an important generator of revenues through tourism, notably the wetlands, which are subject to high external pressures.

Mechanisms for eradicating poverty, changing consumption and production patterns, and protecting and managing the natural resource base for economic and social development needs to be developed. This could be done through:

- Development of policy instruments to correct market failure and distortions and to align public and private incentives with the health and well-being of the poor;
- Establishment and development of a market-based agricultural credit inputs system;
- Promotion of domestic processing of agricultural produce in order to provide increased opportunities for value-adding, employment creation and foreign exchange earnings.

4.4.3 Private Sector Development for Economic Growth

The informal industrial sector is an emerging economic base contributing to considerable pollution of the environment from unclean production and disposal systems. There is need for compliance assistance to Small Micro Enterprises and capacity building aimed at:

- Supporting the private sector to comply with the new environmental legislation imposed on them by raising awareness, providing technical tools and manuals on practical solutions related to effluent discharge and solid waste management;
- Capacity building and organisation of the private sector and government institutions involved, which have a responsibility to educate and inform the private sector on environment and pollution issues

4.4.4 Combating HIV/AIDS

The rural districts are densely populated, with very low coverage in water supply and high prevalence of HIV/AIDS. Addressing WSS, environment and natural resource and agricultural development will ensure safe water and a good nutritional base to counter the effects of water borne diseases and poor nutrition on HIV/AIDS affected people.

4.4.5 Gender

The issue of gender inequity remains a concern in Tanzania and also related to the water/environment sector. The full participation of women in development continues to be hampered by a number of stubborn obstacles. The disparities are in particular noticeable in the fields of income distribution, income opportunities, political participation and socio-economic outcomes. The role of women in decision making processes needs strengthening, with full participation at all levels from WUAs to national level institutions.

5. Rwanda

5.1 Background

Rwanda does not border the Lake Victoria shores but it has the largest contributor to the lake within its borders, the Kagera River. A large portion (67 %) of Rwanda land area is located in the Basin and drains 90 % of Rwanda national water resources towards Lake Victoria via the Kagera. This makes the Kagera and Rwanda the major source of the White Nile. One of the main problems related to the Kagera River is the water hyacinth infestation that is transported through the river and into the Lake Victoria.

Rwanda had its first parliamentary election since independence in 2003 and the new constitution was enacted the same year. The country is still recuperating from the devastation of the civil war and genocide of 1994 and the governmental agencies and institutions are still adjusting to the massive work needed to cope with rebuilding the war thorn country. The implementation process of new policies and frameworks is lacking routine.

The natural resources also suffered from the lack of governmental and policy influence that followed the civil war. The country's forest cover is almost halved compared to pre-1994 conditions. The massive movement of the population and fighting forces are one of the main reasons for this. The lack of infrastructure for physical and biological conservation has accelerated soil degradation and erosion. The countries water resources also show a decline in quality since pre-1994.

Data from the Ministry in charge of water and sanitation shows that in 2005, 54 % of the Rwanda population had access to potable water supply; 67 % in urban area and 41 % in rural area. According the General National Census of 2002, 82.7 % of households have a latrine. But only 8 % of them comply with hygienic and construction standards and most of them are traditional ones. Poverty levels in the basin part of the country ranges from 12 % to more than 75 %.

Farming activities cover more than 70 % of the total national area. Agricultural production system relies on small farms whose production is self-consumed at more than 80 %. According to the 2001 report from the Ministry of Agriculture and Animal Resources, the size of family farms varies from 0.5 ha (34 %) to 2 ha (16 %).

5.1.1 Frameworks and structures

Rwanda is in the middle of large institutional reforms, among others a decentralisation process to local governments. Many of the necessary policies and frameworks have been written and are also approved. The implementation of these policies and framework has been slow as the new institutions are adjusting to the new roles that are given them.

Environment, water and sanitation, lands and forests are departments of the same Ministry in Rwanda (Ministry of lands, environment, forests, water and mines). Policies, strategies and three years plans of action in these sectors were developed in 2005. These policies and strategies were based upon the overall national tendencies as they appear in the 2020 vision of the Poverty Reduction Strategic Plan (PRSP) and the Programme of Decentralisation and Good Governance. The Government of Rwanda is in the process of reviewing the PRSP and the document under preparation is entitled "Economic Development and Poverty Reduction Strategy (EDPRS)". A national strategy for conservation of biodiversity and its plan of action

were adopted in 2000. A national environmental health policy, strategies and plans of action are in the process of elaboration.

5.1.2 Swedish development objectives in Rwanda

In the Swedish strategy priority has been given to (1) peace, stability and reconciliation, (2) democracy and human rights, (3) economic reforms and macroeconomic stability and (4) institutional support and development of capacity. Capacity development, HIV/AIDS and gender equality are inter-thematic issues. Democracy and human rights have been promoted by means of support to the formulation of the new constitution, the 2003 election process and the building up of the capacity of authorities, often in cooperation with Swedish public institutions. The overall Swedish support is guided by the Rwandan poverty strategy. As Rwanda is becoming a member of the EAC it will also have the possibility of receiving support within the framework of the Swedish support to the Lake Victoria Basin.

5.2 Overall Strategic Analysis – Challenges and Opportunities

5.2.1 Challenges

There has been a persistent imbalance between Rwanda's population and its natural resources, i.e., lands, water, fauna, flora, and forests. The pressure on the resources (due mostly to high density of the population), associated with anarchic and inefficient use of land, have resulted in deforestation and utilization of wetlands. The main results of this are soil erosion and degradation, inadequate groundwater reloading, desertification (e.g. Bugesera land), destruction of the biodiversity, silting up of lakes and rivers, water resources pollution and diminution (e.g. decrease of levels in Lakes Ruhondo and Bulera causing an unprecedented national energy crisis, drying up of Lake Cyohoha North). The land erosion is aggravated by the hilly relief of Rwanda (altitude varying from 900 m to 4,507 m over a territory of 16,338 km^2).

The efficiency of the community-based associations for water supply is weak and together with the sanitation situation it is in need of addressing. The main challenge in water and sanitation is to increase water availability (in quantity and in quality) and basic sanitation to 100 % in 2020.

Pollution of rivers and lakes by hyacinth and other aquatic weed is a new and alarming phenomenon in Rwanda. Contamination of groundwater and surface water from solid waste, liquid waste and runoff, represents a big issue, especially in urban areas. Most of the surface waters are loaded with suspended and colloidal matter derived from land erosion. In urban areas, waste water is collected by an on-site sanitation, through septic tank and cesspools. Runoff collection networks in urban areas are not sufficient. Landfills are mostly uncontrolled.

There is no data available for water resources quality for lakes and rivers and groundwater. The quality and availability of groundwater (hydrology) is not well known.

The problems in the water and sanitation sector are aggravated by the lack of competent personnel and a very low participation of the private sector represents a serious problem.

Within Rwanda there is also need for improved donor coordination and alignment with Rwanda's own goals and priorities.

5.2.2 Opportunities

Rwanda has been cooperating with neighbouring countries in development of management programmes cross border ecosystems. Rwanda joined the NBI, the New Partnership for Africa's Development and the African Ministers' Council of Water and is in the processes of becoming member of the EAC.

At present the sanitary practices are not sustainable. On a regional level there exists a network (that is in need of strengthening) of EcoSan approaches which could assist in the spreading of environmentally sustainable practices in Rwanda.

Rwanda has a dense hydrographic network with length of about 2 km per square km; lakes cover an area of 128,190 ha; permanent rivers cover an area of 7,270 and marshlands and valley water cover an area of 77,000 ha. With a sustainable management these resources, in combination of increased use of EcoSan approaches, that should be able to support the population.

In 2004 the Government of Rwanda created Rwanda Environment Management Authority. The establishment of Rwanda Office of Water Supply and Sanitation is in process. NGOs, CBOs and the private sector are stakeholders in the four sectors but need to be strengthened to play a more active role in awareness raising and projects implementation. The process of decentralisation is taking place through notably environment, water and sanitation, lands and forests. With a strengthening of the knowledge and capacity in these areas, local authorities/districts, cities, municipalities and townships could improve implementation of sustainable practices in these fields.

5.3 Overview of existing and future national programmes and institutions

5.3.1 Relevant national policies and frameworks

National Policies

- National Policy on the Environment (2003);
- Sector Policy on Water and Sanitation (2004);
- National Land Policy (draft from 2004);
- National Forests Policy (2003)
- Sector Strategies of the Ministry of Land, Environment, Forestry, Water and Mines (for the period of 2005-2010);
- Environmental Health Policy (under elaboration);

National Strategies

- Rwanda Poverty Reduction Strategy Paper;
- Environment Sector Strategy;
- Water and Sanitation Sector Strategy;
- Land Sector Strategy;
- Forests Sector Strategy;

5.4 Recommendation

The new EDPRS should focus on the implementation of the policies, strategies and plans of action, in environment, water supply, land and forest. Since Rwanda is expected to shortly

become a member of EAC, the EDPRS should emphasize the sub-regional cooperation of other EAC countries, especially in environment, water resources, land and forest management. It is important to strengthen the links between regional policies and especially Lake Victoria Basin Cooperation and Rwanda national policy and to ensure that there is consistency between them for the management of joint natural resources of the Lake Victoria Basin (water, land, forests and atmosphere). Rwanda should try to harmonise its policies in environment, water resources, land and forests management with sub-regional policies. Sida should participate in the process of reviewing the EDPRS.

Coordination, harmonisation, information and experience sharing between water resources sector policy should be emphasized. Innovative and low-cost options for water supply and sanitation are critical for the achievement of the MDGs. Sweden is a global leader in developing ecological sanitation and has provided support to rainwater harvesting in Kenya. It is recommended that there is an intensified effort to promote alternative low-cost technologies for water supply and sanitation.

Waste water and rainwater collection and disposal/treatment of solid waste needs to be expanded, especially for the City of Kigali, as it may play an important role in the reduction of pollution load in Kagera river and consequently in Lake Victoria (reversal of eutrophication processes).

Sida could support a national consultation on large-scale infrastructure and in particular on dams in light of the pressing need to improve storage capacity.

5.4.1 Project support

The existing and future projects identified may be classified in four categories:

- Regional projects including Rwanda: Nile Basin Initiative including the NELSAP, AFRICOVER Project, international conventions, protocols and agreements related to the environment.
- Regional projects not including Rwanda: Ecological sanitation and market-based product development around the Lake Victoria Basin using bamboo; RELMA/ICRAF Kusa community towards poverty reduction; ASARECA; Lake Victoria Fisheries Research Programme and Lake Victoria Fisheries Organisation; Network of Environmental Journalists for Lake Victoria; water supply and sanitation programmes and other programmes identified at sub-regional level;
- Rwanda National projects likely to be integrated in sub-regional context: large water and sanitation projects, land management projects at national level, water resources management in the Lake Victoria Basin (Nile Basin);
- Rwanda National projects which cannot be integrated in sub-regional context: water supply and sanitation projects, environmental protection projects, land and forests management projects located in Rwanda Congo-Basin, small (local) water supply and sanitation projects, small environmental protection, land and forests management projects located in Rwanda Nile Basin (Lake Victoria Basin).

Regarding the above categorisation, Sida could play a part in the regional projects including Rwanda. These programmes/projects may include the promotion and implementation of rainwater harvesting for domestic use (roof gutters and tanks) and for agricultural use (small-scale dams and irrigation), the surveillance of water quality and quantity of lakes and rivers and wetlands, integrated water resources management, building capacity of Rwanda professionals (including journalists) in sub-regional institutions, support in the

implementation of international conventions, protocols and agreements related to environment. Sida should contribute in the replication and up-scaling of NELSAP programmes findings.

For Rwanda national projects/programmes likely to be integrated in sub-regional context, Sida could make this happen. Waste water and rainwater collection and disposal/treatment of solid waste in urban areas, especially for the City of Kigali, may play an important role in the reduction of pollution load in Kagera river and consequently in Lake Victoria (reverse of eutrophication processes). Agricultural transformation needed in Rwanda has to be accompanied by supportive environmental actions in order to halt deforestation, soil erosion and reduction in water tables. Measures could focus on rainwater harvesting, surveillance of water quality and quantity of lakes and rivers and wetlands, terraces cultivation and anti-erosive channels, water retention structures at small scale fort irrigation purposes and uses of pesticides and fertilisers. Management of Rwanda lakes and rivers and wetlands is critical for Lake Victoria. Rwanda could also usefully increase its use of green water.

Sustainable sanitation is at a starting point in Rwanda and needs support. Rwandan organisations could usefully be included in EcoSan network(s) for the region.

5.4.2 Capacity Building

A strengthening of the training capacities of middle level institutions is required to ensure availed middle level technical expertise at the local level. This is important for securing efficiency when the decentralisation process has been completed. Positive experiences gained from the Sida programme on training middle level personnel at the water training institute in Kenya.

A component for Rwanda on Green-Blue water issues should be developed.

5.4.3 Investment and Development needs

Technical issues are not sufficiently addressed. This relates especially to the issue of lack of reliable data on catchment conditions (remote sensing), surface water resources and ground water monitoring (hydromet system), and climate conditions (meteorological data). Improved governance, institutions, legislation, planning and management can only be done on the basis of access to reliable and up-to-date data. There is need to have reliable data collection stations. These require funds and Sida could play a role in this.

Mechanisms for eradicating poverty, changing consumption and production patterns, and protecting and managing the natural resource base for economic and social development needs to be developed. This could be done through:

- Development of policy instruments to correct market failure and distortions and to align public and private incentives with the health and well-being of the poor;
- Establishment and development of a market-based agricultural credit inputs system;
- Promotion of domestic processing of agricultural produce in order to provide increased opportunities for value-adding, employment creation and foreign exchange earnings.
- Increased support to align policies and frameworks in Rwanda to that of the EAC and the newly formed LVBC.

5.4.4 Private Sector Development for Economic Growth

The informal industrial sector is an emerging economic base contributing to considerable pollution of the environment from unclean production and disposal systems. There is need for compliance assistance to Small Micro Enterprises and capacity building aimed at:

- Supporting the private sector to comply with the new environmental legislation imposed on them by raising awareness, providing technical tools and manuals on practical solutions related to effluent discharge and solid waste management;
- Capacity building and organisation of the private sector and government institutions involved, which have a responsibility to educate and inform the private sector on environment and pollution issues

5.4.5 Combating HIV/AIDS

The rural districts are densely populated, with very low coverage in water supply and high prevalence of HIV/AIDS. Addressing WSS, environment and natural resource and agricultural development will ensure safe water and a good nutritional base to counter the effects of water borne diseases and poor nutrition on HIV/AIDS affected people.

5.4.6 Gender

The issue of gender inequity remains a concern in Rwanda and also related to the water/environment sector. The full participation of women in development continues to be hampered by a number of stubborn obstacles. The disparities are in particular noticeable in the fields of income distribution, income opportunities, political participation and socio-economic outcomes. The role of women in decision making processes needs strengthening, with full participation at all levels from WUAs to national level institutions.

6. Uganda

6.1 Background

54% of all Uganda's population draws their livelihoods directly or indirectly from agriculture and fisheries. The Lake suffers from severe degradation also in the Ugandan part. This includes water quality problems for water supply systems, impact on fish breeding sites, drying/receding wetlands, reduced power generation efficiency and impact on industrial development in Uganda and the declining Nile perch fisheries in Lake Victoria potentially due to over-exploitation of the resource.

Overall sanitation coverage is low in Uganda in general and in the Lake Victoria Basin in particular. In Uganda 51 % of the rural and 89 % of the urban population has access to safe drinking water. When it comes to sanitation the equivalent figures are 54 % and 40 %. Sewerage coverage is only about 7 % and yet treatment works are far from efficient, leading to heavy pollutant loading into the Lake.

6.1.1 Frameworks and structures

Key national and sectoral policies and strategies are in place. The over-arching national poverty eradication policy is the Uganda Poverty Eradication Action Plan. The water and sanitation sector is implementing a sector-wide approach to planning (SWAp) and have developed a 15-year integrated sector investment plan to support the country to meet its sector targets. Traditionally Uganda has not had the Lake zone as a development priority but rather focused on its troubled northern part of the country. This might however be due to the fact that there quite a large bias towards that part of the country anyway.

Water sector reforms, coordination, harmonization and information sharing with other sectors and stakeholders are quite advanced in Uganda. Sida is one of the key development partners supporting the sector. Considering this there is still not a national-specific programme for the Lake Victoria in Uganda. Basin-specific activities are the regional activities namely the Lake Victoria Environmental Management Project (LVEMP) and NBI/NELSAP. There appears to be a gap however, with respect to dissemination and integration of these programmes into complementary national programmes. There is need to involve stakeholders at the grassroots that directly impact/are impacted upon by the lake and its resources.

The Government of Uganda fully embraced the LVEMP and through it, a number of studies and assessments have been developed. Draft synthesis reports exist, although these have to be improved to provide information that can guide future actions.

A number of NGOs/CBOs are in place to help communities to attain sustainable development. National institutions to support development within and across sectors are also in place (e.g., NEMA, National Forest Authority, the National Water and Sewerage Council).

Decentralization has taken root in Uganda and to support achievement of national objectives, sectors have put in place capacity building organs/programs (e.g. the Technical Support Units of the water and sanitation sector ensure that implementers at the district and lower government levels have the capacity to implement programmes according to sector norms and standards.

6.1.2 Swedish development objectives in Uganda

The main objectives of the development cooperation between Sweden and Uganda are to combat poverty, contribute to a sustainable social and economical development and promotion of democracy and human rights.

Sweden has a special focus on the Lake Victoria region of Uganda through the Lake Victoria Initiative which highlights the need for improved natural resources management to decrease the pressure on the lake environment. In Uganda much of the support has been directed toward the conflict in the northern part.

6.2 Overall Strategic Analysis – Challenges and Opportunities

6.2.1 Challenges

Whereas coordination and harmonisation at the central government level is quite well-developed, there are still challenges in implementing inter-sectoral district water and sanitation coordination committees to ensure joint planning, implementation and monitoring, so as to optimize the use of limited resources. There is also a need to review water sector laws to empower catchments to manage the water resource in an integrated and sustainable manner, especially under decentralisation where political boundaries are different from lake and river catchment boundaries.

The reducing water level in Lake Victoria has led to attendant water quality and energy production problems which have also affected industrial production, small scale enterprises and water supplies in some towns.

The urban sanitation sub-sector is fragmented with many roles falling under the under-funded and limited-capacity local authorities. It is also under-financed, with respect to all components: water-borne sanitation, public facilities, solid waste management, and urban drainage. Consequently, towns like Kampala have most of their waste ending into Lake Victoria. Rural Water Sub-sector is under-funded and cannot meet national targets at the current rate of funding. There is thus a need to address the sanitation situation.

Many NGOs and CBOs do not integrate their areas of focus towards one goal of poverty reduction – it is not easy to see their overall strategy. Some NGOs/CBOs have created more demand than their human and financial resources can handle.

Research institutions are still ineffective in developing findings and successes into replication and scaling up and incorporation into national policies.

There is little awareness among the population about the link between community/individual action and the direct impact on the environment and the status of the Lake both in terms of negative impact as well as potential benefits to be derived for by them from positive developments.

6.2.2 Opportunities

The Water Research Management Department of the Directorate of Water Development is in the process of developing the framework for catchment management of river and lake basins, through putting in place a legal framework and supporting catchment based NGOs and CBOs.

Sida and other partners should support this initiative. This new catchment wide approach has possibilities to improve the situation in the Lake.

At present the sanitary practices (whether in towns or in the rural areas) are not sustainable. On a regional level there exists a network (that is in need of strengthening) of EcoSan approaches which could assist in the spreading of environmentally sustainable practices in Uganda.

NGOs, CBOs, the private sector exist and if strengthened they could play a more active role in awareness raising, project implementation and monitoring.

There is some progress in reduction of corruption at national and local levels. More effort is still required to increase effectiveness in resource utilization, e.g. through use of alternative approaches/technologies, and better accountability/increased consumer voice.

6.3 Overview of existing and future national programmes and institutions

6.3.1 Policies and frameworks in place

Relevant National Policies and Frameworks

- Uganda Poverty Eradication Action Plan (PEAP), 2004/5 – 2007/8
- Natural Resources and Environmental Policies and Strategies
- National Environmental Action Plan (1995)
- The National Water Policy (1995).
- The National Environment Management Policy (1994)
- The National Environmental Sanitation Policy (2005)
- The Wetlands Sector Strategic Plan (2001)
- The Convention on Persistent Organic Pollutants (POP)
- The Rural Water and Sanitation Strategy and Investment Plan (2000-2015) (RWS-SIP 15) that requires US$ 608million to increase safe water coverage to 77% or US$ 950million to increase the coverage to 95% by 2015.
- The Urban Water and Sanitation Reform Strategy and Investment Plan (2000-2015) that requires US$ 481million to provide 100% urban population with safe water and sanitation by 2015.
- The Water for Production Strategy and Investment Plan (2005-2015) that requires US$ 393 m by 2015, of which US$ 146m is to be financed from public funds and US$ 247m from the private sector and farming community.
- The Water Resources Management Strategy and Investment Plan (2005-2015) that requires US$ 61m.
- Programme for the modernisation of Agriculture (PMA)

6.4 Recommendations

There is a need to increase the efficiency of collection and treatment of wastewater discharges into the environment. Increased focus on wastewater management by the National Water and Sewerage Corporation and implementation of the Kampala and 15 Towns Master plans are critical. Sida could support elements of this gap.

Institutional strengthening of urban authorities to manage the increasing waste loads is critical if pollution loading into the lake is to be curbed and Sida could support local governments to enhance their institutional capacity to manage wastes in a sustainable way.

There is need for enhance financial resource utilization and effectiveness if the sector is to achieve its targets, especially in view of low sector ceiling and the need for a stable macroeconomic environment. Increased transparency and value for money, as well as the use of appropriate technologies are necessary. A strong consumer voice that can ensure accountability by implementers should be supported. This could be in the form of an umbrella organization such as the Uganda Water and Sanitation NGO Network (UWASNET) or through the support of organisations like Water and Sanitation Programme - Africa and Transparency International. Sida should strengthen the capacity of such organizations to increase accountability and effectiveness of resource utilization.

Implementation of the National Integrated Monitoring and Evaluation Strategy at decentralised levels and across sectors should be done to ensure coordination, information sharing and reduction in duplication of monitoring and evaluating arrangements.

The energy sector in Uganda is important for poverty reduction, yet it is still undeveloped with the majority of Ugandans relying of wood biomass for fuel. Sida could support national efforts at rural electrification and the generation of more sustainable sources of energy including hydro power, solar energy and geo-thermal energy. A national consultation on large-scale infrastructure and in particular on dams in the light of the pressing need to improve storage capacity could be supported by Sida. The proposed policy for regional energy support could also consider bilateral support in the sector.

Coordination and cooperation between various sector actors especially at local government level under decentralisation is still wanting. Support is required in this direction. For example: Coordination of rural sanitation services delivery under decentralized framework of service delivery is fragmented, leading to non-optimised resource utilization and inadequate coordination between the water and the agricultural sectors.

Cooperation/coordination between the regional organizations and national actors needs to be improved to increase impact. While institutional capacity has been strengthened in regional organisations/ programmes there is limited capacity to support delivery and implementation of activities as opposed to collecting information and conducting research.

Coordination and alignment among donors should also be sought.

6.4.1 Capacity Building

A strengthening of the training capacities of middle level institutions is required to ensure availed middle level technical expertise at the local level. This is important for securing efficiency when the decentralisation process has been completed. Positive experiences gained from the Sida programme on training middle level personnel at the water training institute in Kenya.

6.4.2 Investment and Development needs

Technical issues are not sufficiently addressed. This relates especially to the issue of lack of reliable data on catchment conditions (remote sensing), surface water resources and ground water monitoring (hydromet system), and climate conditions (meteorological data). Improved governance, institutions, legislation, planning and management can only be done on the basis of access to reliable and up-to-date data. There is need to have reliable data collection stations. These require funds and Sida could play a role in this.

Mechanisms for eradicating poverty, changing consumption and production patterns, and protecting and managing the natural resource base for economic and social development needs to be developed. This could be done through:

- Development of policy instruments to correct market failure and distortions and to align public and private incentives with the health and well-being of the poor;
- Establishment and development of a market-based agricultural credit inputs system;
- Promotion of domestic processing of agricultural produce in order to provide increased opportunities for value-adding, employment creation and foreign exchange earnings.

6.4.3 Private Sector Development for Economic Growth

The informal industrial sector is an emerging economic base contributing to considerable pollution of the environment from unclean production and disposal systems. There is need for compliance assistance to Small Micro Enterprises and capacity building aimed at:

- Supporting the private sector to comply with the new environmental legislation imposed on them by raising awareness, providing technical tools and manuals on practical solutions related to effluent discharge and solid waste management;
- Capacity building and organisation of the private sector and government institutions involved, which have a responsibility to educate and inform the private sector on environment and pollution issues

6.4.4 Combating HIV/AIDS

The rural districts are densely populated, with very low coverage in water supply and high prevalence of HIV/AIDS. Addressing WSS, environment and natural resource and agricultural development will ensure safe water and a good nutritional base to counter the effects of water borne diseases and poor nutrition on HIV/AIDS affected people.

6.4.5 Gender

The issue of gender inequity remains a concern in Uganda and also related to the water/environment sector. The full participation of women in development continues to be hampered by a number of stubborn obstacles. The disparities are in particular noticeable in the fields of income distribution, income opportunities, political participation and socio-economic outcomes. The role of women in decision making processes needs strengthening, with full participation at all levels from WUAs to national level institutions.

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