An Integrated Water Resource Action Plan Programme

Sustainable Land and Water Management for People, Businesses and Nature in the Lake Naivasha Basin, Kenya.

Submitted to the Embassy of the Kingdom of the Netherlands

Submitted by:

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Supporting Partners: Imarisha Lake Naivasha Board; Water Resource Management Authority; University of Twente (ITC); and Dutch Regional Water Authorities.

List of Abbreviations

AWS	Alliance for Water Stewardship
CEO	Chief Executive Officer
CFA	Community Forest Association
CSOs	Civil Society Organizations
CUAHSI	Consortium of Universities for Advancement of Hydrological Sciences
DFID	Department for International Development
EKN	Embassy of the Kingdom of Netherlands
EOIA	Earth Observation and Integrated Assessment
FDW	Fonds Duurzman Waterbeheer (Sustainable Water Fund)
FMAs	Forest Management Agreements
FSI	Floriculture Sustainability Initiative
GDP	Gross Domestic Product
GEI	Green Economy Initiative
GOK	Government of Kenya
HDSR	Regional Public Water Authority “Waterschap Hoogheemraadschap De Stichtse Rijnlanden”
ICT	Information Communication Technology
IDH	Initiatief Duurzame Handel - Sustainable Trade Initiative
IMTC	Inter- Ministerial Technical Committee
IT	Information Technology
ITC	University of Twente, Faculty of Geoinformation Science and Earth Observation (ITC)
IWRAP	Integrated Water Resource Action Plan
IWRMP	Intergated Water Resource Management Plan
KARI	Kenya Agriculture Research Institute
KEPHIS	Kenya Plant Health Inspectorate Services
KFC	Kenya Flower Council

KFS	Kenya Forest Service
KIT	Netherlands Royal Tropical Institute
KWS	Kenya Wildlife Service
LANAWRUA	Lake Naivasha Water Resource User Association
LN	Lake Naivasha
LNB-3P-SDF	Lake Naivasha Basin PPP Sustainable Development Fund
LNGG	Lake Naivasha Growers Group
LNBIMP	Lake Naivasha Basin Intergrated Management Plan
LNRA	Lake Naivasha Riparian Association
M&E	Monitoring and Evaluation
MoWI	Ministry of Water and Irrigation
MSc	Master of Science
NAIVAWASS	Naivasha Water Supply and Sewerage Company
NB&TC	Naivasha Business and Tourism Community
NBSI	Naivasha Basin Sustainability Initiative
NEMA	National Environment Management Authority
NGOs	Non Governmental Organizations
NL	Netherlands
NRM	Natural Resource Management
NZV	Regional Public Water Authority “Waterschap Noorderzijlvest” (NZV)
OPM	Office of Prime Minister
PES	Payment for Environment Service
PELIS	Plantation Establishment for Livelihood Improvement
PFMPs	Participatory Forest Management Plans
PMU	Programme Management Unit
PPPP	Public Private People Partnership
R&M	Research and Monitoring
RIBASIM	River Basin Simulation Model
RVWSB	Rift Valley Water Service Boards

RWAs	(Dutch) Regional Water Authorities (Waterschap)
RZ	Riparian Zone
SDAP	Sustainable development Action Plan
SNV	Netherlands Development Organization
SP	Stakeholder Joint Action Plan
SWAT	Soil and Water Assessment Tool
UK	United Kingdom
UNEP	United Nations Environment Programme
VEI	Vitens Evides International
WAP	Water Allocation Plan
WASH	Water, Sanitation and Hygiene
WATSAN	Water and Sanitation
WDC	WRUA Development Cycle
WEAP	Water Evaluation and Planning
WEH	Water and Ecological Health
WOTRO	Netherlands Organization for Scientific Research
WRM	Water Resurces Management
WRMA	Water Resources Management Authority
WRUA	Water Resources Users Association
WSTF	Water Service Trust Fund
WSUP	Water and Sanitation for the Urban Poor
WWF	World Wide Fund for Nature
WWF- KCO	World Wide Fund for Nature, Kenya Country Office

Executive summary

Naivasha presents many challenges around a unique blend of biodiversity, business interests and livelihoods linked by the essential natural resource of water. Equally unique, the basin is a model of a vibrant partnership between the private sector, the public sector and the people in the Naivasha basin that recognizes the importance of linking sustainable business, livelihoods and nature conservation.

Over the past 10 years, WWF and its strategic partners have supported Lake Naivasha Basin Integrated Water Resources Management. The partnership's strength emerged during the severe drought in 2009 and a shared risk study carried out at the same time articulated the risks of poor water management. Stakeholder consultations undertaken over the past one year has led to the finalization of the overarching 10 year Lake Naivasha Integrated Basin Management Plan-LNBIMP, the Imarisha 5 year Sustainable Development Action Plan SDAP and this submission, the 4 year Joint Stakeholder Plan WWF IWRAP. The relationship between these plans is explained in Section 2.5. This proposal, an illustration of the partnership in Naivasha, is the work of key partners that identifies key results that need to be achieved over the next 4 years.

This proposal will focus on partnership engagement in water resource management, governance and natural resource management. WWF-Kenya (applicant) through this proposal seeks KES 420 million (420,000,000) from the Embassy of the Kingdom of the Netherlands to achieve the 7 Results/ Outputs as follows:

1. Increased capacity and improved governance in WRM institutions (WRMA and WRUAs) for water resource management in LNB
2. Increased knowledge and technical capacity for quantitative water resource management and monitoring in LNB
3. Increased headwater protection and security of water flows through improved participatory forest management and income-generation in the catchment
4. Conservation and sustainable development of riparian farmland in the catchment through improvement and institutionalization of PES mechanism
5. Increases in levels of sustainable production and good stewardship in LNB floriculture through development and adoption of national standards and certification
6. Strengthened institutional capacity of Imarisha Naivasha for execution of the SDAP (monitoring impacts, compliance, oversight and communication functions)
7. Partner consultation and finalization of the Lake Naivasha Basin PPP Sustainable Development Fund project and funding proposal (LNB-3P-SDF)

Whilst WWF as the lead applicant will be responsible for the overall delivery of the programme and reporting to EKN, each partner will provide specific expertise to the programme (see key competencies of each partner in Section 5.1) to achieve the anticipated results (see section on programme implementation). A Programme Implementation Unit (PMU) consisting of the key partners will be established to ensure that programme implementation is timely, transparent, focused and within budget. Representatives of Imarisha's Research and Monitoring (R&M) Committee will monitor and evaluate the performance of the EKN partners against the deliverables

set out in the work plan. The WWF Naivasha office will oversee the day to day implementation of the project, ensure accountability in project implementation, prepare and submit project technical, financial and related final reports.

The partners envision that this IWRAP programme will be used as a model for replication in basins all over the world.

Contents

1.0 Introduction

In the year 2009, Kenya suffered one of its worst droughts. The impact of this was particularly severe in the Lake Naivasha Basin where the lake receded to levels not seen since the late 1940's. Over the last 30 years, the basin has seen a major transformation with the arrival and rapid expansion of a horticultural industry, rapid natural population growth and an influx of people in the immediate environs of the lake seeking employment in the horticultural industry. This has increased demand on natural resources and particularly water resources. The response to this situation by government, the private sector and civil society was unique: they combined their efforts to set out on a path to ensure long-term sustainable development in the Naivasha Basin.

This proposal is developed from the Joint Stakeholder Action Plan (WWF/ IWRAP 2012) that was facilitated by WWF Kenya with participation of key stakeholders in the basin and with funding from the Embassy of the Kingdom of the Netherlands (EKN) and submitted to EKN in June 2012. It responds to the water resource management (WRM) priorities and elements of catchment land management in the broader Sustainable Development Action Plan (SDAP) of Imarisha Naivasha. The Imarisha Naivasha Board is an initiative of the Prime Minister of Kenya, supported by the Prince of Wales' International Sustainability Unit, that responds to the recognised need for a coordinated plan to guide the development of the basin, formulated and managed by Lake Naivasha stakeholders in partnership with the government (see Sections 2.5 and 5.1).

In terms of the conceptual approach, the proposal reflects the shared risks and opportunities analysis that was developed for Lake Naivasha by WWF in 2011 (Pegram, 2011). This report summarizes the risks and opportunities for the different key stakeholders in the basin, as follows:

a) Bio-physical risk related to the water resources and ecosystem of the basin
b) Socio-political risk related to perceptions of inhabitants of the basin
c) Regulatory risk associated with governance at a local and basin scale
d) Reputational risk around requirements on products from the basin
e) Investment risk linked to increasing requirements of financial institutions
f) Economic-financial risk due to impact of these other risks

The proposal is entitled: "**An Integrated Water Resource Action Plan (IWRAP) Programme: Sustainable Land and Water Management for People, Businesses and Nature in the Lake Naivasha Basin, Kenya**". The programme of activities and interventions set out in the proposal will be implemented under a partnership (formalized under the PMU) between WWF Kenya (overall responsibility for programme management), Imarisha Naivasha, the Government of Kenya Water Resources Management Authority (WRMA) and technical assistance partners from the Netherlands (ITC/ University of Twente and two Regional Water Authorities in the NL (Waterschap Noorderzijlvest (NZV) and Waterschap Hoogheemraadschap (HDSR)). The 12 LNB WRUAS (Water Resource User Associations), 4 CFAs (Community Forest Associations) and other community groups are implementing partners and beneficiaries on the ground. Other required expertise will be contracted as required under specific Results or incorporated through other project partnerships under the broader SDAP (e.g. Universities of Nairobi, Egerton and Leicester), civil society and other

stakeholder groups involved in the development and implementation of IWRAP and SDAP. (See Section 5.0 for detailed implementation arrangements).

The IWRAP is a response to a unique and well established public–private sector people partnership (PPPP) in the Naivasha Basin. The PPPP initiative and concept (now formalized through the establishment of Imarisha Naivasha) is already drawing worldwide interest and through support of this proposal, the technical staff at the Netherlands Embassy will have the opportunity to be closely involved in the programme and draw upon their network of expertise to explore opportunities to develop new concepts concerning water and food security.

In order to make explicit links between all the plans in the basin, this programme shares the same vision as the Master Plan (LNBIMP, 2012- 2022) which is:

"A clean, healthy and productive environment and sustainable livelihoods in the Lake Naivasha Basin for the benefit of the present and future generations "

This will be achieved through the following **Programme Purpose**:

To create essential enabling conditions for effective water regulation and governance, sustainable land and natural resource use and sustainable development in the Lake Naivasha Basin.

The programme will focus on partnership engagement in water resource management, governance and natural resource management. Through this proposal, WWF-Kenya (applicant) seeks Ksh 420 million (Ksh 420,000,000) from the Embassy of the Kingdom of the Netherlands to achieve the 7 Results/ Outputs defined in this proposal (Section 3 and Log Frame, annex 2). Under the coordination of the SDAP umbrella (Section 2.5), this programme will work closely with other relevant initiatives and funding partners including the LNB Climate Change Vulnerability Asssessment (UK- DFID funding to WWF) and the "Stronger Service Providers, Better Services for All in Naivasha Municipality Proposal for a Water Operators' Partnership" (Vitens Evides International, NAIVAWASS, WSUP, SNV, RVWSB, with funding from EKN).

The programme perspective is enabling – building capacity (institutional and technical), enhancing working relationships and governance in water resource management and aspects of catchment land management across the basin. Comprehensive monitoring and feedback processes will ensure effective programme management and learning and track progress towards achievement of the proposed results/outputs and longer-term, sustainable impacts. A proposal for a complementary project to build on these enabling initiatives and achieve a fully-functioning and self-financing WRM system across the basin is detailed in Result 7. This includes the development of a Sustainable Development Fund to ensure sustainable management and development, basin-wide and long-term. A key element of the Sustainable Development Fund programme is that revenues from a premium from flowers sold in the EU will be invested in Lake Naivasha through the proposed Development Fund. A preliminary proposal involving the same partnership under this programme, with additional technical and private sector funding partners, was submitted to the Sustainable Water Fund (FDW) of the government of The Netherlands (DGIS) in October 2012. Further elaboraton and final submission of the proposal are detailed in Result/ Output 7.

2.0 Background and Context

2.1 Background to the funding proposal for IWRAP

This funding proposal is a response to major challenges limiting sustainable water resources and land management in LNB and elaborated in the Joint Stakeholders' Action Plan (SP) submitted to the EKN in June 2012 (WWF/ IWRAP 2012). The programme of activities in the proposal (Section 3) draws upon work areas that were identified through the various stakeholder meetings and consultations in Naivasha which led to the agreed IWRAP/ SP plan. The relationship between these processes, the IWRAP/ SP Plan and other LNB stakeholder plans (SDAP and LNBIMP) are detailed in Section 2.5.

2.2 Environmental and Economic relevance of Lake Naivasha Basin

A detailed description of the Lake Naivasha Basin is provided in several documents that are appended to this proposal including the SDAP, SP and shared risks and opportunities report. However this section provides a short description of the place for those that might not have read the appended documents.

Lake Naivasha (LN) lies in the Eastern Rift Valley and currently covers approximately 100 to 150 km^2; and the area of the Lake fluctuates quite markedly and rapidly (Everard et al., 2002) due to its hydrological sensitivity that creates quick succession of high water mark and recession. It is the second largest freshwater lake in Kenya and has, since 1995, been listed as a Ramsar Site- a Wetland of International Importance. The lake has no surface water outflow. The surface inflows to the lake come via three river systems – the Malewa, the Gilgil and the Karati through a papyrus-dominated fringe in the northern part of the lake.

The Lake Naivasha basin is also at the heart of Kenya's horticulture industry (mainly flowers and vegetables). The Lake Naivasha floriculture industry accounts for more than 70% (US$400 million) of the country's cut flower exports. Kenya's cut flower exports account for more than 40% of the EU retail market while generating 9% of Kenya's total foreign exchange revenue and contributing 2% to 3% to the Kenyan GDP. In 2008, the Netherlands accounted for 51% of Kenya's cut-flower exports followed by the UK (25%) and Germany (9%). It is estimated that 45% of the revenue generated by a typical cut flower farm is spent on the farm, implying that the contribution of the floriculture industry to Lake Naivasha's local economy is approx US$180 million. (G. Pegram, 2011)

The total irrigated commercial farm area around Lake Naivasha is about 4,450 ha. Cut flowers account for about 43% of the irrigated area, followed by vegetables with 41% and fodder with 15% (Musota, 2008). About 62% of the cut flowers around Lake Naivasha are grown in greenhouses (Mekonnen&Hoeksta, 2010).

South of the lake close to Hell's Gate National Park, electricity is generated through geothermal power (G. Pegram, 2011). Over 120 geothermal wells have been drilled in Olkaria. At the moment the installed power potential at Olkaria, which consists of 3 plants, is 162 MW. Seven development sectors divide the Olkaria geothermal area. Of these seven, only three are committed to development (Lagat, 2010). In addition, the lake supports local tourism and fisheries.

The population of the Lake Naivasha Basin has grown from approximately 230,000 people in 1979 to 650,000 in 2009. In the decade between 1989 and 1999 (during the boom years of the horticulture

industry), the population of the basin grew by 64% (G. Pegram, 2011). In the past decade this population growth has slowed to approximately 13%, and is expected to grow further and reach well over 700,000 people in the near future. The flower industry in Naivasha employs approximately 20,000 people directly and a further 350,000 jobs are created in the associated service and informal businesses sector (G. Pegram, 2011).

The focus on the Lake and the horticultural industry tends to overlook the fact that the Basin covers approximately 3,400 km^2. The upper catchment is characterised by small scale farming activities both for subsistence and cash crops sold in the nearby urban areas of Naivasha town, Nakuru and Nairobi. As the source of water draining to the Lake, the activities of the small scale farmers in the upper catchment have a significant influence on the quantity and quality of water discharging into the Lake. Simplified, one can say that the majority of water quantity issues (over-abstraction) is related to the large water abstractors around the lake and that the majority of the water quality issues (especially pollution with nutrients) is related to poor land use practices of small holders up-stream. Consequently in the IWRAP much attention is directed to improving land use practices and management of water resources in this area.

Only a small section of the Naivasha Municipality is covered by conventional sewerage systems. The capacity to treat the wastewater is highly insufficient at the present time. Therefore, the waste disposed from the sewerage system remains a source of water pollution. Further, the majority of sampled households (78%) use pit latrines to dispose human waste, while hotels and flower farms around Lake Naivasha use mainly septic tanks to dispose of human wastes with serious risk of environmental pollution (Mireri, 2005). In recognition of their community responsibilities, the Lake Naivasha Growers' Group were recently appointed to the board of NAIVAWASS, the company charged with delivering water and wastewater services to the Naivasha Municipality[1].

2.3 Brief history of WWF and partners involvement

Several conservation initiatives to restore Lake Naivasha landscape environmental conditions have taken place and are still going on. These have been instrumental in investigating the most appropriate development direction for Lake Naivasha and the implementation of concrete measures to secure the landscape for future generations.

Local water resources management in Naivasha finds its roots in the Lake Naivasha Riparian Association (LNRA) established in 1929 to protect local landowners' rights. In the 1980's, with the advent of the floriculture industry, LNRA became keen on balancing the impact of the expanding commercial interest around the Lake and protecting its environmental integrity. A group of progressive commercial farmers aware of sustainable water use linkages to their commercial interests in the 1990s, established the Lake Naivasha Growers Group (LNGG). In 1995, LNRA lobbied for the Lake's designation as a Ramsar Site.

[1]These issues are the focus of the"Stronger Service Providers, Better Services for All in Naivasha Municipality Proposal for a Water Operators' Partnership" (VEI, NAIVAWASS, WSUP, SNV, RVWSB, with funding from EKN)

In 2005, the LNGG initiated an hydrological study of the Lake through independent consultants with a view to preparing a Water Allocation Plan[2] (WAP) in response to the provisions of the new Water Act at that time. The WAP was subsequently submitted to government and through stakeholder discussion and engagement facilitated by WWF, it has now been adopted. Furthermore, the work done by the consultant, and WWF involvement, lead to the formation of the 12 Basin Water Resource Users' Associations (WRUAs) which are to be the vehicle to launch several of the catchment based interventions envisaged in the IWRAP.

ITC has been working in the basin since 1997. Some 80 MSc students did their research in the basin on topics related to natural resources, environment and socio-economics. Since 2011, ITC has been executinng a research project funded by WOTRO. ITC has built relations with all major stakeholders, and research outputs have been used for planning purposes- the WAP is to a large extent based on ITC research outputs.

Over the last fifteen years or so, several other organisations including WWF have shown keen interest on environmental restoration of the Lake basin. WWF has been more active in Lake Naivasha landscape since 2004 when a scoping mission identified desired interventions leading to bigger programmes such as the *Linking Futures programme* (2007-2011). The main goal of this programme was to link conservation and/or restoration of the natural environment to improving livelihoods of the local population and economic development. The focus ranged from supporting functional WRUAs, CFAs and small-medium nature based enterprises to create alternative income opportunities and develop a common vision and plan for the future of Lake Naivasha.

The major drought in 2009 reinforced existing and mobilized new coalitions that recognised the need for cordinated and inclusive management of natural resources. The effects of the drought was a wake up call to all stakeholders- if nothing was done to address the long term challenges of lack of enforcement and unregulated water abstraction, then the consequential business, environmental and social risks associated with water shortages will increase.

In response to this situation, several initiatives gained momentum.

- WWF launched the "Joint Immediate Action Plan for Lake Naivasha", an informal association with the LNGG (private sector), WRMA and the civil society platform, to implement immediate actions by all key stakeholders considered necessary and urgent to address most important water use and management threats.

- WWF introduced the *shared risk and opportunity in water resources* approach. This new approach takes a (business) shared risk perspective concerning the use of natural resources and not (only) a conservation perspective with an ultimate aim of optimising benefits to all involved, including national benefits. The stakeholders in Lake Naivasha Basin embraced the concept of shared risks and the consequences of these risks for each of these groups and the commonalities between them as depicted in Figure 1 below. This has become the basis for constructive engagement between these groups to improve the management of the basin and thereby reduce the risks to all groups.

[2] A simplified version to be enhanced under this proposed programme

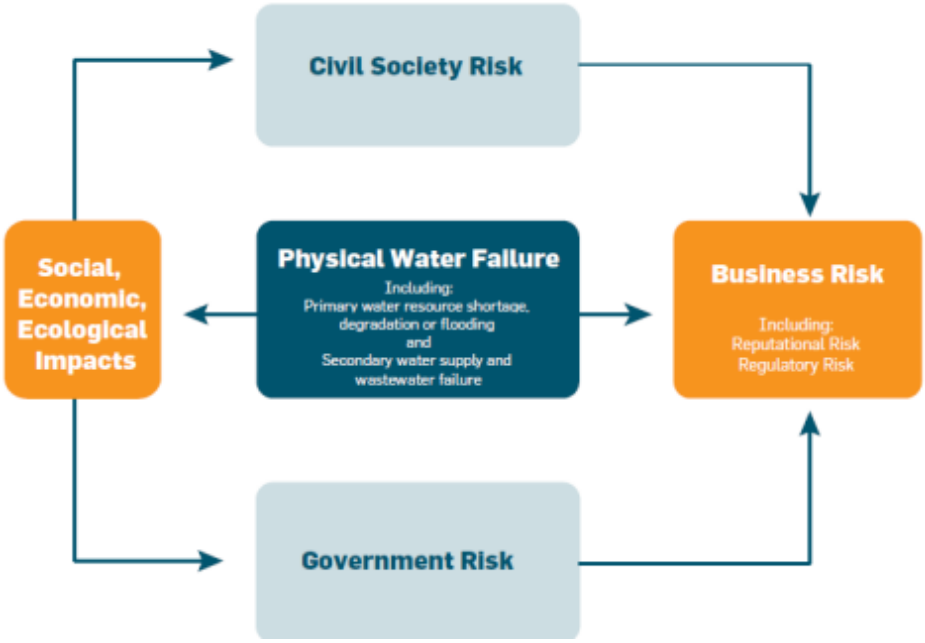

Figure 1: Shared water risk

The acceptance of the shared risk approach lead to a *"shared vision"- advocating for a balance between* economic development and conservation of biodiversity especially natural resources for sustainable development. The stakeholders recognise that conservation and development complement each other and that conserving natural resources is a vital element of minimising risks and improving economic sustainability and growth in the future.

- This approach is refelcted in initiatives like the payment for environmental services (PES) scheme, whereby LNGG paid upstream small holders under the PES scheme for good land-use practices, the establishment of an umbrella WRUA connecting all the WRUAs in the different parts of the basin and a potentially new relationship between growers and upland small scale farmers.

- LNGG initiated a water abstraction survey of the Lake that was upscaled with support from WWF and WRMA, to include the whole Basin that revealed the true extent of illegal abstraction. This lead to the approval of the WAP and planned gazettement of the Naivasha basin as a protected area for surface and groundwater resources.

- A further significant achievement was the agreement between WRMA and the WRUAs facilitated by WWF to allow WRUA's to act as agents of WRMA in the management of water resources and collection of water charges at the sub-catchment level. This was a far-reaching mandate for the WRUA's and the first in its kind in Kenya.

- Momentum was regained in finalising the Lake Naivasha Basin Integrated Management Plan (LNBIMP). This plan, under the stewardship of the Kenya Wildlife Services (KWS), had been in preparation for more than five years. It addresses the need for an integrated, equitable and coordinated approach to resource management within the Basin and as such establishes a reference with broad stakeholder acceptance as the Master Plan for the future (see explanation of links to IWRAP and SDAP, section 2.5 below).

- WWF with the support of EKN and DGIS organised a visit by key Lake Naivasha representatives to the Hague to assess potential collaboration between Lake Naivasha and the Netherlands. One of the outcomes was a first sketch of important integrated water resource management issues to jointly work on which has evolved in the joint stakeholder's plan recently finalised (see also below under 2.4).

- Another crucial development is that the government created a vehicle with legal backing, the Imarisha Naivasha Board, to bring all initiatives in Lake Naivasha together and create a coordinated plan for their implementation and for the longer term sustainable management of the Naivasha Basin (see 2.5, below).

2.4 The Joint Stakeholders' Plan (SP)

The development of an integral and stakeholder driven and owned plan for Lake Naivasha was an evolution of strong stakeholder commitment to secure the resources of Lake Naivasha for sustainable development. For years the Lake Naivasha environment was characterised by conflict between stakeholder groups instead of consensus. The 2009 drought made it clear to all stakeholders that the ecological limits of the system were close and something *collectively* needed to be done to improve the situation.

The shared risk study (annex 6- Shared Risk and Opportunity in Water Resources Management) articulated the risks for each stakeholder group (Private Sector, Government and Civil Society groups). From this study, the stakeholders recognized the incentive for common consensus in planning as a path to achieve improved water resources management in the basin and the future of economic and environmental sustainability for Lake Naivasha. The study showed that all stakeholders in Lake Naivasha run high risks in different forms threatening their livelihoods if the resources they all depend on will not soon be managed more wisely (Pegram, 2011).

It was during this time that the stakeholders in the basin developed the *"shared vision"* (as described in section 2.3), and with funding from EKN, developed a water and land/ natural resource action plan IWRAP/SP). This vision recognises that the natural resource use limits (water, land, forest, fish, others) are based on sound ecosystem management principles, respected by natural resource users and enforced by government. Furthermore, ecosystem services beneficial to the livelihood of poor people are recognized and incorporated into water resources management. The IWRAP/ SP Plan was finalized and submitted to EKN in June 2012.

The IWRAP/SP identified 7 work areas that have been re-formulated by programme partners under this proposal into the 7 Results/ Outputs and the detailed activities and budgets presented in Section 3, Log Frame (annex 2) and detailed budgets/ activities workplan, Annex 3.

2.5 Lake Naivasha Imarisha SDAP and relationship with other Basin plans

The origins of Imarisha Naivasha are referred to in Section 1.

The Imarisha Lake Naivasha Management Board was created in 2011 by official gazette[3] to manage the Lake Naivasha Catchment Restoration Programme. It is broadly representative of all stakeholder

[3]Gazette Notice 5368 of 20th May, 2011

groups involved in use and management of the Lake and catchment, water and natural resources. Board members include representatives of local and national government, civil society/ community groups, land/ resource managers, private sector and business community (see details in SDAP: Imarisha Naivasha, 2012- annex 8). It has strong support from Government of Kenya (Office of the Prime Minister, with oversight by an Inter-Ministerial Technical Committee) and private sector (especially Naivasha flower growers, UK and other European flower retailers) and is in effect created as a PPP. The specific functions of Imarisha are to:

- Develop a programme ("Imarisha Naivasha Programme") to coordinate the activities of various players engaged in the conservation of the lake and its catchment, and for that purpose to review and approve projects;
- Monitor compliance with the laws and regulations governing the environment of the lake and its catchment in collaboration with the relevant Ministries;
- Develop and enforce codes of conduct to be observed by the players in order to improve the environment and establish sustainability of the lake and its catchment in partnership with the relevant stakeholders;
- Develop, adapt and execute a Trust or other instrument to receive financial resources from within or outside Kenya to finance the implementation of programmes, for which the Board shall be fully accountable for proper and prudent management and for the loss of which it shall be liable;
- Collaborate with all the stakeholders, including research institutions and promote their active participation in the Imarisha Naivasha Programme within the lake and its catchment;
- Report on a quarterly basis to the Inter-Ministerial Technical Committee and seek guidance on policy and technical [issues] from the Committee.
- Perform any other tasks as requested by the Inter-Ministerial Technical Committee.

When Imarisha Naivasha was gazetted, several plans for the Lake and catchment existed but were not endorsed by all stakeholders; one was the subject of a court injunction. Many effective conservation and development initiatives were taking place but not in a coordinated and collaborative way and additional urgent actions are required to reinstate critical ecosystem functions of the Lake and its catchment, to underpin longer-term sustainable development. The "Sustainable Development Action Plan" (SDAP) is the first Action Plan (2012-2017) for Imarisha and the Catchment Restoration Programme. It is designed to achieve its mandate through coordination, monitoring compliance, enforcement of codes of conduct, receiving and managing finances, stakeholder input and collaboration.

SDAP draws heavily on previous planning and stakeholder consultation exercises, in particular the LNRA / LNMC Integrated Management Plan (2004), the "Lake Naivasha Catchment Restoration Programme Concept Note" (2011), draft Imarisha Naivasha Board Development Plan (undated), other Imarisha documents and the Kenya Wildlife Service-led "Lake Naivasha Basin Integrated Management Plan 2012 – 2022" (LNBIMP). The LNBIMP was produced through a series of consultation processes involving all stakeholders around the Lake and in the wider catchment and launched on 11th April 2012. It seeks to:

i) Enhance quality and quantity of water resources within the basin
ii) Enhance ecosystem services and promote financial incentives mechanisms to communities
iii) Ensure equitable access and sustainable utilization of basin resources

iv) Improve and secure livelihoods for local communities including disadvantaged groups
v) Promote participatory resource use and management

The SDAP shares these aims and builds on the wide stakeholder consultations, which guided the production of the LNBIMP. SDAP picks up from it, a set of urgent priorities for ecological restoration and development for the five-year period (2012 to 2017). SDAP was also produced through a further series of consultative processes detailed in its annexes. (SDAP – annex 8)

In order to make explicit links with the widespread stakeholder input and shared catchment management perspectives of the LNBIMP, the SDAP shares the LNBIMP Vision, which is:

"A clean, healthy and productive environment and sustainable livelihoods in the Lake Naivasha Basin for the benefit of the present and future generations "

SDAP reflects and incorporates water-related conservation, development, management, research and livelihoods activities underway or proposed in the Lake Naivasha Basin. It incorporates the WWF-led IWRAP: "One Lake Naivasha for All - A 5 year Integrated Water Resources Action Plan for Sustainable Economic Development"; the NBSI (Naivasha Basin Sustainability Initiative - led by Leicester and Nairobi Universities) and other component/ contributing programmes. The institutional water resource management (WRM) component of SDAP is based on IWRAP, which was developed simultaneously and with effectively the same stakeholder groups (the IWRAP/ SP process described above).

SDAP groups priorities and activities under sustainable development objectives and broad programme areas, the 4 SDAP Logical Framework "Outcomes":

- **SDAP Outcome 1 –** Lake Naivasha and its Riparian Zone (as legally defined) are protected and managed according to "wise use" principles and showing significant, measurable improvements in ecosystem restoration and resilience.
- **SDAP Outcome 2** – Land use and management in the wider Basin and catchment of Lake Naivasha contribute to sustainable development and climate change resilience through water and soil conservation, rehabilitation of forests, improved agriculture and livestock practices, sustainable nature and culture-based tourism, increased use of renewable energy/ reduced energy use, sustainable livelihoods and improved governance.
- **SDAP Outcome 3** – Water resource institutions, mechanisms and facilities across the Basin function to regulate water use sustainably and to improve community access to clean water and sewerage, through increased knowledge, capacity and effective monitoring, sub-catchment management planning, payments for water services, water resource stewardship and conservation, urban planning and implementation.
- **SDAP Outcome 4** - Imarisha Naivasha recognized and functioning effectively as the coordinating institution for Lake Naivasha Basin restoration, wise use and sustainable development.

This IWRAP programme effectively responds to all the four SDAP outcomes above as it implements significant components of SDAP Outcomes 2 (sustainable forest and agricultural land and water management), Outcome 3 (sustainable WRM: institutional and technical capacity and governance)

Outcomes 4 (institutional development of Imarisha Naivasha) and contributes to (The Lake Riparian Zone strategy and monitoring) Outcome 1.

Integration of IWRAP activities and Results under the SDAP umbrella will be achieved through participation of Imarisha staff in the IWRAP PMU and monitoring activities and the involvement of IWRAP (WWF) programme staff in Imarisha Programme and Research and Monitoring committees (see Sections 5 for details of implementation arrangement and partner roles). It is important to note that Imarisha's role on the PMU is to monitor and coordinate, whereas WWF will implement and execute the programme.

3.0 The IWRAP Programme of Work

A description of the programme of work and activities proposed under each Result/ Output follows. The detail of indicators, targets and means of verification under each Result and key programme assumptions are in the detailed Log Frame (annex 2) and the detailed activities/ budgets are in the activities/ budget work plan, Annex 3. Implementation, partnership and programme management arrangements follow in sections 5 and 6.

3.1 Programme Logical Framework

The table below shows a summary of the Logical Framework headings and the 7 key programme areas (Results or Outputs). Collectively, these 7 Results will achieve the programme purpose: creation of enabling conditions for longer-term sustainability of WRM, land management and natural resource use and sustainable socio-economic development in the Lake Naivasha Basin.

Table 3.1: Summary headings (purpose and outputs) from Programme Logical Framework (annex 2)

Programme Purpose: To create essential enabling conditions for water regulation and governance, sustainable land and natural resource use and sustainable development in the Lake Naivasha Basin	
Result/ Output 1	**Increased capacity and improved governance in WRM institutions (WRMA and WRUAs) for water resource management in LNB**
Result/ Output 2	**Increased knowledge and technical capacity for quantitative water resource management and monitoring in LNB**
Result/ Output 3	**Increased headwater protection and security of water flows through improved participatory forest management and income-generation in the catchment**
Result/ Output 4	**Conservation and sustainable development of riparian farmland in the catchment through improvement and institutionalization of PES mechanism**
Result/ Output 5	**Increases in levels of sustainable production and good stewardship in LNB floriculture through development and adoption of national standards and**

	certification
Result/ Output 6	**Strengthened institutional capacity of Imarisha Naivasha for execution of the SDAP (monitoring impacts, compliance, oversight and communication functions)**
Result/ Output 7	**Partner consultation and finalization of the Lake Naivasha Basin PPP Sustainable Development Fund project and funding proposal (LNB-3P-SDF)**
	Programme management

3.2 Description of programme areas by Result/ Output

RESULT 1: Increased capacity and improved governance in WRM institutions (WRMA and WRUAs) for water resource management in LNB

This result aims at the development of WRMA into a functional organisation for operational water management, capable of the implementation of all basic tasks and the incorporation of WRUAs in the WRMA framework as agents for water use regulation and permitting. This requires:

- The capacity to translate into operational water management policies the results of hydrological modelling and scenario analysis and to provide the public with accessible and comprehensive information about these policies.
- A clear definition of water resource management tasks and responsibilities and the related employment and training of staff for daily performance.
- A clear distribution of field operational tasks and their implementation between WRMA and WRUA.
- A platform which can be used to discuss and coordinate water management issues with other relevant stakeholders
- A sound financial management with cost-recovery of water management tasks
- Strengthening of the relationship between WRMA and water users concerning taxes and permits and development of a transparent system with equally transparent enforcement practices.
- Development of working practices specifically aligned to the water legislation.

Implementation of this Result will be supported by the Dutch Regional Water Authorities and the Water Governance Centre. WRMA and WRUAs staff will be trained “on the job”, in service and in workshops. Coaching will be available by expert missions and by remote contact. The training and development strategy will be defined jointly with WRMA senior management.

Sub result 1.1: Articulation of input/output of technical water management modelling & scenarios with WRMA policy development and public communication

By 2017 WRMA will have the capacity to use the water management models to agree with stakeholders and finalize the WAP, present long- and short-term scenarios, give forecasts on a simple stochastic model (a joint target with Result 2). The focus in the programme will be on hydraulic and hydrological information, mainly oriented to single questions and basic topics. WRMA will be able to communicate effectively with the public through paper and electronic media.

Sub result 1.2: Institutional reinforcement and improved stakeholder interaction

WRMA will grow to an operational water management authority. The basic tasks will be defined and grouped in employees' work descriptions and required capacities/competencies. Additional staff will be recruited and trained. Working routines will be developed, evaluated and adjusted.

WRMA and WRUA tasks and responsibilities will be clearly defined and translated into operational organizational structures. The focus will be on joint monitoring of hydraulic and hydrological data. In addition, the members of two WRUAs will be trained in issues of integrated water management, and involved gradually in the implementation of the permit and enforcement system.

By 2015, a stakeholder platform on water management will be established for feedback and for the orientations of adjustments (under an existing body like Imarisha, Umbrella-WRUA or other well-known group within/ outside Naivasha Basin).

Sub result 1.3: Improved financial management of water user fees

The finances of water management in the LN Basin will be clarified and elaborated, especially in relation to the water user fee permit system. The result will be transparent to all parties, with data stored in a reliable and accessible information base. This will lead to the development of a sustainable financial business model for water management in the LNB, (linked to the future LNB Sustainable Development Fund) and including a roadmap for implementation at the WRMA/WRUA level.

Sub result 1.4: Improved water use regulation

The WRMA and WRUA development steps will be elaborated within the context of the Water Act 2012 and other relevant legislation. Governance issues will be identified and solutions will be found. By 2017 two WRUAs will be incorporated into the WRMA institutional framework as agents for water regulation and water use permits and enforcement. Other WRUAs will subsequently be brought on board with the same responsibilities, in a phased way.

RESULT 2: Increased knowledge and technical capacity for quantitative water resource management and monitoring in LNB

The overall objective is to create capacity at WRMA to manage water resources in the Lake Naivasha basin in an integrated way (spatially and temporally). WRMA should be able to:

Sub result 2.1 Monitor constantly the quantity and quality of water resources based on monitoring stations.

Sub result 2.2: Assess the long-term impact on the water resources system of different policy options and water allocation scenarios, using of a set of validated numerical models that interact where required, resulting in updates of the WAP (Water Allocation Plan) and thresholds for the traffic light system.

Sub result 2.3: Forecast the short-term development of the water resources system using the set of validated models in combination with stochastic forecasts and water use and water use scenarios.

Sub result 2.4: Inform stakeholders and general public on the actual status of the water resources.

Monitoring

The existing monitoring network for weather data, surface water quantity and quality and groundwater levels will be improved (including new observation wells). A monitoring strategy will be developed by WRMA, with the stakeholders in the WRUAs and supported by the Dutch RWAs, ITC and Deltares[4]. WRMA and local stakeholders will determine which information the monitoring system should supply and necessary investments in the current monitoring system will be determined based on the agreed requirements; a preliminary list of investments is detailed in the budget.

The responsibility to monitor will be partly transferred to WRUAs. Therefore, a client-server system is required to enter and retrieve data. The data will be stored in the official WRMA database based on DHI Mike-suite software and/or a parallel open-source solution like CUAHSI Hydrodesktop. Implementation of the monitoring system will be supported by ITC, RWAs, and Deltares. In order to receive timely data of the manual stations operated by WRUAs, mobile telephones will be used. Two piped water supply schemes in the upper basin will be carefully monitored (and analysed) using recording water meters at the intake.

Modelling – Groundwater

Current work by ITC includes improvement and calibration of a ModFlow model for Lake Naivasha and its surroundings, using ModFlow with the Lake package. Deltares input, in collaboration with ITC and WRMA, will further improve the model and assess the uncertainty in the results, including an extensive sensitivity analysis to determine which input parameters have most impact (for example on groundwater level of abstraction around the lake). A Monte Carlo analysis will assess the uncertainty in the results based on uncertainty in parameter values (e.g. hydraulic conductivity and the storage coefficient of the hydrogeological formations). New monitoring results will be used to recalibrate the model, resulting in a calibrated groundwater model with a description of the uncertainty in the results, focusing on water management related questions on the use of water from the lake and groundwater aquifers. The key output will be the understanding and quantification of the relation between the lake and aquifer: How much water abstracted from the aquifer has depleted aquifer storage and how much has been recharged from the lake (and thus depleted Lake storage)

[4] Deltares is an independent, institute for applied research in the field of water, subsurface and infrastructure

Modelling – surface water hydrology

A SWAT surface water model exists for the area. ITC will update and calibrate this model with new data on rainfall with support from Deltares. To describe the interaction between surface and groundwater, the results of SWAT will be used as input for ModFlow and vice versa. The model provides important information on water availability in the catchment that will be used by ModFlow and WEAP and in the scenario analysis.

Modelling – water allocation

A WEAP water allocation model (developed at ITC) describes water demand and supply in the lake basin. An assessment will be made either to continue with the WRMA Mike- Basin model or update the WEAP model at ITC or use a RIBASIM model. Input will be derived from the ModFlow and SWAT models and new data on water demand will be included. The model will be developed further and calibrated by ITC, with support from Deltares. The hydrological model is essential for determining flow characteristics anywhere in the basin, required to make informed decision on issuing abstraction permits. It will (in combination with the hydrological model) provide (backup) flow data if river gauging stations become non-operational as well as missing historic data and data on the un-gauged parts of the basin. It will be used to perform long and short-term forecasts (climate, land use change, water demands etc.), updating of the WAP, and for assuring the integrity of the overall flow data in the basin. The integrated lake-river-groundwater model is essential for making informed decisions on water allocation in the lower end of the basin.

Scenario analysis

The set of linked models to describe groundwater, surface water and water demand and supply will be used to assess the impacts of different policy scenarios. The scenarios analysis will focus on an update of the WAP and determination of new thresholds for the traffic light system (WRMA, with support from ITC, Deltares). An assessment of the impact on different choices with respect to water allocation and thresholds will be made based on historical rainfall data or manipulated rainfall data to assess the impact of a future situation. This activity is common with result 1, where RWAs, WRMA ITC/Deltares and stakeholder work jointly on basin governance based on the model outputs

A further extension of the scenario analysis to include a linked socio-economic analysis in an Integrated Assessment framework is foreseen in a future project (see Result 7, LNB-3P-SDF).

Forecasts

The modelling system used for the scenario analysis can also form the basis for a hydrological forecasting system. A simple probabilistic model will be used to predict the water status 3-6-9 months ahead. More sophisticated forecast will be included in future project proposal (see Result 7, LNB-3P-SDF).

Public information

All data related to abstraction points such as permits status, payments, abstraction time series (water meter readings) will be organized in a web based database. These data will be available in appealing GIS/ aggregated formats available on a public website. All monitoring information and the

results of the scenario analysis will be made available in the form of maps, graphs and tables through the Internet.

Capacity building

The above mentioned interventions under result 2 are very technical by nature and hence expert support is required to implement the interventions. However, the basic principle and approach is that the above will be developed and implemented in very close collaboration with technical staff of WRMA and where necessary WRUAs while senior management staff is informed and consulted regularly to ensure ownership over the results, products and services. Technical capacity building at WRMA is a prerequisite and will be done by ITC/ Deltares using various approaches (on-the-job, user manuals and various methods of distant delivery). Although training workshops are foreseen, the training will be especially on-the-job and learning-by-doing. Regular assessment of the capacity of WRMA is essential to ensure sufficient absorption capacity. The presence of a young water professional at MSc level with modelling experience is essential and the team of mid-level officers in WRMA sub-regional office will be reinforced.

RESULT 3: Increased headwater protection and security of water flows through improved participatory forest management and income-generation in the catchment

The protection and sound management of headwater forests will help to restore the hydrological (infiltration and sponge) functions of the catchment, to maintain steady flows to the rivers and eventually the Lake. Past projects have resulted in the establishment of 4 Community Forest Associations (CFAs), the development of 4 Participatory Forest Management Plans (PFMPs) and approval and signature of 4 forest management agreements (FMAs) with Kenya Forest Service (KFS). The major challenges limiting the realization of these opportunities include the working relationships between the parties and the conditions that are attached to FMAs (stringent tendering conditions that are almost impossible for CFAs to fulfil as forest co-managers). There is a common view among CFA members that the benefits they realize from forest co-management are not commensurate with the level of conservation activities they undertake, and still illegal activities are undertaken in the watershed forests.

The programme will work at both policy and field level to ensure sustainable forest management to restore watershed infiltration functions important in recharging river flow, increase benefits to rural communities and provide habitat for biodiversity conservation.

Sub result 3.1*: Revision of FMAs and associated policies*

The programme will support KFS and CFAs in a review and revision of the FMA regulations for ownership and tendering requirements and the formulation of new guidelines for policies on forest establishment and forest products harvesting in plantation forests (under the Forest Act, 2005). The objectives are to remove institutional barriers, to ensure that communities embrace forestry as a form of land-use and that they have access to sustainable harvests other non-timber products.

Sub result 3.2: CFAs income-generating activities

KFS will work with the 4 established CFAs to develop income-generating projects such as on-farm timber forest establishment, Plantation Establishment for Livelihood Improvement (PELIS), farm

crops value addition. Through the 4 CFAs, forest-adjacent communities will be supported to develop sustainable incomes based on timber and NTFP exploitation initiatives which also reduce human activities and impacts in adjacent forests. Support will be given to development of sustainable incomes and financial management (transparency, cash flow records etc.)

Sub result 3.3: PFMPs mid-term review

A review of the implementation progress and experience of each of the 4 existing PFMPs in the LNB will be carried out jointly by CFAs and KFS, supported by a consultant, with identification of successes, weaknesses and gaps in implementation to date. Recommendations will be made and a clear plan to address these in the second phase will be detailed for each PFMP. This will include detailed year work plans and budgets and a funding strategy for each PFMP.

Sub result 3.4: Restoration of forest cover at degraded sites

Degraded headwater sites in five subcatchments[5] will be the focus of specific restoration programmes including planting of indigenous tree seedlings from established tree nurseries; aftercare including replacement of seedlings which do not survive; KFS/ CFA surveillance patrols (to prevent illegal activities) and farmer education on control of accidental (dry season) fires. KFS will continue training farmers on fire management.

Sub result 3.5: Establishment of KFS forest restoration fund

A forest restoration fund will be established, managed by KFS, to promote sustainable forest management and improved livelihoods of forest adjacent communities. KFS and the programme will support CFAs to develop proposals (for example, for funding from Green Zones (ADB funding) project and any other funding mechanisms such as CDTF), with a target of four million ksh raised for CFA projects by the end of 2015. Eligible projects will be based on sustainable income-generating activities and PFMPs.

RESULT 4: Conservation and sustainable development of riparian farmland in the catchment through improvement and institutionalization of PES mechanism

Result 4 focuses on a different area within the catchment than Result 3, land-use here is agriculture instead of forest and hence a different instrument is required.

The rationale for this Result is that the Kenya constitution emphasis on land ownership and its sustainable use, which this programme will realise by implementing measures that encourage small scale farmers to adopt better land use practices through practical demonstrations. The extension of PES will support the conservation and sustainable use of riparian areas through appropriate land use. Engagement with small holders at farm level through the PES process will initiate the development of more cohesive farmer groups and form the basis for more organised and appropriate forms of small holder agriculture giving access to market intelligence, agronomy and logistical support. Ultimately, widespread adoption of improved land use practices throughout the basin will have a positive impact on water quality and availability and demonstrate the function of PES to raise awareness and initiate better farming practises and improved livelihoods.

[5] These five subcatchments are: Upper Malewa Tributaries, Upper Wanjohi Tributaries, Kianjogu River, and Kahuria river and Kararua River subcatchments

A previous project (WWF-Kenya and CARE) mapped some "hotspots" of degradation, demonstrated land management solutions and developed a simple conservation business case (PES: payment for ecosystem (watershed) services). This was piloted in sections of Wanjohi and Tulaga sub-catchments with over 500 farmers and a further 200 requested to join the scheme early in 2012. LNGG, the main buyer in the scheme provided the incentive for upland farmers to farm in a better way. The Naivasha PES scheme has been very successful in raising awareness on improved land use practices, and is therefore a valuable pre-cursor to a more structured intervention with small holders.

Scaling of PES is foreseen in the LNB-3P-SDF programme. It is estimated that there are over 50,000 small scale farmers and it is important to learn from the pilot project and establish a working module that will become replicable throughout the basin. This is the focus of Result 4. Enabling activities proposed are the identification of a module of 3,000 farmers in "hotspot" areas, initiation of better farming practises, creation and capacity building of more homogeneous farmer groups or cooperatives. Recommendations from a previous consultancy report undertaken by the Netherlands Royal Tropical Institute – (KIT) will be combined with a review of the pilot scheme. Currently, through World Bank and UNEP funding, the Ministry of Environment is spearheading incorporation of PES into national policy. The Naivasha basin experience will contribute to this process, and WWF and partners will share the lessons learned so far and participate in the policy formulation process.

Wider adoption of sustainable land use practices at all levels in the basin will add value and provide opportunities for branding produce from Naivasha as being produced in a socially and environmentally sustainable manner. Improved market linkages will provide incentives for famers to use land sustainably and follow best practice. This programme will undertake the following sub results:

Sub result 4.1 Develop a PES business case:

The programme will undertake a PES cost-benefit analysis and consider alternative business case models that incorporate potential financial and non-financial reward systems that benefit all farmers in the scheme. These models will also include options for commodity value addition. Farmers will be organised into formal producer and marketing groups in order to improve sustainable land use enforcement and the linkages to markets through adherence to contractual agreements, cooperative action, creating opportunities to grow appropriate crops more efficiently and profitably. Collaborate with research institutions, private sector and Ministry of Agriculture (MoA) to assist in the development of small-scale business plans (based on existing land use plans – appropriate crops for ecological/ altitudinal zones etc.).

Sub result 4.2 Identify potential PES intervention areas:

Start point will be mapping of new PES sites (hotspots) and rank them (based on PES feasibility assessment study and other studies in the basin).

- Pegging and improved land management (appropriate fodder crops and indigenous vegetation cover with commercial value) in river riparian areas. The targeted areas are the Main Malewa River, Upper, Lower and Middle Malewa r, Mkungi- Kitiri and Wanjohi..
- Supporting soil and water conservation; and surface water harvesting (pans, retention ponds and cut-off drains) and use technologies in 3 WRUA areas (Karati-Longonot, Mariba & Lower Malewa): semi-arid areas with predominantly pastoralist communities.

Sub result 4.3 Establish PES monitoring programme

As indicated above, benefits in terms of improved water quality and quantity will only be discernible on the lower areas of the catchment and lake with widespread adoption of improve land use practices throughout the basin. In defining the PES project module, where improvements at a sub-catchment level might be measurable, appropriate water sampling and monitoring systems will be installed. Other monitoring indicators will be established through definition of performance check sheet for each farm (e.g introduction of grass strips and contour cultivation; tree planting and nurturing; participation in farmer group activities; rainwater collection and enhanced income generation.

STRONGER FARMER GROUPS, STRONGER MARKET LINKAGES:

Since most farmers are not involved in formal marketing and proactively making market linkages, the initial incentive for PES will be achieved through improved land use practises and participation in farmer groups that lead to better market intelligence and access, improved logistics and product sales. Opportunities to link more progressive small holder groups with larger scale farming enterprises will be investigated. If small-scale farmer groups do engage with larger growers, then they must be organised with sufficient capacity to sustain supply and meet quality standards. Strong farmer groups need to become the norm rather than the exception in order to give greater confidence to large growers/exporters that are interested, but still unsure, about dealing with smallholders.

Strong farmer groups are fundamental in identifying and implementing solutions to a range of issues. The formation and capacity building of groups requires its own attention. Capacity building to specifically target more effective and sustainable group functioning is a component that this programme will address.

RESULT 5: Increases in levels of sustainable production and good stewardship in LNB floriculture through development and adoption of national standards and certification

A Kenya Flower Council (KFC) project (part-funded by EKN) is developing a national mechanism for industry-wide compliance for sustainability (the "Capacity Building for Sustained Market Access" project). This KFC initiative is geared towards the national situation but since 70% of all flowers exported from Kenya are grown in Naivasha, it is particularly relevant to Naivasha.

Result 5 in this programme fits within and contributes to the broader national initiative. The focus is on achieving improved and wider adoption of an enhanced standard of sustainable flower production. Through the application of trial audits of small medium and large growers, greater awareness will be created of how improved levels of sustainable production can be achieved, together with recognition of the concept of water stewardship amongst a broader cross-section of growers in the LNB. The "good business sense" benefits (reduced business risk) resulting from adoption of an enhanced standard of "sustainable production" will be promoted and more widely recognized among individual growers. Increased support for the adoption of a national standard from growers in Naivasha will follow from the recognition that its adoption will reduce industry-wide risks (the whole Kenyan industry) by improving the marketability of Kenyan flowers and protection of the industry from adverse criticism.

The following are the sub results

Sub result 5.1: Formulation of a draft Kenyan national floricultural standard. This will be developed by KFC in cooperation with Kenya Bureau of Standards (KBS) and other stakeholders (eg KEPHIS), through a consultancy (data review, proposal of a draft standard) and stakeholder input (consultation, review and approval of drafts).

Sub result 5.2: Trials of the draft Kenyan national floricultural standard. Trials will be carried out on 9 LNNG (Lake Naivasha Growers Group) farms and 9 non-LNGG member farms (three large, three medium and three small farms in each category). Audits of the draft national standard will be carried out by KFC on all 18 farms, feedback provided to individual farms and a report prepared for discussion by key stakeholders (including KFC, KEPHIS, KBS).

Sub result 5.3: Alignment/ benchmarking of the KFC Silver Standard with the AWS watershed standard. KFC will carry out a review and incorporate enhancement of water stewardship components in its own Silver Standard. KFC (lead auditor) and KFC certification committee will undertake benchmarking and report to the KFC Technical committee and KFC Board.

Sub result 5.4*: *Draft Kenyan national floricultural standard aligned/benchmarked against the enhanced KFC Silver Standard. KFC and KBS will align the enhanced KFC standard and draft national standard, undertake benchmarking and report to the KFC Technical committee and KFC Board.

RESULT 6: Strengthened institutional capacity of Imarisha Naivasha for execution of the SDAP (monitoring impacts, compliance, oversight and communication functions)

Imarisha Naivasha is established in the LNB as the long-term institutional structure for oversight and coordination of all ecosystem restoration/ management and sustainable development activities, Basin-wide and which also represents all Basin stakeholders (communities/ civil society, local and national government and agencies, private sector and business interests).

Activities under this Result are designed to strengthen the institutional capacity of Imarisha to carry out its mandate and implement the Sustainable Development Action Plan (SDAP), to support the development of Imarisha as a government agency and to support specific Imarisha functions of communication, monitoring/ oversight, compliance and engagement of development partners in sustainable financing of long-term, basin-wide, sustainable development.

***Sub result 6.1: Institutional capacity*.** As activities to support the restoration of the basin and execute components of the SDAP gain momentum, the Imarisha Secretariat requires personnel and logistical support to enable it to perform its responsibilities. The staffing structure follows recommendations from the DPM but additional capacity is required in the form of a Project Manager to coordinate and monitor Imarisha input to this IWRAP programme (including participation in the PMU and programme monitoring). Imarisha staff to be recruited include: CEO under the revised agency structure, Project Manager and ICT Manager. It is intended that the secretariat will be self sustaining after two and a half years.

***Sub result 6.2: Imarisha development to an Agency*.** In 2013, following the national elections, the Office of the Prime Minister (GoK) (currently the parent ministry for Imarisha) will be dispensed

with. To allow Imarisha to continue to execute its mandate, it will be re-constituted as a government agency (activities include obtaining legal and policy advice and submission of proposal to OPM).

Sub result 6.3: Lake Riparian Zone Strategy and Monitoring. The Riparian Zone (RZ) of Lake Naivasha is arguably the most sensitive topic that Imarisha must address and its importance is recognised by being one of the 4 Outcomes of the SDAP. It involves Ministerial engagement through the Inter-Ministerial Technical Committee and the preparation of a well researched and communicated management plan. A specific Monitoring Plan (environmental and other indicators) will be developed for the RZ programme and a Technical Officer appointed within LANAWRUA to manage implementation of this aspect. (See SDAP Monitoring Programme – Page 72 of SDAP-Annex 8).

Sub result 6.4: Communication and monitoring function. Imarisha Naivasha will develop a strong communication and information-sharing system underpinned by a database/ web site and information repository. The ICT Manager will work closely with ITC, RWAs and software firms. Activities include the recruitment of staff, establishment of the database, web site and information repository, training for staff, development and implementation of a Basin-wide communication strategy. (See SDAP Monitoring Programme – Page 72 of SDAP-Annex 8).

***Sub result 6.5: Engagement of development partners/ future funding*.** This proposed IWRAP programme (and other potential future project funding, e.g. from the Netherlands government FDW budget) will have a major impact on addressing the four Outcomes of the SDAP of Imarisha Naivasha. Imarisha staff engaged through this IWRAP programme funding will also be responsible for identifying and contracting other development partners to enable the achievement of the 5 year goal of the SDAP. The ultimate objective is long-term sustainable development based on sound water resource management and realization of real water and ecosystem service values across the basin. This activity links to Result 7 and the development of a detailed partnership (PPP) funding proposal to the Netherlands government FDW (see Result 7: development of LNB-3P-SDF project to establish a long-term sustainable finance mechanism (LNB Sustainable Development Fund).

RESULT 7: Partner consultation and finalization of the Lake Naivasha Basin PPP Sustainable Development Fund project and funding proposal (LNB-3P-SDF)

A Lake Naivasha Basin PPP Sustainable Water Fund programme proposal was submitted to AgentschappNL under the Sustainable Water Fund facility. The 13 partners[6], (WWF Kenya as lead applicant) provided technical input to the proposal based on their strengths and competencies. This proposed programme: "LNB-3P-SDF" aims at establishing a long-term financing mechanism, creating avenues for revenue generated from the premium on the sales of flowers in the EU and from water fees collected in the basin. This proposal is under review by DGIS (November 2012), however because of time constraints, this proposal was not as conclusive as the partners would have liked it to be. WWF Kenya needs more time to finalize the proposal and enhance commitments from private sector funding.

[6]Partners in the LNB-3P-SDF are WRMA, MoWI, Imarisha, LNGG, LNRA, NB&TC, GIZ, Albert Heijn, IDH, University of Twente-Faculty of Geoinformation Science and Earth Observation (ITC), Dutch Regional Water Authorities (WatershapNoorderzijlvest –NZV and Hoogheemraadschap De StichtseRijnlanden).

The LNB-3P-SDF proposal is very innovative and addresses a key constraint in projects undertaken in LNB and globally, namely the long-term financial sustainability of NRM interventions and its' governance. This makes the LNB-3P-SDF proposal very relevant for the IWRAP at hand. The principle LNB-3P-SDF concept is to set-up a PPP Sustainable Development Fund for LNB which receives revenues of premium of flowers sold in the EU, water user fees, and other revenue systems to i) scale or maintain interventions in LNB that are not by nature an economic business case but necessary for sound NRM and ii) ensure operational costs of bodies involved are secured.

The partnership has successfully got commitment of key partners for the LNB-3P-SDF proposal, namely next to the partners mentioned in this proposal, support by Albert Heinj in the Netherlands to promote sustainable flowers and determine an appropriate premium, IDH to assist in improving the standards for flowers and mainstream in the EU, GIZ (Water Future Initiative) to assist in setting-up the fund itself for LNB-3P-SDF. This complements the support to Imarisha from the UK retailers. Together the LNB-3P-SDF concept has been detailed out in concrete deliverables and timeframes.

4.0 Assumptions, Risks Mapping and Management

This section provides important information on assumptions and risks that are likely to affect the successful implementation of the proposed programme.

4.1 Assumptions

This proposal is based on the following assumptions:

a) Progressive large growers will not be discouraged by the actions of those who do not aspire to embrace more sustainable practices and will continue to support land and water resources management initiatives that they have initiated and or supported. These initiatives include the water allocation plan, the payment for ecosystem services (PES), water stewardship and support to uplands small scale farmers (organizing them into cooperatives, outgrower schemes and linkages to markets). Furthermore, it is foreseen that all growers will comply with certification and therefore minimise free rider behaviour.

b) The Government continues to support the Lake Naivasha Imarisha Board as the preferred vehicle to coordinate development in the Basin and that it will provide increased funding to effectively execute its mandate. The re-structuring of the government under the new Constitution will result in Imarisha becoming a government agency most likely linked to the Ministry of Environment and Mineral Resources.

c) WRMA will engage as an equal partner in PPP and will accelerate on the operationalisation of the transfer instrument so that the WRUAs have resources and authority to support WRMA in water resources management in the sub-region. Further, it assumed that the on-going policy review will not complicate water resource management structures in the basin.

d) The Minister responsible for water resources management will soon gazette regulations that define riparian area (for nature) as conservation areas as well as the ground water area.

e) The political situation in the country will not destabilize after the general election in March 2013 so that private sector continues to thrive in the basin and people derive benefits from the local economy.

f) National and local government commitment to basin-wide IWRM and sustainable development will continue irrespective of political and institutional change (elections, devolution and county boundary reforms)

g) LN Basin can supply sufficient ecosystem/ watershed services (water, soils etc.) to satisfy demands for socio-economic development

This programme will monitor the assumptions as necessary.

4.2 Risks

Through a rapid risk assessment, WWF and partners have recognized the risks: and mitigation strategies identified on how to deal with them if they should happen. The programme risk assessment tool (annex 9) shows the overall programme risk rating at 4[7]. The section below gives a summary of the medium risks that will be addressed.

a) **Risk category- Political**: In the event that political instability after 2013 General Election occurs, it may lead to conflicts in the basin. Lake Naivasha was a centre of ethnic conflict following the 2008 General Election. An examination of the political situation in Kenya and political alignment as the general election in March 2013 is approached, does not suggest a repeat of violence in the basin.

b) **Risk Category: Economic**: The Kenya Shilling could weaken against international currencies in the months closer to the elections. This will affect the programme operation as implementation costs such as prices of commodities/ supplies will increase.

c) **Environmental factors**: Climate Change is an influence that could increase the physical risk (mainly water availability) for businesses, people and nature. Changes in climate patterns will affect investment priorities and the economy of local people (fisheries, livestock production and arable farming). Harsh weather, such as a drought could jeopardize careful planning and management initiatives.

d) **Risk Category- Reputation**: There are some large scale water users who do not embrace sustainable practices but seek to associate themselves with those that do. This puts these users at a competitive advantage in terms of cost of production and exposes the industry as a whole to adverse criticism and reputational risk in important international markets.

4.3 Risk Mitigation

a) **Political**: Election Related Political Violence - the programme will continuously and carefully monitor development and prepare partners and staff in readiness for uncertainties arising from the general election. The programme will also engage with the civil society organisations to start on peace building through the WRUAs to bring communities together in preparations for post election harmony using the experience of the Weseges WRUA in Bogoria that forestalled post election conflicts in the neighbouring Weseges sub-basin in 2008.

b) **Economic**: Potential weakened shilling: to mitigate this, the programme proposes that the funds for the programme are transferred in international currency (Euros) or alternatively make a provision for 1% contingency in the budget to cushion against this currency fluctuation.

[7] An overall rating of 4 refers to a Medium Risk and the programme should have a clearly defined mitigation action

c) **Environmental**: The Programme has through other funding conducted vulnerability assessment and is in the process of developing an early warning system. Some progressive growers have instituted coping strategies to adapt to changing climate e.g. water harvesting, water use efficiency and closed water systems where water from the lake is recycled several times until water chemistry constrains this system. The programme will work closely with LANAWRUA to promote these best practices among other large growers and WRUAs for the uplands growers and small scale farmers

d) **Reputation**: WWF Kenya and the Lake Naivasha Imarisha Board will engage with the KFC to broaden the scope of compliance to internationally recognised levels through the national mechanism and link to mandatory compliance for exporters

5.0 Implementation Arrangement

Under the terms of its appointment, Imarisha has a responsibility to execute the Sustainable Development Plan (SDAP) and coordinate and monitor all development activity in the Naivasha basin. The proposed EKN programme and its defined Results 1 to 7 respond substantially to each of the Outcomes 1 to 4 of the SDAP and as such Imarisha's primary responsibility will be to monitor and evaluate the performance of the EKN partners against the deliverables set out in the work plan.

However, under Result 6, which responds to Outcome 4 of the SDAP, the EKN programme provides support to enhance Imarisha's institutional capacity to execute its monitoring, compliance, oversight and communication functions under the SDAP. Therefore Imarisha in a sense also becomes a partner with its own deliverables defined in the work plan. This support effectively puts in place the capacity to perform its primary responsibility as defined above.

The partners proposed for this IWRAP programme represent a broad based group, namely:

- WWF Kenya
- Imarisha Naivasha acting in an oversight/coordination role
- Government of Kenya, Water Resources Management Authority (WRMA)
- University of Twente, Faculty of Geoinformation Science and Earth Observation (ITC)
- Two Regional Water Authorities in the Netherlands (Waterschap Noorderzijlvest (NZV) and Waterschap Hoogheemraadschap de Stichtse Rijnlanden(HDSR).

These partners will be able to call on additional expertise from other organisations including but not limited to the Water Governance Centre and Deltares in the Netherlands, Kenya Flower Council (KFC), Kenya Bureau of Standards (KBS), Kenya Plant Health Inspectorate (KEPHIS), and Egerton University in Kenya. The tasks allocated to the different partners will be based on their specific experience and expertise in the areas of intervention defined in the IWRAP programme.

Each partner will present a letter to state their contribution and commitment to the IWRAP programme. Annex 10 shows some of the letters already received, and for the partners. Commitment letters will be sent directly to EKN.

WWF-Kenya is the lead applicant, offering extensive experience of managing and implementing large conservation programmes. Its operations are guided by leading standards that advocate transparency and accountability. WWF has been established in Naivasha for several years as the leading NGO engaged in successful water resources management. WWF has established strong links with local and international private sector stakeholders and recently coordinated a highly successful project that brought together small scale farmers and members of commercial farmers represented by the Lake Naivasha Growers' Group in a joint action plan to implement the payment for environmental services (PES) scheme.

5.1 Specific Roles of the Partners

WWF Kenya

As a consequence of the formation of the Imarisha Naivasha Board, WWF Kenya has re-defined its previously individual role in the Lake Naivasha Basin from a convenor of development partners to facilitate resource mobilisation, programme implementation, monitoring and evaluation, reporting, communications, and partnership management that is in harmony with the Outcomes of the SDAP.

At a national level, WWF will continue to work with the Government of Kenya to establish an appropriate enabling environment, as demonstrated by the revision of the Water Act to devolve water resources management to Basin Water Authorities, the gazettement of Lake Naivasha basin as a conservation area and facilitating negotiations between the WRMA and the WRUAs to establish an agency relationship in which WRMA devolves water resources management to the 12 sub-basin WRUAs.

WWF will manage the partnership in implementation of the programme as follows:

- WWF Kenya will take overall responsibility for the IWRAP programme management and will manage the relationship with the Embassy of the Kingdom of the Netherlands (EKN).
- WWF will finalise arrangements for the Sustainable Water Fund proposal (LNB-3P-SDF project) defined in Result 7.
- WWF will formalise contractual arrangements with Imarisha Lake Naivasha Board, Twente University/ITC, the Dutch Regional Water Boards, WRMA head office and Naivasha sub-regional office and others as appropriate.
- WWF will work with the WRUAs and CFAs to implement Results 3 and 4.
- WWF will be responsible for overall financial management and will track the disbursement of funds against defined key performance indicators. WWF will prepare technical and financial reports for EKN as specified in the grant agreement. WWF will work with the Imarisha Project Manager and CEO as representatives of the SDAP Research and Monitoring Committee to define a performance monitoring system that will fulfill internal (EKN) and external (Imarisha) monitoring and evaluation criteria.
- WWF will ensure that resources are properly allocated to and utilised by the partners in the IWRAP programme.
- The programme partners will be represented on a Programme Monitoring Unit (PMU) that will be Chaired and administered by WWF.
- WWF will communicate with the Embassy on changes, challenges and adaptive management.

Refer to human resource section 6.2 for roles of staff

Imarisha Lake Naivasha Board

Imarisha Lake Naivasha Board was set up by the Kenya Governement in recognition that sustainable development can only be achieved by establishing a management board with overall responsibility for coordination of development in the Basin, including the allocation and management of resources. Furthermore this would only be possible if the management board was truly representative of all the key stakeholders in the basin who rely on the basin's resources for their livelihoods.

Imarisha has formulated a Sustainable Development Action Plan (SDAP) to guide the restoration of the basin and lay the foundation for longer term sustainable development. The SDAP has four Outcomes, namely:

1. The Lake Naivasha and Riparian Zone Programme
2. Wider Catchment Management Programme
3. Water Resource Management Programme
4. Enhancement of Imarisha's institutional capacity to execute the SDAP

The IWRAP programme contributes to all of the SDAP outcomes.

Each of the Outomes 1-3 is monitored by a committee that is convened by Imarisha. A fourth cross-cutting committee deals specifically with research and monitoring of development programmes being executed under the SDAP, and the IWRAP programme is one, and a leading one, which falls under the SDAP. As such the Research and Monitoring (R&M) Committee will monitor and evaluate the deliverables defined in the Results and performance of the partners to the IWRAP programme.

Under the IWRAP programme, Imarisha will appoint a Project Manager who with the CEO will represent the Research and Monitoring Committee on the PMU, and the appointment of an ICT technician who will be trained on the establishment and management of a resource data base (Result 6).

Imarisha's mandate provides a direct reporting route to government line ministries through the Inter-Ministerial Technical Committee and this link will be maintained to facilitate resolution of any cross-cutting issues.

Imarisha will also faciliate the involvement of other stakeholders on Result 5.

The involvement of other partners and stakeholders in implementation of SDAP and the Imarisha Programme and R&M Committees provide additional opportunities for communication, partnership working and sharing of information and lessons learned to support this IWRAP programme. R&M and development programmes linked under SDAP include the Water and Ecological Health (WEH) monitoring programme, the Naivasha Basin Sustainability Initiative (NBSI) and the Earth Observation and Integrated Assessment (EOIA) Project. These involve partnerships between LANAWRUA, LNRA, Nature Kenya, other local stakeholders, Nairobi and Egerton Universities and international Universities (Leicester, UK; Twente, Netherlands; Bonn, Germany). NBSI has funding support from flower retailers (European supermarkets) for small-scale development programmes with catchment WRUAs. Research and monitoring efforts are coordinated through the SDAP R&M committee and annual meetings of all research groups and stakeholders in the Basin (SDAP monitoring programme-see page 72 of SDAP Annex 8).

Twente University/ITC

Twente/ITC has been the leading academic institution operating in the basin for the last 20 years or so, specialising in hydrology and water resources management. ITC's strength lies in its active participation knowledge-sharing through teaching and research undertaken by Kenyan graduates in many aspects of water related assignments including modelling, river basin management, ecosystem services and integration with governance.

Twente/ITC will lead the implementation of Result 2. Their tasks include groundwater studies, total water balance modelling, upgrading the water allocation plan (WAP), developing alternative water allocation scenarios, information storage and sharing system, hydrological programme monitoring including all aspects of surface and ground water development.

Deltares have previously undertaken a scoping study of ground water abstraction and will be brought in to assist Twente/ITC in the specialist aspect of hydro-geology. Arrangements for this will be managed by Twente University/ITC.

Regional Water Authorities in the Netherlands

The NL RWA's are government water authorities with organisational and analytical expertise in regional water management (quality and quantity). They work in all aspects of policy development, resource management and planning.

In this programme the Regional Water Authorities (Waterschap Noorderzijlvest (NZV) and Waterschap Hoogheemraadschap (HDSR) will apply their technical expertise and knowledge to the organisation and execution of efficient and participatory water management in the Naivasha basin. The RWAs will take the lead in Result 1 which includes developing the WRM institutions (WRMA's and WRUA's) capacity and governance. They will assist Twente University/ITC-Deltares in the aspect of customising the hydrological models to the WRMA users'level. They will support WRMA and WRUA in several institutional, legal and financial aspects. They contribute by lending their expertise on integrated water management to about 1100 working hours.

Private Sector in Lake Naivasha

The Lake Naivasha Growers' Group, Lake Naivasha Riparian Association and the Naivasha Tourism and Business Community represent a substantial part of private sector interests in the Lake Naivasha area. Each has demonstrated its commitment to sustainable development by pledging financial support to the FDW Sustainable Water Fund proposal (see Result 7).

LNGG has partnered with WWF and provided the financial support to implement the current PES project. In addition the members of LNGG contribute over €450,000 per annum to community and civic projects particularly in the environs of Lake Naivasha. LNRA for more than 50 years has been leading efforts to protect the lake riparian zone and was instrumental in achieving Naivasha's Ramsar status. The Naivasha Tourism and Business Community engage in various activities to support the people living in Naivasha.

These parties and particularly the floriculture industry will have a significant role in contributing to Result 5 which looks at the private sector interests related to improved water management, water stewardship, business standards and horticultural certification.

Water Resources Management Institutions

The Water Resources Management Authority (WRMA) is the government agency mandated to manage surface and groundwater resources in Kenya. In the IWRAP programme, WRMA will collaborate with the other partners (especially the NL Regional Water Authorities and ITC), since they will become the principal beneficiary of the capacity building that will be provided. This implies

a significant growth in both working capacity and operational means. The impact of this engagement will be an active working relationship between WRMA and the WRUA's to enhance water management, monitoring and licensing of abstraction and improved revenue generated from water service charges.

5.2 Programme Management Unit (PMU)

The PMU will comprise of representatives of the partners to the IWRAP programme, namely

- WWF as lead partner with overall financial and management responsibility to EKN for execution of the programme
- Imarisha Naivasha acting in an oversight/coordination role, through representatives of the Imarisha Research and Monitoring Committee
- Government of Kenya, Water Resources Management Authority (WRMA), represented at the Naivasha sub-regional level
- Twente University/ITC
- A representative of the two Regional Water Authorities in the Netherlands (Waterschap Noorderzijlvest (NZV) and Waterschap Hoogheemraadschap Stichtse Rijnlanden (HDSR).

WWF Kenya will be Chair of the PMU, and will convene two physical meetings a year and the rest of the communication will be via webex or other appropriate means. Meetings at an operational level will be convened with a view to providing monthly progress reports to the PMU. The PMU will develop terms of reference for its mandate and agree and share this with EKN. In outline the TOR will provide for:

- Oversight of the implementation of the work plans and approval of expenditure based on clear work plans that link to the annual budget.

- Establish a monitoring and evaluation system that achieves the (internal) goals of the IWRAP programme and consistency with the (external) Imarisha Research and Monitoring Committee requirements and SDAP Monitoring Programme.

- Members of the PMU will take lead in their respective work areas and implement the programme and ensure that each work area is delivering on its results and that these harmonise with the overall programme to avoid duplication and conflict in work areas.

- Track the progress in the implementation of the programme and use the outcomes of the monitoring exercise to evolve adaptive management of the programme as necessary.

- Review and approve reports (technical and financial) and other communication to the Embassy of the Kingdom of the Netherlands to ensure compliance with funding requirements and quality of the reports.

- Support communication of the lessons learnt from the implementation of the programme through participation in international conference and technical working groups so that the lessons learnt can be used as best practices in other basins elsewhere in the country, region and the world.

- Stay in touch with key external developments to respond to relevant issues affecting the anticipated outcomes of the programme and ensure continued alignment with the SDAP Outcomes.

As indicated above Imarisha will be represented on the PMU by a full time Project Manager and the CEO of the Imarisha Secretariat, whilst WWF will appoint a full time Programme Coordinator who will be based in Naivasha. The PMU will be chaired by the WWF Country Director and administered by the WWF Programme Coordinator.

5.4 Monitoring and Evaluation

As described above, the IWRAP programme will be contributing to several components of the four Outcomes of the SDAP and will be monitored by the Project Manager and CEO as representatives of the Imarisha Research and Monitoring Committee. This is what is referred to earlier as "external" monitoring (notably of basin-wide impacts, rather than programme progress). The details of this are set out in *page 72 of* the SDAP Monitoring Programme (page 72 of annex 8).

The IWRAP programme needs to be able to report on M&E from an "internal" perspective to EKN and whilst this may appear to be duplication in reporting it is proposed that in its first month of operation the PMU develops a common system of M&E IWRAP programme reporting based on the SDAP provisions. This can be in the format of a dash board, CP network or bar charts that best reflects the achievement of the programme milestones and highlights aspects where performance is not meeting targets and the reasons for this.

Result 6 provides for support to set up an integrated resource database managed by Imarisha and aimed at creating a readily and electronically accessed depository of information both historical and generated through the IWRAP (and other current initiatives in the Basin). This will greatly assist the process of monitoring the IWRAP programme and provides context (wider impacts monitoring of changes in the Basin and indicators of "sustainable development" – ecological/ hydrological, social and economic).

The IWRAP programme will have two major evaluations. The first (mid-term evaluation) will be towards the end of the second year and a final evaluation at the end of the implementation period. The results of the mid-term evaluation will be used to review the programme targets and if necessary prepare a revised log frame and workplans for submission to the Embassy of the Kingdom of Netherlands in Nairobi.

The annual progress of the proposed four year program will be reported bi-annually (1st September and 1st March of every year, with the first report due end of September 2013, and the last report March 2017) to EKN as well as uploading into the WWF network reporting cycle. If needed, additional (oral) reporting will be arranged. WWF Kenya will also encourage technical staff at EKN to conduct periodic field visits to provide additional monitoring and advice on best practices on integrated water resources management from Netherlands and elsewhere in the world.

6.0 Budget (Action Costs) and Human Resource

6.1 Programme Budget

A summary result based budget of the proposed programme is provided in annex 4. A detailed activity based budget is attached in annex 3.

In total WWF Kenya (the applicant) is seeking a total of Kshs. four hundred and twenty million (ksh 420,000,000) from the Embassy of the Kingdom of the Netherlands. The larger programme will work closely with other initiatives funded from other sources including DFID, WASH and the potential upcoming Sustainable Water Fund through a Public Private Partnership. The table below provides a summary of the budget.

Summary budget

PROJECT BUDGET		**ESTIMATES**				
Acc. Code	**Income / Expenditure**	**Budget FY 13**	**Budget FY 14**	**Budget FY 15**	**Budget FY 16**	**TOTAL**
	EXPENDITURE					
50XX	Staff Costs	13,391,508	14,597,994	15,892,128	17,315,676	61,197,306
51XX	Third Party Fees	23,083,204	8,402,537	2,519,500	2,519,500	36,524,741
52XX	Other Grants and Agreements	86,166,450	72,524,640	55,267,286	37,925,520	251,883,896
53XX	Travel, Meeting and Training Costs	3,143,994	2,368,000	2,368,000	2,368,000	10,247,994
54XX	Communication and Fundraising Costs	1,700,000	1,700,000	1,700,000	1,700,000	6,800,000
55XX	Miscellaneous Costs	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
56XX	Office Running Costs	629,800	748,050	748,050	748,050	2,873,950
57XX	Field Running Costs	2,808,000	2,448,000	2,808,000	2,448,000	10,512,002
58XX	Capital Asset Costs	4,849,000	0	0	0	4,849,000
	Subtotal Direct Project Expenditure:	*136,771,956*	*103,789,221*	*82,302,965*	*66,024,747*	*388,888,889*
5900 to 5949	Management Costs 8.0 %	10,941,757	8,303,138	6,584,237	5,281,980	31,111,111
	D - TOTAL EXPENDITURE	**147,713,713**	**112,092,359**	**88,887,202**	**71,306,726**	**420,000,000**

6.2 Proposed Human Resources

WWF Kenya will recruit a Programme Coordinator (PC) who will be responsible for the overall delivery of the programme of work. The Programme Coordinator will operate from Naivasha town and be responsible for coordinating the actions of all the coalition partners, preparing technical and financial reports. The PC will chair the monthly progress meetings and will participate in and serve as the Secretary of the Programme Management Unit (PMU).

The PC will work closely with the Imarisha Project Manager recruited as a part of the support provided to Imarisha through the IWRAP programme (Result 6).

A full time WWF Programme Accountant will be appointed to manage the financial affairs of the programme, prepare monthly financial statements and assist the Programme Coordinator in financial arrangements and management of the programme partners. The programme will benefit from supervision and support from other WWF-Kenya staff. These are:

- The Country Director will maintain oversight of the programme, maintain linkages with Kenya Government institutions and EKN, chair the PMU meetings and take overall responsibility for the execution of the IWRAP programme. The WWF Freshwater Coordinator based in Nairobi will provide technical assistance and will link the NL based organisations and those in Kenya and importantly follow up on the funding proposals with the Sustainable Water Fund (Result 7).

- Technical Programme Officer will support the functions of the Programme Coordinator on administrative and provide monitoring capacity to ensure the overall impacts of the programme are being achieved.

- Other staff at WWF KCO will be made available to support the programme. These include the Finance Manager, Communication Manager, Programme Accountant, Admin/IT support staff who will put in time into the programme.

WWF will use its global network of experts with a broad range of skills in water resources management and environmental development to enrich the programme. The Netherlands is the acknowledged international hub of the floricultural industry and WWF's contacts within this will be used to contribute to the development of standards compliance such as the ongoing FSI initiative. To support the enhancement of WRMA's institutional capacity, it is anticipated that the current sub-regional technical staff of 11 will increase to 15 as part of WRMA's contribution to the programme (Results 1 and 2). The staff will be strengthened by detachment of employees contracted by Imarisha with resources that gradually become available from the Sutainable Development Fund . The proposed programme management structure is attached as annex 1

7.0 Sustainability

The sustainability of the outcomes of this programme will be anchored on five important factors that provide a sound basis for the continuation of the programme in Lake Naivasha Basin post the EKN funding:

1. **Financial** – The partners in this programme are jointly working together to develop Lake Naivasha Basin PPP Sustainable Development Fund (LNB-3P-SDF) Project whose anticipated outcome is a Development Fund for the Lake Naivasha Basin. The partners have presented a proposal for part funding to the Sustainable Water Fund in The Hague, the Netherlands. This Fund will be jointly financed by actors in the flower and vegetable value chain with groups such as Albert Hein (Ahold) and LNGG, LNRA and the Naivasha Tourism and Business Community and the Dutch Government. Ahold have actually committed to 0.001 Euros per stem per year to this fund. This fund will provide sustainable financing mechanism for the long term development of the Lake Naivasha Basin, including water resources management.

   The partners in this programme believe that their submission to the Sustainable Water Fund was not fully responsive and Result 7 of the IWRAP programme provides for the reformulation/ completion of LNB-3P-SDF project proposal.

2. **Institutional** – Appropriate policy and institutional arrangements for devolved water resources management. Legislation in Kenya is currently being reviewed and amended to conform to the new Constitution. The programme will work with the Ministry of Water and Irrigation to reflect the principle of delegation of responsibility where water resources will be managed at the sub-catchment level. In this connection the programme will support the proposal to establish basin water authorities so that the Rift Valley region, in which Lake Naivasha is situated, becomes an autonomous water basin authority. The advantage is that decisions including collection of revenue will be done at a level close to the LN Basin. The government has already established Imarisha Lake Naivasha Board to coordinate development in the basin. The board is representative of the diverse interests in the LN basin who derive their livelihoods directly from water use or who represent smaller groups who rely on the water resources of the basin. The board members have been selected by the organisations or groups who were defined by government as key stakeholders and range from large commercial interests to the important civil society groups. To develop the capability of the board and secretariat to fulfil its mandate the programme will provide a block grant to finance support staff and logistics and to enable the Imarisha Board to be reconstituted as an agency for the basin. Part of it may be detached to WRMA for the implementation of integrated water management tasks (Result 6)

3. **Environment and Climate**: The environmental and climate sustainability of the programme is based on:

   (a) Government commitment: the Government has shown its commitment by gazetting Lake Naivasha Catchment as a protected area and ground water conservation area. Despite a legal challenge, the court ruled in favour of proceeding with the final gazettement and this will be

completed by early 2013. Strong support from the Government has strengthened the established public-private sector relationships. Gazettement- which provides for special rules for the basin, will strengthen natural resource governance and regulation- the Government will be held accountable to enforce the rules – and civil society will play a strong role in advocacy- which is critical in sustainability of water resources in the basin, and Imarisha will monitor compliance and bring transgressors to the attention of the Government.

(b) Strong involvement of the private sector by individual organisations already embracing sustainable business practices and collectively through the Lake Naivasha Growers' Group (LNGG). The programme will support national (KFC-KBS-KEPHIS) initiatives on certification of horticulture. This programme will target a plan to link export licences for horticulture products with compliance to a national standard. Once substantial compliance has been achieved, the horticulture industry in Naivasha will be recognized as embracing high standards of agricultural, social and environmental practices and pave the way for flowers grown in Naivasha to be internationally recognized as being produced in a sustainable way. Furthermore, working with and influencing international markets to pay a premium for sustainably grown flowers will highlight the benefit of compliance and encourage self regulation. Once these measures are in place the opportunity to benchmark with the FSI initiative, envisaged in the FDW proposal (Result 7), will further enhance the "sustainability" credentials and contribute to a reduction of the business risk associated with purchasing flowers from Naivasha.

(c) Improved information and understanding of the hydrology and water availability in the basin from this programme and the proposed consolidation under LNB-3P-SDF with FDW funding (Result 7), linked to ecological restoration, land use management and impact monitoring under SDAP, will ensure that efforts to achieve "sustainable" ecosystem management and development are based on good science, sufficient and well-trained staff, stakeholder participation and monitoring of actual change and impacts. This provides a mechanism for maintaining developments in the basin within the limits of the available water and ecosystem services and overall ecosystem capacity. Monitoring of impact indicators under the SDAP Monitoring Programme will provide the information on changes in water (availability and quality), biodiversity and landscapes, human health, livelihoods and social development etc. This provides a feedback mechanism for adjusting the development process to maintain human development in the basin within the limits of the ecosystem.

4. **Technical** - Building the appropriate level of water resources management (WRMA sub-regional office and WRUAs). The focus of Results 1 and 2 is to build the necessary capacity (institutional and technical) for water resources management. This includes efficiency in water management (including regularisation of abstraction permits and water fees collection) and transparency. The partners recognise that these two results will lead to increased revenue, establish robust management and operational systems and create a human resources structure suited to achieve long term sustainable water resources management.

5. **Social** – In Naivasha, sustainable economic growth based on the sustainable allocation and use of resources will improve job security for more than 30,000 people directly employed and 300,000 people indirectly employed in the horticultural industry. Furthermore, greater

transparency in the allocation and management of resources will encourage existing investors to have confidence in continuing to invest and attract new investors. The recognition that water stewardship plays an important role in business planning such as was demonstrated by the success of the initial PES project, will enhance the cooperation between small-scale farmers and the major commercial growers. This will aid technology transfer and strengthen linkages and logistics to local markets. PES is one of many instruments that can provide incentives for maintaining and restoring ecosystem services and is a mechanism with great potential and increasing interest among both the private and public sectors

8.0 Appendixes

Annex 1: Programme Management structure

Annex 2: Logframe

Annex 3: Detailed activity and budget

Annex 4: Summary result based budget

Annex 5: work plan for Y1

Annex 6: Shared Risk and Opportunity in Water Resources

Annex 7: SP- One Lake Naivasha Joint Stakeholder Action Plan

Annex 8: SDAP- Sustainable Development Action Plan

Annex 9: Programme risk assessment tool

Annex 10: Commitment letters from Partners

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