**Project Title**

*Rusuli* community-led, eco-friendly Marshland Development Project

**Project Summary**

(In 75 words or less please summarise what your project intends to achieve and how)

Against the background of rapid population growth and a climate change related increasing unreliability of rain-fed agriculture, marshland development presents an opportunity to ensure food security and economic growth in *Rwanda*. On basis of a community-led and eco-friendly approach, the here presented project attempts to sustainably balance socio-economic and ecological functions of marshlands. Three main outputs are planned: (1) construction of drainage-irrigation infrastructure, (2) protection of sub-catchment and (3) training and coaching to farmers/farmer groups.

**Anticipated Start Date**

(DD/MM/YYYY)

1/6/2015

**Project Duration**

(in months)

20 months

**Funding Requested**

(RWF)

533,722,000

**Name of Lead Organisation**

Weltungerhilfe (WHH) (formerly known as Agro Action Allemande (AAA)/German Agro Action (BAA)

**Type of Organisation, which best describes the Lead Organisation**

(please select only one box)

- [ ] Government Institution
- [ ] Non-Governmental Organisation (NGO)
- [ ] Private Sector Enterprise
- [ ] Academic Institution
- [ ] Other (please specify)

**Partner Institutions**

The District of *Huye*; The Southern Province of Rwanda; MINAGRI/RAB & Irrigation and Mechanization Task Force; Rwanda Cooperative Agency (RCA)

**Full Office Address**

Deutsche Welthungerhilfe e.V., P.O Box 1346, Kimihurura/ Kigali/ Rwanda. Tel: +250 252 587 910

**Website Address**

(if applicable)

www.welthungerhilfe.de

**Contact Person**

(the person who will have ultimate responsibility and be accountable for delivering this project)

Name: Eng. Audace KUBWIMANA

Position: Country Representative & Project Leader

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**Is this a resubmission of an earlier submitted PD(if so please provide details)**

No
SECTION 1: INFORMATION ABOUT THE APPLICANT

Q 1.1  **What** is the Lead organisation's total number of full-time employees?

Welthungerhilfe global: about 2,000  
Welthungerhilfe Rwanda: 27

Q 1.2  **What** is your organisation's experience of managing similar projects or activities (please explain why you think your organisation and partners are capable of managing the project)?

Welthungerhilfe (WHH) is an international NGO founded in Germany. Established in 1962, WHH has developed a broad development portfolio over the years, and is currently active in 40 countries with an annual budget of about €160 million. WHH, also known as “Agro-Action Allemande” or “German Agro Action” was registered as an NGO in Rwanda in 1995 and has contributed to national development through interventions and project activities in a variety of sectors and fields, namely: rural development / agricultural extension / value chain / soil and water conservation / capacity building and organizational development. Based on the direct implementation of about 20 projects in the last 20 years in Rwanda, with an estimated total volume of € 29 million, WHH staff has gained strong expertise, skills and knowledge in the mentioned fields.

From 2004-2014 WHH has implemented a comprehensive Marshland Development, Soil Conservation and Value-Chain-Program known as “Establishing a System of Integrated Resource Utilization” (ESIRU) in 4 Districts of the Southern Province of Rwanda (Muhanga, Ruhango, Nyanza, Huye). The program was mainly funded by the Embassy of the Kingdom of the Netherlands (EKN) (€ 17 Mio of the total project volume of € 21 Mio). In the course of the program about 1,000 ha of marshlands were transformed into highly productive rice schemes; 600 ha radical terraces and 1,200 km of infiltration galleries were developed on the surrounding hillsides, mainly for water and soil conservation purposes; 120 km of rural roads were constructed or rehabilitated to provide access to the developed marshlands; furthermore 12 cooperatives and 6 Water User Associations were supported with extensive Capacity Building activities. All project activities were carried out with strong participation / involvement of local communities and Local Government Authorities (LGA).

The proposed project in the Rusuli valley builds on experiences gained, and lessons learnt during the implementation of this large-scale program. This concerns the construction of irrigation infrastructure and soil- and water-conservation measures: here a rich experience capital was gained in regard of all
matters of technical planning and work execution; cost-effective CFW coordination; efficient and transparent procurement procedures; logistics. This furthermore concerns the field of organisational development, e.g. with regard to quantity of training needs, training and coaching methodologies etc.

The Rusuli marshland is located in a side valley of the Mwogo marshland, which itself was one of the project areas of the ESIRU program. In the Mwogo valley about 500 ha of marshland area was transformed into irrigated rice schemes (2007-2012) through a labour intensive Cash-for-Work (CFW) approach. The developed marshlands are now cultivated by 5 cooperatives with about 3,000 members, producing 2 crops of rice per year. As pre-ESIRU baseline surveys in the WHH project area show, about 80% of the population had monthly incomes of less than $10 (of these a great portion had no monetary income at all). After the project some 3,000 households in the Mwogo area produce about 3,300 tons of rice per year, resulting in a yearly turnover of $ 1.2 Mio. (about $300 per household). Additionally a variety of crops like Maize, Beans, Cassava are grown on the ESIRU hillsides. Furthermore the funds injected via CFW into the local communities have stimulated off-farming activities and businesses (small shops, supplies etc.). Compared to the pre-project situation, this presents a great improvement in terms of food security and economic empowerments.

Due to its previous project activities, WHH is familiar with the specific conditions (climate, hydrology, soils etc.) of the area. WHH is furthermore well known and well connected to / with the local population and LGAs on all levels (cell, sector, district and Southern Province of Rwanda). The positive experience of the Mwogo project and the urgent need to further increase agricultural production encouraged farmers, LGA and WHH to search for additional project opportunities in the area. The Rusuli valley was identified as an area with high potentials for project activities aiming on improved agricultural production.

In the Marshland Development (MLD) sector in Rwanda currently a certain trend can be observed: The majority of projects aim at maximized utilization of natural resources. Yet marshlands are known to fulfil numerous functions such as ecological, hydrological, social and recreational functions. In spite of this trend, one central lesson learnt from marshland development during the last decades is that any “one-sided maximization approach” is likely to have negative effects - in particular on the ecological system. In order to avoid “one-sidedness” and its negative effects on the sustainability of the intervention, marshland development should be based on “wise-use principles” and a systems view on marshland functions. For the Rusuli marshland development, WHH and its partners have developed a concept for an improved MLD concept aiming at effectively balancing socio-economic and environmental factors in marshland development through “minimal intervention” and systems thinking. The current project seeks to establish a best practice example on wise-use of marshland resources, with the overall aim to serve as a model and inspiration for the future attempts to cost-effectively and sustainably transform swamps and marshes for agricultural purposes.

A second central lesson learnt from the ESIRU program is that the comprehensive involvement of users and LGA during all project phases is a key success factor. The collaboration with LGA of the Southern Province became a core component of the so-called ESIRU Consolidation Phase (2012-14), during which users and LGA were comprehensively supported in taking over operation and maintenance (O&M) of the ESIRU facilities. In the course of the program, joint activities collaborative agreements (MoUs), with province, districts as well as governmental institutions were established, ensuring active involvement in the program implementation and establishing mechanisms to ensure the follow up of the management of the schemes after the end of the project.

As experienced during the ESIRU program, capacities and time to ensure proper cultivation of the plots might in individual cases not be sufficient; this has been observed in particular in cases of women headed
households. It is therefore planned to support the creation of “vulnerable women groups” (VWG) within the cooperative. Here a number of women (normally 3) group together to jointly cultivate 1 plot.

The WHH Headquarter in Bonn/Germany will support the team of WHH Rwanda in matters of project management and administration. In particular the so-called Sector Strategy, Knowledge & Learning Unit will play a crucial role in supporting the Rwanda team with technical expertise. The main task of this unit is to strengthen the exchange of knowledge and experience, develops technical guidelines and initiates necessary changes to support effective and future-oriented programme work. The central contact person from this unit for the Rwanda team will be Dr. Heinz Peter. However, over the past years, WHH has built enough capacities for its local team through formal and on-job trainings; the Country Office will carry out thus the actual project implementation, including routine management, administration and reporting. Support by the HQ will be provided only on demand, and does not imply any additional project costs or other resources.

Q 1.3 List the name, position, and email of key personnel involved in the project, such as the project executive, project manager, and core technical staff. (Provide a CV for each of the key personnel as an attachment to this PD)

- Eng. KUBWIMANA Audace, Project Manager; email: audace.kubwimana@welthungerhilfe.de
- Eng. Dr Heinz Peters, Senior Advisor (Welthungerhilfe Sector Strategy, Knowledge and Learning Unit); email: Heinz.Peters@welthungerhilfe.de
- Eng. Augustin NZAMWITAKUZE, Project Engineer; email: nzaugustin@yahoo.fr
- Mr Jonathan NTURO, Community Mobilization and Cooperative Capacity Building Specialist; email: jonathannt5@gmail.com
- Mr BANANEZA Emmanuel Octave, M&E Specialist; email Emmanuel.bananeza@gmail.com
- Madame Faith KAMUKAMA, Financial Manager; email: Faith.kamukama@welthungerhilfe.de
- Eng. KAYIRANGA Jean Pierre, Project Agronomist/Rice Specialist, email: kayiranga1@yahoo.fr

Q 1.4 Lead Organisational Finances. Provide a copy of these from the most recent audited annual accounts (income and expenditure statement & balance sheet in RWF, as well as the main sources of funding) as an attachment to this PD.

Attached to the PD is the WHH Annual Report 2013, with the audited financial statement. As the records are in € only, we attached an additional excel sheet with the respective tables in RWF.

SECTION 2: INFORMATION ABOUT THE PROJECT

Q 2.1 Why is the project needed (clearly state the problem this project will address and the evidence base for its justification. Where possible, refer to international, national and/or sectorial strategies.)?

The Rusuli marsh is located in a side valley of the Mwogo river catchment. According to MINIRENAs classification of wetlands, the Mwogo catchment marshes are categorised as wetlands that can be utilized for agricultural uses under condition of a positive Environmental Impact Assessment (EIA). Administratively it is located in the Rwaniro Sector, Huye district. Huye is among the districts with a high percentage of population under poverty and extreme-poverty categories, representing 47% of the total population of the District as indicated by the 2010/11 Integrated Household Living Conditions Survey (EICV3). This study shows that this percentage is higher than the national average of 44.9%.

Agriculture presents the main economic activity in Huye, involving 76% of the population aged 16 years
and above. Agriculture is also the main drive for household income at a rate of 48%, followed by wage income at a rate of 28%, which again is dominated by farm wages covering 66% of the total wages.

Agriculture in Huye however face great challenges. Central challenges are land scarcity, fragmentation and degradation, poor farmers’ organization and inadequate knowledge in farming techniques. Huye ranks 5 in the top districts with households cultivating areas under 0,3 ha. According to EICV 3, the percentage of land protected against soil erosion in Huye district is 76%. This percentage is the lowest in the Southern Province and it is below the national average (78%). The situation of farmers in Huye is even more challenging as a high proportion of farmers depend on rain-fed agriculture only. This form of land use is highly vulnerable to the apparent increasing incidences of droughts and floods, commonly linked to the phenomenon of Climate Change.

A clear intensification of climate related challenges on agricultural production was observed in WHHs project areas in the Southern Province in recent years, where farmers who exclusively depend on rain-fed agriculture experienced partly severe food insecurity due to lack of rains during the “traditional” rainy-seasons, and / or frequent events of high intensity rains, causing destructive flood events. This observation was confirmed through community consultations during preparatory missions for this project: floods and drought are stated to be the top challenges farmers face. In order to overcome these challenges, the Huye District Development Plan (DDP) outlined the development of irrigation infrastructures (including MLD) among the district priorities.

This situation is also reflected in the national priorities: Rwanda’s Vision 2020 defines productive high value and market oriented agriculture as one of the 6 pillars for building a diversified, integrated, competitive and dynamic economy, which will raise the country to the level of middle-income countries. However, Rwanda is at the same time highly vulnerable to climate change as it is currently strongly relying on rain-fed agriculture. NAPA-Rwanda (National Adaptation Programme of Action to Climate Change) indicated that agriculture is among the sectors which are most vulnerable to Climate Change in Rwanda and therefore highlighted promotion of non-rain fed agriculture among possible adaptation strategies.

Under the five years Economic Development and Poverty Reduction Strategic Plan (EDPRS 2, 2013-2018), the Government of Rwanda (GoR) regards MLD as an important tool and opportunity for ensuring food security and economic growth and thus a central component of the promoted strategy to build resilience to Climate Change. While the Irrigation Master Plan (IMP 2013) lines out 200,000 ha of potentially cultivable marshland areas, the target for the EDPRS 2 is to develop a total of 100,000 ha under irrigation; of these 65,000 ha are marshland areas. The Strategic Plan for Agriculture Transformation (PSTA III) specified that the 65,000 ha of marshlands to be developed are foreseen for rice cultivation with the purpose to cover the domestic need; currently about 70% of the national annual requirement are produced in Rwanda. The Rwanda Green Growth and Climate Resistance Strategy (GGCRS) also confirms that the availability of irrigation infrastructure is vital for a successful adaptation to changing rainfall patterns and therefore recommends optimising water usage through introduction and application of adequate irrigation techniques.

In order to address the problems of land scarcity and fragmentation in Rwanda, the national land law endorsed the consolidation of the use of small plots of farmlands in order to improve land management and agriculture productivity. Furthermore the Farm Land Use Consolidation Policy currently implemented by MINAGRI explicitly focuses on the synergies between land use consolidation and its Crop Intensification Program, mainly targeting priority food crops, including rice. This policy highlights MLD as a strong tool for achieving the targeted land consolidation. Also EDPRS2 prioritizes land consolidation
among the most promising measures for rural development.

Apart from land consolidation through MLD, social inclusion and inclusive growth are important aspects of the project design. The Rwandan National Social Protection Strategy (RNSPS) recognises social protection as a key component for sustainable economic growth. Among other things, the strategy builds upon (i) systematic, regular and predictable cash transfers providing income support to the poorest parts of the population (e.g. Vision2020 Umurenge Program, VUP), and (ii) means of ensuring access to public services such as health and education (e.g. cheap / free health insurance for poor families).

Through its dedicated community-led and pro-poor approach the Rusuli program aims at strengthening local capacities through training, coaching and technical support, and systematically includes the most vulnerable and needy part of the population (e.g. plot distribution on basis of district poverty rankings; more details under Question 2.3, Activity 2.1). Furthermore the planned CFW activities provide important temporary income generating opportunities for the local population - again with clear prioritisation of the poorest and most vulnerable members of the community. As previous projects show these activities are likely to trigger additional / off-farm business generating activities (small stores, work-shops etc.). In this sense the proposed project determinedly aims at supporting social inclusion and inclusive growth.

The Rusuli marshland has an area of about 120 ha (gross). Currently it is used by about 30 farmers on an occasional basis, with very limited production levels. Besides the common problems of inadequate water control, poor organization and inappropriate farming systems, the agricultural production in the swamp is at risk of decline due to increasing effects of climate related hazards such as frequent high intensity rains and floods and siltation from the unprotected (mostly steep) hillsides. The present project intends to change this situation, transforming the swamp into a secured and highly productive agricultural area. The developed Rusuli marshland will allow some 700 farmers to produce 2 crops rice per year, corresponding to a yearly turnover of RWF 190 Mio. (ca. $ 275,000) (i.e. assuming a net area of 70 ha; rice plots of 0,1 ha; yields of 5.5 t/ha; and farm gate prices of RWF 250/kg).

The here proposed project seeks to establish a best practice example of wise-use of marshland resources, with the overall aim to serve as a model and inspiration for the future attempts to transform swamps and marshes for agricultural practices. With the emphasis on cost-effective implementation, it is sought to ensure an attractive cost-benefit ratio. FONERWA’s program objective aims at supporting Rwanda’s economic growth in an environmentally sustainable way. With the here proposed measures WHH and its partners attempt to directly contribute to this important overall objective, and thus seek collaboration with FONERWA.

Q 2.2 What change is this project intended to achieve (state specific objectives, expected results/impact and long-term legacy. To address the core environment and climate change objectives of the project, it would be helpful to refer to national and sectorial climate change and environment objectives. Provide measurable indicators, within a log-frame matrix. In addition, make a note of the expected impacts on employment and poverty reduction, as well knowledge and technological transfer.)?

1. Project impact

The impact of the project is “Conservation and management of natural resources strengthened and sustained”. This impact statement refers to FONERWA’s Logical Framework and the project is intended to contribute to the FONERWA output indicator 1.1; “Area (ha) of land secured against erosion”.
As detailed in Logframe, by the end of the project and area of 770 ha is protected against erosion. This is composed of 120 ha (gross) protected and developed marshland area; and 650 ha of protected hillside area (bench terraces and agro-forestry trees) in the marshland surrounding hillsides.

2. Project outcome:

The project outcome is defined as “Improved resilience to climate change through community-based, eco-friendly marshland development for optimum and sustainable agricultural production”.

The outcome is linked to the project impact as the eco-friendly marshland concept ensures and sustains optimum use of natural resources. The project will not consider the marshland as isolated element, but as part of the sub-catchment system. The project interventions intend to reverse the environmental degradation in the hillside catchment while enhancing the optimum use of the resources in order to build resilience to climate change. The future marshland and hillside farmers will benefit from improved and safe means and techniques of production, allowing the reliable production of 2 crops per year.

The “State Of Environment Report” (REMA, 2009) shows the role of environment in the social-economic development of Rwanda with particular emphasis on land use, agriculture, industry and mining. The study indicated the apparent relationship between poverty and environment, as well as climate change, highlighting that the top 3 root causes of poverty in Rwanda are (1) lack of land, (2) poor soils, (3) drought and weather. These results demonstrate also the linkage between natural resources management and agriculture development, which is among the 6 pillars for poverty eradication and economy growth.

The current project will therefore contribute to mitigating the challenge of lack of land by increasing the available arable land area; the challenge of poor soils by improving the soil fertility through hillside development as well as a sustainable soil fertility management in the developed marshlands; and the challenge of droughts and weather by developing adequate water management systems.

The following objectively verifiable indicators allow measuring the achievement of the project outcome targets:

**Outcome indicator 1**: “Production rice in tonnes per year”: The aim of transforming the marshland into an irrigation scheme is to increase agricultural production (here the production of rice). Rice is among the high value and market-oriented crops identified in Rwanda. Economic growth and climate resilience has a strong relationship since resilience refers to the ability to deal with climate variability. Sustained income from rice production therefore will support concerned farmers in building climate resilience. Furthermore irrigated agricultural production ensures 2 crops per year, thus helps to compensate for climate change related productivity drops of rain-fed agriculture, as observable in the traditional hill-side agriculture. During this project intervention, rice production is expected to increase in terms of both yield and coverage. The targeted rice production at the end this project is 660 tonnes/year (5.5t/ha on 60 ha times 2 seasons) from the current 30 tonnes/year. In the first season after the project’s end additional 10 ha will be cultivated, giving the total net area of 70 ha, with a final expected production of 770 tonnes/year.

The used production targets are based on WHH experiences from the ESIRU program: when all facilities are put in place and farmers are properly trained / coached (agronomy, irrigation), average yields of 5,5 t/ha are realistically achievable. In the developed Mwogo marshland, neighbouring the Rusuli valley, individual farmers have achieved up to 7 t/ha. The 5,5 t/ha used in the PD present an average over 10 years; given an anticipated and targeted gradual increase of the yield over the years up to 6-7 t/ha (in
line with the national target), this presents a realistic value.

The increases in household income and rice production are measured against the currently low productivity in the Rusuli marshland, both with regard to the utilized area (occasionally / irregularly cultivated 20-30 ha, out of 120 gross), and the achieved production levels.

**Outcome indicator 2:** “Number of poor families using adequate water management systems”: This translates the number of families who built resilience to climate change. Resilience to climate change is realized through the usage of adequate water management systems, which allow adaptation to an increasing number of droughts and floods. This number is expected to increase from 30 to 700 households at the end of the project.

### 3. Project outputs:

In order to achieve the above stated project outcomes, the project plans to deliver the following 3 outputs: (i) constructing irrigation and drainage infrastructures; (ii) developing erosion control in the Rusuli catchment hillsides; and (iii) awareness raising, and supporting farmers to establish proper organizational structures (cooperatives, Water User Organisations (WUOs)) and strengthening their capacity to ensure the sustainability of the project,

**Output 1:** “Eco-friendly irrigation-drainage infrastructures constructed and utilized”: Irrigation-drainage infrastructure will be constructed following an eco-friendly “minimal intervention approach”. This includes i.a. that proportion of about 30% of the wetland is reserved as a buffer area (buffering agro-chemicals). Furthermore the natural river course is maintained. In this way changes in drainage velocities which might result in increased erosion, are avoided. These measure aim at conserving to a great extend the marshland’s ecological functions while utilizing available natural resources.

By the end of the project, drainage-irrigation channels of about 30 km in total length, access roads of 13 km, 85 bridges and 4 Rice Drying Platforms (RDP) will be constructed on the total developed marshland net area of 70 ha.

3 indicators specify the progress of the activities, and allow an objective verification of the achievement of the targets under Project Output 1: Indicator 1 is related to the total length of developed irrigation and drainage network (total of 30 km); Indicator 2 details the area / surface of the developed marshland (total of 70 ha). Finally Indicator 3 shows to the length of the constructed km of access roads (in total 13 km).

A number of milestone indicators in 4 months intervals allow detailed monitoring of the progress towards achieving the envisaged targets. The milestones for each indicators are specified in the Logframe.

**Output 2:** “Area bordering Rusuli marshland stabilised and protected against erosion”: Under this output, the project’s hillside land / soil conservations measures are put. The main purpose of these activities is to protect the scheme in the marshland against erosion and flooding. Furthermore this activity presents a decisive soil and water conservation measure, allowing the extension of agricultural area in the hillsides and an increased production of biomass. The targeted area to be developed is 650 ha, covering the adjacent hillside 500 m upwards from the marshland banks. The area will be protected through anti-erosive trenches, which in their intermediate spaces allow the formation of progressive terraces. The trenches will be stabilized with fodder grasses, legume shrubs mixed with agroforestry and fruit trees, further diversifying the agricultural production.
2 indicators allow transparent monitoring of the achievement of the envisaged targets under Output 2: Indicator 1 is related to the area stabilized / protected by trenches (total of 650 ha). Indicator 2 shows the number of agroforestry trees planted (total of 63,480).

A number of milestone indicators in 4 months intervals allow detailed monitoring of the progress towards achieving the envisaged targets. The milestones for each indicators are specified in the Logframe.

Output 3: "Community participation raised and capacity strengthened for the sustainable management of natural resources in the Rusuli sub-catchment": Community participation during all project phases is central to ensure ownership of the project by the local communities / future marshland and hillside farmers, which again is a prerequisite for the sustainability of the interventions. The participatory process started already during the preparation of the present proposal in form of community participation in the problem analysis and joint identification of activities/interventions. The idea of a beneficiary contribution in the form of 1 day of community work per week ("Umuganda") during the implementation was proposed by the farmers during these preparatory meetings. It is expected that during the project some 2,200 community members will participate in the CFW activities; some 700 cooperatively organized farmers will receive plots in the developed marshland (selection on basis of district poverty ranking / "Ubudehe"-lists, as explained below); some 420 farmers will benefit from trainings and capacity building activities. In line with Rwandan policies & laws on marshland utilization, the new plots’ users will be organized into a cooperative, dealing mainly with matters of agricultural production and marketing, and a parallel water user organization (WUO), dealing with irrigation / water management and infrastructure maintenance.

The 2 farmers’ organisations will be the central managing bodies, supervised and regularly supported by local government institutions/authorities. All planned capacity-building activities are designed to enable these organisations in becoming self-reliant, self-managed and democratically organised production units. Ensuring sufficient returns from marshland / rice cultivation is a pre-requisite for the functionality of these organisations (incl. services like loans, hiring of extension workers etc.).

As clearly specified in the program design, the project builds on a close collaboration with local government authorities and governmental institutions. The marshland are government owned; thus the GoR has a high interest in ensuring continued functionality of the facilities.

The two farmers’ organisations will receive extensive trainings and capacity building measures during the 20 months project period with the target to enable these organisations to properly manage the newly developed scheme. RCA together with the district and sector will be involved in all trainings. These authorities and institutions will play a crucial role in monitoring and continued coaching of farmers after the project period. These responsibilities will be detailed in the respective MoUs.

During the project time a position of a manager for the cooperatives, as well as for the WUO are foreseen (each over the period of 12 months, starting with the preparation of the first crop). For the cooperative additionally an accountant will be assigned (for the period of 8 months; coming in before the first harvest). The positions will be financed after project end by the cooperatives.

5 indicators allow transparent monitoring of the achievement of the targets under Output 3: Indicator number 1 details the number of farmers organized into cooperatives and Water User Organisations (total of 700). Indicator 2 shows the labour force contributed by beneficiaries through community-work / Umuganda (total of person days equivalent to RWF 65,771,760). Indicator 3 is related to the number of
farmers trained in the course of the project (total of 420). Indicator 4 shows the proportion of women in leadership positions in the farmers’ organisations. As detailed in the Logframe, by the end of the project 40% are targeted. Finally, indicator 5 is related to the proportion of youth benefiting from the project activities. Here a total of 70% is envisaged by the end of the project.

A number of “milestone indicators” in 4 months intervals allow detailed monitoring of the progress towards achieving the envisaged targets. The milestones for each indicators are specified in the Logframe.

4. Long-term legacy:

In addition to the direct changes through improved water control, one of the major motives for this project is to establish an example for marshland development practice, which sustainably balances economic and environmental factors and functions. In the project design comprehensive monitoring of the ecological effects of the Rusuli project are included. The Environmental Impact Assessment (EIA) currently carried our (March 2015) under supervision of RDB will provide comprehensive baseline data, against which regular and continues project monitoring will be conducted (water quality; soil quality; flora and fauna). On basis of the so generated data, a final environmental audit will comprehensively conclude on the “eco-friendliness” of the Rusuli approach.

This project is expected to contribute substantially to behavioural changes in terms of sustainable management of natural resources and climate change-adaptation, through knowledge acquired from organized capacity building and knowledge exchange - programs.

The ESIRU program shows that returns from irrigated rice production allow not only to cover for Operation and Maintenance (O&M) of the schemes and structures, but also entail considerable net-profits for the individual farmers – likely to inspire and motivate other farmers to engage in rice production. The project’s cost-effective “minimal intervention approach” can easily and sustainably be applied in other areas. This combination of cost-effectiveness, productivity, transferability and sustainability will make the Rusuli scheme an inspiring and motivating model – presenting a central long-term legacy of the project.

The project is furthermore expected to strengthen socio-economic ties and support economic empowerment in the community, mostly through savings, new income-generating activities in parallel with farming activities. Farmers will be advised and assisted in dealing with SACCOs to regularly save a part of money earned through CFW. An inspiring example was identified in the community where with small savings from the “Vision 2020 Umurenge Programme” (VUP), a modern apartment building worth RWF 60,000,000 was constructed without any other external support.

Q 2.3 How will the project objectives be achieved (include a detailed Work Plan as an appendix highlighting key deliverables and activities and responsibilities. Clearly describe the approach and methodology to be followed and the sequence of activities planned.)?

A number of activities will be carried out in order to achieve the project objectives:

Note: In the PPD the total costs for the proposed activities were estimated at $ 600,000. In the meantime a detailed technical pre-feasibility study was conducted. On basis of this study the design of the irrigation infrastructure was revised. The costs of the updated design increased, as outlined in the attached detailed budget. It has to be noted that the technical aspects of marshland development are complex. During the
preparation of the PPD the cost plan was partly based on estimates; the cost plan of the PD however is based on data from field surveys and detailed desk-studies. The increase of the costs is a result of the now refined data and figures, and corresponding changes to the design of the irrigation infrastructure. The increased project costs do not result in a negative Cost-Benefit ratio.

**General remark: integration of recommendations of the Environmental Impact Assessment (EIA):**

In April 2015 WHH assigned an external, REMA certified expert to conduct an Environmental Impact Assessment (EIA) for the planned marshland project. The EIA (approved by RDB on 23/4/2015) concludes that the planned activities do not pose any major threat to the environment, thus recommends proceeding with the implementation.

As agreed with FONERWA (and as required by RDB for its approval of the EIA), all mitigating measures not addressed in the first versions of PD / work plan, will be integrated in the final work plan and the final version of the PD.

The planning and execution of the envisaged construction works, as well as all activities related to the planed agricultural operation in the developed marshland, will be conducted in accordance with the Environmental Management Plan (EMP), as provided in the EIA-Report. The project team will conduct regular monitoring of environmental impacts of the project activities in the form of an environmental monitoring report on quarterly basis, and avail all respective records for environmental audits.

Any substantial changes to the project design will be notified to RDB for further environmental consideration and adjustment of this certificate of approval.

The project management furthermore ensures that any other undesirable environmental impacts arising from implanting this project not yet foreseen by the time of the EIA will be mitigated; that all necessary approvals from the local administration as well as other relevant institutions are available; that other environmental conditions and requirements as maybe prescribed by the environmental authority or any other any other legal agency will be fulfilled.

As part of the work plan, WHH will carry out regular monitoring of water quality, and impacts of the project activities on soil, flora & fauna (in accordance with the EMP); a final Environmental Audit is foreseen at the project end.

The actual mitigating measures recommended in the EIA Report which were not part of the first version of the PD, have subsequently been included. Yet, the EMP in its full level of detail will be regarded as a separate management tool and document, and considered during the detailed planning of the activities, and used for all mentioned monitoring activities.

**Output 1: Eco-Friendly irrigation -drainage infrastructures constructed and utilized:**

**General note on risk management, and mitigating measures for anticipated environmental impacts during the construction works:**

In addition to specific measures outlined in the respective section of a particular work phase / work type, the following safety and mitigating measures will be applied during all construction works:

- Construction of the diversion weirs as well as earthworks for side preparation will be carried out during the dry season, in order to minimize potential excess soil erosion.

- All work areas and access roads on site will be regularly watered by water browser in order to reduce...
dust levels;
- equipment engine, fuel and emission systems of construction machinery and vehicles will be maintained in accordance with manufacturers’ recommendations to minimize exhaust smoke, fuel and oil leaks;
- temporary drains will be constructed and directed in such a manner as to reduce the risk of water logging or erosion and siltation of downstream drainage system of Rusuli marshland before Mwogo river;
- bunds of the fuel storage facility will have a piped drain to a common oil interceptor (shared with the workshop / maintenance area);
- liquid fuel storage and dispensing will be done far from water bodies;
- adequate sanitary facilities shall be provided for workers;
- immediate soil remediation will be carried out for any major oil or fuel spillages that may occur by mopping up with an appropriate material and disposal off site by a registered contractor in an approved manner;
- Stockpile areas for materials such as sand, gravel, stone, laterite, and topsoil, will be surrounded by perimeter drains with sediment and other pollutant traps located at drain exits.
- hazardous wastes, material soiled with hazardous wastes and empty containers of hazardous materials will be stored on site in an approved manner, and be removed at regular intervals to off site waste disposal facilities designed to handle such hazardous waste as required by law;
- rubble such as concrete spoil or broken blocks and excess sub-soil from trench excavations will be stockpiled in a designated area on site and utilized on site as backfill and hardcore for the new slabs and substructures;
- topsoil removed will be stockpiled in a designated area and will be re-used on the site for landscaping and other green areas;
- Operations, which result in undue noise disturbance to nearby communities and dwellings (e.g. blasting activities and operation of heavy machinery and construction traffic) are restricted between the hours of 18:00 and 06:00;
- Existing mature trees on the site will be preserved as far as is possible.

WHH has signed an MoU with the Huye district; under this MoU the Huye district assures fulfilment of all supervisory obligations. This includes ensuring that all raw materials and construction inputs will be procured from REMA approved sources only;

In collaboration with the Rwaniro Health Centre the project team will conduct HIV/AIDS, Malaria awareness and prevention campaigns amongst all members of the workforce (6 sensitization campaigns, + regular follow up by project team).

The Project Management Team and relevant authorities will arrange on a regular basis that all supervisory employees are trained to ensure the following:
- A basic understanding of the key environmental features of the site and its environment
- Awareness of any other environmental matters, which are deemed necessary by the Project Management Team (e.g. appropriate behaviour / community relations, public health issues).
- Basic First Aid

Key personnel will furthermore receive training in basic Fist Aid. The project will provide a First Aid post on site, which is appropriately equipped and staffed by fully trained First Aid personnel. In case of serious injuries on site, e.g. accidents with heavy machinery, etc., the project management will formulate a plan to deal with such emergencies, prior to possession of the site.
During all construction works Personal Protective Equipment (PPE) will be issued as required to the various categories of workforce.

The members of the CFW workforce will be hired over a period of maximum 3 months; after this period new labourers will be recruited. This practice allows a maximum number of people to benefit from the income generating opportunities generated by the project.

The monitoring of the outlined safety and mitigating measures will be conducted in accordance with the Environmental Monitoring Plans (EMP) for the construction and the operation phase by the project team, and, as specified, in parts with support of the local government authorities, and/or external experts.

The findings of the monitoring missions and activities will be recorded in M&E- and Management-reports, and compiled in the quarterly environmental reports to the donor.

**Activity 1.1 Undertaking excavation of irrigation and drainage channels**

Under this activity canals with a total length of about 30 km will be excavated. This includes 13 km of periphery canals, 10.8 km of secondary canals, 5 km of the main drain and 1.4 km of thalweg-canals. The project will purchase basic materials such as ropes, trees for pegs and picks. The works will be executed through CFW, supervised and directed by the Project Engineer and Project Management. The work plan includes a 1-labour day contribution per week by the beneficiaries (“Umuganda”). So-called team leaders will be recruited during mobilization campaigns (activity 1.2). Furthermore a topographer will be recruited to support the Project Engineer.

**Activity 1.2 Constructing hydraulic structures**

The hydraulic structures include 3 head intakes, 8 thalweg crossing structures, 85 off-takes, 61 drop structures (6 on the main drain, 50 thalweg crossings and 5 on periphery canals), and 85 wooden bridges. The purchase of construction materials cement, stones, sand gravels, woods etc. will be done through regulated and transparent procurements processes (for details see Q3.6), and all construction works will be conducted by local labour and local masons through CFW.

Construction of the diversion weirs will be carried out during the dry season, in order to minimize potential excess soil erosion.

A temporary boundary fence will be erected at site take-over by the project. All site safety rules must be strictly and permanently adhered to within the areas of the site.

**Activity 1.3 Executing levelling and creating parcels and buffer areas**

After the irrigation and drainage network is finalized, parcels are created and levelled to allow gravity water circulation. The total area of 70 ha will be developed. Like in all other construction activities, the works will be implemented through CFW/HIMO.

**Activity 1.4 Constructing Rice Drying Platforms (RDP)**

Adequate post-harvest infrastructures are important in order to ensure competitive quality of the rice produced and minimize post-harvest losses. In this regard farmers’ cooperative will be supported in constructing 4 Rice Drying Platforms (RDP). The project will purchase construction materials, hire skilled
labour and equipment. The works will be carried out under direction of the project engineer.

**Activity 1.5 Constructing access roads**

In order to ensure access to agricultural inputs and easy commercialization of the product, a feeder road of 13 km surrounding the marshland will be constructed. The project will purchase construction materials; the works will be implemented through CFW. The works will be directed by the project engineer, assisted by a topographer.

**Activity 1.6 Planting trees**

One component of the eco-friendly marshland development approach is proper erosion control through plantation of appropriate varieties of agroforestry trees. It is planned to plant trees and shrubs in-between the developed plots, on the bands alongside the channels and along the access roads. A nursery will be prepared to produce seedlings needed for this activity. Trees will be planted during the suited season (from October to June) in order to ensure a high rate of survival.

**Activity 1.7 Purchasing and distributing agricultural inputs**

For the valorisation of the developed areas, farmers will be supported through the distribution of initial agricultural inputs such as seeds, fertilizers and pesticides. In particular for promoting the use of organic fertilizers, poor families will receive small livestock. The revolving approach used in GIRINKA program ("Kwitura") will be adopted to cover a large number of families at minimum costs.

**Output 2: Area bordering Rusuli Marshland stabilized and protected against erosion**

According to FAO standards for marshlands development, in order to ensure proper erosion and flood control a bordering protected area of 1 to 15 times the area of the marshland is considered as adequate. In accordance with this guideline an area of about 650 ha (5 times the areas of the marshland) covering the areas in the radius of 500 m from the marshland banks will be developed with anti-erosive trenches / progressive terraces. The total length of the trenches will be 325 km. In addition to the trenches agro-forestry trees will be planted. Both measures ensure the protection of an area of 650 ha in the adjacent hillsides against erosion.

**Activity 2.1 Preparing nurseries for agro-forestry and fruits trees**

During the construction of irrigation-drainage structures, nurseries will be prepared for agro-forestry and fruit trees. Farmers will be supplied with inputs such as seeds, nursery bags, woods, nails etc., while they will provide the labour for maintaining the nurseries under close supervision of the project agronomist. High value and adapted species will be selected, e.g. legumes for the nitrogen enrichment of the soil, high nutrition value fruits, high productive varieties in terms of biomass for fodder and fertilization, etc. In total 63,480 of seedlings will be produced at the end of this activity.

**Activities 2.2 Excavating anti-erosion trenches**

In total 325 km of anti-erosive trenches will be excavated along the hill-side contour lines through CFW. With this measure an area of 650 ha is stabilized and protected against erosion. The landowners of the protected hillsides will sign an agreement for their commitment for further valorisation and maintenance of the structures.
Activity 2.3 Planting trees and grasses

On the anti-erosion structures, agro-forestry trees will be planted, mixed with shrubs and elephant grasses to ensure stability of the structures and at the same time producing a variety of products, such as biomass for soil fertility and animal fodder. Seedlings and technical guidance will be provided to land owners by the project; the labour for planting will be contributed by the beneficiaries.

Output 3: Community participation raised and capacity of user groups (cooperative and Water User Organisation) strengthened for the sustainable management of natural resources in the Rusuli sub-catchment

Activity 3.1 Organizing the project inception workshop:
During the project start-up, an inception workshop will be organized. The main objectives of the workshop are to update all stakeholders on the final version and approved project; to communicate the rational and benefits of this project (on national, regional and community levels); to discuss in detail the project interventions and modalities of the implementation. The workshop will be used to refresh on roles and responsibilities of each stakeholder, especially with regard to Monitoring and Evaluating (M&E) of the project activities. During the workshop details of integrating the project activities into performance contracts (IMIHIGO) of LGA will be discussed.

For the inception workshop representatives of FONERWA, the Southern Province, the Huye district, MINAGRI, RNRA, RCA, opinion leaders in the targeted community and other relevant actors will be invited.

Activity 3.2: Undertaking meetings for community awareness raising, recruitment and organizing potential beneficiaries

After the official project launching at district level, a community mobilization campaign will be organized by the project (facilitated by the project’s Community Mobilization & Cooperative Capacity Building Expert) in collaboration with LGA. The aim of the campaign is to inform the community about the upcoming project and select beneficiaries. In order to facilitate easy communication and efficient management, the beneficiaries will be organize into small groups. Finally manpower for the CFW implemented activities will be recruited in the community.

The mobilisation will be done through meetings and direct interaction with the population in each of the 4 cells surrounding the Rusuli marshland. During the meetings criteria for selecting beneficiaries in different overlapping categories will be communicated and discussed, and the list of selected beneficiaries will be validated.

Beneficiaries will be categorised and selected as follow:

Category 1: Men and women who will be hired as labour force for the CFW implemented works, i.e. marshland development, excavation of progressive terraces and construction of access roads. The labourers will be proposed by local leaders, and the selection will be validated in the community meetings. Priority will be given to the poorest members of the community, the owners of hillside land to be developed in the course of the project, and farmers who are currently exploiting the marshland. District poverty ranking (“Ubudehe”-lists) will be used to determine poverty levels of beneficiaries. Women will be encouraged to join the team (in the previous ESIRU program well over 50% of the CFW
labourers were women; it is intended to maintain gender equality in the implementation of the Rusuli project).

Category 2: People selected from category 1, with special technical skills, e.g. masons, porters and leadership qualities (“team-leaders”). Local leaders will propose them; additionally, they will undergo a technical test organized by the project.

Category 3: Families / owners of the land to be developed with progressive terraces on the hillside. These people will be identified in the course of the planned topographical delineation of the area. As in previous projects, WHH will sign an agreement with individual households specifying roles and responsibilities during implementation, and a commitment for valorisation and maintenance of the developed structures.

Category 4: Farmers / households who will receive plots in the developed marshland for rice production. The priority will be farmers who are currently exploiting the marshland, and poorest families (again, on basis of “Ubudehe”-lists, with special focus on families who do not have land on the hillside). They will be organized into small groups of 20 farmers and they will be supported in the process of creating a cooperative.

Activities 3.3 Organizing training on creation, registration and management of cooperatives and Water User Organizations (WUO):

The Government of Rwanda (GoR) encourages farmers to form cooperatives. Cooperatively organized farmers enjoy several advantages over those producing individually, including improved access to extension and advisory services, easy exchange of technologies and experiences, assisted access to financial services (loans and savings), agricultural inputs and markets of products etc. WHH has extensively supported the formation of cooperatives in recent projects, and contributed to organisational development through comprehensive capacity building activities. From WHH experience the importance of properly developing management and entrepreneurial capacities in farmer cooperatives cannot be overestimated. A strong focus is therefore set on this aspect in the proposed Rusuli project.

In order to ensure proper operation and maintenance of the irrigation infrastructure in developed marshlands furthermore the formation of complementary Water User Organizations (WUO) is essential, and mandatory by Rwandan Law. These units will be mainly responsible with the daily water management routines (irrigation turns and scheduling; gate keeping etc.).

For both organisations, the project plans to facilitate a manager for a period of 1 months. The managers will take up their tasks prior to the first cropping period. In cooperation with the cooperative board and in regular consultation with the general assembly, the managers will play a central role in facilitating all matters of operation and maintenance of the scheme. The main tasks of the cooperative and the cooperative leadership are related to the agricultural production and marketing, while the WUO focus on all matters or water management, irrigation and scheme maintenance. In addition to the manager, the project will facilitate the position of an accountant for the period of 8 months. The accountant will take-up his/her task after the first harvest. Proper financial management and accountancy (including the collection of member fees) is crucial for the functionality of the user groups, and thus the whole scheme.

After the project end the 3 positions will be financed over by the cooperatives and WUO after project end (in the ESIRU program so-called “cooperative liaison officers”, mainly fulfilling the mentioned manager roles, were assigned to each cooperative; after the project end the cooperatives employed them as managers, covering their salaries through member fees).

After future marshland farmers are selected, the farmers will be involved in the implementation / CFW
activities, and at the same time, the formation process of the cultivators’ cooperative will be initiated. After maturing the idea of forming cooperatives and WUOs, a training workshop on creation, registration and management of these farmer groups will be organised by the project, in partnership with Rwandan Cooperative Agency (RCA) for 105 participants (i.e. 3 farmers from each of 35 farmers groups).

During the recent ESIRU program a Memorandum of Understanding (MoU) with RCA was signed, creating the framework for joint trainings; it is planned to prepare a similar MoU for the current project. A training module will be developed by a designated expert from RCA, covering areas such as forming and registration of a cooperative, management (planning, administration, finance, audit, etc.) and marketing. The training will enable members to have adequate understanding of cooperative legislation and regulations. The trainings furthermore present opportunities to prepare the formation of cooperative unions and federations. The trained farmers will be further supported through coaching activities. So acquired skills and knowledge will be shared and disseminated through peer-to-peer interaction (Farmer Field School Approach, FFS).

**Activity 3.4: Organising a training on rice farming systems, integrated pest management and eco-friendly practices**

**Note: integration of recommendations of the Environmental Impact Assessment (EIA) into the operational phase**

Central aspects mentioned in the RDB approved EIA on the operational phase (i.e. the agricultural activities in the developed marshland) concern the agricultural praxis, as well as maintenance of the irrigation infrastructure.

The capacity building activities in the field of rice agronomy, soil fertility and pest management decisively promote the use of organic manure, as well as natural pesticides. This is reflected in the training contents and approaches used. Furthermore a pilot field of 0.5 ha will be installed; on this field natural soil fertility and natural pesticides will be tested and experientially researched. These activities, among others, specifically gain at mitigating effects of increased agricultural activities in the developed marshlands.

Proper maintenance of the irrigation infrastructure plays an important role to avoid negative effects like excess soil erosion. The huge amount of capacity building measures in the field of organisational development aim at strengthening managerial capacities of the farmers, and guarantee proper operation and maintenance of the scheme.

In order to ensure optimum production it is important to provide farmers with basic knowledge and skills in rice farming techniques and pest management. The Farmer Field School (FFS) is a group-based learning process that has been used by MINAGRI in recent years to promote Integrated Pest Management (IPM) with successful results. In the ESIRU program it was used to introduce advanced rice cultivation techniques. The project will partner with MINAGRI/RAB to initiate the FFS approach. In this way in particular novices will obtain basic knowledge on rice cultivation, rice value chain, soil fertility and pest management. The Training of Trainers (ToT) (involving 105 farmers, i.e. 3 of each of the farmers group) will cover basics on rice land preparation, plant establishment, water management, fertilization, pest management, harvest, drying and storage.

**Activity 3.5 Conducting a training on water user organizations and water permit**

In order to help the farmer’s WUOs and cooperatives to comply with laws and regulations governing the
use of water resources as prescribed in the ministerial order n°001/11.30 of 23/11/2011 ("Establishing irrigation water users associations in irrigation schemes") and the Law N°62/2008 of 10/09/2008 ("Putting in place the use, conservation, protection and management of water resources regulations"), beneficiaries will participate in a training on these regulating tools and will be advised on the way to put them into application. Experts from MINAGRI and RNRA will be solicited to facilitate this training.

**Activity 3.6 Organizing a study tour in Bugarama**

Study tours have demonstrated to be effective as a quick knowledge transfer and experience exchange approach. In order to complement knowledge gained in the theoretical training on rice cultivation, water management, financial administration etc., a study visit to the Bugarama- scheme will be organized during 3 days (1 working day). This scheme is well known for experienced and advanced rice-farming techniques, working with private stakeholders, well developed post-harvest processing, and especially for optimal water management. Bugarama is one of 5 sites short-listed as “best practice schemes” with regards to efficient water use for agricultural production, by a study conducted under a MINAGRI project ("Best Practices for Water Harvesting and Irrigation in Rwanda; Efficient Water Use for Agricultural Production (EWUAP)").

**Activity 3.7 Conducting training on water management and O&M of irrigation-drainage infrastructure**

For the success and sustainability of the project results it is essential to provide farmers’ cooperatives, WUOs and local technicians with essential technical skills to ensure proper operations and maintenance (O&M) of the irrigation infrastructure. A 1 week training session will be organized in Huye to provide essential information on water management in an irrigated rice scheme as well as O&M of the irrigation infrastructure. The training will be facilitated by the Project Engineer and supported by district and sector technicians and technicians from MINAGRI/ Irrigation Task Force.

**Activity 3.8 Organizing study tour in Kirehe districts**

In order to complement knowledge acquired from the theoretical training on O&M of irrigation and drainage infrastructures, a study visit will be organized to the Kirehe district. The Kirehe irrigation-scheme is also well known for advanced rice farming techniques, integrated pest management approach and especially for well-established and functional farmer’s organization and best practice water management and infrastructure maintenance.

**Activity 3.9 Conducting regular coaching on cooperative and WUO management, and on farming techniques**

In addition to trainings and study visits, regular coaching programs by the project’s Community Development Expert and the project’s agronomist will be availed in order to assist farmers in the process of formation, registration and management of cooperatives and WUOs, and on technical aspects of farming, water management and operational maintenance of infrastructure. Coaching will facilitate knowledge transfer from model farmers to the rest of the organisations’ members through the FFS approach. Regular coaching will also support facilitation of discussions to introduce social economic mechanisms such as loan & saving, contract farming and self-help social groups ("Ibimina"), contribution to the community health scheme “Mutuelle de Sante” etc. Furthermore coaching will facilitate participation of farmers in planning and monitoring and evaluation through data recording and reporting.

Note: During the ESIRU program, WHH conducted numerous trainings with farmers and famers
organisations representatives. During these activities rich experiences were gained in training delivery to farmers - including illiterates. As quite a huge number of farmers in the countryside are illiterate, appropriate methods on basis of picture / symbol based communication are essential to involve all participation in the knowledge transfer. The main components of the successful training methods allowing inclusion of illiterates are besides symbol based teaching: Learning by doing through FFS & PVS, videos display, regular coaching sessions by experts, group meetings led by ToT beneficiaries, etc.

**Activity 3.10 Producing and disseminating a Documentary Film on the community led, eco-friendly marshland development approach**

Beside the objective of improving agricultural production this project is aiming at piloting an innovative eco-friendly marshland development. In order to disseminate this approach a documentary film will be produced. Filmmaking will cover the whole project duration, showing the gradual changes from the baseline situation to the intended improved situation at the end of the project. The documentary is planned to be broadcasted on Rwanda Television and distributed to stakeholders.

**Activity 3.11 Hiring cooperative and Water User Organisation managers**

During the recent ESIRU program the cultivators’ cooperatives were supported by so-called cooperative liaison officers, who strengthened the management of the groups. The users noticed the importance of these positions during the project time, and decided to continue hiring a dedicated manager for the cooperative after the phase out. On basis of this experience WHH proposes to include the position of a manager for the cooperative and the WUO during the time the production of rice is starting (January to December 2016), and support the cooperatives in establishing proper leadership. With the returns of the first full harvest, the cooperatives and WUO are enabled to finance these staff themselves.

**Activity 3.11 Hiring an accountant for the cooperative**

In addition to the manager, WHH experiences clearly show the importance of a properly trained and capable accountant for the user group. The account not only ensures transparent handling of member fees and cooperative capital; he furthermore plays a central role in the collection of the fees. The functionality of the user groups and thus the utilization of the developed marshland depend on fair and timely membership contribution. For this purpose the project proposes to support the position of an accountant for the second project phases, allowing the proper collection of the member fees and thus the establishment of the initial cooperative capital.

**Output 4: Administration and management of the project adequately carried out**

**Activity 4.1 Setting up the project field office**

Since the project will be mainly implemented by the permanent project staff (WHH) with few external supports, the proximity to the intervention area constitutes a success factor. Furthermore, a project field office will help minimizing operating costs while maintaining a permanent contact and close collaboration with the local community and LGA.

This activity will consist of identification and rent of a field office in Huye district and acquisition of associated accessories, such as office supplies, utilities and securing guards. Office equipment will be transported from the Head Office in Kigali to the field office. The project technical staff will be based permanently in Huye districts.
Activity 4.2 Recruiting staff and carrying out regular project management

The routine activities of project administration and management are most important for the success of the project because they cut across all other project activities. This activity will cover the project regular planning and review (annual planning, quarterly planning, monthly and weekly planning), control and supervision of the project staff and contracts, recruitment and procurement for goods and services, reporting interaction with stakeholders, etc.

The Project Implementation Unit will be composed of the executive staff i.e. Project Manager, Financial Manager, M&E Specialist; the technical staff, composed of the Project Engineer, The Project Agronomist and the Community Development Expert, and the support staff including an Accountant Secretary, and a Driver.

The team of WHH Rwanda will be supported by the WHH Headquarter in Bonn/Germany in all matters of project management and administration. In particular the so-called Sector Strategy, Knowledge & Learning Unit will play a crucial role in supporting the Rwanda team with technical expertise. The main task of this unit is to strengthen the exchange of knowledge and experience, develops technical guidelines and initiates necessary changes to support effective and future-oriented programme work. The central contact person from this unit for the Rwanda team will be Dr. Heinz Peter.

The project will work to establish a framework for a close partnership with relevant governmental institutions where needed.

All potential project partners have been consulted in the course of the proposal preparation, and their views have been included in the project design. For example:

- During the discussions with RCA, and the joint review of WHH and RCA collaboration in recent years, one finding and outcome was the users’ organisational structures should be established at the beginning of the project. In the ESIRU program the cooperatives were established after the “hardware” was in place. It was found that is more suitable organize all activities, including implementation and construction, through cooperatives (ownership; social-learning processes etc.)
- In discussions with MINAGRI/RAB the early conduction of PVT and FFS approaches was recommended; WHH sees this as an important remarks: both approaches support achieving proper production levels, which presents a prerequisite for the cooperative’s functionality. The recommendation has been considered for the project design.
- In extensive discussions with RNRA about the ESIRU program, it was recommended to more carefully and systematically include ecological consideration into the project design (balancing ecological and economical / agronomical functions of marshlands). The “eco-friendly” approach partly results from these discussions.
- Farmers and future project beneficiaries have been consulted during a stakeholder analysis workshop. This event was the starting point for the proposal preparation. The farmers provided detailed information regarding the current statues of the Rusuli area (e.g. current challenges of flooding; limitations to agricultural production due to water shortage during the dry season etc.). All the expressed concerns / ideas / proposals have been considered and covered in the PD.

The roles of the different project partners can be summarized as follow:

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<tr>
<th>Huye District</th>
<th>- Avail the Rusuli scheme for the project</th>
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<td></td>
<td>- Co-implementation</td>
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<td>- Monitoring</td>
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Moreover, in addition to the existing MoUs with the Southern Province and the Huye districts, MoUs with RAB, RNRA and RCA will be initiated.

**Activity 4.3 Organizing the project steering committee meetings and joint monitoring sessions (4)**

The project will establish a Steering Committee made up of representatives of all key stakeholders to ensure strategic management of the project. Those key stakeholders includes the Ministry of Agriculture and Animal Resources (MINAGRI), The Ministry of Natural Resources (RNRA), Rwanda Cooperative Agency (RCA), the Southern Province, Huye district, Rwaniro sector, the farmer’s cooperative, NGOs and other actors operating in the region.

The Steering Committee will be involved in the project planning and validation of reports. This will ensure effective participation in the project implementation. The steering committee will meet on quarterly basis in the Huye district. The meetings will be preceded by joint field visits and a joint assessment of the progress of the project implementation. On this basis the Steering Committee is enabled to provide relevant recommendations and guidance.

**Activity 4.4 Conducting mid-term review and final project evaluation**

Two periodic studies are planned to assess changes against the baseline situation and the targeted goals. The baseline study was not considered in this project because respective studies conducted during previous interventions under ESIRU Program have covered the targeted area. The ESIRU studies are planned to be enriched by recent socio-economic and demographic statistics and data by sectors and the Huye district.

The mid-term review will take place after one year of implementation and is expected to inform the project team in case re-adjustments on the project activities are necessary to achieve the project goal. The final evaluation will be conducted during the last quarter of the project and will constitute a base for the project completion report.

**Activity 4.5 Preparing the project closing and hand over**

Proper closing of all project activities, including extensive documentation of the activities, is very important for the sustainability of its results. Furthermore it present an important opportunity to
establish and share lessons learnt.

The developed Rusuli marshland will be handed-over with the responsibilities for utilisation and O&M to the cooperatives and WUOs, and the district as landowner. Other partners like RCA, RAB, RNRA will be in charge of monitoring and support as per their respective role and responsibility.

In particular RCA will take over close supervision and follow-up of the cooperatives performance. The General Director of RCA expressed the readiness of RCA to fulfil this role after the project phase out during a meeting with WHH representatives.

Central part of the handing-over documentation will be plot maps covering the newly established Rusuli developed marshland. An accompanying table will indicating plot owner, status of plot etc., and will function as a central management tool for the cooperatives. At the official end of the project, a handing-over workshop will be organized to ensure transfer of both hard (documents, equipment, etc.) and soft (experience, lessons) project assets to the beneficiaries.

The Environmental Impact Assessment (EIA) currently carried our (March 2015) under supervision of RDB will provide comprehensive baseline data, against which regular and continues project monitoring will be conducted (water quality; soil quality; flora and fauna). On basis of the so generated data, a final environmental audit will comprehensively conclude on the “eco-friendliness” of the Rusuli approach.

**Activity 4.6 Regular monitoring of water, soil, flora and fauna to qualify and quantity impact of marshland development**

In the project design comprehensive monitoring of the ecological effects of the Rusuli project are included. The Environmental Impact Assessment (EIA) currently carried our (March 2015) under supervision of RDB will provide comprehensive baseline data. These baseline data will be extended / updated through regular testing of water quality, soil quality, flora and fauna. On basis of the so generated data, a final environmental audit (under activity 4.5) will comprehensively conclude on the “eco-friendliness” of the Rusuli approach.

**Approaches and methodology**

The approaches and methodology constitutive for the design of the Rusuli community-led, eco-friendly marshland development project are to a great extend derived from lessons learnt from the 10 years ESIRU program (see page 3), and / or inspired by best practice examples of other successful marshland programs.

An eco-friendly form of marshland development is planned to materialize mainly through 3 central design particularities: (i) the drainage channels will be excavated following the natural river course, contrary to conventional approaches with regulated and straightened natural river courses (the “natural river course”-idea is inspired by the “room for the rivers” strategy, which was implemented in the Netherlands in recent years); (ii) a buffer areas with natural vegetation (such as papyrus) will be created in-between irrigated plots, serving to accumulate drained water from the cultivated areas for filtration by the natural vegetation before being re-channelled in the main drain. This will help to minimize possible pollution by fertiliser residues but also to conserve the biodiversity in the marshland. (iii) The marshland environment will be green and protected through anti-erosion structure and agroforestry trees and shrubs both on hillside and in the valley side. This will be accompanied by an extension toward organic agriculture in the
In the project design comprehensive monitoring of the ecological effects of the Rusuli project are included. The Environmental Impact Assessment (EIA) currently carried our (March 2015) under supervision of RDB will provide comprehensive baseline data, against which regular and continues project monitoring will be conducted (water quality; soil quality; flora and fauna). On basis of the so generated data, a final environmental audit will comprehensively conclude on the “eco-friendliness” of the Rusuli approach.

The importance of involving local communities during all project phases for the sustainability of the intervention is certainly no new discovery. However, still a great number of rural development programs neglect this important aspect. During the ESIRU program, the importance of proper community mobilisation was a key lessons; and WHH gained considerable knowledge on strategies and techniques to ensure proper involvement of the community during the program. The community-led approach has already been launched as community members played a leading-role during the preparatory problem analysis and the identification of the project interventions. At a high rate the project will be implemented by the community members through CFW. Community members will also be involved in the projects M&E.

The planned comprehensive capacity building activities reflect the experience from the numerous marshland development projects in recent years: marshland development usually required substantial investments in hardware / irrigation infrastructure, and accompanying soil- and water-conservation measures. Neglecting corresponding capacity building and organisational development activities highly reduces the chances for this investment to be sustainable and profitable. For this reason WHH proposes not only intensive and comprehensive trainings of farmers and user group leaders, but also to follow up on the so provided skill and knowledge transfer through repeated coaching measures, really ensuring the capacities are available when they are needed – by the end of the project.

The participation of all stakeholder is further ensured through the constitution of a Steering Committee and the partnership agreement with LGA and governmental institutions. The MoUs with the Southern Province and the Huye district will go beyond the project duration, and will ensure that respective supervisory functions will be fulfilled after the projects phase out.

The idea to establish the Rusuli scheme as a model scheme for sustainable marshland development is based on the experience that the majority of marshland development programs neglect the systems perspective on marshland functions, resulting in one sided “maximisations-approaches”. The Rusuli developed marshland attempts to show and prove that effective marshland development can be achieved through a “minimal intervention approach”, i.e. by maintaining natural contours and natural river courses to a great extent, and through the inclusion of sufficient buffer areas for natural filtration of agrochemicals. This approach has the effect that central natural functions of the marshland stay intact (e.g. natural slopes and drainage networks; water quality); furthermore the method is very cost-effective, while still allowing high production levels. It is the conviction of the project team that the cost-effectiveness, eco-friendliness and highly productiveness presents a convincing mixture, and might well inspire other projects within the great number of available marshland areas in Rwanda.

As in the ESIRU program, all construction works are planned to be implemented though CFW (payment via SACCOs), injecting substantial amounts into the local economies. As the ESIRU experience shows, this is likely to stimulate off-farming activities and businesses (shops, bars, supply). However, the CFW activities are temporary, and are not planned to be sustained after the project end.
With expected production levels of 5t/ha/season (as currently achieved in the neighbouring Mwogo scheme) regular costs for O&M can be met. Nevertheless, the planned regular community works / UMUGANDA (1 day per week) will continue after the project and will be a strong tool to ensure proper maintenance of infrastructure. In fact, as per the internal rules and regulations of the WUO & cooperative, UMUGANDA is to be organized / done on a weekly basis and those who do not participate have to pay fines. The project will capacitate the management of farmers’ organizations and ensure that internal rules and regulations and clearly defined and applied.

During the two last project years of the ESIRU program, WHH channelled some funds into the district’s annual budget with the aim to sensitize the district for considering the ESIRU schemes in future district’s plans. The district implemented a number of maintenance activities with the funds and committed to keep budgeting for the ESIRU facilities maintenance support in the future. The Huye District is thus sensitized for the necessity of including important production schemes in its annual action plans depending of course on annual district priorities.

After project implementation, the scheme will be officially handed over to the District and farmers. They will thus commit to its maintenance in a handover MoU to be signed. The MoU should be with clear responsibilities for each of the parties. Farmers will take care of the regular and routine maintenance whereas the district will do monitoring, advocacy, technical support, etc. For the District to be able to carry out its roles, the scheme will have to appear in the District annual plan and Budget.

The inputs for the first season are provided to the farmers through the project, as a means to support the start-up. These inputs however are considered a “loan by the cooperatives”, i.e. farmers are requested to pay back the input costs to the cooperatives from the first harvest. This amount presents the capital base of the organisations, which will be used to cover the capital flow required to start of the next season, and so on.

As in the ESIRU program, the close collaboration with LGA is regarded a central factor for a successful exit-strategy. LGA are involved during all project phases. As marshlands are government property, a high interest on the side of the districts exits to ensure sustainable functionality of the productive infrastructure.

The partnership with governmental institutions like RCA finally will ensure proper supervision of the cooperatives performances after the phase out. During a meeting with WHH, the director of RCA has confirmed the readiness and availability of RCA to take over and fulfil this important role.

Q 2.4 **How does the project address cross-cutting issues such as gender and youth?**

The project is expected to create positive impacts on different aspects of the living conditions for the community members. During its implementation particular attention will be paid on some cross-cutting issues as to maximize the project benefits:

- **Gender and family**
  Gender equality and equity was a decisive component of WHHs previous MLD program (e.g. anti-gender based violence awareness campaigns; gender equality in cooperative leadership etc.; high percentage of women involved in CFW). The *Rusuli* program intends to build on the experiences gained, and continue to strongly promote gender equality and equity, particularly as women and youth are most vulnerable to poverty and climate change. The project will be of particular benefit to this group since it contributes to poverty reduction and climate resilience. The project will help women and youth to improve their
livelihood through CFW, saving activities and most importantly by improving the agricultural production in a sustainable manner. During the awareness raising, mobilization and distribution of plots in the developed marshland, the focus will be on women and youth to ensure their high participation and benefits. One of the project’s indicators quantifies women participation in leadership positions of the cooperative & WUO; here a minimum of 40% of committees’ members are expected to be women. Moreover, from ESIRU experience, young people (from 18 to 35 years) were highly represented in all project activities. The Rusuli project is likewise targeting to involve youth, targeting 70% of participants being youth in all project activities.

It is planned to initiate the creation of vulnerable women groups. One important lesson learnt from previous programs is that individuals – in particular in cases of women headed households – partly lack the capacity and time to ensure sufficient labour force and inputs required for maximizing the productivity of a plot. During distribution of developed plots, some women will be given the opportunity to organize themselves in self-help groups.

- **Capacity building**
  Capacity building is an important element for the success and sustainability of a project. In fact, it enables to expand the project results beyond its scope. The current project has considered this important element and planned a set of interventions under the output 1, dealing with community participation and capacity strengthening. They arise specifically from the long-term observation in rural Rwanda and its efficient results achieved in the past few years in almost all agricultural, technical and environmental dimensions. Especially short-time result-based coaching-measures are very promising in the intervention-environment and are planned accordingly. Consequently, the monitoring of Capacity Building activities and results will be focused.

- **Social inclusion**
  The project is expected to contribute significantly to the improvement of living conditions for poor families. In fact, poor families especially those who do not have land, will be given priority during selecting beneficiaries for CFW and during the distribution of developed plots in the marshland (more details provided in the respective sections).

<table>
<thead>
<tr>
<th>Q 2.5</th>
<th>Who are the stakeholders affected by the problem, and who are the stakeholders influential in solving the problem? How have they been incorporated and involved in project design and delivery?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholders are individuals or groups who, indirectly or directly are stand to gain or lose from a given project. In this project stakeholders can be grouped in different categories:</td>
<td></td>
</tr>
</tbody>
</table>

1. **Primary stakeholders (beneficiaries):** 700 households who will be given plots in the marshland for rice production, 1,300 families (estimated) whose land will be developed in the adjacent hillsides, and 2,200 people who will participate in the CFW activities during the project implementation. The future marshland and hillside farmers will be involved during all project stages: full involvement and good participation of the key stakeholders is certainly the project’s central success factor.

2. **Secondary stakeholders (affected by the problem):** Directly or indirectly, the about 22,000 inhabitants of the Rwaniro sector in Huye district are affected by the problem of droughts and floods and the poor management of Rusuli marshland. As results of the project, the rice production will increase, money will be injected in the region and the sub-catchment will be protected against erosion (roads and infrastructures protected). This will positively affect the business environment in the region and support
other off-farm activities.

3. Other stakeholders (influential in solving the problem): Huye district, RCA, MINAGRI, RNRA will play central roles for the success of this project. The stakeholders have been consulted, and they have already participated in the design of this project in different ways. Furthermore RCA, RNRA and RAB agreed to contribute to the capacity building program; the Huye district was consulted when choosing the marshland and committed to protect additional 28 ha in the catchment through VUP.

**Q 2.6 How will the benefits of the project be sustained after FONERWA funding comes to an end?**

The technical trainings and organizational support to be provided by the project will contribute substantially to behaviour changing, mainly for the community in the targeted area, with regard to sustainable management of natural resources. Beneficiaries will acquire knowledge, the skills and positive attitude towards maintenance of the infrastructure, farming systems, and management of water, while expected returns from rice and vegetable production will cover costs for O&M of the production facilities and ensure regular income.

Farmers will be supported in establishing a mechanisms and routines of saving a part of the money paid through CF, triggering the generation of additional off-farming activities and small businesses. In fact farmers will be assisted to use bank accounts for their payments (SACCO). In this process discussions will be organized among farmers to debate and decide on which the percentage of money to be saved, the investment activities etc.

Experience from the ESIRU program shows that in a well-developed marshland cultivated by well organised cooperatives, rice production can secure a sufficient profit margin to cover costs of O&M and still provide sufficient / interesting income to the farmers (as shown in the above presented example calculation). In addition to this, farmers will be trained on “Contract farming systems” so that they can alternatively have access to advance or loans to purchase inputs payable at the harvest period.

**Q 2.7 What is the scope for income generation from the project?**

Income generating and economic empowerment – in a sustainable way — is a central component of the project. The developed Rusuli marshland will allow some 700 farmers to produce 2 crops per year, corresponding to a yearly turnover of RWF 190 Mio. (ca. $ 275,000); i.e. assuming a net area of 70 ha; rice plots of 0,1 ha; yields of 5.5 t/ha; and farm gate prices of RWF 250/kg. Rice production thus presents a great opportunity for income generation in rural areas of Rwanda. As pre-ESIRU baseline surveys in the WHH project area show, about 80% of the population had monthly incomes of less than $10 (of these a great portion had no monetary income at all). Against this background the anticipated production levels and corresponding returns by the end of the project present a substantial and sustainable improvement of the economic situation of a considerable number of households.

According to PSTA III, rice is identified among Priority Value Chains as it is at the same time a food crop and cash crop for reliable income. Apart from rice, which will be the main crop in the marshland, the upper parts will be exploited for high nutrition and market value vegetables to supplement the farmers’ diets but also to be an alternative source of income.

It is also expected that saving of money gained via CFW will be invested in other off-farm activities. The protection of the hillside will also boost the production for both agriculture and livestock on the hillside part and in a sustainable manner.
Q 2.8 **Preparation:** Has a feasibility or pre-feasibility study been conducted *(If yes, then please attach a copy to this PD)?*

Yes

Q 2.9 **Preparation:** Are there any outstanding regulatory or legal requirements that need to be met before the project can proceed *(access to land, planning consent, use of new technologies)?*

- GoR is the owner & is represented by the district (see land law & LGA law)
- District agreed to distribute the newly developed plots to poor farmers who will be organized in a cooperative & WUO (legally registered). The distribution will be carried out on basis of district poverty ranking (Ubudehe list). The cooperatives together with LGA will monitor utilization of the plots. In case farmers prove unwilling / not capable of cultivating, plots can be re-distributed.

Q 2.10 **Preparation:** Has an Environmental Impact Assessment been conducted for the project *(If yes, then please attach a copy to this PD)?

WHH currently launches an EIA. The EIA will be conducted by an external consultant, and carried out under coordination of / in accordance with the guidelines and regulations of RDB. RBD representatives visited the Rusuli marshland on 25/2/2015, and provided ToR for the EIA.

The time for the full procedure, including review by RDB, is estimated at 6-8 weeks. WHH attempts to finalize the EIA, and include all recommendations into the PD until middle of April.

A recently conducted environmental audit of the ESIRU CoPh is attached to the PD. It is currently in process of review by REMA.

Q 2.11 **How will the performance of the project be monitored and evaluated (both during and after the project)?** Explain the monitoring system below and then fill in the budgeted M&E Plan (in the table below – example activities listed for information purposes only).

The project’s M&E section will comprise 2 main components: (i) The continuous monitoring of project activities, results and use of project resources on basis of FONERWAs M&E matrix and (ii) the assessment with focus on outcome and impact levels, both internally (impact monitoring) and externally (external evaluation). Since the ESIRU Program was implemented in the same region as the new project, certain baseline data (socio-economic baseline) still provide relevant information and can be used for impact monitoring. The data will be enriched by current sector and district demographic and socio-economic reports. Required additional data will be collected by the beginning of the project.

The above mentioned MoUs with the project districts include a clear commitment on the side of LGA for involvement in M&E of the project activities – during and after implementation.

For the internal monitoring, the project M&E specialist will ensure regular collection, treatment and distribution of the project data. The data will be analysed by the project management and other stakeholders, and presented in progress reports (including activities, financial and procurement progress). The logical framework and the M&E plan provide respective indicators to be monitored and reported on. For the external evaluation, a qualified consultant will be hired to conduct the midterm review and the
The project performance will be monitored at 3 levels: (i) At steering committee level, through meetings and organized joint field monitoring sessions (including field visits); (ii) At project level, regular management meeting will be organised to discuss planning and progress reporting e.g. quick reports with figures, weekly and monthly reports and plan of action. (iii) At Community level, especially the cooperative will be trained on participatory monitoring and evaluation and as they will be primary sources of information, they will be supported to record and share data through simple templates.

<table>
<thead>
<tr>
<th>M&amp;E Activity</th>
<th>Responsible person</th>
<th>Timeframe</th>
<th>Budget (Rwf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inception workshop</td>
<td>Project Manager</td>
<td>Quarter 1</td>
<td>1,352,000</td>
</tr>
<tr>
<td>Progress reports</td>
<td>M&amp;E Specialist</td>
<td>Quarterly</td>
<td>-</td>
</tr>
<tr>
<td>Steering committee meeting and joint field monitoring sessions</td>
<td>M&amp;E Specialist</td>
<td>Every two quarters</td>
<td>3,426,000</td>
</tr>
<tr>
<td>Midterm review</td>
<td>External consultant</td>
<td>Annually</td>
<td>5,053,000</td>
</tr>
<tr>
<td>Final evaluation</td>
<td>External consultant</td>
<td>Final Quarter</td>
<td>5,053,000</td>
</tr>
</tbody>
</table>

Q 2.12 How will you involve the beneficiaries and other stakeholders in monitoring and evaluation?

The Project M&E specialist will closely work with the cooperative committee in data collection and with the district officers to verify and communicate M&E data.

In order to optimize the participation of beneficiaries and stakeholders in M&E, the project will establish a Steering Committee with a broad representation of key stakeholders including farmers’ representatives, districts, sector, MINAGRI, MINIRENA (for more details on the activities of the Steering Committee, please refer to Question 2.3, Section 4.3).

Q 2.13 Which Output from the FONERWA’s overarching M&E framework will be contributed to in the project’s M&E Framework (if possible choose an indicator from FONERWA’s M&E framework)?

Output Indicator 11: Area (ha) of land secured against erosion

Q 2.14 Duplication of project with other funding sources - all relevant potentially overlapping projects need to be identified and the areas of overlap and complementarity identified, drawing lessons and establishing a framework for coordination during implementation. Please provide a summary of recently concluded, ongoing, and pipeline projects that are relevant to the proposed project in the table below.

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
<th>Timing and geographical coverage</th>
<th>Potential duplication and synergies</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESIRU Program</td>
<td>Comprehensive marshland development, Soil Conservation and Value-Chain-Program</td>
<td>10 years from 2004-2014; Southern province of Rwanda, e.g. Mwogo feasibility study</td>
<td>The eco-friendly marshland development approach is based on “lessons learnt” from the ESIRU Program. Most of studies conducted under ESIRU are valid for Rusuli, e.g. Mwogo feasibility study</td>
</tr>
</tbody>
</table>
### RSSP/LWH MINAGRI

**Land Husbandry and water harvesting program**

- Continuous; Southern Province of Rwanda, Huye district
- This program has accumulated experience in terracing; feasibility studies including soil tests, slope, soil cover, and can be useful for the project.

### VUP Huye

**Watershed development**

- Continuous; Southern Province of Rwanda, Huye district
- The project is expected to undertake terracing on 28 ha upstream the marshland contributing to its protection.

### HUYE/MINAGRI

**Expected to build the road Kigarama-Mwogo**

- 2015; Southern Province of Rwanda, Huye district
- The feeder road will connect Rusuli to the market, making the rice agri-business environment more conducive and allowing easy access to inputs.

- The ESIRU Program closed in December 2014. All other above-mentioned projects are funded and currently ongoing. Given that WHH is well connected with local actors, routine and systematic coordination with on-going projects will be ensured through project’s regular M&E visits & workshops, as well as forums like JADF; District Irrigation Steering Committee (DISC), etc. Moreover, the proposed project Steering Committee will furthermore contribute to / ensure proper coordination.

- 4 joint field monitoring sessions and M&E workshops with representatives from LGA, RCA, RAB etc. are budgeted.

- Furthermore a midterm and an end evaluation, including workshops are foreseen and budgeted for

- The project will be framed by a Start-up and closing workshop

- The scheduled M&E activities will insure regular involvement of other institutions in project implementation and monitoring. The M&E activities are planned in a way that recommendation and advise by project partners can be used to improve the project management.

- As in the previous ESIRU program, WHH is an active partner in the usual partner networks (JADF; DISC etc.)

- Finally, the project steering committee will ensure proper involvement of all project partners in the implementation of the project.

#### Q 2.15 Lesson Learning: Please explain how the learning from this project will be disseminated and shared during (and at the end) of the project, and to whom this information will target (e.g. Project stakeholders and others outside the project)

One of the major motives for this project is to establish an example for marshland development practice, which sustainably balances economic and environmental factors and functions. With regard to its model function the documentation and communication of “lessons learnt” is certainly crucial for the projects success. WHH will communicate lessons through the reporting system including the project completion report. WHH furthermore actively participates in the District Joint Action Forum (JADF), by this maximizing synergy and interaction with other actors operating in the same area of intervention. In particular through the partnership with RAB, MINAGRI will be closely following activities of the project. It is expected that the study tours for the project beneficiaries in other different areas of the country will enable exchange of ideas among farmers.

A documentary film will be produced and broadcasted to disseminate success stories from the project. Knowledge and experience sharing sessions would be organized for all FONERWA funded project to enable exchange on the results of this project, especially on the innovative eco-friendly marshland
development approach.

**Q 2.16 Risk Management:** Please outline the main risks to the successful delivery of this project indicating whether they are high, medium or low. If the risks are outside your direct control, how will the project be designed to address them?

<table>
<thead>
<tr>
<th>Risk description</th>
<th>Category (political, operational, financial, environmental)</th>
<th>Risk level (low, medium high)</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure in cooperative management by farmers</td>
<td>Operational</td>
<td>Low</td>
<td>- Farmers will not be forced to adhere to the cooperative, they will be introduced to the advantages of cooperatives, and decide for themselves</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Comprehensive Capacity Building through the project and RCA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Follow up and coaching by RCA will be ensured</td>
</tr>
<tr>
<td>Pest outbreak</td>
<td>Environmental</td>
<td>Low</td>
<td>Training on <em>Integrated Pest Management</em></td>
</tr>
<tr>
<td>Insufficient man power for CFW activities (e.g. farmers working for other projects paying higher salaries)</td>
<td>Financial</td>
<td>Low</td>
<td>The project pays standard wages</td>
</tr>
<tr>
<td>Construction works during rainy season</td>
<td>Environmental</td>
<td>Medium</td>
<td>- Planning according to seasons / climatic conditions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Liaising with <em>Rwanda Meteorology Agency</em></td>
</tr>
<tr>
<td>Low participation of women and youth</td>
<td>Operational</td>
<td>Low</td>
<td>Emphasize on Gender during community mobilization</td>
</tr>
<tr>
<td>Decreasing rice price</td>
<td>Financial</td>
<td>Medium</td>
<td>Achieve high productivity levels; produce high quality rice; diversified production on hillsides</td>
</tr>
</tbody>
</table>

**Q 2.17 Risk Management:** What specific risks, if any, does your project pose to the environment, people or institutions affected by the project and how will these be managed and mitigated?

<table>
<thead>
<tr>
<th>Risk</th>
<th>Risk level (low, medium high)</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excess drainage of the marshland due to non-accurate data used in designing the drainage system</td>
<td>Low</td>
<td>Rainfall and hydrological data to be carefully verified, where possible comparison of data from different sources. Using modelling where accurate data are lacking</td>
</tr>
</tbody>
</table>
Perturbation of the biodiversity in the marshland | High | The design of the marshland development foreseen innovative buffer areas in between the irrigated plots; the EIA will provide systematic knowledge and detailed recommendations on this aspect; recommendations will be considered in the final PD, and project planning.

Erosion caused by irrigation, drainage infrastructure | Medium | Proper design of the drainage channels (proper slop, section sizes)

The Rusuli project design builds on a number of lessons learnt from the previous ESRIU program. This concerns in particular the question of balancing economic and ecological factors. The incorporation of a high proportion of the marshland as a buffer zone results from this consideration. Furthermore the “room for the river”- approach attempts to minimize the interference into the natural system. These measures already present central components of the “risk management”. It is sought to consider the different marshland functions already in the design, so to avoid further problems resulting from one-sided project planning.

The proposed project is fundamentally a social-learning exercise. In order to provide a stable foundation, the involvement of partners with rich experiences in the field of organisational development is ensured (e.g. RCA). Furthermore, the close collaboration with local government authorities on all levels ensures full alignment of the activities with current local policy targets and strategies.

The project is clearly community-led; this means the beneficiaries have been involved during the problem analysis and the identification of project activities. With this approach a strong sense of ensured, required to sustain the project achievements.

From past experiences a central safeguard factory for the sustainability of the intervention is found in production levels allowing the farmers to gain substantial returns. As experienced in Mwogo (close to Rusuli) yields of 5/t/ha are realistic, and even higher yields are possible. The production potentially allows covering for O&M while at the same time providing income. In WHHs experience this is a key success factor.

As a great number of activities are planned to be implemented via CFW, special care needs to be taken to suitable working and payment conditions. WHH plans to incorporate s gender & child sensitive CFW system (shelters, breastfeeding breaks, etc.). CFW payment will be transparently organized through SACCOs.

### SECTION 3: PROJECT BUDGET AND VALUE FOR MONEY

**Q 3.1** What is the total cost of the project (RWF; provide total cost for each year of the project disaggregated by capital and recurrent expenditure)?

<table>
<thead>
<tr>
<th>Summary of the project budget</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>293,453,934</td>
<td>200,307,328</td>
<td>493,761,261</td>
</tr>
<tr>
<td>Recurrent</td>
<td>145,287,250</td>
<td>105,305,250</td>
<td>250,592,499</td>
</tr>
<tr>
<td>Total</td>
<td>438,741,183</td>
<td>305,612,577</td>
<td>744,353,760</td>
</tr>
</tbody>
</table>
Q 3.2 **What** is the total amount requested from FONERWA (RWF; *provide financing needs for each year of the project*)?

<table>
<thead>
<tr>
<th>Amount requested from FONERWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>year 1</td>
</tr>
<tr>
<td>year 2</td>
</tr>
<tr>
<td>total</td>
</tr>
<tr>
<td>320,233,200</td>
</tr>
<tr>
<td>213,488,800</td>
</tr>
<tr>
<td>533,722,000</td>
</tr>
</tbody>
</table>

Q 3.3 **List** all other sources of funding. Note whether the status of other funding sources (*i.e. Whether the money has been approved or is awaiting authorisation*)

<table>
<thead>
<tr>
<th>Sources of funding</th>
<th>Amount</th>
<th>%</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weltungerhilfe</td>
<td>144,860,000</td>
<td>19</td>
<td>Approved</td>
</tr>
<tr>
<td>Beneficiaries</td>
<td>65,771,760</td>
<td>10</td>
<td>Approved</td>
</tr>
</tbody>
</table>

Q 3.4 **Additionally**: Explain why the project cannot be fully financed by other sources than FONERWA?

Under ESIRU WHH has mobilized funding which already covered different interventions on wide range; however, it is clear that the demand for marshland development and soil conservation is still high and requires resources above the individual household financial capacities. FONERWA with its wide and important mission of supporting environment and climate resilience is relevant to support partners to address progressively the challenge.

Q 3.5 **What** non-financial support is needed to implement the project? What is the best way for FONERWA to deliver this support?

FONERWA would be one of the channels to disseminate the innovative approach of eco-friendly marshland development. FONERWA would support to display the approach through its media program or through facilitating discussions on it through knowledge sharing sessions.

Q 3.6 **Value for Money (Economy):**

i) Briefly describe how the required inputs have been identified and how the GoR procurement procedures will be used to ensure they are obtained cost effectively

ii) Provide identified unit cost measures or selected project outputs? (Please see VfM guidelines on how to determine these. Further guidance from the FONERWA Secretariat is available)

The cost estimates for project inputs are based on the experiences with similar projects implemented by WHH in the same area of intervention. These data were updated / complemented by the conducted pre-feasibility study, consultation of the updated RPPA reference prices and stakeholders.

The costs related to infrastructure works were based on the ESIRU program experience, costs for hotels, consultancy service rates and supplies were referred to the RPPA reference prices, while for the salaries, transport and allowance, rates of the *Government of Rwanda* (GoR) and the *Internal Rules and Regulations of WHH* were compared.
A number of substantial differences in the program design of the ESIRU program resulted in substantial cost-difference between ESIRU and the here proposed Rusuli development Project. The relatively high costs of the ESIRU program were determined i.a. by the construction of 3 huge water dams/reservoirs; the construction of 600 ha bench terraces, 120km roads; furthermore the construction and equipping of the Gafunzo Agro Processing Centre (a rice mill with 2,5T/hr capacity and a distillery). All these activities and construction are part of the specific ESIRU cost / ha. Furthermore, the CFW activities were implemented in the framework of a HIMO approach, aiming at the involvement of older and less-capable people in works (i.e. 5 working hours per day; reduced targets).

Regarding procurement, the *International WHH Procurement Guidelines* and the *Rwanda Public Procurement Laws and Regulations* will be used in parallel. The GoR procedures will however prevail where the two documents are conflicting, as required by FONERWA. Transparency, Competition, Economy, Efficiency, Fairness, Accountability are the common principles governing the two procurement references. Although the Procurement Laws allow using different procurement methods (Open Competitive bidding, Restricted tendering, Request for quotations, Shopping, Single sources, Force account, Community participation, etc.), the open competitive tendering will be prioritized.

The unit costs used for calculating the cost-benefit of the project were calculated from the total budget used to produce the output results over the quantity of units of the produces results.

<table>
<thead>
<tr>
<th>Q 3.7</th>
<th>Value for Money (Efficiency):</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Briefly explain how the provision and operation of project inputs produce the expected outputs</td>
<td></td>
</tr>
<tr>
<td>ii) What is the Net Present Value (NPV) and benefit cost ratio for this project (Please see VfM guidelines on how to determine these measures. Further guidance from the FONERWA Secretariat is available)?</td>
<td></td>
</tr>
</tbody>
</table>

Basing on a logical framework approach activities and inputs were planned to achieve the project’s 3 outputs and the project’s outcome, which contributes to achieving the expected project impact. This process was supported by the past experience and lessons learnt during the 10 year ESIRU Program. In order to ensure that relevant inputs are exhaustively identified and in realistic quantities, the detailed budget (units, unit costs and quantity) has been prepared in a participatory manner, and discussed at different levels.

A Net Present Value (NPV) of RWF 48,654,722 was obtained over a period of 10 years with a discount rate of 10%. The Benefit-Cost Ratio (BCR) is positive, showing the project’s viability.

<table>
<thead>
<tr>
<th>Q 3.8</th>
<th>Value for Money (Effectiveness):</th>
</tr>
</thead>
<tbody>
<tr>
<td>How does your project demonstrate effectiveness:</td>
<td></td>
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<tr>
<td>- How will it show the outputs meet the project objectives?</td>
<td></td>
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<tr>
<td>- Which indicators will you measure to demonstrate effectiveness?</td>
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</tbody>
</table>

The link between the expected impact and the outcome is clear and strong. Indeed the conservation and management of natural resources refers to the optimum use of natural resources for growth today while considering the needs of future generations.

The eco-friendly marshland development concept is therefore in pertinent in line with conservative management of natural resources. Moreover the climate resilience is strongly related to creation of sustainable sources of income, namely through the development of the marshland for increasing

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agriculture production, securing farmers against climate variability and unpredictability of rain-fed agriculture, and reducing the pressure on the hillside as well.

The outcome indicators therefore functions as effectiveness measures. Also the tie between the outcome, outputs and activities is logical and pertinent: Since the project is oriented to achieving physical and tangible results, the indicators are clear and easy to track.

Agricultural production will be traced through the cooperative records and regular follow up of activities by the project field technicians. The number of families both male and women headed using the marshland will be easily traced because all users will be member of the cooperative. The man power contributed by beneficiaries will be regularly recorded in the books of the workgroup team leaders and the Project Engineer. The project M&E Specialists will design simple reporting templates for cooperative representatives to regularly report on key events related to the project implementations and this will be verified or compared to the reports of the project field technicians and relevant district officials (district and sector agronomist, RCA).

ATTACH ANNEXES HERE TO THE PD APPLICATION—these can be accepted as separate files but clearly organise and identify the annexes so they are easy to refer to.

Lucien D’Hooghe
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