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WWF Mara River Basin Management Initiative, Kenya and Tanzania

PHASE III – FINAL EVALUATION REPORT

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Abbreviations and Acronyms

BMZ	German Federal Ministry for Economic Cooperation and Development
BSAP	Biodiversity Strategy and Action Plan
CAAC	Catchment Areas Advisory Committee (Kenya)
CBO	Community Based Organization
CDTF	Community Development Trust Fund
CFA	Community Forest Association (Kenya)
CMG	Catchment Management Groups (Kenya)
CMS	Catchment Management Strategy
CMs	Council of Ministers
CSR	Corporate Social Responsibility
DFT	District Facilitation Team (Tanzania)
EAC	East African Community
EARPO	Eastern Africa Regional Programme Office (of WWF)
EDCP	Effluent Discharge Control Plan
EFA	Environmental Flows Assessment
EMC	Environment Management Act (Tanzania)
EMCA	Environment Management Coordination Act
EIA	Environmental Impact Assessment
ESARPO	Eastern and Southern Africa Regional Programme Office (of WWF)
GoK	Government of Kenya
GoT	Government of Tanzania
IGA	Income Generating Activity
IRBM	Integrated River Basin Management
IWRM	Integrated Water Resources Management
KCO	Kenya Country Office (of WWF)
KFS	Kenya Forest Service
KWS	Kenya Wildlife Service
LVBC	Lake Victoria Basin Commission
LVBWB	Lake Victoria Basin Water Board (Tanzania)
LVBWO	Lake Victoria Basin Water Office (Tanzania)
LVSCA	Lake Victoria South Catchment Area
MCWC	Mara Catchment Water Committee
MoA	Ministry of Agriculture
MoU	Memorandum of Understanding
MoW	Ministry of Water
MRB	Mara River Basin
MRBMI	Mara River Basin Management Initiative
MRCC	Mara River Catchment Committee (in Tanzania)
MWRUA	Mara Water Resources User Association (Kenya)
NBI	Nile Basin Initiative

NELSAP	Nile Equatorial Lakes Subsidiary Action Programme (of NBI)
NEMA	National Environment Management Authority (Kenya)
NRB	Nile River Basin
NOK	Norwegian Kroner
Norad	Norwegian Agency for Development Cooperation
SCMP	Sub-Catchment Management Plan
SEA	Strategic Environmental Assessment
SENAPA	Serengeti National Park
TAC	Technical Advisory Committee (Kenya)
TANAPA	Tanzania National Parks
TCO	Tanzania Country Office (of WWF)
TWRUF	Trans-boundary Water Resources Users' Forum
TZ	Tanzania
USAID	United States Agency for International Development
USD	United States Dollars
WRM	Water Resources Management
WRMA	Water Resources Management Authority (Kenya)
WRMA-LVSCA	Water Resources Management Authority (Kenya) - Lake Victoria South Catchment Area
WSTF	Water Service Trust Fund (Kenya)
WRUA	Water Resources Users' Association (Kenya)
WUA	Water Users' Association (Tanzania)
WWF	World Wide Fund for Nature

Acknowledgements

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Executive Summary

This report presents findings from the final evaluation of Phase III (2010–2012) of the Mara River Basin Management Initiative (MRBMI) which was initiated by the World Wide Fund for Nature (WWF) and supported by the Norwegian Agency for Development Cooperation (Norad) and WWF-Norway. The evaluation was commissioned by WWF-Kenya Country Office (KCO) in cooperation with WWF-Norway. The Project's overall goal was improved water quality and quantity and the purpose was enhanced Integrated Water Resources Management (IWRM) policies and practices in the Mara River Basin by the end of 2012.

Brief description and context

The Mara River Basin covers approximately 13,750 km^2 and is a trans-boundary river basin which is shared by Kenya and Tanzania (65% and 35% respectively). The Mara River originates from Kenya in the Mau escarpment and drains into Lake Victoria in Tanzania. Problems such as poor water quality and quantity and environmental degradation continue to threaten biodiversity and local livelihoods in the Mara River Basin. Over-abstraction of water resources due to increasing demand, pollution, loss of forest cover, unsustainable agriculture, poor and inadequate infrastructure and facilities, weak legislative and institutional arrangements are among the causes of these problems in the Mara River Basin (MRB). To address these problems strategically, the project was designed in three phases with results from one phase forming a basis for the design of the next phase. The phase III being the last one followed from recommendations of phase II and was designed to complete IWRM activities as well as documenting lessons learned for up scaling. The expected outputs of this phase are outlined below.

Phase III set out to fulfil four main outputs:

Output 1: Strengthened capacity of community level representatives and their institutions (including Mara Water Resource User Association (MWRUA), Mara River Catchment Committee (MRCC) and water users' associations (WUAs)) to implement integrated water resources management (IWRM) and income generating activities (IGAs) relevant to IWRM.

Output 2: Key IWRM results, impacts and lessons documented and disseminated to partners and stakeholders to enhance knowledge and participation in IWRM.

Output 3: IWRM advocacy and lobbying strengthened through engagement of local, national and regional partners to influence implementation processes of policies and legislations for improved delivery of IWRM**.**

*Output 4***:** Sustainability, coordination and partnerships among IWRM institutions strengthened to improve IWRM implementation at local, national and trans-boundary levels.

Overall assessment

Phase III strongly focused on sustainability and documentation and dissemination of lessons learnt from previous interventions. The achievement of activities in these areas in accordance with the workplan was 100% in Kenya and 65% in Tanzania. Specifically, a total of six new Water Resources Management (WRM) institutions were successfully established and formalized in the MRB and over 800 people were recruited which increased local awareness, participation and representation. Advocacy and lobbying activities were

also enhanced significantly at local, national and regional levels. However, the Project continued to face various challenges such as slow processes in reforming the water sectors; lack of commitment and political goodwill by key partners (e.g. government departments) and limited financial capacities of local WRM institutions to for self-sustainability. The evaluation was conducted to assess the Project using a set of criteria and these are relevance, effectiveness, efficiency, impacts sustainability, replicability and magnification potential of the Project's activities. Key findings are as follows:

Relevance

Phase III was relevant because it raised awareness on the value of conserving the Mara River Basin which supports a rich diversity of plants and animals. The long term goal of the Project of improved water quantity and quality of the Mara River and its associated streams will eventually benefit diversity of plants and animals of the Mara-Serengeti ecosystem. The great wildebeest migration between the Masai Mara and the Serengeti National Parks is a significant ecological activity and mammals such as the African Elephant and the Black Rhino which inhabit the savannah plains of the Mara-Serengeti ecosystem are of global conservation significance.

At purpose level, Phase III contributed significantly to water sector reform processes in both Kenya and Tanzania by strengthening legal and institutional frameworks. Three new WRUAs were formed in Kenya (Lower Mara, Sand River and Talek) and another three WUAs in Tanzania (Upper Tigithe, Lower Tigithe and Tobora) in recognition of the need to mainstream the Project's objectives into the national policy frameworks as stipulated in the Kenyan Water Act (2002) and Tanzanian Water Act (2009). Much support was given to these local WRM entities by facilitating processes of registration, development of their constitutions, Sub-catchment Management Plans (SCMPs) and action plans. In addition, successful lobbying of the Water Resources Management Authority (WRMA) to sign the Instrument of Appointment with the Mara WRUA in Kenya and the Lake Victoria Basin Water Office (LVBWO) to sign Memorandum of Understanding (MoUs) with the WUA/MRCC in Tanzania further enhanced IWRM processes. These frameworks provided avenues and mechanisms to promote lobbying for implementation of IWRM policies. The MoUs enhanced recognition of activities carried out by the WRUAs and in particular data collection and monitoring. It made the WRUAs own the process and assume sense of responsibility in executing the functions. As the WRUAs and WUAs continue to proliferate in the basin, they provide platforms and opportunities for sharing lessons and best practices through capacity building workshops which were effectively carried out by the project.

The Project responded appropriately to the recommendations made in the Phase II evaluation (**see recommendations in Section 5.1**). For example, the Project documented and disseminated lessons learnt from IWRM implementation processes with reference to: establishing, activating and sustaining stakeholder platforms; local land and water management interventions from local to catchment scales; IWRM implementation methodologies and trans-boundary river basin management and; monitoring of impacts of local level interventions for IWRM. The documentation process has proved to be valuable and relevant in providing guidelines on IWRM practices for the Mara River Basin, WWF programmes and partners. For instance, the WRMA has applied some lessons learnt in Lake Victoria Basin (LVB) in Kenya.

To promote regional coordination in trans-boundary water resources management, Phase III worked closely with the USAID grant under MRBMI in lobbying the Lake Victoria Basin Commission (LVBC) of the East African Community (EAC) to adopt strategic documents mainly the Environment Flow Assessment (EFA) for the Mara River, Strategic Environment Assessment (SEA) for the Mara River Basin and the Biodiversity Strategy and Action Plan (BSAP) and Payment for Ecosystem Service policy guide for the transboundary Mara River Basin within its activities. The Project also lobbied the LVBC to support the Trans-boundary

Water Resources Users Forum (TWRUF) which the Project created in previous phases, in an attempt to promote regional policies on trans-boundary natural resources management within the East African Community (EAC). These efforts were made in collaboration with other partners.

Effectiveness

Effectiveness of the project was assessed against the 16 indicators (3 at purpose and 13 at outputs level) as outlined in the log framework (**Annex 5**). The majority of these indicators were achieved effectively during Phase III (**see degree of achievement section 6**). In particular, the Project made significant achievement in enhancing IWRM implementation processes by successful facilitation of formation of new WRUAs/WUAs, their registration and formalization procedures. In Kenya, Nyangores, Main Mara, Talek and Sand River WRUAs were supported to be compliant with WRUA development cycle including development of draft SCMPs. In Tanzania, the WUAs/MRCC were supported to draft action plans in line with the LVBWO mandates. SCMPs and action plans are important instruments through which these WRM institutions execute IWRM policies and practices and this is in line with the water acts in both countries. Secondly, these instruments have been used to substitute business plans which Phase III had intended to develop for the WRUAs/WUAs/MRCC. In Tanzania, business plans were not developed because the project was informed that the WUAs are supposed to develop action plans that will be part of implementation of the LVBWO business plan and not to have business plans of their own. In Kenya, it was agreed that the project support the WRUAs to come up with SCMPs and develop funding linkages with the Water Service Trust Fund (WSTF) which will ensure sustainable funding of IWRM activities. To further strengthen the capacities of these WRM institutions, a Capacity Needs Assessment (CNA[1]) exercise was conducted for all the WRUAs in Kenya and capacity building plans were developed. The same was done in Tanzania and recommendations used in capacity development of WUAs as well. The WRUAs and the WUAs provided opportunities through which stakeholders and beneficiaries can voice their demand for services and also participate in decision making processes with regard to implementing the IWRM activities in the basin. Use of tools namely SCMPs and Action plans ensured that the IWRM problems in the basin are comprehensively and progressively addressed.

During Phase III over 800 local community members were effectively recruited by the new WRUAs/WUAs of which more than 50% of these community representatives are women and about 30% of the committee members are female. The creation of these stakeholders' platforms effectively enhanced local participation in WRM as well as gender equality in the Mara River Basin. The project wound down its engagement on IGA activities by supporting a very limited number of IGA intervention in 2010. These were initiated in the previous phase (planting high value trees and dairy goats initiatives) and attempts were made to conclude them in the early part of phase three so that the project could concentrate on four key strategic approaches; lessons sharing, lobbying for IWRM policy implementation, strengthening capacity for water data collection and monitoring and finally, enhancement of sustainability of IWRM dialogue platforms developed by the project within the legal and institutional framework prescribed by the Water Acts in both countries.

Documentation of lessons learnt from implementing IWRM was highly effective in both countries and four thematic areas were successfully appraised by a team of external IWRM experts. Dissemination of lessons learnt was done in Kenya where two workshops were held for practitioners and policy-makers and three policy briefs were drafted to strengthen local capacities and engage relevant government departments to implement IWRM at local levels. In Tanzania, no formal communication of lessons learnt was done.

[1] CNA was also conducted for the Technical Advisory Committee (TAC) in Kenya and in Tanzania as well.

An advocacy and lobbying strategy was successfully developed[2] and the Project facilitated dialogues between the WRMA and LVBWO and WRUAs/WUAs/MRCC. For example, the Project effectively facilitated formalized monitoring arrangements through MoUs between WRUAs/WUAs and WRMA/LVBWO. As a result, all the six WRUAs in Kenya started to use turbidity tubes to record water clarity in various sites in 2012. In Tanzania, the LVBWO was facilitated to lobby the Ministry of Water and Irrigation (MWI) to finance water resources monitoring stations while the Lake Victoria Basin Water Board (LVBWB) was lobbied to fund MRCC to carry out monitoring activities.

With reference to sustainability, the majority of the activities which the Project carried out successfully such as establishing and registering new WRUAs/WUAs; development of their SCMPs/action plans; development and signing of contractual agreements with mandate owners all promote sustainability. The active involvement of lead agencies such as WRMA and LVBWO provides opportunity for sustaining and up scaling the activities.

Efficiency

Based on against 13 activities in the work plan (**see Section 7.2**), the Project completed the majority of its planned actions in both countries. In Kenya, 100% of the activities were completed and 65% in Tanzania. All the WRUAs/WUAs were successfully established as planned and the majority developed their IWRM plans. Four thematic areas of documentation were successfully appraised, ToRs were fully developed and competent consultants were recruited to carry out the process. An advocacy and lobbying strategy was successfully completed which clearly made important recommendations on how to move forward IWRM processes in the Mara River Basin. The Project successfully organized the development and signing of contractual agreements (e.g. between the WRMA/LVBWO and the WRUAs/WUAs/MRCC) and worked closely with LVBC of the East African Community (EAC) and Nile Equatorial Lakes Subsidiary Action Programme (NELSAP) of the Nile Basin Initiative (NBI).

Since Phase III focused on sustainability and lessons learning experiences, IGAs became a low priority for the Project team but collaborative efforts were made to support local community groups to implement afforestation and dairy goat keeping initiatives through other grants within the MRBMI. Formal disseminating of lessons learnt from the documentation was not done in Tanzania mainly because funding was cut short within the final year of the Project. Development of business plans was deliberately omitted and instead it was decided that SCMPs and action plans would be used for fundraising. SCMPs and action plans are adequate for planning business activities for the WRUA/WUAs. These institutions in accordance with the legal frameworks of Kenya and Tanzania are intended to promote environmental conservation as opposed to exploitation of resources for enhanced income generation in the context of entrepreneurship. Efficiency is therefore viewed from the realization of the proposed activities in the context of the purpose of the project and in comparison to value for resource inputs. With 100% achievement in Kenya and 65% in Tanzania, the project can be considered to be efficient. Both the SCMPs and the action plans are guided by the national policies for water resources management aimed at realization of environmental sustainability

A comparison of budget and expenditure items indicated that the funds were efficiently utilized with overall under expenditure of 10% in 2010 and 19% in 2011. In 2011, the under expenditure was balanced by over expenditure although in one of the items namely, communication and fundraising the over expenditure was quite high at 52%. However, this was balanced by negligible expenditure for the same

[2] With funding from the USAID

item in 2011. In the same year 2011, all expenditures were less than the budget with relatively low percentage deviations. In this case also third party fees which had a relatively higher under expenditure can be said to have been balanced by over expenditure in 2010 so that during the project period, the budget can be said to have been efficiently expended. The budget was incurred in executing activities of which overall, over 80%[3] were completed efficiently as planned. Good staff performance contributed to this efficiency.

Impacts

An immediate outcome of the Project was that it created awareness and strengthened local capacities on water governance. The WRUAs/WUAs already act as the implementing agencies of regulatory frameworks in Kenya and Tanzania and their members have gained insights into the Mara River Basin issues and water sector reform processes in Kenya and Tanzania. Findings showed that members of these WRM institutions who participated in activities such as registration, development of institutions, SCMPs/action plans, contractual agreements (e.g. MoUs) have gained various technical skills required in good water governance.

The WRUAs/WUAs have become good platforms for social interactions and members have been able to share common interests and learn from each other and this has promoted social learning which is useful in river basin management (Tippett *et al*. 2005). In addition women's participation in water governance increased and it is envisaged that they will play key roles in decision-making processes and this is good progress towards gender mainstreaming in IWRM processes.

With a larger stakeholder engagement in IWRM, it is expected that IWRM process and implementation across the River Basin will improve. It is anticipated that this will lead to improved water flows in the Mara River and this enhance long term sustainability of ecological processes that govern the biodiversity level and species abundance in the Mara-Serengeti ecosystem. Secondly, local interventions which combine livelihoods with catchment protection will improve biodiversity, reduce soil erosion, improve ground water recharge and help mitigate the effects of climate change in the Mara River Basin. These are long term impacts which can only be realized in the long run if the activities are sustained. Such anticipated impacts include improvement of ecosystem services arising from IGAs such as afforestation and dairy goat farming

It was too early to document the Project's impacts with reference to long-term goal of securing improved water flows and good water quality. This is because there needs to be long-term reliable hydrological data that can be carefully analyzed to show some meaningful trends in water quality and quantity in the River and associated streams. Potential negative impacts associated with the project may include cultural erosion as a result of introduction of new goat breeds and social exclusion of non-project beneficiaries. These impacts are noted but they are however outweighed by the positive impacts resulting from enhanced availability of good quality IWRM processes generated by the project in the basin. Overall, the Project's achievements of enhancing IWRM policies and practices will have long-term positive impacts on socio-economic conditions, water resources management and environmental conservation in the Mara River Basin.

Sustainability

[3] Based on 100% completed work plans in Kenya and 65% in Tanzania

Phase III made significant achievement in ensuring sustainability of river basin activities. Firstly, multi-stakeholder's platforms have promoted social learning and collective action in catchment management and livelihood diversification. On the other hand however, success of individuals or groups to continue with the Project's activities will be determined by level of external support, commitment and whether the benefits accrued outweigh the costs incurred.

Secondly, many of the multi-level institutions that the Project facilitated will act as avenues for sustaining land and water management initiatives in the Mara River Basin. This is because the Project made good efforts in providing technical and financial support to WRUAs/WUAs by formalization processes through contractual agreements with higher level WRM authorities (e.g. MoUs and Instrument of Appointment). Successful signing of MoUs and subsequent recognition and clarification of the roles of these WRM institutions will sustain their participation in river basin activities if they have adequate financial and technical resources. In addition, SCMPs and action plans which the Project helped to develop will enable the WRUAs/WUAs/MRCC to fundraise and execute their various roles effectively. The activities initiated by the project will need continued support as they develop into new ones depending on emerging issues. WRUAs/WUAs will need to continue mobilizing resources to sustain these activities. The framework for establishment of WRUAs/WUAs provides for public and private sector participation in IWRM and this provides avenues for resource mobilization. Some of these institutions include WSTF in Kenya, LVBC and Community Development Trust Fund (CDTF) which has been very active in especially in Kenya. Through synergies and networking with these institutions and others resources will continue to be mobilized to sustain the IWRM activities. WRUAs/WUAs also do internal resource mobilization through membership drive and monthly subscription to support some of the activities. This diversification of resource mobilization is an opportunity to be explored in order to reduce dependency on donor funding.

Overall, the Project made a significant achievement in the establishing and formalizing several WRM institutions all of which have a high potential for sustainability of IWRM processes.

Replicability and Magnification

Replicability and up-scaling have high potential as WRUAs/WUAs continue to grow within and outside the River Basin. The purpose of the Project conforms to the objectives of government institutions in both Kenya and Tanzania as well as the needs of the target groups and beneficiaries. This combination will ensure that the internal dynamics of WRUAs/WUAs will sustain the IWRM processes. The involvement of stakeholders and in particular mandate owners at higher government levels has been replicated in Kenya and Tanzania. For example, it is now mandatory for the WRMA and LVBWO to participate in WRUA/WUA's activities such as development and implementation of SCMPs/action plans. Secondly, the Project's efforts to align its activities with the higher level government authorities (e.g. WRMA and LVBWO), key partners such as the LVBC and other donors (e.g. USAID) means that there is a great potential to up-scale activities such as afforestation and water quality monitoring in other areas within the catchment. It is anticipated that if the project continues to disseminate key lessons learnt from implementing its various activities to a wide range of audience, the replicability and magnification potential will be raised significantly beyond the MRB. Already some of the lessons learned and experience gained during the formation and capacity development of MRB WRUAs have been used by WRMA-LVSCA during the formation of WRUAs in other basins such as Sondu.

Lessons learnt

The underlying principle of integrated river basin management is to take into account multiple perspectives. Hence an important lesson learnt in the MRB is the need to recognize the priorities of different stakeholders (e.g. socio-economic needs of the local communities) and align them with catchment

conservation activities. Thus in response, the Project through collaborative efforts promoted IGAs among local communities as a way to incentivize them to engage more effectively with conservation activities.

Another key lesson learnt about sustainability is the importance of aligning efforts with key partners such as government departments. The Project made a significant achievement in establishing WRUAs/WUAs, strengthening their capacities as well as lobbying mandate owners to make commitments in supporting them. This will ensure sustainability of WRUAs/WUAs and their activities in the longer run although it was noted that over-reliance on external funding can also limit sustainability of WRM institutions.

The need for strong national and regional collaboration was also a key lesson learnt. The Project invested much time and efforts in lobbying key stakeholders such as the WRMA and the LVBWO and the LVBC to formally recognize WRUAs, WUAs, MRCC and TWRUF. In order to do this, it is important to put in place contractual agreements and to make sure that they are signed by the relevant parties in order to formalize the ToRs. However, processes of contractual agreements can be slow due to delays in fulfilling legal requirements necessary for the contract to be binding.

The other lessons learnt from implementing the MRBMI include the importance of monitoring impacts of the project in order to justify activities and the need to document and disseminate lessons learnt from implementing IWRM policies and practices. For example, learning from previous experiences can improve the efficiency of future activities as previous mistakes can be avoided and resources can be invested on what works.

Recommendations

The key recommendations are:

- ✓ Up-scaling capacity building of WRUAs/WUAs for proposal development for resources mobilization is essential to sustain IWRM activities carried out by the WRUAs;
- ✓ Development of communication materials for up-scaling best practices and lessons learned follows from the knowledge generated by project which needs to be made available in other WRUAs/WUAs within and outside the basin;
- ✓ Institutionalization of basin-wide approach for effective upstream - downstream interactions. This approach is essential in ensuring that there is a mechanism for coordination of IWRM activities carried out by WRUAs within the same basin.
- ✓ Continued monitoring of water quality and quantity to provide long term data for water allocation and planning as well as monitoring impacts of IWRM processes implemented in the basin.
- ✓ Replication of IGAs to incentivize WRUAs/WUAs to participate in IWRM processes and sustain the activities.
- ✓ Continuation of catchment protection and soil conservation measures to restore the functions of the catchment in sustaining the environment.
- ✓ Mainstreaming best practices and execute IWRM functions with the policy framework in line with the up-coming water act as aligned to the Kenyan Constitution 2010.
- ✓ Promote payment of economic use of water within the policy frameworks for example through Water Resources Management Rules in Kenya to sustain IWRM actions.
- ✓ Support implementation of trans-boundary water policy to enhance IWRM processes in MRB.

1. Introduction and purpose of the project evaluation

This report presents findings from the final evaluation of phase III of the WWF Mara River Basin Management Initiative (MRBI) in Kenya and Tanzania. An independent assessment was conducted to evaluate the achievements and impacts made by the Project, their contributions and sustainability in relation to the purpose of the Project. The evaluation was commissioned by WWF Kenya Country Office in cooperation with WWF-Norway. The purpose of the evaluation in accordance with the TOR is to provide WWF and project stakeholders with an independent assessment of the achievements made toward the project purpose, how these have contributed to the overall project goal and identify the impacts of the project and ways that this may be sustained. Findings from the evaluation will act as guidance in the design and implementation of future WWF projects in water resources management as well as those of partner organizations, both governmental and non-governmental.

The exercise focused on the three year Phase III of the Mara River Basin Management Initiative (January 2010–December 2012) and was conducted from 12th November to 20th December 2012 by a team of three external consultants who have sound knowledge and understanding of water resources and environment management at local, national, regional and international levels, including experience from Kenya and Tanzania. The team was led by Professor Japheth Onyando of Egerton University, Kenya who has over 20 years work experience in Hydrology, Water Resources, and Environmental Management. Professor Onyando has a high level of expertise and extensive field experience in integrated water resources management (IWRM) and plays an important advisory role in shaping water reform process in Kenya. The team leader was assisted by two experts; Dr. Leah Onyango, who is a socio-economist with over 15 years of experience and Dr. Dorice Agol, a multi-disciplinary scientist with over 10 years' experience in environment, natural resources management and international development.

2. Methodology

Literature reviews were conducted on the Project's documents (**see reference list**), relevant policies and academic papers. Interviews and discussions were held with key stakeholder representatives and Project staff. Key stakeholders were drawn from WWF offices, local and central governments of Kenya and Tanzania, Community and private company representatives, etc. A list of all respondents consulted is presented in **Annex 4.** Questionnaires were used to collect quantitative and qualitative data (**Annex 6**). Focus group discussions and informal conversations generated useful information as did field visits and observations. Mixed methods of quantitative and qualitative data analyses were used (e.g. percentages and content analysis). However, the evaluation exercise was limited by time and could not carry out extensive fieldwork especially with regard to collecting quantitative data for more comprehensive analysis.

3. Project Background, Context and Justification

3.1 Summary of project Information

Table 1: A summary of the Project's information.

Project Name	Mara River Basin Management Initiative
Project Location	East Africa (Tanzania and Kenya)
Project reference numbers: WWF-International WWF-Norway Norad	9F074901 5002 GLO-08/449-26 (2010–2011), QZA-11/0893-18 (2012)[4]
Project budget	2010: NOK 1,905,005 2011: NOK 2,330,704 2012: NOK 1,464,826 Total (phase III) = NOK 5,700,535
Donor(s)/ funding sources	*Norad (90%), WWF-Norway (10%)*
Implementing agency and partners	WWF-Norway and WWF Eastern and Southern Africa Regional Programme Office(ESARPO) Partners: Ministry of Water and Irrigation (Tanzania and Kenya) Water Resources Management Authority (Victoria South Catchment), Kenya and the Lake Victoria Basin Water Office, Tanzania
Contact person	Mohamed Awer MAwer@wwfesarpo.org, Batula Awale BAwale@wwfesarpo.org, Seif Hamisi SHamisi@wwesarpo.org, Onesmo Zakaria ozakaria@wwftz.org, Andrew Fitzgibbon (afitzgibbon@wwf.no)

Start Date:	1st January 2010	**Expected End Date:**	31stDecember 2012
Network Initiative / Ecoregion Programme / Priority Place(s)			
Africa Rift Lakes Priority Place			

3.2 Project background

Project management and organization

The Project was executed with support from various partners as represented in the Project's implementation structure in **Figure 1**. Norad was the main donor of the Project and WWF-Norway had the

[4] The first phase was 2003–2005 and the second phase 2006–2009. Project numbers were 9F074901 (WWF-International), 5002 (WWF-Norway) and GLO-02/467-7 (2003–2005), GLO-05/312-3 (2006–2008), GLO-08/449-4 (2009) for Norad.

overall responsibility to support the Project and coordinate its funding activities. The WWF Kenya Country Office (WWF-KCO) coordinated and facilitated all Projects' operations with direct support from the WWF-Tanzania Country Office (WWF- TCO).

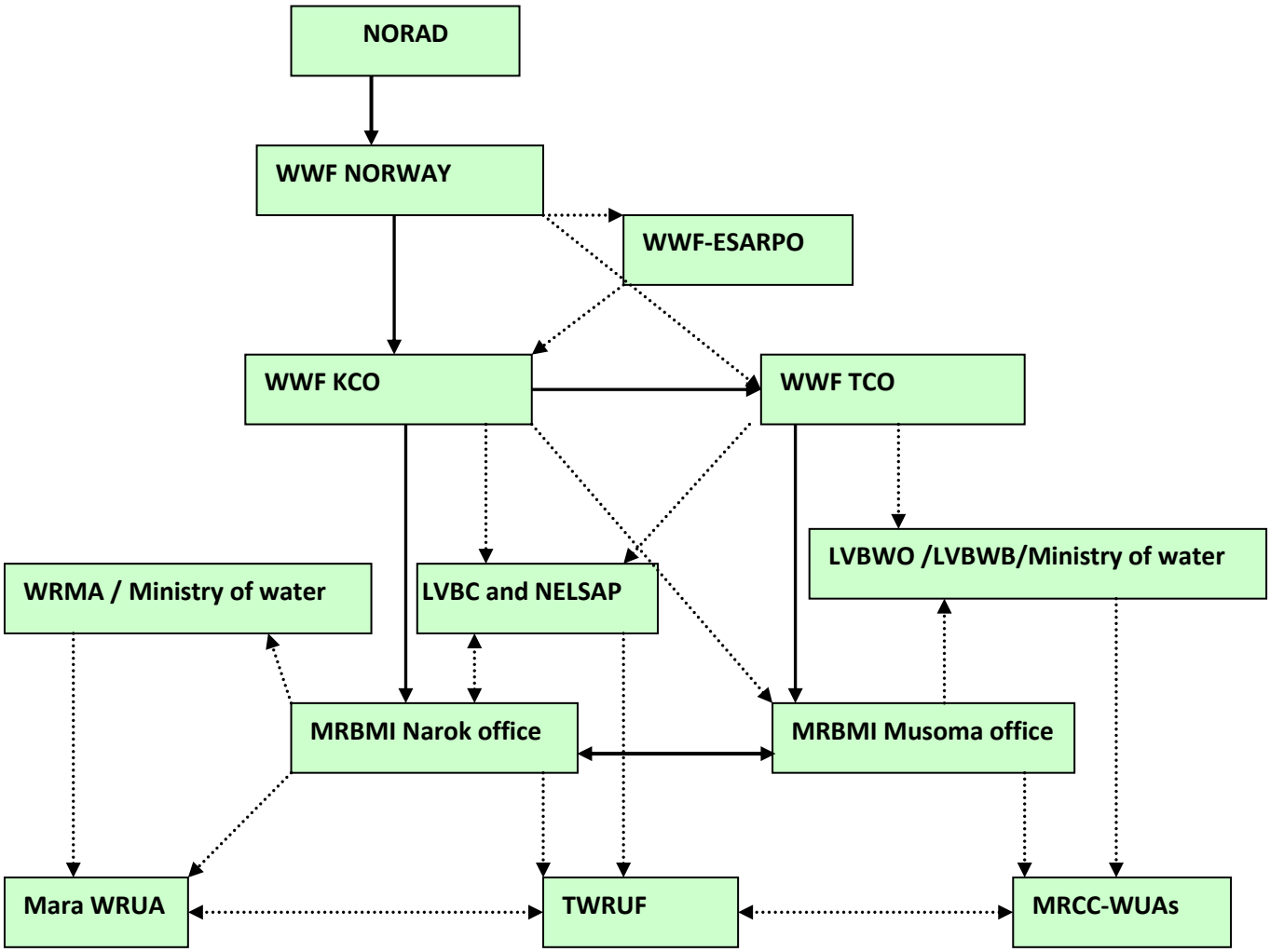

Figure 1: Simplified project implementation framework for the Mara River Basin Management Initiative (MRBMI).

Complete lines in the figure illustrate formalized relationships where reporting is done while dashed lines illustrate less formalized relationships characterized by consultations. Text box 1 outlines the key partners and their main responsibilities.

Other partners participated through joint work plans. At regional level, the LVBC supported the Project in coordinating trans-boundary water management activities through the Council of Ministers (CoMs) of the East African Community (EAC). In Kenya the WRMA, Ministry of Water and Irrigation (MWI) and Mara WRUA played key roles in supporting water resources management activities. The LVBWO, Ministry of Water (MoW), WUAs, MRCC and District Councils in Tanzania supported the Project in WRM activities. Local governments such as the Narok County Council (Kenya), and the village governments in Tanzania gave some administrative support to the Project in relevant areas of jurisdiction. Local partners such as Community Based Organizations (CBOs) and private sectors (e.g. farmers, miners, hoteliers) also collaborated with the Project in various ways.

Text box 1: Key Project's Partners and their responsibilities

Norad: The principal donor providing 90% of the financial support.

WWF-Norway: Donor providing 10% of the financial support and coordination with Norad and WWF-KCO for quality assurance and technical input.

WWF-ESARPO: Facilitates regional coordination between WWF-KCO and WWF-TCO.

WWF-KCO: Provides administrative, technical, communications, human resource and policy support to WWF field office in Narok and recipient of donor funds.

WWF-TCO: Provides administrative, technical, communications, human resource and policy support to WWF field office in Musoma.

MRBMI Narok Office: Execution of project in Kenya.

MRBMI Musoma Office: Execution of project in Tanzania.

WRMA/Ministry of Water and Irrigation (Kenya): Mandated to manage water resources in Kenya.

LVBWO/LVBWB/Ministry of Water (Tanzania): Mandated to manage water resources in Tanzania.

EAC LVBC and Nile Basin Initiative Nile Equatorial Lakes Subsidiary Action Programme (NELSAP): Manages shared water resources of the Lake Victoria Basin.

Mara and other WRUAs: Brings together water resource users in the Mara River Basin in Kenya.

MRCC-WUAs: Brings together water resource users in the Mara River Basin in Tanzania.

TWRUF: A forum that facilitates dialogues on trans-boundary water resources management in Kenya and Tanzania.

Geographical location

The Mara River is an international river, shared between Kenya and Tanzania (see **Figure 2**). The size of the Mara River Basin is about 13,750 km^2, of which about 65% is located in Kenya and 35% in Tanzania. The Mara River runs through the Masai Mara National Reserve on the Kenyan side and the Serengeti National Park on the Tanzanian side, the latter being a World Heritage Site and a Biosphere Reserve and therefore of global conservation significance. There are also forest reserves in the upper part of the Basin in Kenya. The Mara River and the Mara-Serengeti ecosystem are of great economic importance at local, national and regional levels.

Figure 2: Mara River and its main tributaries and the Masai Mara and Serengeti protected areas.

3.3 Biodiversity importance of project area

The Mara River Basin has diverse habitats of rich forests, grasslands, wetlands and floodplain which support important biological diversity of plants and animals (**Figure 3**). The upland forests which forms the headwaters of River Mara is the main lifeline of the River and has been a subject of conservation efforts under the national water tower restoration programme in Kenya which commenced in 2008. Within the Rift Valley, the Mara-Serengeti ecosystem is highly recognized as a priority area of global conservation importance especially with reference to the African Elephant and the Black Rhino which inhabit its savannah plains. The Mara-Serengeti ecosystem also supports the migration of the Wildebeest between Kenya and Tanzania. And due to its intimate connection with the Lake Victoria Basin (LVB) and the Nile River Basin (NRB), the Mara River is an important trans-boundary water resource and its issues are deliberated within regional frameworks such as the Lake Victoria Basin Commission (LVBC) of the East African Community and the Nile Basin Initiative (NBI).

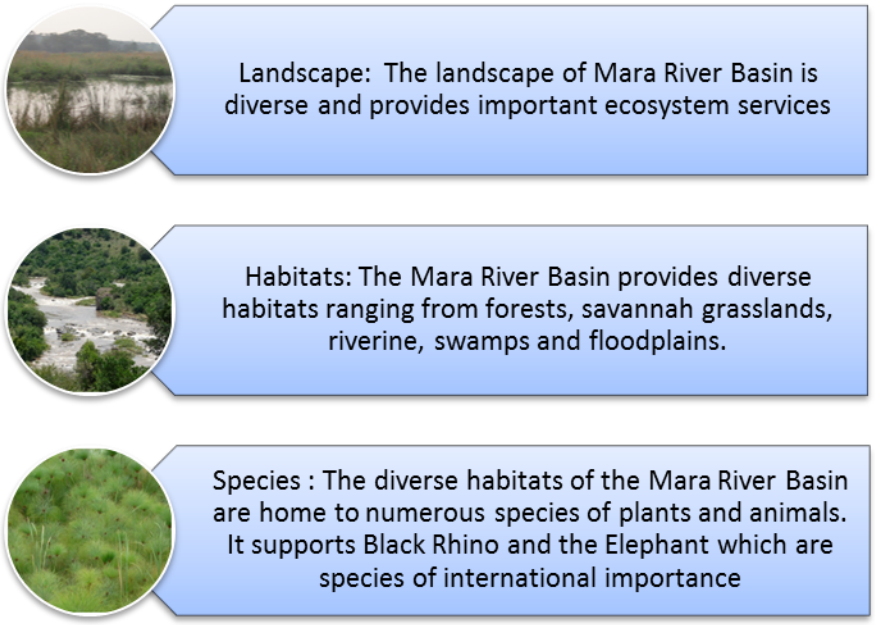

Figure 3: A graphical representation of the biodiversity importance of the Mara River Basin

3.4. Policy, legal and institutional context

The MRBMI operates in the context of political and institutional reforms of the water sectors in Kenya and Tanzania. These reforms are driven by Kenya's Water Policy of 1999 and Water Act (2002) in Kenya, while in Tanzania, the National Water Policy of 2002 (NAWAPO-2002) and Water Resources Management Act (2009) are the main drivers of the sector reforms. The water reforms in both countries have fundamentally changed the institutional frameworks in the water sectors by decentralizing decision making and devolving powers over water resources management to WRM institutions as guided by the various policies and acts (**Table 2).**

Table 2: A summary of the key policy drivers for water sector reforms in Kenya and Tanzania

Act/policy	Functions
Kenya	
The Water Act 2002 Sessional Paper no. 1 of 1999 on the National Water Policy Proposed Water Act 2012- harmonized with the Kenya constitution 2010	Provides the institutional framework for management, conservation and control of water sources. Provides the legal authority to establish autonomous institutions such the WRMA, CAACs and the WRUAs to manage and protect water resources at various levels. Provides for establishment of Water Resources Regulatory Authority (WRRA) as a regulatory body and six Water Basin Authorities (WBAs) for implementation of IWRM processes
Water Resources Management Rules 2007	Supplement the Water Act 2002 and act as a legal operational tool for equitable water allocation and planning water.
National Water Resources Management Strategy	Operationalizes the Water Act 2002 and establishes a guideline for management of water resources at catchment level.
Water Quality Regulations, 2006 (Legal notice No. 121)	Provides guidelines and standards for the discharge of wastes into water bodies.
Waste Management Regulations 2006	Regulates the handling, transportation and disposal of waste in order to protect the environment (e.g. water catchments)
Controlled Substances Regulations, 2007 (Legal Notice No.73 of 2007)	Defines controlled substances (e.g. wastes) provides guidance on how to handle them.
The Lakes and Rivers Act (CAP 409)	Protects biodiversity in lakes and rivers.
Tanzania	
National Water Policy of 2002 (NAWAPO-2002)	To develop a comprehensive framework for sustainable development and management of the Nation's water resources, in which an effective legal and institutional framework for its implementation will be put in place.
Water Resources Management Act (2009)	To provide for institutional and legal framework for sustainable management and development of water resources.
National Water Sector Development Strategy (2006-2015)	Sets out how the Ministry responsible for Water will implement the National Water Policy.

Legal and institutional frameworks in Kenya

In Kenya, the Water Act (2002) is principal law that governs the management, conservation, use and control of water resources. The Act stipulates that every water resource is vested in the State, whereby the Minister of Water and Irrigation shall have control over every water resource in as assisted by the Director of Water Resources. The Act separates water resources management and development from water supply

services delivery, through a detailed institutional framework which promotes a decentralized system composed of multi-level institutions (**Annex 1**). For example, at the national level the Ministry of Water and Irrigation (MWI) takes the role of policy formulation leaving the Water Resources Management Authority (WRMA) to take the lead role in the management of all water resources in Kenya. At the local level, the WRUAs are responsible for administering cooperation and conflict resolution by bringing all water users together in their respective areas (WRMA 2007). The Mara River falls under the management of the Lake Victoria South Catchment Area (LVSCA), a regional WRMA office located in Kisumu, Western Kenya. Issues of the Mara such as issuance of abstraction permits and regulating and enforcing WRM are handled at the Sub-Regional office of LVSCA located in Kericho town.

Other related legal frameworks that support the water acts in Kenya are the Environment Management and Coordination Act (EMCA) of 1999; the Environment Policy; the Forest Act (2005), the Agriculture Act (CAP 318); National Land Policy Land Control Act (CAP 406); The Fisheries Act (CAP 378); the Wildlife Act, the Irrigation Act (CAP 347), etc. For example EMCA demands that Environmental Impact assessment (EIA) should be carried out for proposed interventions that may have impacts on the environment. The Forest Act (2005) in Kenya promotes sustainable use of forest products and participatory afforestation through Community Forest Associations (CFAs). The Land Act promotes protection and sustainable use of riparian lands. Regarding pollution of water sources the National Environment Management Authority (NEMA) issues licenses at a fee and charges those who discharge effluent above drinking water quality standards. The WRMA is responsible for undertaking participatory control of pollution using Effluent Discharge Control Plan (EDCP), a tool used to progressively control pollution from point sources (Water Rules 2007). The Constitution of Kenya 2010 provides for right to clean and safe water in adequate quantities for everyone hence promoting the on-going pollution control measures within the water resources management rules. The draft Water Act 2012 has emphasized separation of regulation from management of water resources which is envisaged to improve efficiency in IWRM processes including pollution control so that the right to clean and safe water can be realised.

Legal and Institutional frameworks in Tanzania

In Tanzania, water resources management falls under the Ministry of Water (MoW). Other Government departments responsible for water related issues in Tanzania include the Division of Environment at Vice President's Office, which is responsible for ensuring sustainable environmental management; Tanzania National Parks (TANAPA) in the Ministry of Natural Resources and Tourism, responsible for regulating, developing and administration of Serengeti National Park in the Mara River Basin; and District Councils under the Ministry of Local Government is responsible for natural resources management at the local level.

All water resources in Tanzania are governed by the Water Resources Management Act (2009) and the National Water Policy (NAWAPO) of 2002, which guide the water sector in sustainable development and efficient utilization of water resources[5]. The implementation of the NAWAPO is guided by the National Water Sector Development Strategy (NWSDS). The NWSDS stipulates that the water resources management legislation should be reviewed so that all associated laws are harmonized in order to develop a coherent, holistic and integrated strategy for the water sector in Tanzania.

The institutional framework for water resources management is shown in the **Annex 2**. The institutional framework is streamlined to facilitate effective integrated water resources planning and management, and the roles and responsibilities of the different stakeholders are clearly defined so as to ensure their

[5] The Policy addresses most WRM issues such water resource assessment, water resources planning, environmental protection and conservation, water quality and pollution control, policy direction, water utilization and allocation, trans-boundary waters and water resources management legislation.

participation at various levels. At national level for example, the Mara River falls under the management of the LVBWO which is located in Mwanza and regulates water resource use. At the catchment level, the Sub-Basin Water Office which is located in Musoma has a direct responsibility of managing the MRB issues such as issuance of water abstraction permits.

Other key policies and legislative documents govern the management of water and other related resources in Tanzania. These include Environment and Management Act (EMC) of 2004; agricultural and Livestock Policy, the National Environmental Action Plan (NEAP); National Environment Policy (NEP), the Village Lands Act, National Forest Policy (NFP), Forest Act (2002) the National Wildlife Policy (NWP); the National Biodiversity Strategy and Action Plan (NBSAP) and the National Strategy for Growth and Reduction of Poverty (NSGRP). For example, the Environment and Management Act (2004) provides for the development of the Environmental Management Plans for National Protected Areas such as the Serengeti National Park. Protection of and management of rivers, river banks and shores through prohibition of destructive human activities in certain areas (EMC 2004)

3.5 Socio-economic conditions

The Mara River Basin supports over one million people with various socio-economic and cultural backgrounds. Gender inequality is high because women have less access to natural resources and the formal economy. Access to infrastructural facilities and social services is limited to the majority of the populations in the Basin. Water security is very poor and conflicts over water tend to arise especially during the dry season. Many people do not have reliable water supplies and rely on untreated water from the River and Perennial River and streams. Less than 60% of the population has access to sanitation coverage and incidences of outbreaks of waterborne diseases such as cholera and typhoid are high.

The Mara River Basin supports valuable economic activities such as tourism, agriculture and mining which accounts for about 15% Gross Domestic Product (GDP) in both Kenya and Tanzania (LVBC, USAID & WWF ESARPO 2011). Details of socio economic activities are given in **Figure 4**.

Over the last 20 years, the Mara Basin has experienced agricultural transformations mainly due to increase in human population resulting from natural growth and immigration. Large areas of forests and grasslands have been converted into farmlands. These are mainly found in the upper and middle parts of the basin where annual rainfall is above 1200 mm and can sustain rain fed subsistence agriculture.[6] Livestock is a common activity especially in the lower zone where rainfall is relatively low (800 mm/year). Other socio-economic activities are small scale businesses. Due to encroachment for socio-economic gains the area under the Mau forest in Kenya has declined from 752 km^2 in 1973 to 650 km^2 in 1985 and to 493 km^2 in 2000 (Hoffman, 2007).

[6] Examples of the main crops grown are maize, beans and potatoes and a variety of vegetables.

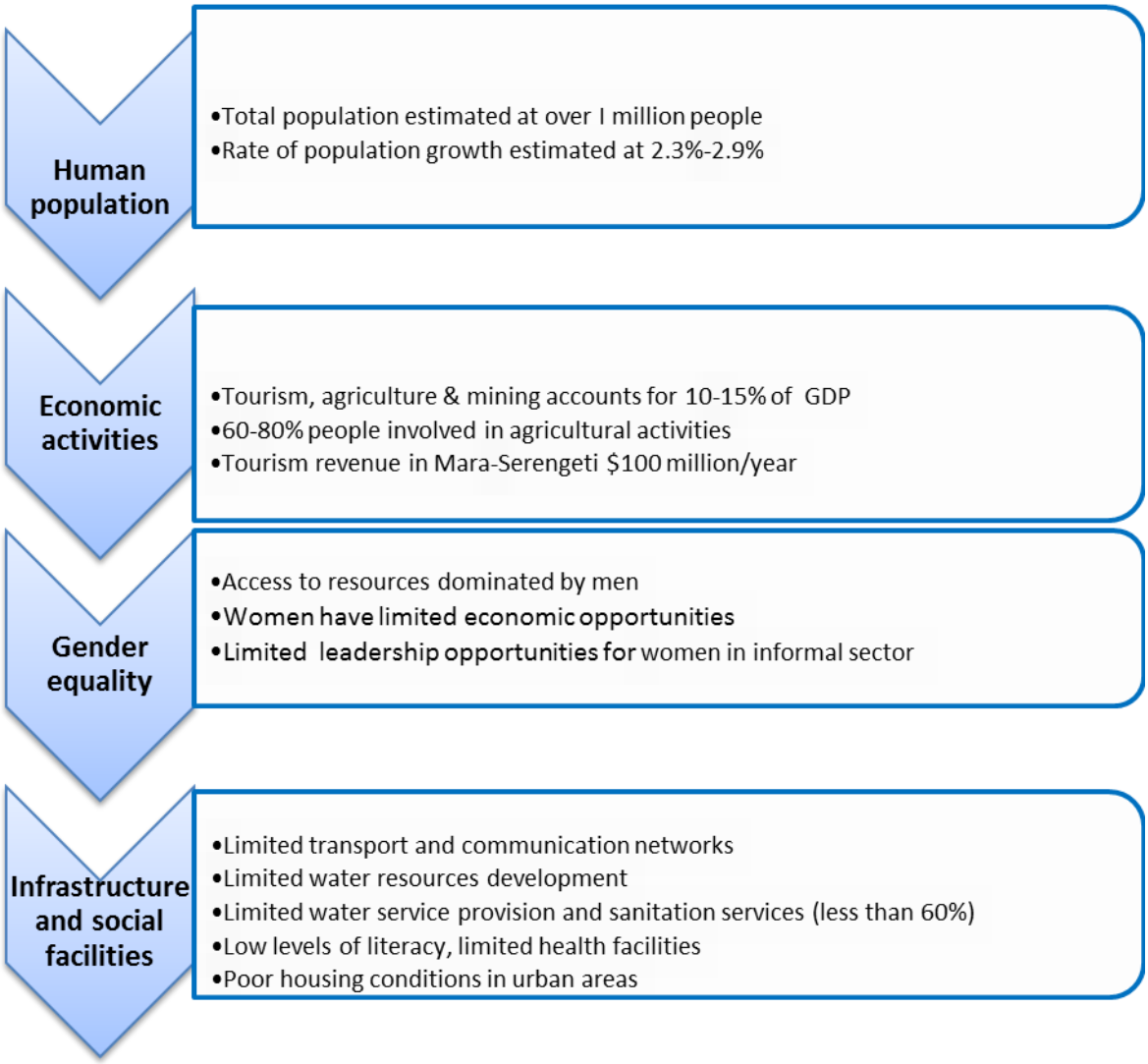

Figure 4: Socio-economic background of the Mara River Basin.

3.6 Justification

The survival of the entire Mara ecosystem depends on the River Mara and its associated wetlands. The ecosystem has a rich biodiversity of plants and animals which are of local, national and global importance. However, the biodiversity of the Mara River Basin is increasingly being threatened because of over-exploitation of it natural resources for socio-economic benefits. The loss of vegetation cover together with overgrazing, over-abstraction of water sources, poor farming methods as well as haphazard disposal of solid and liquid wastes have resulted in increased soil erosion and sedimentation, poor water quality, declining water flows and subsequent water scarcity (especially during dry seasons) in the Mara River Basin. Previous studies have shown that low water flows and subsequent water shortages may significantly affect biodiversity in the MRB (Gereta *et al*. 2002).

The water resources of the Mara River and associated wetlands[7] are mainly important for domestic, livestock, irrigation and other purposes[8]. Over-abstraction of water resources due to increasing demand

[7] Other water sources (wetlands) which are associated with Mara River are springs, rainwater harvesting, wells, boreholes, dams/pans and wetlands.

has aggravated the problem resulting in conflicts over water sharing occasionally occurring between large scale irrigation farmers and pastoralists particularly during droughts (*Ibid*). Threats to the Mara River Basin such as water scarcity, pollution, deforestation, soil erosion, sedimentation, water related conflicts, floods and drought have negative implications on the socio-economic wellbeing of the local populations who continue to experience poverty. In recognition that these issues are quite diverse and cross cutting, the Project set out to promote strong legal and institutional frameworks through IWRM policies and practices in order to address them.

[8] Domestic (26%); Livestock (19%); Irrigation (15%); Hydropower (7%); Industrial (4%) and others (2%) (Aboud et al. 2002).

4. Project goal, purpose and expected outputs

The overall goal of the Phase III of the project (2010–2012) was 'improved quality and reliable quantity of water in the Mara River Basin for sustainable ecosystem functions and basic human needs'.

The purpose was 'enhanced Integrated Water Resources management (IWRM) policies and practices in the Mara River Basin by the end of 2012'. Phase III focused on strengthening capacities of WRM management institutions in order to ensure their sustainability as well as documenting lessons from implementing activities since the MRBMI began in 2003. The Project set out to achieve four main outputs as follows:

Output 1: Strengthened capacity of community level representatives and their institutions (including Mara Water Resource User Association (MWRUA), Mara River Catchment Committee (MRCC) and water users' associations (WUAs)) to implement integrated water resources management (IWRM) and income generating activities (IGAs) relevant to IWRM.

Output 2: Key IWRM results, impacts and lessons documented and disseminated to partners and stakeholders to enhance knowledge and participation in IWRM.

Output 3: IWRM advocacy and lobbying strengthened through engagement of local, national and regional partners to influence implementation processes of policies and legislations for improved delivery of IWRM**.**

*Output 4***:** Sustainability, coordination and partnerships among IWRM institutions strengthened to improve IWRM implementation at local, national and trans-boundary levels.

5. Relevance and Quality of Project Design

Phase III set out a goal to improve quality and reliable quantity of water in the Mara River Basin through enhancement of IWRM activities and sharing of lessons learned for up-scaling best practices within the policy and legal frameworks. Considering the Project's goal and purpose, the strategies set out for carrying out its various activities and achieving its outputs were comprehensive and relevant. The Logical Framework Analysis (LFA) clearly defined and outlined the Project's purpose, outputs and indicators. The relevance and quality of the Project design were evaluated with regard to:

- Response to proposed recommendations made in the Phase II evaluation
- Conservation priorities at national, regional and international level
- Legal and institutional frameworks in water resources management
- Regional cooperation in trans-boundary water resources management
- Alignment with stakeholder's priorities and expectations (e.g. livelihood improvements)
- Appropriateness of monitoring system
- Assumption of risks

5.1 Response to proposed recommendations made in the Phase II

Documenting Mara IWRM initiatives

Phase III investigated, appraised and documented the multiple lessons learnt from piloting IWRM policies and practices as recommended in Phases I, II and III. Appraisal of four themes were done namely; establishing, activating and sustaining stakeholder platforms; local land and water management interventions from local to catchment scales; IWRM implementation methodologies and trans-boundary river basin management and; monitoring of impacts of local level interventions for IWRM. A comprehensive document was produced which outlined key lessons learnt (**see Section 10**). The documentation is valuable and relevant because it provides rich insights into integrated river basin management (IRBM) which have been shared with some Project partners and stakeholders. Findings have shown that some Partners such as the WRMA and the LVBC have already integrated certain key lessons learnt in their operations. For example, LVBC has taken over and is at the moment anchoring the Transboundary Water User's Forum within its mandate to help it coordinate cross-border IWRM interventions at grass root levels in the basin. WRMA-LVSCA on the other hand has incorporated the lessons generated in IWRM processes executed by WRUAs in Mara and other basins within the region.

Data, monitoring and information

It was recommended that Phase III continued with monitoring activities and in response Phase III successfully formalized arrangements for data collection and information management by facilitating the Instrument of Appointment between the Mara WRUA (on behalf of all the WRUAs) and the WRMA in Kenya and MoUs between the WUAs and the LVBWO in Tanzania. These contractual agreements were necessary because they clarified WRUA/WUA's role in monitoring water quality and quantity as well as urged mandate owners (i.e. WRMA and LVBWO) to finance data collection, information management and maintenance of monitoring equipment. However, data collection and analysis has not been consistent partly due to logistical challenges as well as lack of commitment by mandate owners such as the WRMA and the LVBWO. With regard to monitoring the Project's activities and their impacts, the Project supported the collection of geo-referenced information by a GIS expert to establish baseline information on wildlife

and vegetation. In Kenya, afforestation activities were of sub-catchment management groups with the WRUAs were evaluated and results showed survival rates of tree seedlings were very high of up to 90%.

Alignment of donor and government efforts

The Project continued to forge partnerships and closer collaboration with various donors and government departments as recommended by Phase II. It continued to promote trans-boundary water resources management by working alongside regional partners such as the LVBC, the Nile Equatorial Lakes Subsidiary Action Programme (NELSAP) of the Nile Basin Initiative (NBI). Through collaborative activities with the donors such as WWF-Germany/BMZ and USAID, the Project supported local conservation and livelihoods initiatives such as afforestation and dairy goat farming. In Kenya the Project continued to work closely with the WRMA, NEMA, WRUAs, CFAs and various Local Government departments (e.g. Narok County Council) in catchment protection and conservation. Similarly, the Project engaged the LVBWO, TANAPA and various Village Governments in river basin dialogues. Such collaborative efforts will promote efficiency and minimize duplication at both strategic and operational levels.

Leadership and coordination

It was recommended that project leadership structures be defined and project staff roles in relation to other ongoing projects (USAID and BMZ/WWF Germany). During Phase III a Project Coordinator was recruited with clear roles and responsibilities in coordinating all the activities of the Project in both Kenya and Tanzania. This enhanced the implementation of the Project's activities in the final phase.

Strengthening IWRM advocacy and lobbying

The Project facilitated the signing of the Instrument of Appointment between the WRMA and WRUAs in Kenya and MoUs between the LVBWO and WUAs/MRCC in Tanzania. If these contractual agreements are honoured and Terms of Reference (ToR) successfully implemented, the WRUAs and WUAs will gain more power to execute their roles and to lobby local communities to demand acceptable level of performance and effective delivery of services (e.g. good water quality by key government departments in both Kenya and Tanzania. Besides, WRUAs/WUAs will be able to sustain their activities such as monitoring water abstraction and collecting revenue from abstraction permits if they are provided with a clear budget.

Strengthening strategic focus

In order to refocus future management interventions towards a risk-based approach Phase III made efforts in facilitating data collection on water quality of the River Mara and its tributaries by the WRUAs in Kenya. The intention was to accumulate empirical data and carry out analysis in order to establish cause-effect linkages. In addition, Phase III continued to strengthen local understanding of the key threats facing the basin in terms of both priority processes and geographical locations affecting water quality and quantity.

Establishing and activating stakeholder's platforms

Phase III focused on sustainability of water institutions and made notable efforts in establishment of three additional WRUAs in Kenya (Lower Mara, Talek and Sand River) and three WUAs in Tanzania (Upper Tigithe, Lower Tigithe and Tobora). It facilitated their registration processes, development of their SCMPs and action plans, proposal writing and formulation of by-laws which strengthened their capacities and will allow them to executive IWRM activities. For example, the completed SCMPs for Amala and Nyangores in Kenya and action plans for the MRCC in Tanzania provide useful directions for IWRM implementation.

5.2 Conservation priorities

Phase III made notable progress towards improving the ecosystem services[9] of the Mara River Basin. In recognition of the increasing demand for water and deteriorating water quality, the Project's efforts to strengthen WRM institutions will contribute to improved water quality and quantity as well as reduce the effects of climate change. For example, flows in Amala River at station No. 1LB02 continues to show increasing peak flows and reducing low flows. This is an indication that the area has increasing potential for flood damage during rainy seasons and conflicts over water sharing during dry seasons. If dry season low flows are reduced substantially, there may be severe impacts on animal populations such as the Black Rhino and the African Elephant as well as great migration in the Serengeti–Mara Ecosystem. Local livelihoods and businesses that depend on tourism for employment and income will also be affected. Thus in attempting to address these issues, the Project raised the profile of the Mara River Basin at local, national, regional and global scales (**Figure 5**).

Figure 5: Value of the Project with reference to global, regional and national conservation efforts

[9]Sustainable management of resources of a given ecosystem requires the understanding of its main functions which include:

- provisioning services (e.g. fresh water and wood fuel supply)
- Regulatory services (e.g. water flow regulation and carbon sequestration)
- Cultural Services (e.g. Tourism and recreation)
- Supporting Services (e.g. soil nutrient cycling and water retention)

(Adopted from Millennium Ecosystem Assessment 2005)

In addition, catchment degradation mainly as a result of unsustainable human activities has raised a national concern in both countries. In Kenya, the government initiated a process to restore and rehabilitate the Mau watershed from where River Mara and other rivers originate. Such initiatives need to be up-scaled downstream in order to facilitate upstream-downstream linkages, promote a coordinated action and a basin wide approach to sustain the ecosystem functions of the Mara River Basin. In this respect, Phase III collaborated effectively with other projects (e.g. funded by USAID, and WWF-Germany) and lobbied relevant government departments to initiate local conservation initiatives. In early, 2010 six groups from the mid-upper and lower zone of the Mara Basin were trained on improved land use practices, on-farm tree planting and riverbank protection in Kenya. With the support of the Ministry of Agriculture (MoA) and Kenya Forest Service (KFS) staff from Narok South District, the groups planted a total of 15,000 high-value trees along farm boundaries. Such initiatives will make long-term contributions in improving biodiversity and mitigating climate change in the future.

5.3 Legal and institutional frameworks in water resources management

Strengthening water governance

Successful IWRM implementation requires good water governance supported by institutions that can administer WRM effectively at all levels. The water sector reforms in Kenya and Tanzania stipulate the formation of water institutions at all levels (e.g. WRMA, MRCC, LVBWO, WRUAs/WUAs etc.). Phase III strengthened water governance through the formation of three new WRUAs in Kenya (Lower Mara, Talek, Sand River) and three WUAs in Tanzania (Upper Tigithe, Lower Tigithe and Tobora) and simultaneously gave further support the Mara WRUA and the MRCC. These efforts together with successful lobbying of key stakeholders (e.g. the WRMA, LBWO, LVBC) to endorse these WRM institutions (e.g. MoUs) are key steps towards building their legal, technical and financial sustainability in water governance.

Endorsement of multi-stakeholder participation

IWRM proposes a participatory approach to water resources management involving multiple stakeholders mainly users, planners, policy-makers etc. (Global Water Partnership 2000; Calder 1999). This principle is clearly reinforced by successful establishment of multi-level WRM institutions in both Kenya and Tanzania. These institutions have engaged multiple stakeholders across the Mara River Basin from water users, government officers to private businesses. Continued engagement with hoteliers and camp owners in Kenya and the mining industry in Tanzania, has improved participation of the private sectors in WRM. Furthermore, increased participation by women through the WRUAs/WUAs promotes gender equality.

Enhancement of economic value of water

IWRM places significant economic value to water, a principle which is in line with the priorities of the water sectors in Kenya and Tanzania which put emphasis on the need to enhance economic value of water (e.g. Issuance of water permits to secure water rights). For example Part VII of the Tanzanian Water Act (2009) stipulates that permits must be obtained for water abstraction and use. Under the Kenyan Water Rules 2007 water users must obtain permits to secure rights. The signing and development of contractual agreements which the Project facilitated if implemented will allow the WRUAs/WUAs to carry out their roles in collecting revenues from water abstraction in their respective sub-catchments. This will promote economic value of water across the river basin.

5.4 Regional cooperation in trans-boundary water resources management

Another key strategy that was implemented over the period of phase III was to improve trans-boundary water resources management activities through regional collaboration. The Project continued to collaborate with the institutions that it had built partnerships with. A good example is where synergy was built with LVBC in the management of trans-boundary water resources. **Figure 6** demonstrates key collaborative efforts and the strength of each alliance.

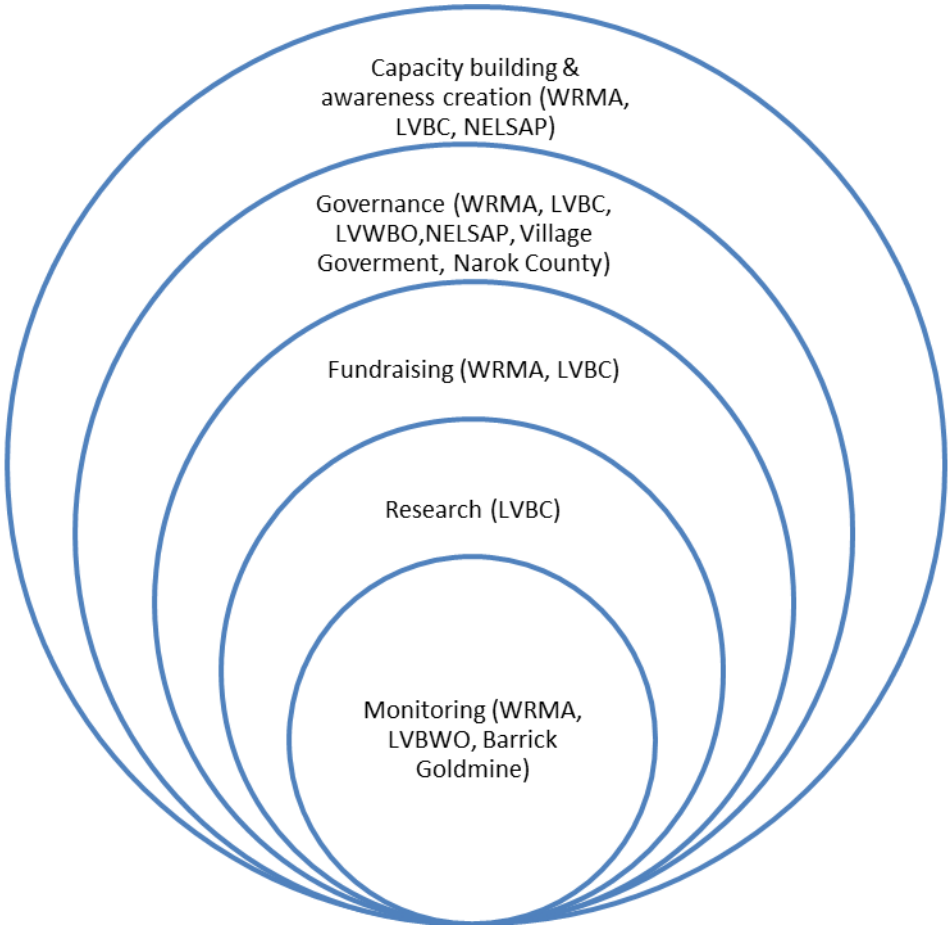

Figure 6: Key areas of collaboration with donors', government departments and intergovernmental agencies.

The Project has worked closely with NELSAP to establish a sustainable framework for joint management of the shared water resources of the Mara River Basin. It has also contributed in the development of small-scale investment projects such as irrigation by strengthening of local capacities through the WRUAs/WUAs. In addition, it has lobbied the LVBC successfully to adopt TWRUF and carry out its future activities as an exit strategy.

5.5 Alignment with stakeholder's priorities and expectations

Alignment and cooperation with local communities

Analysis showed that the majority of expectations of the stakeholders match the Project's goals, purpose and its intended outputs. Interestingly, the degree to which the stakeholders' expectations were met varied across different issues. Local communities expected the Project to improve local livelihoods, access to clean and reliable water and other natural resources, continued support, improved capacities and power

(**Table 3**). Expectedly, the majority indicated that they highly expected the Project to improve their living standards mainly through income generating activities (IGAs). Although not a key question but essential for sustaining IWRM and being promoted by WRMA in Kenya under the proposed livelihood programme within the WRUA framework. However, Phase III focused on sustainability issues, lesson learning as well as sharing of experiences with limited IGA activities.

Table 3: Level of expectations of local communities.

	Level of Expectation			
Expectation of local communities (N=26)	***High***	***Moderate***	***Low***	***None***
Improved living standards	100%	0%	0%	0%
Improved access to adequate water (dams, wells)	100%	0%	0%	0%
Improved access to other resources (e.g. trees, fish)	94%	0%	6%	0%
Improved technical capacities (e.g. trainings on IGAs)	94%	6%	0%	0%
Sustained efforts and activities (e.g. spring protection)	88%	6%	3%	3%
Access to financial resources (e.g. more support)	84%	10%	6%	0%
Empowerment on catchment issues	78%	13%	9%	0%
Improved water quality	63%	19%	9%	9%
Access to material resources (e.g. tools &equipment)	31%	22%	16%	31%
Strengthened community voice (advocacy)	31%	9%	54%	6%

Further analysis showed that the majority of local people believed that the Project fulfilled their expectation of empowering them in understanding threats to the River Basin (**Table 4**).

Table 4: Perceptions of local communities on whether expectations were fulfilled.

	Perception on expectation fulfilment		
Expectation of local communities (N=26)	***Expectation fulfilled***	***Expectation not fulfilled***	**Not sure/NA**
Empowerment on catchment issues	90%	10%	0%
Strengthened community voice (advocacy)	70%	25%	5%
Improved water quality	63%	19%	9%
Improved access to adequate water (dams, wells)	55%	35%	10%
Improved access to other resources (e.g. trees, fish, crops)	55%	40%	5%
Access to material resources (e.g. tools & equipment)	45%	45%	10%
Improved technical capacities (more trainings on in IGAs	40%	55%	5%
Improved living standards	30%	55%	15%
Sustained efforts and activities (e.g. spring protection)	25%	65%	10%
Access to financial resources (e.g. more support)	20%	70%	10%

Alignment and cooperation with other stakeholders (e.g. Government departments)

Other stakeholders highly expected the Project to improve awareness on threats to the Basin and to strengthen local capacities in sustainable management of the natural resources as well as diversify their livelihoods (**Table 5**).

Table 5 : Expectations of other stakeholders in relation to Project's purpose and outputs.

	Level of expectation			
Expectations of other stakeholders (N=18)	***High***	***Moderate***	***Low***	***None***
Improved awareness on threats to the Basin (e.g. expanding urban centres, pollution)	100%	0%	0%	0%
Strengthened capacities of local communities	100%	0%	0%	0%
Improved participation of local communities	88%	12%	0%	0%
Catchment protection and conservation	77%	12%	11%	0%
Access to clean reliable water sources	69%	19%	12%	0%
Improved policies and by-laws	39%	39%	12%	10%
Gender equality	39%	31%	19%	11%
Advocacy (hard to reach stakeholders and government departments)	31%	27%	27%	15%

Over 70% of respondents asserted that the Project had fulfilled their expectation of strengthening the capacities of local communities mainly through CMGs, WRUAs, WUAs, and District Facilitation Teams (DFT). The majority indicated that the Project has improved awareness on threats to the basin (e.g. such as pollution, destruction of the river bank) and on the value of sustainable activities such as tree planting and energy saving stoves (Jikos). For example, the Project worked closely with staff of Kenya Forest Service (KFS) and the Ministry of Agriculture from Narok South District and trained local community group on improved land use practices, on-farm tree planting and riverbank protection. In addition, the Project worked with the WRMA LVSCA in Kenya to support Amala and Nyangores to prepare sub-catchment management plans for implementation of IWRM. However, only a few were confident that the Project brought gender equality among local communities across the catchment.

Table 6: Perception of other stakeholders on the fulfilment of their expectations

Expectation of other stakeholders (N=18)	**Perception on expectation fulfilment**		
	Fulfilled	Not fulfilled	Not sure
Strengthened capacities of local communities	70%	30%	0%
Improved awareness on threats to the Basin (e.g. expanding urban centres, pollution)	65%	30%	5%
Improved participation of local communities	55%	40%	5%
Access to clean reliable water sources	55%	35%	10%
Catchment protection and conservation	50%	45%	5%
Improved policies and laws	46%	35%	19%
Advocacy (hard to reach stakeholders and government departments)	42%	30%	28%
Gender equality	25%	45%	30%

5.6 Appropriateness of monitoring system

The Logical Framework Analysis was used as the main framework for monitoring the progress of the Project's outputs and activities. Using the SMART criteria (Specific, Measurable, Achievable, Realistic and Time-bound), analysis showed that the majority of objectively verifiable indicators, key sources of their verification and associated assumptions that were made quite explicit.

The LFA clearly reflects the Project's intention to create favourable conditions for implementing IWRM by end of 2012 through enhanced capacities of multiple stakeholders and institutions, good policies and laws and improved socio-economic well-being of the local stakeholders through income generating activities (IGAs). Analysis also suggests that it is feasible to measure each source of verifiable indicator as shown in the LFA. Realistically, the Project did not manage to verify certain indicators quantitatively such as improved water quality and strengthened local voices (advocacy and lobbying). This is partly because the LFA seems only to act as a general framework for the overall monitoring of the Project's performance. For effective monitoring of indicators, there should be a robust system with a list of specific and if possible quantifiable parameters which can be used to for evaluating the Project's impacts. For example, in the case of monitoring water quality it would be useful to consider chemical, biological and physical parameters.

5.7 Assumptions and risks

The majority of assumptions and the associated risks in the LFA are adequate and relevant as summarized in **Table 7.** However, some gaps have been noted. Firstly, some of the assumptions were not realistic, for example drawing on the Project's past experiences and lessons learnt, it is now clear that the provision of technical and financial resources to WRUAs/WUAs by government institutions such as the WRMA and LVBWO is a long process as these government institutions continue to struggle to meet their budget needs. Besides, the willingness of government institutions to take action even after signing contractual agreements has proved to be difficult in the past.

Secondly, assumptions on critical principles of IWRM such as participation by all stakeholders and representation of all their concerns and priorities and gender equality were not made explicitly. Thirdly, the Project failed to take into account internal factors such continued transfer of funding from the donor and misappropriation of funds. For example, it emerged that Norad funding stopped on the Tanzanian side due to misuse of funds in another Norad funded project in Tanzania. Lastly, risks such as negative impacts of other external factors such as socio-economic and political conditions should have been clearly articulated in the LFA. For example, some assumptions would have been made on how the new rules and regulations within the water sectors in both countries (e.g. changes in the structures of the WRUAs/WUAs) and in Kenya (e.g. the new constitution) will influence sustainability of the Project's efforts in future. Failure to monitor assumptions implied that their impacts on project delivery were implicit and therefore could not be mitigated.

Table 7: Evaluation of assumptions and risks associated with IWRM implementation at all levels.

Risk and assumption	Adequacy, relevance and comprehensiveness
1-*Implementing partners and stakeholders embrace implementation of IWRM polices and legislation in their operations.*	An adequate, relevant and complete assumption and a risk taking approach as IWRM is widely being implemented all levels in both Kenya and Tanzania. At regional level the Lake Victoria Basin Commission is implementing IWRM through support of WRUA/WUAs, community based organisations and the public sector. At the national level, the operationalization of IWRM is underway by the mandated government institutions such as the WRMA and the LVBWO. At the local levels, IWRM operationalization is being facilitated by the CMGs, WRUAs and WUAs through their sub-catchment management plans. However, the Project did not assume that local level institutions such as CMGs, WRUAs/WUAs would adequately represent local concerns and gender related issues.
2-*Mandated government institutions make available adequate human and financial resources to implement IWRM.*	IWRM is a legal requirement of the water sector reforms in Kenya and Tanzania and as a result, the WRMA and LVBWO have the mandate to implement its policies and practices through the Water Act (2002) and Water Resources Management Act (2009). IWRM activities are clearly budgeted for as outlined by Water Resources Management Strategy and the Catchment Management Plans. However it was not realistic to assume that these mandated institutions would have adequate technical and financial resources to implement IWRM activities. For example, the WRMA and LVBWO lack adequate human resources, equipment and infrastructure to implement IWRM.
3-*Government lead institutions in Kenya and Tanzania continue to support local level IWRM institutions, TAC and DFT to implement their mandate.*	An adequate and risky assumption but one which is not realistic and complete. Government institutions such as the WRMA, NEMA, LVBWO and relevant ministries acknowledge the existence and the roles of CMGs, WRUAs/WUAs, TAC and DFTs. However, it was not realistic to assume that much support would be given. Secondly, it is not certain whether these institutions formed under the Project would be sustainable in the long run considering that the Project is ending.
4-*Community institutions become more sustainable in their operations (funding, administration, technical capacity to implement their mandate).*	An adequate and risky assumption which could be realistic if CMGs and WRUAs/WUAs have a budget allocation and if they have the capacities to fundraise effectively from both internal and external sources.
5-*Partners and stakeholders open to new documentation and willing to use this in implementation of IWRM*	Adequately risky but assumption should have been made that the issues raised from the lesson learning exercise would be appealing and relevant to the priorities of partners and key stakeholders.
6-*Governments and other partners support sustainability initiatives*	Adequate but not realistic as the kind of support that governments often give is not always explicit. For example, an official agreement by the WRMA/LVBWO to support WRUAs/WUAs may not enhance sustainability if no money is given to the latter institutions.

6. Effectiveness (Achievement of purpose)

Achievement of purpose was assessed against 16 objectively verifiable indicators as outlined in the logical framework analysis (**Annex 5**). Overall about 70% of the indicators were achieved effectively by the Project. As a result Phase III made significant progress towards enhanced IWRM processes and implementation in the Mara River Basin. All the 15 indicators are evaluated as follows, with the first three at purpose level and the remaining at output level.

1. **Enhancement of implementation of IWRM policies and practices at all levels (80%):** Three new WRUAs were formed in Kenya (Lower Mara, Talek River and Sand River) and another three were formed in Tanzania (Tobora, Upper Tigithe and Lower Tigithe). SCMPs for the Amala and Nyangores WRUAs were successfully completed in 2011 in Kenya while those for Lower Mara, Talek and Sand River WRUAs were drafted with German funding. The Sand River WRUA was supported to implement water harvesting activities and two water-tanks in schools. In Tanzania, action plans for Upper Tigithe and Tobora WUAs were completed. These IWRM institutions and their management instruments (i.e. SCMPs and action plans) have enhanced multi-stakeholder participation and decentralized systems of water governance in line with the water sectors in Kenya and Tanzania. The Project's efforts in facilitating the WRUAs/WUAs to participate in monitoring water quality and collecting water fees in the future will enhance IWRM practices in future. Close collaboration with government departments such as the WRMA, LVBWO, NEMA and regional partners such as the LVBC and the NBI and successful lobbying of these institutions have also created further opportunities for implementing IWRM processes at national and regional levels.

2. **Enhanced participation and representation by local stakeholder (60%)***:* Participation has increased due to the formation of the new IWRM institutions. The WRUAs and WUAs that were formed during Phase III effectively recruited 868 members[10] who are representatives of local communities (**Table 8**).

Table 8: Total number of members recruited by the WRUAs/WUAs.

WUA/WRUA	No. of people recruited	Active members
Lower Mara WRUA (Kenya)	168	20
Sand River WRUA (Kenya)	180	20
Talek River WRUA (Kenya)	150	15
Tobora WUA (Tanzania)	100	30
Upper Tigithe WUA (Tanzania)	120	20
Lower Tigithe WUA (Tanzania)	150	20
Total	**868**	**125**

However, only 14% of members have been actively engaging with WRUA/WUA activities and therefore it is uncertain whether these members have truly represented the interests and concerns of the local people in their respective areas. Results showed that these WRM institutions are challenged with engaging local communities actively because most people have expectations of them in terms of improving their livelihoods (e.g. income). In addition, the majority of the WRUAs/WUAs still have limited power and influence because they are still new and not well established for example:

> *"We still do not have power and a strong voice, we have no money or budget line and we have not yet accomplished some tangible goals so that people can see that we are a strong institution.*

[10] The majority of members are women.

That's why it is still difficult for us to approach hoteliers or camp owners …. (WRUA official, Sand River, Kenya)

3. **Improvement of local level monitoring - e.g. water quality (50%):** Through MoUs Phase III effectively facilitated processes of formalization of monitoring arrangements and a result the WRUAs in Kenya began to collect data on water turbidity / sediment load using turbidity tubes in 2012. In Tanzania, the LVBWO was supported to lobby MoW to finance water resources monitoring stations and the Lake Victoria Basin Water Board (LVBWB) was lobbied to fund MRCC to carry out monitoring activities. However effective data collection and monitoring were significantly affected due to:

- ✕ Lack of systematic monitoring methods
- ✕ Difficulties in collecting data (e.g. lack of transport and long distance to the sampling sites)
- ✕ Lack of incentives which leads to low level of motivation to collect data twice a day (8am and 5PM).
- ✕ Inconsistence in data sets (e.g. missing information)
- ✕ Failure to validate and analyze data and give the WRUAs/WUAs feedback on data
- ✕ Lack of commitment by the WRMA/LVBWO

4. **Identification and implementation of income generating activities (IGAs) by Mara WRUA (50%)***:* The IGAs were scaled down and only limited interventions were executed in 2010. These include planting of trees and keeping of dairy goats. They were concluded in the course of the phase to allow more time for the project to focus on four key strategic approaches namely lessons sharing, lobbying for IWRM policy implementation, strengthening capacity for water data collection and monitoring and finally, enhancement of sustainability of IWRM dialogue platforms developed by the project within the legal and institutional framework prescribed by the Water Acts in both countries.

5. **Formation of WRUAs/WUAs and forging linkages (100%):** The Project effectively established and registered 6 WRUAs/WUAs and they were trained on registration procedures, formulation of by-laws, governance, financial management as well as water reform processes in both countries. The Project also and facilitated partnership building between these WRM institutions (and with CMGs) and with mandate owners through formalized agreements, for example:

- ✓ An Instrument of Appointment was signed between the Mara WRUA and the WRMA (June 2011)
- ✓ Mara WRUAs signed MoUs with Amala, Isei, Nyangores, Talek and Lower Mara WRUAs (June 2011)
- ✓ Formalized agreement between WUAs and LVBWO completed (August 2011)

6. **Enhanced capacities of WRUAs and MRCC to develop SCMPs and IWRM plans respectively (100%):** In Kenya all WRUAs were trained to develop SCMPs (Nyangores and Amala SCMPS were completed). The Mara WRUA successfully developed its strategic plan (2011-13). In Tanzania, the MRCC was supported to develop and present its work plans to the Basin Water Board and the Local Government. It facilitated the reviewing of the Draft Mara Catchment Strategy in line with the National Water Sector Development Strategy (NWSDS 2006-2015).

7. **Production of documentation on four thematic areas (100%***):* A comprehensive document was produced on key lessons learnt on four themes namely establishing, activating and sustaining stakeholder platforms; local land and water management interventions from local to catchment scales; IWRM implementation methodologies and trans-boundary river basin management and; monitoring of impacts of local level interventions for IWRM. Among the key lesson learnt were; the need for sustainable institutions and activities, the importance of systematic monitoring of impacts and use of simple equipment for data collection, the importance of engaging influential actors (for example, politicians and local champions) and the need for strong regional cooperation, collaboration and alignment of activities across the River Basin.

8. **Dissemination of documentation materials to key partners and stakeholder (50%***):* In Kenya two workshops were effectively facilitated by the Project and three policy briefs were drafted on: Strengthening initiatives on catchment restoration; Stakeholder dialogues platform strengthening; and Strengthening government participation in IWRM implementation at grassroots level. In Tanzania, no formal communication was done to disseminate lessons learnt. Much of the lessons learnt were shared verbally through informal interactions with Project partners and stakeholders in both countries. For effective dissemination, additional efforts should be put into communicating lessons learnt by use of various methods (e.g. documentaries, flyers, etc.).

9. **Implementation of lessons learnt by partners and stakeholders (30%**): Some key stakeholders are keen to adopt key lessons learnt, for example, in Kenya the WRMA is keen to use turbidity tubes for water quality monitoring and the MWI has already taken some of the Mara experiences into account in drafting the Water Bill. The Project should make a follow up in order to investigate which partners have implemented lessons learnt or are likely to integrate them within their activities.

10. **Development of advocacy and lobbying strategy (100%):** With funding from the USAID, WWF developed an advocacy and lobbying strategy in 2010 which made the following recommendations:

- ✓ Sustainable support for water users associations to undertake their mandates;
- ✓ Documentation of results, impacts, lessons learnt and best practices;
- ✓ Support Mara River Trans-boundary Water Resources users forum (TWRUF);
- ✓ Conflict resolution over water;
- ✓ Institutionalization of Environmental Flows Assessment (EFA) in National Water allocation systems;
- ✓ Institutionalization of Payment of Ecosystem Services (PES);
- ✓ Support for the Preparation and implementation of strategic environmental assessment (SEA) for the Mara River;
- ✓ Implementation of Biodiversity Strategy and Action Plan (BSAP) for sustainable management of the Mara River Basin;
- ✓ Support for preparation, implementation of management plan and adaptation of Trans-Mara forest reserve;

11. **Implementation of advocacy and lobbying strategy (80%):** The Project made good progress in implementing the majority of these recommendations with contributions from other donors. With funding from Norad/WWF-Norway the Project worked hard to ensure sustainability of the WRUAs/WUAs through capacity building initiatives and by the end of 2012, all WRUAs/WUAs were registered and the majority had developed by-laws, SCMPs and action plans. Successful formalization WRUAs/WUAs' roles were done mainly through the Instrument of Appointment, MoUs and other formal agreements. For example in Tanzania, the Project lobbied the key partners such as LVBWO, the Water Board (LVBWB), the MoW and the District Development Directors of Tarime, Rorya, Serengeti and Musoma to recognize the MRCC and the WUAs and support their work plans. The documentation of lessons learnt was very successful although dissemination was limited to only two formal workshops. With support from other sources of funding (e.g. USAID), key stakeholders such as the LVBC, WRMA, Kenya Forest Service, LVBWO, NEMC, NEMA, SENAPA were successfully lobbied to approve the contents of documents such as EFA, SEA, and BSAP within their management and policy frameworks. As a result, the LVBC adopted EFA, BSAP and SEA documents in the Mara and is in a process of implementing these documents in Kenya and Tanzania as well as using them as reference documents in the process of expanding its transboundary engagements elsewhere (e.g. in Lake Jipe and is considering a transboundary project in Lake Tanganyika). In addition, the LVBC agreed to adopt the TWRUF in order to sustain s activities in the future.

12. **Influence of documentation on IWRM policy and practices (80%**): The documentation the Project made good efforts in strengthening the capacities of the WRUAs/WUAs in order to sustain their activities in the future. All WRUA/WUA members in both Kenya and Tanzania, for example, were trained on how to carry out their various roles effectively (e.g. conflict resolution, water monitoring) as required by the Water

Rules 2007 of the Kenyan Draft Kenyan Water Bill (2012), the Water Act (2002) and the Tanzanian Water Resources Management Act (2009). This is in response to the documentation which highly emphasized the need for the WRM institutions to sustain their activities in the longer run. In addition, the Project made efforts in training of WRUA/WUA representatives on field hydrology and data collection and monitoring of water quality began in Kenya. This was in response to the documentation which strongly proposed local IWRM initiatives such as data collection. However, monitoring activities were not effective as data were never analyzed neither interpreted.

13. **Development of business plans/management strategy for Mara WRUA and MRCC (60%):** In Tanzania the MRCC was supported successfully to develop action plans for the WUAs and in Kenya WRUA successfully developed a three-year Sub-Catchment Management Plan (SCMP) (2011-13) to enable them strategically address the IWRM challenges in the basin and in line with the Catchment Management Strategy (CMS) for Lake Victoria South Catchment Area in Kenya. However, development of business plans were omitted and instead, the SCMPs and actions plans were used to substitute the business plans. In Tanzania, business plans were not developed because the project was informed that the WUAs are supposed to develop action plans that will be part implementation of the LVBWO business plan and not to have business plans of their own. These instruments are suitable for planning and implementing IWRM processes as well mobilizing resources for implementation of the activities.

14. **Identification and implementation of three key priorities of the business plans and sub-catchment management plans for the MWRUA and the MRCC (60%)**: The Project fully supported both the Mara WRUA and the MRCC to identify a list of key priority activities notably tree planting, eco-tourism, development of irrigation infrastructure and water harvesting. However, implementation of these activities was limited especially for MRCC which is challenged with lack of financial resources. The Mara WRUA on the other hand made progress in tree planting with financial support from external sources and income generating activities (e.g. tree nurseries).

15 **Identification of capacity gaps of Mara WRUA and MRCC (50%):** In Kenya, a Capacity Needs Assessment (CNA) exercise was conducted for all the WRUAs[11] and results showed that the majority were challenged by lack of funding, limited democratic governance (e.g. elite capture) and tensions between members and non-members. In Tanzania, there was no evidence to show that any structured capacity gaps assessment was conducted.

Project's achievements

In summary, Phase III has made some notable achievements towards enhanced IWRM implementation as follows:

- ✓ Improved legal and policy environment through alignment with key regulatory frameworks
- ✓ Establishment and formalization of WRM institutions to promote decentralized water governance
- ✓ Increased local capacities through awareness creation on threats to the basin (e.g. pollution)
- ✓ Increased multi-stakeholder participation and representation in WRM activities by 800 people.
- ✓ Increased advocacy and lobbying across the river basin
- ✓ Improved trans-boundary water resource management (e.g. through collaborative activities)

Project's Failures

The following weaknesses were:

- × Lack of dissemination of lessons learnt from the documentation mainly in Tanzania
- × Failure to ensure that WRMA took full responsibility for the water resources monitoring data
- × Involvement of stakeholders from the private sector was weak

[11] CNA was also done for TAC in Kenya; none was done for District Facilitation team in Tanzania.

7. Efficiency of Planning and Implementation

7.1 Financial

Analysis of the budget and expenditure for 2010, 2011 and 2012 was carried out for the items shown in **Table 9**. A total of 10 items were considered in the analysis including miscellaneous costs which was considered in the budget but had no allocation and hence no expenditure. This is an indication of effectiveness in allocation of funds implying no expenditure was incurred that was unforeseen. In 2010, there was over expenditure in third party fee of 21%s, communication and fundraising 52%, office running costs of 7%, field running costs of 14%. These deviations are relatively low except for communication and fundraising which was quite high. In 2012 there was almost negligible expenditure for the same item. It can therefore be interpreted that some activities some activities for 2011 were taken care of in 2010 hence the over expenditure. In the same year under spending in the remaining items ranged from 10% to 25%. These were compensated by over spending in other items with overall deviation being 10% under expenditure in the total budget. In 2011, the project under spent in all the items with an overall under expenditure of 19%. These deviations are relatively small and acceptable and therefore it can be inferred that there was effective use of financial resources in executing the planned activities. Similar argument can be applied in 2012 assuming the same trend was maintained

Table 9: Analysis of budget and expenditure in NOKs.

	2010			2011			2012		
Items	**Budget (NOKs)**	**Expenditure (NOKs)**	**% deviation**	**Budget (NOKs)**	**Expenditure (NOKs)**	**% deviation**	**Budget (NOKs)**	**Expenditure (NOKs)**	**% deviation**
Staff costs	772,675	665,534	-16	532,111	485,491	-10	674,324		
Third party fees[a]	28,350	35,959	21	404,532	293,849	-38	312,335		
Other grants & agreements	295,455	235,897	-25	0	0	-	0	0	
Travel meetings and training costs	416,799	383,463	-9	486,173	374,818	-30	190,160		
Communication and fundraising	12,600	26,339	52	41,042	3,319	-1137	12,223		
Miscellaneous costs	0	0	-	0	0	-	0		
Office running costs	101,736	109,288	7	108,526	101,748	-7	80,179		
Field running costs	65,723	76,461	14	109,559	90,132	-22	46,240		
Capital assets	0	0	-	389,795	384,545	-19	0		
Sub-Total	1,693,338	1,532,940	-10	2,071,738	1,733,778	-19	1,315,461		
Management fee (12.5)	211,667	191,618	-10	258,967	216,722	-19	149,365		
Total budget	**1,905,005**	**1,724,558**	**-10**	**2,330,705**	**1,950,500**	**-19**	**1,464,826**		

[a] – The budget lines under “Third party fees” include “Other grants and agreements” for the years 2011 and 2012.

Explanation for over- or under expenditure

During the calendar year 2011, the Kenya Shilling weakened considerably against the USD while the Norwegian Kroner strengthened significantly against the USD. This resulted in a sizeable amount of extra funds for the project. In addition, an extra 150,000 NOK was availed to the project for activity implementation. Consequently, an addendum to the original contract was prepared to take into consideration the extra Kenya shillings gained from both sources. Funds transfer was in two categories namely from Norway to Project finance office in Nairobi (Table 10) and from Nairobi to the field (Table 11)

Table 10: Funds Transfer from Norway to project finance office in Nairobi

Transfer requested	WWF-Norway transfer		Funds received by project finance office	
	Date	Amount (NOK)	Date	Amount (KES)
WWF Nairobi-Opening Balance Under Expenditure 2009	1-Jan-10	20,184	10thMarch2010	246,450
1st transfer 2010, Mara River Basin Project	14-Jan-10	381,001	23rdMarch2010	1,779,000
CBNRM Funds Balance	1-Jan-10	316,156		
2nd Transfer 2010 For Mara River Basin 5021/GLO-08/449-4/9F0749)	31-Aug-10	600,000	16thSep2010	1,062,000
3rd and Final Transfer 2010 for Mara River Basin from WWF Norway (5002/GLO-08/449-4/9F0749)	24-Nov-10	587,662	Dec2010	1,907,976
Opening Balance	1-Jan-11	180,447		
1st Transfer 2011 for Mara River from WWF Norway 5002 GLO 08 449/4/9F0749	19-Jan-11	400,000	Feb2011	27,595
2ND TRANSFER 2011 FOR MARA RIVER BASIN FROM WWF NORWAY	20-May-11	419,554	March2011	890,637.50
ESA/MARA RIVER 2011 NORAD	1-Sep-11	962,634	June2011	490,086
4TH TRANSFER 2011 FOR MARA RIVERE BASIN FROM WWF NORWAY	10-Nov-11	368,070	Nov2011	3,540,608
Opening Balance	1-Jan-12	380,205	April2012	852,361
1st Transfer 2011 for Mara River from WWF Norway 5002 GLO 08 449/4/9F0749	18-Jan-12	378,000	Feb2012	1,612,521.3
Overstated Accruals from previous periods	1-Jan-12	306,294	July2012	1,577,954
2ND TRANSFER 2012 FOR MARA RIVER BASIN	24-Sep-12	556,634	Sept2012	583,477
Total		**5,856,841**		**14,570,666**

As shown in Table 10, during the three year period of the project, first transfers of funds was done in January of each year. This ensured consistency in commencement of activities every year and according to plan. Funds transfer to the field is shown in Table 11.

Table 10: Norad/WWF-Norway funds' Field Transfers from Nairobi from 2010 to 2012

YEAR	QUARTER	AMOUNT (Kes)	Amount (NOKs)
2010	1	2,025,450.00	135,030.00
	2		-
	3	1,062,000.00	70,800.00
	4	1,907,976.00	127,198.40
Sub-Total		**4,995,426.00**	**333,028.40**
2011	1	927,595.00	61,839.67
	2	490,086.00	32,672.40
	3		-
	4	3,540,608.00	236,040.53
Sub-Total		**4,958,389.00**	**330,552.60**
2012	1	1,612,521.30	107,501.42
	2		-
	3	1,577,954.00	105,196.93
	4	583,477.00	38,898.47
Sub-Total		**3,773,952.30**	**251,596.82**
TOTAL		**13,727,667.30**	**915,177.82**

As shown in Table 11, funds transfer was consistently done from 2010 to 2012 except during the second quarter in 2010 and 2012 while in 2011 there were no transfers in the third quarter. Probably there were funds in the account still, and hence there did not have to be another transfer to keep the project running.

7.2 Project delivery

Implementation of work plan and activities

The level of achievements of activities in Phase III was 100% in Kenya and 65% in Tanzania (**Table 12).** In both countries, some delays were made in initiating documentation process due to long negotiation processes with the consultants. In Tanzania dissemination of documentation on lessons learnt was not done in a structured manner compared to Kenya where two workshops were held. This was due to the fact that funding stopped in Tanzania. Processes of facilitating negotiations between LVBWO and MRCC/MCWC on decentralized systems of water resources management in Tanzania was slow mainly because there were delays in formalization of water institutions (e.g. WUAs) as stipulated by the Water Resources Management Act (2009).

Table 11: Level of implementation of work plans and activities

Activity	Kenya	Tanzania
Activity 1.1: Facilitate community institutions (MWRUA, MRCC and WUAs) to identify income generating activities (IGAs) that enhance IWRM and develop work plans and budgets.	Identification of IGAs completed.	Identification of IGAs completed.
Activity 1.2: Build the capacity of community institutions to implement IWRM and income generating activities.	All WRUA members were successfully trained on IWRM processes. Completed.	WUAs and the MRCC members were successfully trained on IWRM processes. Completed.
Activity 1.3: Support community institutions (MWRUA, MRCC and WUAs) to implement key/priority activities of proposed work plans and identified IGAs.	IGAs supported by Norad/WWF-Norway. Partly completed.	IGAs supported by Norad/WWF-Norway. Partly completed.
Activity 1.4: Support the establishment of three sub-WRUAs in Kenya (Lower Mara, Talek and Sand River), two sub-catchment committees in Tanzania (Tobora and Tigithe Rivers) and IWRM plans for these local level institutions.	Establishment of Lower Mara, Talek and Sand River WRUAs completed. SCMPs for Amala and Nyangores completed.	Establishment of Tobora, Lower and Upper Tigithe WUAs completed. Actions plans for Tobora, Lower and Upper Tigithe WUAs drafted.
Activity 2.1: Appraise the four thematic areas (water source protection, soil and water conservation and livelihood interventions from community level to catchment scale; establishing, activating and sustaining stakeholder platforms for IWRM; IWRM implementation methodologies and lessons learnt in trans-boundary river basin management; and monitoring of impacts of local level interventions on IWRM).	Appraisal of all four thematic areas was successfully completed.	Appraisal of all four thematic areas successfully completed.
Activity 2.2: Develop ToR for all relevant thematic areas and recruit competent consultant(s) to undertake the documentation assignment on successes, challenges, lessons learnt, results and impacts in the identified thematic areas.	Completed successfully.	Completed successfully.
Activity 2.3: Disseminate, share and communicate the outcome of activity 2.2 above through basin level dialogue, national and regional level meetings (with MoW and LVBC) and international level (e.g. WWF Network, World Water Forum, Stockholm Water Week and AMCOW).	Two workshops were held to disseminate lessons learnt.	No evidence that lessons learnt formally disseminated.
Activity 3.1: Using documents generated from output 2 and experiences in implementing IWRM, develop lobbying and advocacy strategy to influence implementation of policies, laws and practices in IWRM by stakeholders in the Mara River Basin at local, national and trans-boundary levels.	Development of an advocacy and lobbying –Policy briefs completed and presented in workshop of policy implementers in Kenya.	Not done in Tanzania.

Activity	Kenya	Tanzania
Activity 3.2: Facilitate negotiations between WRMA/LVBWO and MWRUA/MRCC on devolution of water resources management (water allocations, revenue collection).	Development and signing of Instrument of Appointment completed under USAID funding but project continued to support negotiations with WRMA for allocation of funds to WRUAs, budget was developed.	Development and signing of MoUs completed. 11 WUAs signed MoUs with LVBWO clearly defining each other's role and responsibility and commitment on technical and financial support for WUAs in as far as they implement their Action Plans. The project supported the Action plan development while USAID funds were used in facilitating signing of MOU.
Activity 3.3: Engage other government agencies at local, national and trans-boundary levels in the Mara River Basin to incorporate the Project's experiences and lessons in order to improve implementation of the various natural resource management policies and legislations.	Two workshops successfully facilitated. Three policy briefs drafted. Communication of policy briefs to lobby for improved IWRM implementation. The same briefs were used to inform the review of the draft Water Act 2012.	Not done.
Activity 4.1: Support MWRUA (Kenya) and MRCC (Tanzania) to develop their own business plans, and implement key priorities of their plans, focusing on post-project sustainability.	No business plans were developed. SCMPs and strategic plans used to substitute business plans. Four WRUAs were facilitated to apply for WSTF-One already granted-Nyangores WRUA, 3 WRUAs-Isei, Amala (Mulot) and Siana have had their application accepted by WSTF and are waiting for granting.	No business plans were developed. Action plans used to substitute business plans.
Activity 4.2: For institutional sustainability, identify capacity needs of MRBMI and partner institution staff in financial and technical skill and support the implementation of recommendations to address key capacity gaps.	Capacity Needs Assessment successfully conducted for WRUAs and TAC.	Capacity Assessment was done report produced and handed to LVBWO and WUAs for implementation.
Activity 4.3: Support local water resources management institutions (MWRUA, MRCC and WUAs) to lobby with Ministry of Water and Irrigation for sustainable legal, technical and financial support for IWRM activities and consequently develop MoUs (between government water authorities and local water user institutions in Kenya and Tanzania) to enhance technical and financial sustainability.	Successful lobbying of the WRMA to support WRUAs through Instrument of Appointment.	Successful lobbying of the LVBWO to support WUAs/MRCC through MoUs.

Project adaption to changes and lessons learned

In Tanzania, a significant financial consequence related to activity implementation during the period under review was the late development of the Project proposal for 2010-2012 which required the development of a new log-frame and a change of the Project's focus. This affected the budget for certain activities to be implemented. Another change noted was withdrawal of donor funding on the Tanzanian side during the third year (2012). Although some support from KCO and TCO was given to the Project's staff in Tanzania by other funding sources, many of the planned activities did not go ahead. For example, the Project did not finalize activities that aimed to handover its initiatives to relevant Government authorities as an exit strategy. This will obviously affect sustainability of the Project's achievements in the long run.

On the Kenyan side, there were no major deviations in the project budget or expenditures during the three years of the Project. However, the project conducted a budget review to accommodate exchange rates gains as requested by the donor (WWF –Norway) as well as additional funding in 2011 based on request.

7.3 Other management factors

All team members of the Project demonstrated knowledge and understanding of the Terms and Reference (ToR) of their various jobs. In addition, team members were found to have a broader view and a deeper understanding of the Project's purpose and outputs and were able to clearly explain the ways in which their duties and responsibilities helped to achieve the Project's purpose. In summary, the majority showed that they had exceeded their respective job standards in all aspects including full understanding of all the tasks associated with their jobs, time frame for completion, reporting and resources required to successful completion. In addition, team members demonstrated that they had the ability to work as a team and communicate adequately with their colleagues, partners and clients. Improved inter-personal skills enabled them to implement the Project's activities with less difficulty. Opportunities for training for staff were identified in the field of organizing and analyzing data. Although team members of the Project are capable of collating water quantity and quality data, they need to verify the data and do simple quantitative analyses in order to determine trends.

7.4 Implementation constraints

A significant constraint that affected the implementation of planned activities in Phase III was lack of mechanisms to ensure that lead agencies meet their obligations to ensure continuation of the activities. In Kenya, members of the WRUAs who were trained on field hydrology and volunteered to monitor water quality were not given sufficient logistical support as per the agreement with WRMA. The Project should have developed some incentives to encourage WRUA volunteers to continue with data collection whenever there delay in compensation by WRMA given the importance of this activity.

In Tanzania, activities mainly monitoring and dissemination of documentation on lessons learnt were not completed because funding stopped in 2012. Secondly, delays in the formalization of water institutions such as the Mara Catchment Water Committee (MCWC) and the Lake Victoria Basin Water Board (LVBWB) slowed down the Project's capacity to implement its planned activities in Tanzania such as finalization of action plans which required formal approval by the mandate holders. The Water Act 2009 provided the legal framework for the establishment and operation of MCWC and WUAs as guided by NAWAPO 2002.

In both countries, delays follow-up of contractual agreements such as Instrument of Appointment and MoUs also slowed down implementation of activities. In Kenya for example, negotiations between the WRUAs and the WRMA are still on-going with regard to Instrument of Appointment whereby the latter is still reluctant to allocate a clear budget for the former to operationalize assigned roles such as monitoring water abstraction activities. The instrument was done under USAID Funding and follow-up meetings on implementation were funded by Norad/WWF-Norway. Budget principles have been agreed upon while

exact amounts and what to be covered are still being negotiated. To a certain extent dealing with newly recruited government staff that are inexperienced in the MRB issues slowed down implementation of some activities. This was evident in both countries where government officers were transferred and new ones were recruited. Having forged strong links with the outgoing officers, it became a challenge especially dealing with new officers who were not familiar with the Project and/or were unwilling to cooperate and make commitments for example in water quality monitoring.

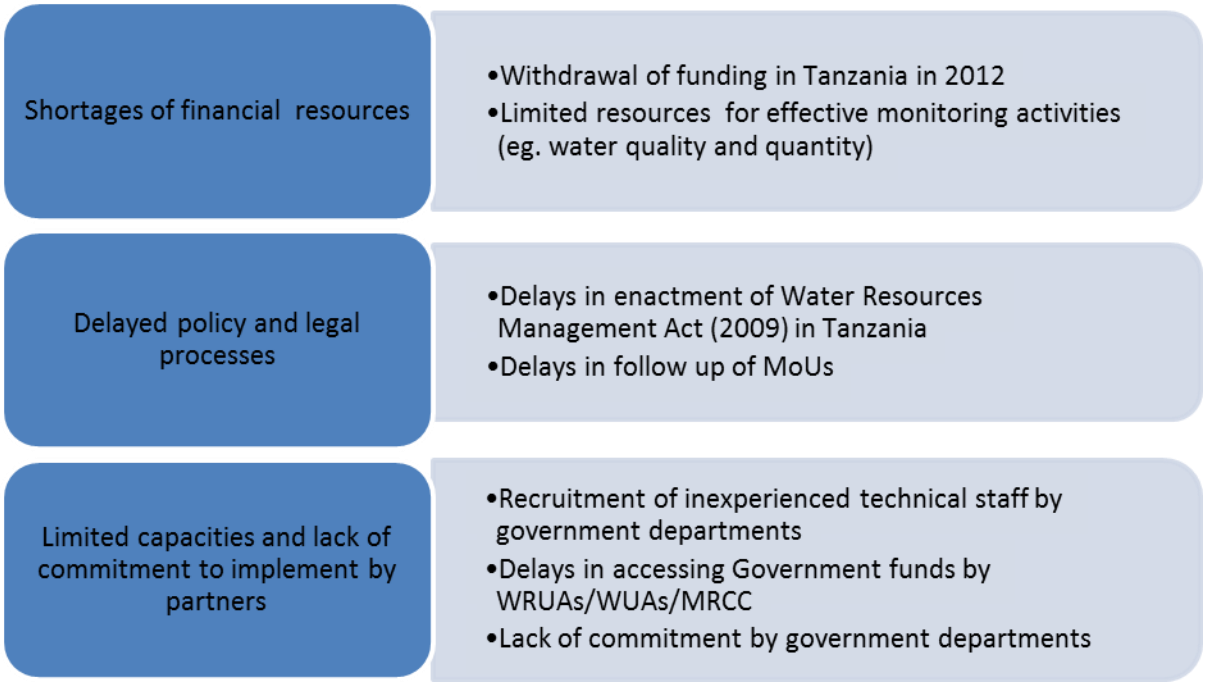

Figure 7: Constraints in implementation of proposed action correct this in the context of my comments above

8. Impact (effects of the project and value added)

8.1 Biodiversity, ecosystems and climate

Biodiversity level and species populations

Previous phases of the Project already supported catchment protection activities such as afforestation and river bank protection. Although Norad/WWF-Norway's support to conservation activities was limited, findings showed that collaborative efforts with other donors sustained local community action in catchment protection and conservation. For example, with support from the WWF-Germany, Phase III engaged local communities to carry out soil and water conservation activities such as river bank protection and tree planting in the upper catchment mainly around the Trans-Mara Forest in Kenya. In Tanzania some community groups which were supported previously have continued with establishing tree nurseries and maintaining protected springs as a multiplier effect of initiatives by Norad.

Considering the fact that Phase III made a significant achievement in strengthening the capacities of WRUAs/WUAs/MRCC to become sustainable, it is highly likely that these institutions will evolve to become important avenues for conserving biodiversity across the Mara River Basin. All the SCMPs/action plans developed by the WRUAs/WUAs have clear conservation priorities and associated activities such as soil and water conservation. With funding, these institutions will be able to fulfil such activities which will increase biodiversity of plants and animals. In addition, findings showed that some WRUAs/WUAs were very keen to protect water sources and preserve water quality in their respective areas. For example, some officials have already attempted to engage with hoteliers, camp owners and mining companies to stop them from polluting the water sources of the Mara. Successful mobilization will minimize activities that compromise water quality and quantity in the Mara and this is certainly useful for survival of wildlife in the Mara. In addition, enhanced IWRM will contribute to improved water security especially during dry season and this will help to maintain or improve the biodiversity of the Mara-Serengeti Ecosystems and its ecological functions such as the great Wildebeest migration.

Ecosystem services and health

Although Norad/WWF-Norway funding supported very little conservation activities it was noted that collaborative efforts mainly tree planting and dairy goat farming will improve the ecosystem provisioning services of the Mara ecosystem. For example, more trees will improve access to wood fuel, charcoal and material for building, construction for beneficiaries. Increased in vegetation cover will also promote a clean environment and tree roots will also improve the capacity of soils to supply essential nutrients in farmlands.

The Mara-Serengeti ecosystem is intimately linked to flow of water, both quality and quantity, in the Mara river and to socio-cultural values such as livelihoods and recreation such as tourism. Successful implementation of IWRM initiatives in the Mara River Basin will maintain or enhance its conservation value while supporting its wildlife which attracts millions of visitors every year. The Project's success in strengthening the capacities of local community groups (e.g. through CMGs, WRUAs/WUAs) has already created much awareness amongst local people with diverse backgrounds to value the Mara River as an important resource that is intimately linked with culture and practices of its inhabitants. Other ecosystem services of IWRM include adaptation to climate change impacts, and mitigation of floods and drought as a result of weather variability.

8.2 Social and economic impacts

Improved local capacities (knowledge, skills and attitude) in river basin management

In areas where the Project has intervened, it has strengthened local capacities to participate in WRM activities (e.g. water monitoring) and influence decision-making in WRM in Mara River Basin. For example, WRUA members who have volunteered to collect water samples asserted that they have practical and technical skills. During focus group discussions, respondents were confident that the Project has significantly strengthened community awareness, knowledge and understanding of threats to the River Basin such as deforestation, soil erosion and pollution. **Figure 8** outlines some local testimonials which support this assertion.

Figure 8: Respondent's testimonials on the Project's role in strengthening local community awareness

Key: R1: Member, Amala river Basin (Ke) R2: Member Nyangores (Ke) R3: Member Isei (Ke) R4: Member, Dairy Goat Group R5 and R6: Member, Bee-keeping Bukabwa (Tz)

Gender Equality and improved local livelihoods

Phase III continued to encourage women's participation in catchment protection and management. All WRUAs/WUAs recruited women to be on the management committee and findings revealed that women tend to be active members of these groups. Continued engagement of women through community groups will improve their active participation in decision-making in the management of the River Basin issues. Although this can be promoted by IGAs, however, the project scaled down such activities in order to concentrate more on the strategic approaches which are more of IWRM relevance.

8.3 Governance and management of natural resources

Improved legal and institutional environment

A significant difference that Phase III made was creating favourable environment for WRM institutions and uptake of water related policies. Much work was done through advocacy and lobbying mandate holders and key partners. More people across the Basin are increasingly becoming aware of the legal frameworks that are associated with water resources management in both countries. Enhanced awareness by local communities has made them strengthen weak voices and with time, more people will have strong voices to demand service delivery by the mandate owners (e.g. TANAPA, LVBWO, WRMA, NEMA /NEMC etc). In addition, the increased awareness of the threats to the Mara River Basin will allow more people to lobby individuals and commercial enterprises (e.g. hoteliers, camp owners, miners) to take remedial actions .

Increased civil society participation

WRM proposes a participatory approach to water resources management involving multiple stakeholders (e.g. users, planners, policy-makers etc.). The Project engaged multiple stakeholders across the Mara River Basin from water users, government officers to private businesses. Direct engagement with private businesses such as hoteliers and camp owners in Kenya and the mining industry in Tanzania improved multi-stakeholder dialogues and it is expected that this will enhance their participation and support to implementation of IWRM processes.

Monitoring status of natural resources (e.g. water and forests)

There are numerous water sources across the Mara catchment which are essential for sustaining life, environment and development yet they are vulnerable and limited. Phase III administered water quality monitoring activities by providing simple equipment (turbidity tubes) to the WRUAs. Even though volunteers who have participated in taking samples have not been able to decipher the results from data collected, they do appreciate the importance of monitoring activities. WRMA is yet to meet its bargain regarding this activity hence the reluctance of the WRUAs to consistently continue with data collection.

9. Sustainability, replicability and magnification potential

9.1 Sustainability

An increased capacity in catchment management, especially for local resource users is important for sustaining the Project's activities. It is argued that strengthened local capacities will eventually bring sustainable behavioural change across the River Basin. The Project also focused on building financial and technical competencies of the WRUAs through capacity building workshops where representatives were trained on key areas such as formulation of proposal writing, constitutions, SCMPs and action and strategic plans. Some WRUAs in Kenya have progressed better towards financial security. For example, Mara WRUA and Isei WRUA secured funding from the Water Service Trust Fund (WSTF) using SCMPs/action plans.

Although the Project did not develop specific documents to outline its exit strategies explicitly, it made good progress towards sustainability through successful establishment and activation of WRM institutions across the River Basin. These locally based institutions are expected to continue to engage with conservation activities that also improve livelihoods. The Project successfully lobbied key partners such as the WRMA, LVBWO, NEMA, LVBC to give formal and legal recognition to the WRM institutions that it created (e.g. WRUAs, TAC, and TWRUF). The LVBC has shown much interest in adopting the TWRUF and this will ensure continuity of TWUF's activities in the future. Successful signing of MoUs to endorse the WRUAs/WUAs/MRCC have already enhanced their chances of working closely with their respective counterparts in performing their duties in the future if these higher level institutions will be fully committed. Phase III also did well in collaborating with other donor funded projects within WWF's work in the Mara River Basin (e.g. WWF-Germany, BMZ, USAID-TWB&HH) and this will ensure sustained efforts. In addition, new WWF projects (e.g. the WWF-UK/HSBC funded) and other upcoming activities will continue and build on with some of the Project's activities. It is recommended that future projects should develop clear exit strategies for sustaining activities in the longer run.

The activities initiated by the project have high potential for sustainability given the extent of institutionalization through WRUAs / WUAs. These institutions can mobilize resources internally through registration and subscription, from WSTF in Kenya and civil society organizations namely Community Development Trust Fund (CDTF) as well as regional programs such as LVBC and the Nile Basin Initiative (NBI) among others. The private sector although not well mainstreamed by the project but is also another potential area from where resources can be mobilised to sustain and upscale the IWRM processes. In Kenya, WRMA has developed a concept to incorporate livelihoods within the SCMPs as a means of promoting WRUA participation and consequently sustaining IWRM processes. The issue of livelihood is a noble idea which although was scaled down by the project but offers potential for sustainability of IWRM processes.

9.2 Replicability and magnification potential

Within the Mara basin, WRUAs are continuing to proliferate and they will learn lessons from pilots initiated by the project. The lessons learned which have been documented will provide documentary and authenticated evidence of good practices that can be upscaled. Outside the Mara, there are chances that the activities of the Project will be replicated if key lessons learnt are disseminated and effectively taken up by policy processes in both countries. So far there are possibilities of adopting the Mara experiences in Lake Naivasha in Kenya and Ruaha River Basin in Tanzania. There have been exchanges with WWF IWRM initiatives in Uganda as well. In summary there is a great potential to replicate and magnify the achievements of the Project due to: much awareness which has been created across the river Basin on key

issues; improved engagement with the various government authorities; water conservation; shared experiences of lessons learnt and continued collaborative efforts with key partners at all levels. It is highly possible that certain activities will be repeated and up-scaled. Some examples which have been taken up are stream-flow monitoring, agreements through MoU and incorporation of IGAs in IWRM initiatives.

In order to maximize the replication potential of the Project and provide basis for up-scaling IWRM policies and practices, a lot more effort will have to be put into sharing lessons learnt widely by use of a variety of formal and informal structures.

10. Lessons learned

Several lessons have been learnt from implementing the Project's activities. Key lessons learnt include the value of understanding critical issues, multi-stakeholders, their roles, priorities and expectations; the need to identify ways of sustaining activities, the need to be able to demonstrate impacts and to document and disseminate lessons learnt implementing IWRM (failures and successes).

Understanding and integrating multiple perspectives

Phase III continued to strengthen the understanding of the key threats facing the Mara River Basin. This an important aspect of IWRM which requires that various perspectives should be integrated in order to promote democratic decision making processes in water resources management. With regard to land and water management intervention, a clear message that emerged is the need to integrate catchment management priorities with socio-economic needs of the local communities. In response, Phase III worked collaboratively with other donors to promote IGAs in order to incentivize local communities to engage more effectively with conservation activities.

Sustainability

A key lesson learnt about sustainability is the importance implementing activities in line with government policies. Establishing and activating WRUAs/WUAs as well as strengthening their capacities clearly complemented the government's efforts in promoting decentralized systems of water governance as stipulated by the water acts of both Kenya and Tanzania. Furthermore the development and signing of contractual agreements endorsed and clarified the roles of these WRM institutions. If the ToRs of the contractual agreements are successfully implemented and financial assistance is given, the WRUAs and WUAs will be able to sustain their activities effectively in the longer term. In addition, the project invested a lot of time and efforts in lobbying key stakeholders with the aim to secure formal recognition and political good will for WRUAs, WUAs, MRCC and TWRUF.

Monitoring the impacts of interventions

More investment should be put on developing an effective monitoring system with adequate resources in order to justify the Project's activities and verify its impacts and their degrees. As Phase III worked towards improving water quality and quantity across the Mara River Basin, this message became an important key lesson. For example, pollution of the water sources by hoteliers, camp owners and informal urban settlements in Kenya and gold mining activities in Tanzania poses serious threats to the water quality in both countries. Through MoUs Phase III facilitated the formalization of monitoring arrangements whereby WRUAs/WUAs were formally recognized to share water monitoring responsibilities. Monitoring will inform the status of water quality regularly for appropriate action to be taken.

Institutionalisation of IWRM process

Institutionalisation through establishment of WRUAs / WUAs provides a forum through which target groups and beneficiaries can participate in IWRM processes. It also enables lead agencies to get entry points to the communities and acquire real-time issues affecting them. During SCMP / Action plan development, the WRUAs / WUAs are given opportunity to come up with water resources problems affecting them and in

certain instances like in Kenya, they spend a day to carry out field work and document problems as they encounter them. This creates ownership and promotes implementation of the plan.

Documenting and disseminating lessons learnt from IWRM experiences

A key aspect of the final phase of the Project was the documentation and dissemination of lessons learnt from implementing IWRM activities across the River Basin. The main thematic areas that were appraised during the documentation process were; establishing, activating and sustaining stakeholder platforms; local land and water management interventions from local to catchment scales; IWRM implementation methodologies and trans-boundary river basin management and; monitoring of impacts of local level interventions for IWRM. Following the documentation process, a comprehensive document was produced which outlined key achievements and failures and why they occurred. A key lesson learnt from documentation is that learning from past experiences can lead to better implementation of activities by avoiding mistakes while focusing on what really works. This is more general but worth mentioning. It is anticipated that the document will provide valuable guidelines to similar projects worldwide if key messages are disseminated effectively.

11. Conclusions and overall assessment

11.1 Project performance

The long-term goal of Phase III to improve access to reliable quantity and good quality of water sources was highly relevant for the Mara River Basin which continues to experience low water flows in the dry seasons and poor water quality.

With reference to the project purpose, Phase III made significant improvements in creating favourable legal and institutional environment for IWRM processes and implementation in the Mara River Basin. The greatest progress was made in *output 1* which set out to strengthen the capacity of community level representatives and their institutions (including Mara Water Resource User Association (MWRUA), Mara River Catchment Committee (MRCC) and water users' associations (WUAs)) to implement integrated water resources management (IWRM) and income generating activities (IGAs) relevant to IWRM. Successful IWRM implementation requires good governance supported by institutions that can administer water resources management effectively at all levels. The water sector reforms in Kenya and Tanzania stipulate the formation of multi-level water institutions and Phase III significantly enhanced good water governance by facilitating formation and formalizing of WRM institutions as well as helping them to gain financial and technical capabilities. Although Norad/WWF-Norway supported limited IGAs in phase III, but this support helped community groups to identify activities which have a dual purpose of improving livelihoods and conserving the biodiversity across the MRB.

Output 2 aimed to document and disseminate key results, impacts and lessons to enhance knowledge and participation in IWRM. Performance was moderate and progress was only good in the production of a comprehensive document which clearly appraised successes and failures that previous phases had encountered in piloting IWRM practices across the River Basin. Following the documentation, two formal workshops, one for practitioners and the other for policy makers were held in Kenya to disseminate lessons learnt. From the policy-makers' workshop, three policy briefs were drafted which aimed to strengthen stakeholder's platforms in catchment restoration as well as participation of key government institutions in implementing IWRM at grassroots level. Dissemination of documentation was poor on the Tanzanian side and no evidence was found to suggest that key stakeholders were formally informed about lessons learnt. More efforts should be made to synthesize results from the documentation and disseminate key messages widely by use of formal and informal communication methods.

Phase III performed with moderate success in realizing *Output 3* which aimed at strengthening IWRM advocacy and lobbying through engagement of local, national and regional partners to influence implementation processes of policies and legislations for improved delivery of IWRM**.** An advocacy and lobbying strategy was developed which made several recommendations for enhancing the uptake of IWRM practices and policies at various levels. In both countries , good progress was made in strengthening WRM institutions such as WRUAs/WUAs, documentation and dissemination of lessons learnt, lobbying key government partners such as the WRMA and LVBWO to formalize and support WRM institutions and as well as the LVBC to adopt key instruments such as the EFA, SEA and BSAP.

In Kenya, the Project performed effectively in facilitating the development of the Instrument of Appointment and signing of it. In Tanzania, processes of formalization and gaining support from the key government departments were slow due to delays in water sector reform processes. More work should be done in lobbying key partners such as the WRMA and LVBWO to allocate funds consistently to WRUAs/WUAs so that the latter can operate effectively. For example, these institutions will not do effective monitoring of water quality without much logistic support.

Output 4 set out to strengthen sustainability, coordination and partnerships among IWRM institutions to improve IWRM implementation at local, national and trans-boundary levels. Phase III made much progress in ensuring that all the planned WRUAs/WUAs were established and formalized in line with the water sector reforms in both countries. These WRM institutions are important structures for implementing and sustaining IWRM activities across the River Basin. Furthermore, the Project did very well in facilitating the WRUAs/WUAs to develop SCMPs and action plans some of which have already been used to secure funding from government. Close working relationships with key partners and further efforts to lobby these partners to recognize the WRM institutions that the Project formed have created opportunities for sustaining catchment management activities in the future. However, the capacities of WRUAs/WUAs needs further strengthening (especially the new ones) in terms of building their financial and technical abilities to perform their various roles effectively.

The sustainability of the Project's efforts, have been influenced by socio-economic, political and legal and factors. Availability of financial and technical resources, alignment of activities with government departments, social cohesion among group members, power and politics were found to be among critical factors that determine the level of sustainability. Overall, the Project has progressed well in creating favourable conditions for participation and collaboration. These opportunities provide a high potential for up scaling and sustaining project efforts in the basin and elsewhere.

11.2 Overall assessment of project

A significant achievement of the Project was that it raised the environmental, conservation and socio-economic profile of the MRB at local, national, regional and international levels.

At local level the Project's achievements such as activation, establishment and formalization of WRM institutions notably the WRUAs/WUAs/MRCC created awareness about the MRB issues especially among local people. It also strengthened the capacities of WRM institutions in preparation of their various roles in catchment issues.

At national and regional levels, the Project built close working relationships with key partners such as the WRUAs/WUAs, WRMA, LVBWO, LVBC and other donors. This improved implementation of joint activities that promote better livelihoods while protecting biodiversity (e.g. afforestation). In addition, successful lobbying of these mandate holders created favourable conditions for decentralized water governance through the implementing regulatory measures in WRM (e.g. Water Act 2002 and the Water Resources Management Act 2009 in Kenya and Tanzania respectively).

At international level, Phase III promoted WWF's global conservation efforts attempting to conserve the whole of the Mara-Serengeti ecosystem through joint collaborative activities such as facilitating integrated water resources management, monitoring of water quality and afforestation in the upper catchment of the MRB. Overall, good progress was made towards promoting sustainability and documenting lessons learnt from previous interventions.

12. Recommendations for the way forward

Based on the conclusions, the following recommendations in form of action points have been made to provide a way forward for continuation of activities in the basin. The lead agencies namely WRMA in Kenya and LVBWO in Tanzania are to take responsibility for follow up of the action points.

Table 13: Action points

Action point
1. Up-scaling capacity building of WRUAs/WUAs for proposal development for resources mobilization is essential to sustain IWRM activities carried out by the WRUAs;
2. Development of communication materials for up-scaling best practices and lessons learned follows from the knowledge generated by project which needs to be made available in other WRUAs/WUAs within and outside the basin.
3. Initiate institutionalization of basin-wide approach for effective upstream downstream interaction among the WRUAs/WUAs within the basin. This approach is essential in ensuring that there is a mechanism for coordination of IWRM activities carried out by WRUAs within the same basin.
4. Continued monitoring of water quality and quantity to provide long term data for water allocation and planning as well as monitoring impacts of IWRM processes implemented in the basin.
5. Replication of IGAs to incentivize WRUAs/WUAs to participate in IWRM processes and sustain the activities.
6. Continuation of catchment protection and soil conservation measures to enhance biodiversity and water resources potential.
7. Mainstream best practices and execute IWRM functions with the policy framework in line with the up-coming water act as aligned to the proposed Water Act to be enacted under the Kenya Constitution 2010.
8. Promote payment of economic use of water within the policy frameworks for example through Water Resources Management Rules in Kenya to sustain IWRM actions.
9. Support implementation of trans-boundary water policy to enhance IWRM processes in the Mara Basin.

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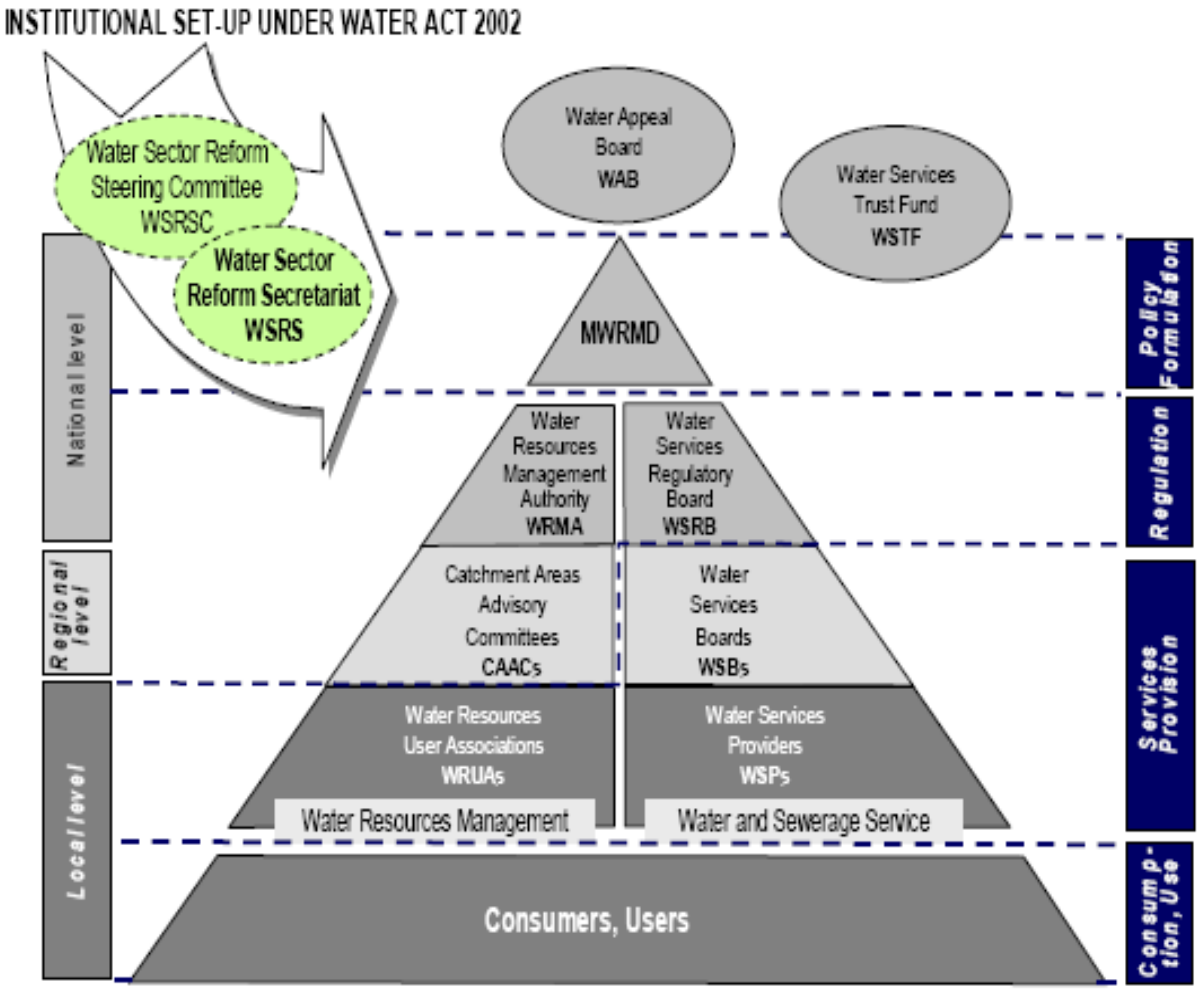
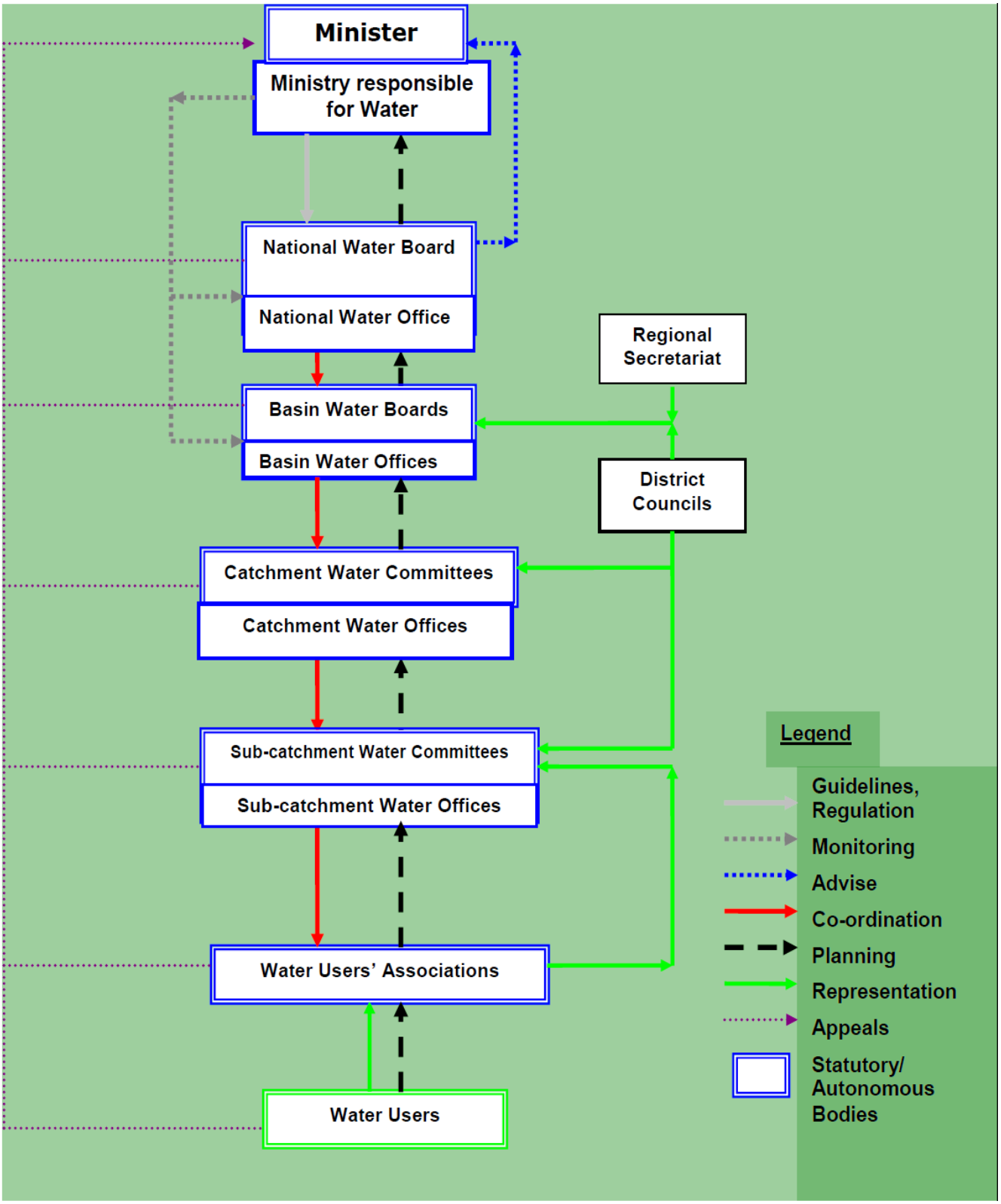
Annex 1: Institutional arrangements of WRM in Kenya



Annex 2: Institutional framework for WRM in Tanzania



Annex 3: Evaluation Timetable

Date	Activity	Location
Wed 7/11/12	Inception meeting	Nairobi
Thurs 8/11/12	Development of evaluation tools	Nairobi
Mon 12/11/12	Travel/meetings	Kenya Mara
Tue 13/11/12	Fieldwork	Kenyan Mara
Wed 14/11/12	Travel	K-TZ
Thurs 15/11/12	Fieldwork	TZ Mara
Fri 16/11/11/12	Fieldwork	TZ Mara
Sat 17/11/12	Fieldwork	TZ Mara
Sun 18/11/12	Travel	TZ-Ke
Mon 19/11/12	Fieldwork	Mara-Ke
Tue 20/11/12	Fieldwork	Mara-Ke
Wed 21/11/12	Fieldwork	Mara-Ke
Thurs 22/11/12	Meetings/travel	Narok -Nairobi
Fri 23/11/12	Meetings	Nairobi
Sat 24 /11/12	Meetings	Nairobi
Sun 25/11/12	Literature Review	Nairobi
Mon 26/11/12	Literature Review	Nairobi
Tues 27/11/12	Data analysis	Nairobi
Wed 28/11/12	Data analysis	Nairobi
Thurs. 29/11/12	Report write up	Nairobi
Fri 30/11/12	Report write up	Nairobi
Sat 1/12/12	Report write up	Nairobi
Sun 2/2/12	Report write up	Nairobi
Mon 3/12/12	Report write up	Nairobi
Tues 4/11/12	Report write up	Nairobi
Tue 4/12/12	Report write up	Nairobi
Wed 5/12/12	Report write up	Nairobi
Thurs 6/12/12	Report write up	Nairobi

Annex 4: List of Respondents/Key Informants

	First name	Surname	Organization and Position	contact
KENYA				
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Annex 5: Logical Framework Analysis and progress against indicators

Key: **Red**: Limited Progress (< 1/3 of indicators achieved); **Amber:** Good Progress (1/3 -2/3 of indicator achieved); **Green**: Very good progress (>2/3 of indicator achieved)

Project Targets	**Indicators**	**Baseline** (value and time of measurement)	**Current status** (Value and Date) with discussion of any variance	**Success rating** (green, amber or red)
Project purpose:				
Integrated water resources management (IWRM) policies and practices in the Mara River Basin enhanced by the end of 2012.	P.1: IWRM policy implementation by local, national and regional institutions and stakeholders enhanced by the end of 2012. P.2: Enhanced participation and representation by local level stakeholders in water resources management structures and their views and priorities are better reflected in IWRM plans and practices by the end of 2012. P.3: Local level monitoring links improved water quality to improved IWRM practices at local level by the end of 2012	Several frameworks in place (e.g. Kenya Water Policy (2002) and Water Act (2005); Tanzanian Water Policy (2005) and Water Act (2009)) while implementation remains incomplete. Local stakeholders are relatively well represented but are only moderately able to participate actively. Local stakeholders' views are to a relatively small degree reflected in the few existing IWRM plans. Limited baseline data available beyond opportunistic and non-systematic sampling / monitoring in several sites.	Kenya: Two sub-catchment management plans developed. Tanzania: Two IWRM plans developed Ke/Tz: One policy strategy developed. Ke/Tz: representation and participation increased by over 800 local people Ke/Tz: Systematic sampling / monitoring not yet in place	
Output 1				
Strengthened capacity of community level representatives and their institutions (including Mara Water Resource User Association (MWRUA), Mara River Catchment Committee (MRCC) and water users' associations (WUAs)) to	By the end of 2010, three key priority IGAs that are supporting IWRM are identified and implemented by the MWRUA in partnership with the Project. By the end of 2011, three sub-catchment WRUAs (Lower Mara, Talek and Sand River) in Kenya are formed and linked to the umbrella MWRUA, and two WUAs (Tigithe and Tobora) are formed and linked to the MRCC in Tanzania.	A quick evaluation of viable IWRM supporting enterprises done on the Kenyan side of the Basin but priority IGAs not identified. Kenya: Umbrella MWRUA formed and operational based on 17 zones on the upper sub-catchment area of Amala, Nyangores and Ngasiat tributaries. The sub-WRUAs for Lower Mara, Talek and Sand River not yet formed.	Six community groups in Nyangores and Amala tributaries were supported to grow a total of 300 avocado fruit trees and an assortment of other agroforestry tree species by July 2010. Kenya: Lower Mara, Sand and Talek Rivers WRUAs formed.	

Project Targets	**Indicators**	**Baseline** (value and time of measurement)	**Current status** (Value and Date) with discussion of any variance	**Success rating** (green, amber or red)
implement integrated water resources management (IWRM) and income generating activities (IGAs) that strengthen IWRM.	By the end of 2012, the capacity of MWRUA and MRCC to develop IWRM plans is enhanced through participatory processes of developing sub-catchment management plans (SCMP) (Kenya) and IWRM plans (Tanzania).		Tanzania: Upper Tigithe, Lower Tigithe and Tobora formed. Kenya: Amala SCMP submitted for funding to the Water Services Trust Fund. Nyangores SCMP complete and proposal for funding (based on key issues in the SCMP) submitted to the WSTF. Siana and Isei WRUAs have also applied for funds from WSTF to enable them undertake SCMP. Isei WRUA got Ksh 700,000 in November. Tanzania: IWRM action plans for 14 WUAs done in 2010. MRCC action plan and budget completed (July 2010). Upper Tigithe WUA established but Tigithe Subcatchment Water Committee and MCWC not yet formed. IWRM actionplan for Upper Tigithe WUA developed	

Project Targets	Indicators	Baseline (value and time of measurement)	Current status (Value and Date) with discussion of any variance	Success rating (green, amber or red)
Output 2				
Key IWRM results, impacts and lessons documented and disseminated to partners and stakeholders to enhance knowledge and participation in IWRM	Documentation materials covering four thematic areas[12] produced by the end of 2012. By the end of 2012, documentation generated in four thematic areas is disseminated to key partners and stakeholders. Partners and stakeholders implement aspects of lessons learnt from documentation by the end of 2012.	Information mainly consists of internal reports. The four thematic areas not specifically and systematically documented. Low level of systematic documentation and hence limited formalized sharing. Extensive verbal sharing of experiences has taken place. Partners and stakeholders are aware of WWF's IWRM efforts but this is based on verbal sharing, exchange visits etc. A limited no of partners & stakeholders implement IWRM activities based on lessons.	Four thematic areas appraised. Four thematic areas documented. Kenya: Two workshops held and three policy briefs drafted. Key IWRM results, impacts and lessons documented by consultant. Documents in the form of technical reports, fliers etc. not produced Tanzania; No formal dissemination of the lessons document was done in TZ because the funding was stopped before the work was done. But the document was received in the Musoma office and informal dissemination had started.	
Output 3				
IWRM advocacy and	Lobbying and advocacy strategy developed by the end of 2011.	Policy implementation and practices focus on enforcement and community implementation rather than threats.	Ke/Tz: Policy advocacy and lobbying strategy document developed. Kenya: MWRUA has increased its	

[12] Thematic areas: i) Water source protection, soil and water conservation and livelihood interventions from community level to catchment scale; ii) Establishing, activating and sustaining stakeholder platforms for IWRM; iii) IWRM implementation methodologies and lessons learnt in trans-boundary river basin management; and iv) Monitoring of impacts of local level interventions on IWRM).

Project Targets	**Indicators**	**Baseline** (value and time of measurement)	**Current status** (Value and Date) with discussion of any variance	**Success rating** (green, amber or red)
lobbying strengthened through engagement of local, national and regional partners to influence implementation processes of policies and legislations for improved delivery of IWRM.	By the end of 2012, implementation of lobbying and advocacy strategy results in: a) MWRUA participating in water allocation plan development and implementation as well as in water license fees collection in partnership with WRMA, and b) increased government funding of MRCC activities through LVBWO, which leads to enhanced participation in water quality and quantity monitoring and water allocation and management. By the end of 2012, IWRM documentation on the four thematic areas has influenced change in IWRM policy implementation and practice to focus on mitigation of threats to water quality and quantity at local, national and trans-boundary levels.	IWRM related documentation available with WWF but not systematically on the four thematic areas and not disseminated in a structured manner.	membership by 800 through its sub-WRUAs. TZ: MRCC has been supported by LVBWB in budget development and received funding through LVBWO in 2010 and 2011 and 2012. Kenya: Advocacy work done through two workshops with key partners. MoUs signed between WUAs and LVBWO but not with MCWC and not implemented	
Output 4				
Sustainability, coordination and partnerships among IWRM institutions strengthened to improve IWRM implementation at local, national and trans-boundary levels.	By mid-2012, two (2) business plans /sub-catchment management plans are completed for local IWRM institutions (MWRUA, MRCC). By the end of 2012, three key priorities of the business plans /sub-catchment management plans for MWRUA and MRCC identified and implemented. By the end of 2011, technical, financial, administrative and governance capacity gaps of MWRUA and MRCC identified and priority capacity needs are addressed by the end of 2012. By the end of 2011, MWRUA and MRCC each have project related exit plans to enhance technical and financial, governance and administrative	WRMA business plan completed, MWRUA business plan to be developed to respond to and to support WRMA business plan. Work ongoing to complete MWRUA vision, structure & action plan. Business plan not completed. Work ongoing to complete MRCC vision, structure and action plan. Kenya: MWRUA was being supported to write proposal to Water Trust Fund and to be funded on its own as a prelude to business plan development. Tanzania: MRCC was being supported to develop proposal to be funded by LVBWO.	Kenya: A strategic plan developed for the Mara WRUA (2011-13). Capacity and training needs assessment done. Ke/Tz: No business plans developed. In Kenya it was agreed that SCMPs will be sufficient in supporting business of the WRUA, the focus then shifted to linking the WRUAs funding in WSTF. By December, 4 WRUAs had applied for WSTF grant, one has been granted, 8 are in process of applying. In Tanzania Action Plans were treated as basis for WUA transaction and	

Project Targets	**Indicators**	**Baseline** (value and time of measurement)	**Current status** (Value and Date) with discussion of any variance	**Success rating** (green, amber or red)
	sustainability.	MWRUA and MRCC registered as community institutions. Financial, administrative and technical capacities were limited. Governance structures to a large extent in place but weakened by low membership involvement in decision making. By the beginning of 2010, MWRUA had a Management Board of 17 members, was able to write grant making proposal (e.g. got funding from Coca Cola in 2010) and had an office with a full time manager employed by MWRUA through proceeds generated by MWRUA activities	project investment were make to link the WUAs with LVBWO and District Council for funding. District Council is now funding some of the WUA activities through Village Environmental committees. Efforts to see allocation from LVBWO to WUAs for implementation of their Action Plan have not been fruitful. Kenya: MWRUA-WRMA partnership strengthened by MoU on management of water resources in Mara river. The project support negotiations on the budget to be allocated to WRUA by WRMA. WRMA is yet to allocate funds for instrument implementation. Tanzania: MRCC-LVBWO partnership being strengthened through joint action planning implementation and budget support. Kenya: Capacity Needs Assessment done for all WRUAs in Kenya. Tanzania: No evidence on capacity needs assessment.	

Questionnaire no……..

Name…….

Date:……

Annex 6. Questionnaire

1. What are your main concerns (/problems) about the Mara River Basin?

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2. Are you affected by these problems? If yes, in what ways?

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3. What do you see as your key role (s) in these issues? Please explain briefly

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4. What are your priorities? (Please list)

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5. In what ways has the Norad/WWF Project collaborated with you/your group/organization in the Mara River Basin? (please list)

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6. What are your expectations of the Project?

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7. Has the Project met your expectations/priorities (Yes/No) Please explain

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8. Which other Projects have you collaborated with or have supported you/your organization?

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9. What are the main strengths/ weaknesses associated the Norad Project?

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10. Any other comments?