No.

**MINISTRY OF AGRICULTURE,
ANIMAL INDUSTRY AND FISHERIES
THE REPUBLIC OF UGANDA**

THE STUDY
ON
POVERTY ERADICATION THROUGH SUSTAINABLE IRRIGATION PROJECT
IN
EASTERN UGANDA

FINAL REPORT

VOLUME-II: PILOT PROJECT REPORT

March 2007

JAPAN INTERNATIONAL COOPERATION AGENCY

**NIPPON KOEI CO., LTD.
TAIYO CONSULTANTS CO., LTD.**

RD
JR
07-24

**MINISTRY OF AGRICULTURE,
ANIMAL INDUSTRY AND FISHERIES
THE REPUBLIC OF UGANDA**

THE STUDY
ON
POVERTY ERADICATION THROUGH SUSTAINABLE IRRIGATION PROJECT
IN
EASTERN UGANDA

FINAL REPORT

VOLUME-II: PILOT PROJECT REPORT

March 2007

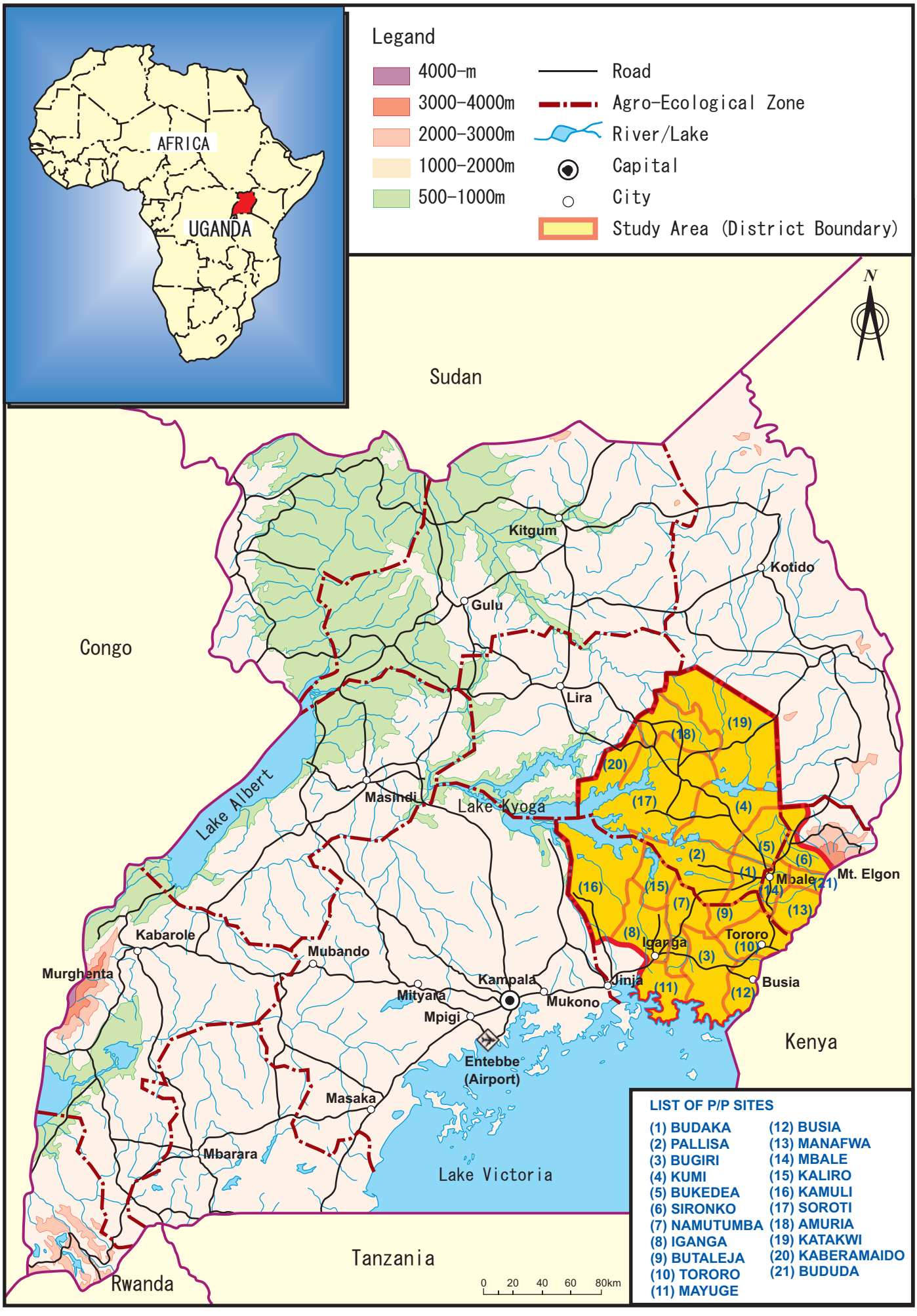
JAPAN INTERNATIONAL COOPERATION AGENCY

**NIPPON KOEI CO., LTD.
TAIYO CONSULTANTS CO., LTD.**

Composition of Final Report

Volume-I: Main Report

Volume-II: Pilot Project Report



Location Map

THE STUDY
ON
POVERTY ERADICATION THROUGH SUSTAINABLE IRRIGATION PROJECT
IN EASTERN UGANDA

FINAL REPORT

VOLUME-II: PILOT PROJECT REPORT

Table of Contents

List of Tables

List of Figures

Appendixes

ABBREVIATION

AC	:	Advisory Committee
AEATRI	:	Agricultural Engineering & Appropriate Technology Research Institute
AfDB	:	African Development Bank
A/P	:	Action Plan
ARDC	:	Agriculture Research and Development Centre
ARI	:	Agricultural Research Institute
CAO	:	Chief Administrative Officer
CBD	:	Convention on Biological Diversity
CBO	:	Community Based Organisation
CDO	:	Community Development Officer
CEC	:	Cation Exchange Capacity
CEFP	:	Crop Experimental Farm Plots
COD	:	Chemical Oxygen Demand
COP	:	Conference of the Parties to the Ramsar Convention on Wetlands
CWMP	:	Community Wetland Management Plan
DANIDA	:	Danish International Development Agency
DAO	:	District Agriculture Officer
DAP	:	Diammonium Phosphate
DCDO	:	District Community Development Officer
DEC	:	District Environment Council
DEO	:	District Environment Officer
DFID	:	Department of International Development, United Kingdom.
Df/R	:	Draft Final Report
DIO	:	District Irrigation Officer
DWD	:	Directorate of Water Development
DWO	:	District Wetland Officer
D/P	:	Development Plan
EC	:	Electrical Conductivity
EIA	:	Environment Impact Assessment
EIRR	:	Economic Internal Rate of Return
EIS	:	Environmental Impact Statement
EIR	:	Environmental Impact Review
FAO	:	Food and Agriculture Organisation of United Nations
F/S	:	Feasibility Study
FPDFP	:	Farmers Participatory Demonstration Farm Plot
F/R	:	Final Report
GDP	:	Gross Domestic Products
GIS	:	Geographic Information System
GoU	:	Government of Uganda
HIPC	:	Heavily Indebted Poor Countries
HDI	:	Human Development Index
Ic/R	:	Inception Report
IRRI	:	International Rice Research Institute
IFAD	:	International Fund for Agricultural Development
IITA	:	International Institute of Tropical Agriculture
IR	:	Rice varieties developed at International Rice Research Institute in the Philippines
It/R	:	Interim Report
IUCN	:	International Union for Conversation of Nature

JICA	:	Japan International Cooperation Agency
KARI	:	Kawaude Agricultural Research Institute
LC	:	Local Council
LEC	:	Local Environment Council
LIRI	:	Livestock Research Institute
LGDF	:	Local Government Development Fund
LGDP	:	Local Government Development Programme
MAAIF	:	Ministry of Agriculture, Animal Industry and Fisheries
MFPED	:	Ministry of Finance Planning Economic Development
MOF	:	Ministry of Finance
MTEF	:	Mid Term Economic Framework
MW&E	:	Ministry of Water and Environment
NAADS	:	National Agriculture Advisory Services
NARO	:	National Agriculture Research Organisation
NCRI	:	National Crops Resources Institute (Namulonge)
NBI	:	Nile Basin Initiative
NBS	:	National Biomass Study
NEMA	:	National Environment Management Authority
NGO	:	Non-Governmental Organisation
NPV	:	Net Present Value
NPW	:	National Wetlands Conservation and Management Programme
NUSAF	:	Northern Uganda Social Action Fund
NWSC	:	National Water and Sewerage Corporation
NWP	:	National Wetlands Programme
O&M	:	Operation and Maintenance
OJT	:	On-the-Job Training
PDM	:	Project Design Matrix
PEAP	:	Poverty Eradication Action Plan
PIE	:	Potential Irrigation Engineer
PMA	:	Plan for Modernization of Agriculture
P/P	:	Pilot Project
RIS	:	Information Sheet on Ramsar Wetlands
P/R	:	Progress Report
PRA	:	Participatory Rural Appraisal
PRGA	:	Primary Rice Growers' Association
RRTDFP	:	Rice Research-cum-Technical Demonstration Farm Plots
S/W	:	Scope of Work
SIDA	:	Swedish International Development Agency
SPES	:	Small Scale Irrigation –special Programme for Support of Food Security
TDFP	:	Technical Demonstration Farm Plots
TOT	:	Trainer of Trainee
TWG	:	Technical Working Group
UBOS	:	Uganda Bureau of Statistics
UCA	:	Uganda Co-operative Alliance
UNDP	:	United Nations Development Programme
UNFEE	:	Uganda National Farmers' Federation
UPE	:	Universal Primary Education
USAID	:	United States Agency for International Development
WA	:	Wetland Association
WARDA	:	West African Rice Development Association
WID	:	Wetlands Inspection Division
WUA	:	Water Users' Association

MEASUREMENT UNITS

Extent

cm^2 = Square-centimeters (1.0 cm x 1.0 cm)

m^2 = Square-meters (1.0 m x 1.0 m)

km^2 = Square-kilometers (1.0 km x 1.0 km)

ha = Hectares (10,000 m^2)

ac = Acres (4,046.8 m^2 or 0.40468 ha.)

Volume

cm^3 = Cubic-centimeters (1.0 cm x 1.0 cm x 1.0 cm or 1.0 m-lit.)

m^3 = Cubic-meters (1.0 m x 1.0 m x 1.0 m or 1.0 k-lit.)

lit l = Liter (1,000 cm^3)

Length

mm = Millimeters

cm = Centimeters (cm = 10 mm)

m = Meters (m = 100 cm)

km = Kilometers (km = 1,000 m)

Weight

gr = Grams

kg = Kilograms (1,000 gr.)

ton = Metric ton (1,000 kg)

Currency

US$ 1.0 = ¥ 117.6 = Ush 1,838.0

(as of October, 2006)

US$ = United State Dollars

¥ = Japanese Yen

Ush = Ugandan Shillings

Time

sec = Seconds

min = Minutes (60 sec.)

hr = Hours (60 min.)

The cost estimate is based on the price level and exchange rate of August 2006.
The exchange rate is:

US$1.00 = Ush 1,850

CHAPTER 1 INTRODUCTION

1.1 Authority

This Pilot Project Report as Volume II of the Final Report was prepared pursuant to Clause VI of the Scope of Work (S/W) for the Study on Poverty Eradication through Sustainable Irrigation Project in Eastern Uganda (the Study) agreed upon between the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) and the Japan International Cooperation Agency (JICA) on the 24th of April, 2003.

1.2 Report Composition

This report presents the results of Pilot Project (P/P) implemented in the course of the Study. In this Chapter 1, feature of the P/P plan is presented including that of Development Plan (D/P) and Action Plan (A/P), since the P/P was designed and implemented on the basis of these two plans. In Chapter 2, activities, achievement and outcomes of each development programme implemented in the P/P are presented in detail. Then, achievement of 14 P/P areas in which the development programmes were implemented under different conditions was evaluated in Chapter 3. What lessons have learnt from the implementation of P/P is presented in Chapter 4 including those reflected in the finalisation of D/P and A/P. Lastly in Chapter 5, conclusion of the P/P and recommendations for concerned authorities and agencies for the implementation of D/P and A/P are presented.

1.3 Outline of Draft D/P and A/P

The draft D/P and A/P were formulated on the basis of the results of analysis made on the present conditions of agriculture and various participatory workshops organised at the level of district, sub-county and village. Both draft plans were compiled and presented in the It/R as the final output of the Phase I Study. Since it was planned in the Study that both draft plans would be revised based on outcomes of the P/P implemented as the Phase 2 Study, these draft plans are outlined in this Section before the description to be given on P/P.

1.3.1 Outline of Draft D/P

D/P is composed of two approaches: 1) common approach and 2) area specific approaches taking into account the common points among districts and specificities of each one. The former considers the institutional problems while the latter is to deal with area-specific problems and potentials. Following the area-specific concept, existing irrigation facilities are rehabilitated in the districts categorized as Group-1and improved in that as Group-2, present upland is converted into irrigated paddy land for crop diversification in that as Group-3, and new irrigation facilities are provided in that as Group-4.

The target year of the D/P is 2017 which is same as that of PEAP. D/P is planned for the total of 10 years and comprised of three terms: short-term (2008-2010), mid-term (2011-2013) and long-term (2014-2017) development periods. The target development area in the D/P is 20,280 ha through implementation of about 1,014 pilot schemes having an assumed average area of 20 ha as models development serving a function of technical demonstration during the D/P period.

In the short-term, the building-up of the institutions for lowland paddy sub-sector development would be carried out through the establishment of pilot schemes in each district. The PIEs, extension service staff, community development officers and farmers shall be intensively trained in the established pilot schemes. The number of pilot schemes to be established during this period would be three in each district, or a total developed area of 780 ha in three years.

In the mid-term, the trained staff would continue their support and services to farmers for irrigation development and modernization of cultivation technology. The number of pilot schemes annually developed would be 5 in each district or a total developed area of 3,900 ha during this period.

In the long-term plan, the number of pilot schemes would also be increased with the intensive technical support from the increased number of supporting staff. In each district, about 15 pilot schemes would be developed annually, or a total developed area of about 15,600 ha during the 4-year period.

During the mid- and long-term plans, the water storage facilities shall be constructed at the upstream stretch of the wetland. This is expected to reduce the encroachment to wetlands by half by increasing the yield of the wetlands and enable farmers to practice double cropping by allowing the cultivation during the dry season by constant supply of irrigation water. As a result, such facility shall contribute to wetland conservation. Prior to the construction of the facilities, planning studies together with EIA will be carried out during the short-term and 10 dams will be constructed during the mid and long-term.

With the above scenario, the target rice production is then set assuming that 10,000 ha are rehabilitated or improved, and other 10,000 ha are newly developed following the government regulations and guidelines. This would correspond to a rice target production of 251,000 tons (in terms of milled rice) with the yield of 2.72 tons/ha (or 4 tons/ha in terms of paddy) by 2017.

To ensure a sustainable development, the following achievement will be essential: namely (i) land and water resource development with steady supply of irrigation water, (ii) technical advancement in paddy production practices, (iii) organisation and activation of the farmers as well as institutional capacity building in the co-operative activities along with the institutional improvement and reinforcement of the project executing authority/agency, and (iv) environmental conservation.

1.3.2 Outline of Draft A/P

(1) Selection of A/P Areas

The A/P areas have been selected based on the following procedures:

a) Inventory of potential irrigation areas,
b) Selection of A/P potential areas, and
c) Supplementary survey made on the A/P potential areas

1) Inventory of Potential Irrigation Areas

In the first place, the Study Team prepared the inventory of potential irrigation areas based on data and information obtained from various sources including Biomass study maps, topographic maps, Land Sat Data, mapping works in the district participatory workshops held in the 13 districts and field workshops held in 12 locations, actual field investigation, etc. The list of potential irrigation areas which was prepared on a district-basis is presented in Table 1.3.1 and these locations are illustrated in Figure 1.3.1.

2) Selection of A/P Potential Areas

The A/P potential areas were firstly selected from the above-mentioned list of potential irrigation areas by the farmer representatives and DAOs/extension staff in the Preliminary EIA workshop held on January 7 to 9, 2004 in Mbale district. The second selection was made in the A/P workshops held in each potential area after the EIA workshop. In these workshops, the detailed field conditions were confirmed together with the farmer representatives and district and sub-county officials.

3) Supplementary Survey in A/P Potential Areas

The supplementary survey in the A/P potential areas was carried out in June 2004. In the survey, supplemental information in the selected A/P potential areas including Doho Rice Scheme was collected. The survey clarified the position of paddy production in each sub-county related to the A/P potential area having the sub-county workshop, and the final selection of A/P areas was made in the process of pilot project site selection in the village workshop. Participants of these two sets of workshops were farmer representatives (rice growers), LC1 chairman, DAO, DEO, extension officer, etc.

4) Selected A/P Areas

The A/P areas finally selected are listed below:

District Group	Name of District	Name of A/P Area	Catchment Area (km^2)
Group-1	Pallisa	Kamonkoli/Naboa	37.37
Group-2	Bugiri	Buwunga	16.19
Group-3	Kumi	Kanyumu/Mukongoro	17.47
Group-4	Sironko	Muyembe	105.69
Total			176.69

The location of each A/P area is as shown in Figure 1.3.2.

(2) Outline of Draft A/P

A/P includes the required actions to be implemented in the short-term in order to achieve certain targets of the D/P. The A/P, therefore, covers most subjects of the short-term plan formulated in the D/P. The A/P period is set for 3 years from 2008 to 2010. It will start after the completion of the present study and is also based on the two approaches mentioned in the above. The first approach is to cope with area specific constraints and applies to four watershed areas which were selected as representative areas of each Group of districts. Development components related to this approach includes land and water resources development and other soft components promoting yield increase and capacity building of stakeholders. The second approach is to cope with overall constraints and applies to the entire Study area. Development components related to this approach intends to increase the yield and capacity building. The Doho Rice Scheme is included in the A/P coping with overall constraints, because it is the only large-scale irrigation scheme in the Study area which is managed by smallholders and which faces a lot of problems needed to be solved.

The summary of the A/P areas for infrastructure development correspond to the area specific constraints for four watershed areas are listed in the following table:

Dimension of the A/P Area

District	Pallisa	Bugiri	Kumi	Sironko	Total
Name of A/P	Kamonkoli /Naboa	Buwunga	Mukon-goro	Muyem-be	
①Catchment area (km^2)	37.37	16.19	17.47	105.69	176.7
②Wetland area ((km^2)	7.13	4.18	2.27	18.25	31.8
③Paddy field area (ha)	315	105	45	21	486.0
④Ratio of (③x0.01)／②x100 (%)	44.2%	25.1%	19.8%	1.2%	15.3%
⑤Ratio of ①／③x0.01	11.9	15.4	38.8	503.3	36.4
⑥Ratio of ①/②	5.2	3.9	7.7	5.8	5.6
⑦Max. Wetland Development (25%)	1.78	1.05	0.57	4.56	7.96
⑧Max. Water available area (20 times)	1.87	0.81	0.87	5.28	8.84
⑨Possible A/P Areas (ha)	178.0	81.0	45.0	200.0	504.0
Number of Potential Small-scale Irrigation Schemes in A/P Area inclusive of P/P	9	4	3	10	26
Number of Small-scale Irrigation Schemes Implementation during A/P period	3	3	3	3	12
Target Area of A/P (ha)	60	60	45	60	225

*: Although Sironko district has been categorized as Group-3, Muyembe A/P area was selected from this district due to security reason in the districts categorized as Group-4.

During the A/P period, under the land and water resources development programme, the existing irrigation facilities are rehabilitated in Pallisa district and improved in Bugiri district. While in Kumi and Sironko districts, present upland is converted into irrigated paddy land, and new irrigation schemes are newly developed, respectively. In parallel with the above, the environment conservation programme is undertaken for formulation of project briefs to seek permit from NEMA, establishment of the

function of wetland management association in farmers group, authorisation of users' right for water in irrigated paddy cultivation in wetland, and monitoring of wetland resources.

Actions related to other two programmes, i.e., production technology development and organisation and institutional development are taken covering all the 13 districts including the above A/P areas. In the production technology development, TDFP (0.4 ha) is established to demonstrate adequate farming practices as well as necessary technology, and technical guidance and training are periodically provided through OJT practices. Good quality seeds and adequate farming tools are supplied to the farmers/farmers' organisation to be organised in each pilot scheme. In the organisation and institutional development, training programme for development and strengthening of farmers' organisations is provided both for the local officers and key farmers from 13 districts. The programme includes guidance on different types of farmers' organisation and registration procedures which are required of paddy growers in wetlands. Practical sessions on organisational and financial management are also included. This training programme is organised 3 times during the A/P period.

For Doho Rice Scheme, a feasibility study (F/S) is undertaken during the A/P period covering both the existing Doho Rice Scheme and the surrounding areas, as Doho Integrated Development Project. This is because the Manafwa River supplies not only the water for the Doho Rice Scheme but also for the surrounding out-growers. The Doho Integrated Development Project is not only for infrastructural development, but also emphasizing upon developing functions of training and extension of irrigation and drainage technology to engineers. Accordingly, it is necessary, even on a small-scale, to attach a "Technology Development and Dissemination Programme for Irrigation and Drainage" to the Doho Integrated Development Project. On this programme, Irrigation Engineers nominated from 13 districts and MAAIF will be trained to follow up for planning and implementation and O & M of successive pilot schemes.

1.4 Pilot Project Plan

1.4.1 Objective of Pilot Project

In the Study, it was planned that the D/P and A/P formulated in Phase 1 Study would be revised based on the outcomes of P/P selected for implementation. In this context, a total of 14 P/P sites including Doho Rice Scheme were selected.

The objectives of the implementation of the P/P were as follows:

- Verification of the projects and/or programmes formulated in A/P and D/P;
- Record of partial achievement of the development target in the P/P site;
- Building the capacity of Ugandan counterpart personnel including staff of local government and the communities concerned; and
- Reflection of lessons learned to A/P and D/P for their finalisation.

It was also planned that problems and constraints on the implementation of the Projects and its management would be identified based on the results of monitoring and assessments carried out on P/P. Countermeasures for the identified problems and constraints would be reflected in the final version of D/P and A/P.

1.4.2 Items to be Verified in Pilot Project

Key items that would be verified in the P/P are (i) increase of yield of lowland paddy, (ii) development of management capacity of farmers' organisation, and (iii) capacity building of government officers and farmers for the wise use of wetlands.

The first item dealing with the increase of paddy yield is essentially important as an indicator showing the possibility of slowdown of the encroachment upon the wetlands. It is assumed that the present pace of encroachment upon the wetlands will be slower if the yield of farmers is increased. Improvement of farmers' economy is also expected from the increase of paddy yield. The P/P is thus designed to rehabilitate and improve the existing irrigation system in Pallisa (Group-1) and Bugiri (Group-2). With the provision of better conditions in water use, yield of paddy is expected to increase. In addition, the farmers in the P/Ps will be trained in proper farming practices to increase yield. For this purpose, crop experimental farm will be established within the Doho Rice Scheme, and demonstration plots will be established in the P/P. Further, the extension service staff will be trained in paddy cultivation techniques, because the number of extension staff who knows about paddy cultivation is very limited.

The second item of farmers' organisation management capacity development is also essential, because farmers' organisation is responsible for proper O&M of irrigation facilities, paddy production and marketing, and wise use of wetlands. How much the capacity of farmers' organisation can be developed with the provision of a series of training courses will be verified.

The third item of capacity building of the government staff and farmers for wise use of wetlands is also verified. At present, farmers are encroaching upon the wetlands without control. On the other hand, the capacity of DEOs and DWOs is insufficient for providing clear guidance to the farmers. Accordingly, P/P intends to establish new irrigation systems with farmer participation. The P/P sites for new development in Kumi (Group-3) and Sironko (as Group-4) will be implemented completely following the government guidelines in terms of their design and procedures. All the procedures, e.g., farmers' organisation establishment, registration for wetland users association, preparation of CWMP, construction of irrigation facilities, monitoring on water and soil quality and training workshops for farmers and local government staff, will be the subject for verification; how much their capacity for wise use of the wetlands can be improved, and how much the speed of encroachment can be mitigated will be verified, although the latter item will be difficult to apprehend during the P/P period.

The P/P activities proposed under each verification item is tabulated as shown below:

Key Verification Items and Required Project Activities

Key Verification Items	Project Programme	Project Activities at Farmers' level	Project Activities at Local Government Level
1.	**Increase of yield of lowland paddy**		
	1) Rehabilitation of existing irrigation system (P/P in Pallisa district) 2) Improvement of existing irrigation system (P/P in Bugiri district) 3) New irrigation system in existing upland field (P/P in Kumi district) 4) New irrigation system in seasonal wetland (P/P in Sironko district)	- On-farm development by farmers.	- New water intake structures, etc. is constructed (depending on area-specific conditions). - Support for farmers training on O&M of irrigation facilities and land and water management by local irrigation engineer.
	5) Research improvement on cultivation technology (using Doho Rice Scheme)	(The activities in this column are carried out together with those in the right column.) - Technical training of extension service staff and potential seed growers - Establishment and operation of seed multiplication and foundation seed farms	- Establishment and operation of crop experimental farm - Technical training of extension service staff and potential seed growers - Establishment and operation of seed multiplication and foundation seed farms
	6) Farming practice improvement	- Technical guidance and on-the-job practices for PRGA members by extension staff. - Establishment of demonstration plots - Demonstration of advanced farming practices and adequate farming tools	- Preparation of technical guidelines and standard cropping calendar
	7) Technical training of extension service staff		- Technical training of extension service staff.
	8) Technical training of potential irrigation engineers		- Technical training of potential irrigation engineers.
2.	**Development of management Capacity of PRGA**		
	9) Organisation and activation of farmers' cooperatives	- Orientation for agreement exchange on participatory development works. - Workshop and orientation on PRGA formation for farmer representatives and local government staff. - Support to establish PRGA as CBO. - Workshop on wetland user rights, water rights and cooperative union for farmer representatives and local government staff - Support to PRGA's registration as Wetland Users Association - Workshop on financial management of PRGA for farmer representatives and local government staff - Workshop on introduction of agricultural support system for farmer representatives and local government staff - Workshop on organisation management skills of PRGA for farmer representatives and local government staff	(The activities in this column are carried out together with those in the left column.) - Workshop and orientation on PRGA formation for farmer representatives and local government staff. - Workshop on wetland user rights, water rights and cooperative union for farmer representatives and local government staff - Workshop on financial management of PRGA for farmer representatives and local government staff - Workshop on introduction of agricultural support system for farmer representatives and local government staff - Workshop on organisation management skills of PRGA for farmer representatives and local government staff

3.	**Capacity Building of Gov. Staff and Farmers for Wise Use of Wetland**		
	10) CWMP preparation	- Support on CWMP preparation	
	11) Workshop on new development and wetland environment conservation for P/Ps in Kumi, Sironko, Soroti, Katakwi and Kaberamaido	- Workshop on new development and wetland conservation for farmer representatives and local government staff - Study tour to new development P/P site in Sironko for farmer representatives and local government staff	- Workshop on new development and wetland conservation for farmer representatives and local government staff - Study tour to new development P/P site in Sironko for farmer representatives and local government staff
	12) Environment monitoring	- Support to districts to instruct farmers on environment-friendly farming practices based on monitoring data	- Support to districts to monitor environmental indices of water and soil - Support to districts to instruct farmers on environment-friendly farming practices based on monitoring data

1.4.3 Identification of Pilot Project Sites

(1) Pilot Project Sites Selected from A/P Areas with Area-specific Constraints

During the 2nd Field Work period, village workshops to select the P/P sites in the A/P areas with area-specific constraints were carried out. A one-day village workshop was carried out in the selected locations at the sub-county workshops with participation of the relevant district officers and local leaders in addition to farmer representatives. The objectives of the workshop were;

- To participatorily select the P/P site;
- To understand the farming condition and land tenure; and
- To confirm the farmers' needs and their intention of participating in the P/P activities.

PRA tools were used in the process of selecting the P/P sites. Such tools are commonly known to facilitate an outsider's understanding of the general condition of an area and farmers perspectives. During the one-day workshop, Mapping, Venn Diagramming and Matrix Ranking were carried out by the facilitators with close supervision of the Study Team. Each tool was selected to identify specific information in the locality as well as to encourage participants to share their views.

PRA Tools and Objectives

Tools	Information to be identified
Mapping	Geographic information Land Use Land Tenure (Identify the owner, tenant, size of each plot)
Venn Diagram	Stakeholders in providing agriculture supporting services Services provided by each identified stakeholder
Matrix Ranking	Identify problems and the most critical one in paddy cultivation in the area

After these activities, the key criteria of selecting the area were presented by the Study Team. The participants have taken the following criteria into consideration in

selecting the P/P area.

- Paddy growers are interested in the area,
- 20 or more farmers or 10 ha of paddy growing area, and
- Farmers are willing to organise a farmers' organisation.

Further, the Study Team also considered whether there is an unresolved dispute over land ownership or not. Such a dispute over land ownership will hinder the implementation of the P/P and therefore the completion of the Study.

At the end of each village workshop, the minutes of meeting was signed by the local leaders, farmer representatives and the representative of the Study Team. The original version was given to the local leaders and a copy was kept by the Study Team in order to share the outcomes of the discussion.

Through these exercises, the Study Team has gained sufficient understanding on the local condition of paddy cultivation to enable them to appropriately formulate the P/P components and their methods of implementation based on the local context.

The selected P/P sites are listed as follows:

List of P/P Sites Selected from A/P Areas with Area-specific Constraints

District	Group	P/P Site (Area)	Sub-county	Village
1. Budaka (Pallisa)	G-1	Jami/Kakoli P/P (17.9ha)	- Kamonkoli - Naboa	- Jami - Kakoli
2. Bugiri	G-2	Kasolwe P/P (10.9ha)	- Buwunga	- Kiteigalwa - Bupala
3. Kumi	G-3	Kajamaka P/P (6.8ha)	- Kanyum - Mukongoro	- Olimai - Omurang
4. Sironko	as G-4	Muyembe P/P (15.0ha)	- Muyembe	- Bunamono

The location of P/P sites is shown in Figure 1.4.1.

(2) Pilot Project Sites Selected from the A/P Areas with Overall Constraints

The P/P sites selected from the nine districts, where the common problems will be addressed, were selected adopting a similar procedure as the selection of the P/P sites from A/P areas. A series of workshops were carried out during the 2nd Field Work period. Six Ugandan field workers, who were trained in advance by the Study Team, facilitated the workshops. Two days were spent on each district.

The first day workshop, the Public Orientation Meeting, aimed at informing a wider audience and to identify the paddy growing farmers is concentrated in the respective sub-counties. The second day workshop was carried out in the selected area during the first day. Objectives included collecting general information on the selected pilot area and gaining contextualised understanding on the problems in paddy cultivation. These activities were largely carried out without notable difficulties.

The turnout of the participants showed the gender imbalance. This was due to the mobilisation of the farmers based on the land tenure: owner or tenants since the main

objective of the workshop was to clarify the local land ownership[1]. However, the Study Team is aware of the fact that the women shares tasks as equally as men. Thus the Study Team will ensure the fair involvement of women during the P/P implementation.

PRA tools were again used to facilitate the understanding of the general condition in the selected locality as well as to identify the land tenure system in the selected wetland areas. Mapping and Venn Diagramming were carried out, which shared the same objectives as the workshops in the pilot areas in the A/P areas. In addition to these tools, Pair-Wise Ranking was carried out after the brain storming of the problems in paddy cultivation. This allowed the Study Team to understand the problems in paddy production in the P/P areas. Such findings were incorporated into the P/P activities.

At the end of each village workshop, the minutes of meeting was signed by the local leaders, farmer representatives and the representative of the Study Team. The original version was left with the local leaders and a copy was kept by the Study Team in order to share the outcomes of the discussion.

The selected P/P sites are listed below:

List of P/P Site Selected from A/P Area with Overall Constraints

District	Group	P/P Site (Area)	Sub-county	Village
1. Namutumba (Iganga)	G-1	Nambigwa P/P (9ha)	Namutumba	Namuwondo
2. Butaleja (Tororo)	G-1	Mwenge P/P (27ha)	Busolwe	Nakwiga
3. Mayuge	G-2	Nawankoko P/P (10ha)	Kityerera	Butangala
4. Busia	G-2	Sibimba P/P (10ha)	Bulumbi	Buhonge
5. Manafa (Mbale)	G-2	Tembelela P/P (9ha)	Butiru	Buwanyama
6. Kaliro (Kamuli)	G-2	Igombe P/P (17ha)	Bumanya	Kyani
7. Soroti	G-4	Gweri P/P (-)*	Gweri	Gweri
8. Amuria (Katakwi)	G-4	Wera P/P (-)*	Wera	Wera
9. Kaberamaido	G-4	Kalaki P/P (-)*	Kalaki	Kalaki

Note: *; No particular site has been selected as P/P area. Only training programmes are provided for selected key farmers of the farmers' organisation and local officers related to the P/P area.

The location of P/P sites is shown in Figure 1.4.1.

1.5 Site Conditions before P/P Implementation

The site conditions of each P/P area before the P/P implementation are presented in the following tables.

[1] Communities in the Study area are based on clan system and patrilineal society. In such context, a female member of the family is not considered to be a permanent member of the clan since they will belong to their spouse's clan upon their marriage. If women own land, the clan's property will become that of their spouse's clan. Therefore, in order to prevent the reduction in the clan property, women generally are not considered to be the heir of the land and thus few of them own land.

DESCRIPTION OF PILOT PROJECT SITE

Project Name: JAMI/KAKOLI Pilot Project (Group-1)
District: BUDAKA (PALLISA)

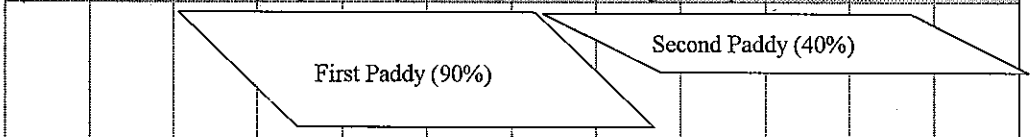
1. Location	Distance from the District Centre		Distance from Sub-county Centre	
	60 km east of Pallisa capital town		4.5 km west from Kamonkoli	
2. Area	16.4 ha		Latitude	Longitude
			N 01°03.277'	E 34°03.632'
3. Administration	County	Sub-county	Parish	Village
	1) Budaka	1) Kamonkoli	1)	1) Jami
	2)	2) Naboa	2)	2) Kakoli
4. Present Land Use	Lowland paddy cultivation			
5. Beneficiaries	Farmers who grow paddy in the wetland which overlays the border of Jami and Kakoli villages. The number of farmers identified was approximately 45.			

6. Land Holding and Tenure		Household (No.)	Owned Area (ha)	Cultivation Area (ha)
	1) Owner Farmers	9	41.0	7.2
	2) Tenant Farmers	36		10.8
	Total	45	41.0	18.0

7. Existing Irrigation Facilities

- Traditional small scale irrigation system has been developed using river flow
- Poor drainage and long water stagnation in farm plots due to small capacity of the culverts under the main road (Mbale-Jinja route)
- Due to poor on-farm development (no land leveling and plot to plot irrigation), irrigation efficiency is very low.
- Endless cropping pattern (cropping is made little by little using family labour force) makes it difficult to undertake O&M works of the irrigation facilities.

8. Cropping Pattern



9. Major Crops and their yields and production	Crop	Yield (ton/ha)	Production (ton)
	1) 1st paddy	1) 2.50	40.5
	2) 2nd paddy	2) 1.85	30.0
	3) Coco-yam	3) 10.5	UKNOWN

10. Farmers' Organisation (N.A.)	Year Established	No of Members (Male, Female)	Registration	Type of Organisation	Membership Fees (Collection Rate)	Subscription (Collection Rate)
	-	-	-	-	-	-
	Farmers' group is not yet established in this particular area.					

11. Major Constraints and Problems with their Priority Orders	Inadequate production technology and lack of technical skills in paddy cultivations are identified as constraints which require urgent actions, and farmers are committed to take part in such actions.
12. Relevant Organisations for Farming	- The most relevant organisations involved in farming activities in the area are Caritas-Tororo and Action Aid which provide farm inputs and technical advice. - Action Aid also provides seeds. - Agriculture officers are also identified yet they are not very close to the farmers. - Several women's organisations are identified such as Kamonkoli Abatagana women's association, Jami Abatagana women's association, Kakoli United women's association.
13. Access to Training	Farmers in the area do not have sufficient access to training programmes in farming.

DESCRIPTION OF PILOT PROJECT SITE

Project Name: KASOLWE Pilot Project (Group-2)
District: BUGIRI

1. Location	Distance from the District Centre		Distance from Sub-county Centre	
	12 km west of Bugiri		4 km west of Buwunga	
2. Area	11.3 ha		Latitude	Longitude
			N 00°32.871' (N 60.383)	E 33°38.904' (E 72.011)
3. Administration	County	Sub-county	Parish	Village
	1) Bukooli	1) Buwunga	1)	1) Kiteigalwa
	2)	2)	2)	2) Bupala
4. Present Land Use	Lowland paddy cultivation entirely in the subjected wetland section			
5. Beneficiaries	Farmers who grow paddy in the wetland which overlays the border of Kiteigalwa and Bupala villages in Buwunga Sub-County.			
6. Land Holding and Tenure		Household (No.)	Owned Area (ha)	Cultivation Area (ha)
	1) Owner Farmers	3	41	2.4
	2) Tenant Farmers	22		9.0
	Total	25		11.4
7. Existing Irrigation Facilities and Condition of Paddy Field	- Traditional small scale irrigation system has been developed using seasonal flow and spring water. Plot to plot irrigation is dominant. On-farm work is poor; No land leveling has been done so far. - Paddy in some plots is being affected by yellow-mottle disease. - During the rain season, especially Feb-Apr, surface run-off floods over the road due to a lack of culverts. - During the dry season, conflicts arise between farmer due to poor water control and shortage of irrigation water.			
8. Cropping Pattern	Jan / Feb / Mar / Apr / May / Jun / Jul / Aug / Sep / Oct / Nov / Dec First Paddy (90%) Second Paddy (30%)			
9. Major Crops and their yields and production	Crop		Yield (ton/ha)	Production (ton)
	1) 1st Paddy		1.80	18.5
	2) 2nd Paddy		1.50	5.13
10. Farmers' Organisation (Kiteigalwa Kabogera Nabegaisi Farmers Association)	Year Established	No of Members (Male, Female)	Registration	Type of Organisation	Membership Fees (Collection Rate)	Subscription (Collection Rate)[1]
	1999	UKN	Sub-county	-	1,000 (100)	20,000 (100)
	- The organisation is aware of the community wetland management plan yet they do not have one since they do not know what it is for. - The group is facing difficulties in establishing group farms since many of their members are not very cooperative. (In establishing the group farm, they hire the land.) - At the time of survey, the group was still in the process of organising villagers for the project. Therefore, the number of members was very many. - The number of members was informed to be 200 (M160, F 40), but seemed still fluctuating.					
11. Major Constraints and Problems with their Priority Orders	Inadequate production technology and technical skills are identified to be the most critical problems among the rice growers in the area. These problems where ranked highest as compared to others					
12. Relevant Organisations for Farming	- KKFFG (Kamu Kamu fish farmers' Group), CDO (Cotton Development Organisation), NAROGA (Nakisenyi Rural Adult Literacy Association) and MAAIF were identified among the most relevant in their farming activities. - Naroga provides both credit schemes and farm inputs in addition to technical advice. - MAID and CDO provide extension services and provide inputs. - KKFFG provides advice on nutrition, livestock and crop improvement. - The characteristics of the farmers organisation in the area are that many of them are involved in the literacy programme and training in farming skills. - There is a Bupala Kawama Growers Association for Rice Production.					
13. Access to Training	- The available training was on clonally coffee, banana plantation, vanilla, and goats by the District Agriculture Office. Cow's training programme was organized by HYPHA. - The information was passed on to the farmer through LC-1 chairman. - HYPHA programme collected 500 shillings from each participant, which was easily afforded by the farmers. Otherwise, the training programme organized by the District Agriculture Office was free of charge and with the provision of lunch. - The participation has extended to 15 persons or more. - The training should be organized at the parish level rather that at the sub-county. That will make the training programme accessible to many farmers who will incur less transport costs,					

[1] This is one time payment similar to share. Every one must pay the indicated amount, as they become member of the association.

DESCRIPTION OF PILOT PROJECT SITE

Project Name: KAJAMAKA Pilot Project (Group-3)
District: KUMI

1. Location	Distance from the District Centre		Distance from Sub-county Centre	
	15 km south of Kumi		5 km west of Mukongoro	
2. Area	9.0 ha		Latitude	Longitude
			N 01°13.32' – N 01°11.7' (N 46.65 – N 51.43)	E 33°31.14'–E 33°33.24' (E 96.19 – E 102.78)
3. Administration	County	Sub-county	Parish	Village
	1) Kumi	1) Kanyum	1)	1) Olimai
	2)	2) Mukongoro	2)	2) Omurang
4. Present Land Use	Upland cropping, i.e. maize, groundnut, upland rice, beans, etc. Paddy is limited to few ha so far.			
5. Beneficiaries	Farmers who cultivate crops in the wetland which overlays the border of Olimai and Omurang villages in Kanyum and Mukongoro Sub-Counties, respectively.			
6. Land Holding and Tenure		Household (No.)	Owned Area (ha)	Cultivation Area (ha)
	1) Owner Farmers 2) Tenant Farmers	32	33	25
	Total	32	33	25
7. Existing Irrigation Facilities	• No systematic irrigation has been developed. Only in a small case, farmers are individually using spring water for irrigation purpose. • Due to the insufficient water during the dry season, conflicts are observed around the water springs. • Discharges of the spring water is not enough even for domestic use especially in the seasonal month between Nov-Jan and May-Jul.			
8. Cropping Pattern	Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec Maize (15%) Groundnut (5%) Upland Rice (3%) Millet (5%) Paddy Rice (3%) Pastureland (79%)			
9. Major Crops and their yields and production	Crop		Yield (ton/ha)	Production (ton)
	1) Maize	4) Beans	1) 1.20 4) 0.85	1) 18.0 4) 4.25
	2) Groundnut	5) Paddy	2) 0.85 5) 1.50	2) 4.25 5) 4.50
	3) Upland rice	6) Millets	3) 1.20 6) 0.35	3) 3.60 6) 1.75
10. Farmers' Organisation (N.A.)	Year Established	No of Members (Male, Female)	Registration	Type of Organisation	Membership Fees (Collection Rate)	Subscription (Collection Rate)
	-	-	-	-	-	-
	• No group is organized in the area. The reasons include the following: • Traditionally, informal organisation of neighbors, relatives, clan members and friends get mobilized to help and provide labor during clearing, digging, weeding, harvesting and transportation of produce. This would be paid in kind i.e. a few kilos of produce and local millet brew (alcohol). Then recently, these practices are changing to economic terms but lack formal organisation of individuals and objectives. • The effect of political instability and resettlement prevented them to organize a group. • Inadequate sensitisation about the need to form farmers' organisations particularly for paddy production. • Many farmers are skeptical of outsiders or workshops for development as they are not used to these . • In the past, the kind of development interventions was not community driven but led by the powerful stakeholders. Therefore, many farmers are rather not tempted to join development initiatives.					
11. Major Constraints and Problems with their Priority Orders	• Farmers identified the most urgent issue in growing paddy was insufficient water supply between Nov-Jan and May-Jul. They are also willing to commit themselves in improving such condition. • Second ranked problem was lack of improved seeds followed by lack of equipment for land preparation.					
12. Relevant Organisations for Farming	• Local shops, neighbors and local councils were most relevant in farming in the locality. • There were no community based organisation or NGOs identified.					
13. Access to Training	• The available training was on maize, cotton and cattle raising by the District Agriculture Office. , The training programme organized by the District Agriculture Office was free of charge and with the provision of lunch. • The training should be organized at the parish level rather than at the sub-county. This will make the training programme accessible to many farmers who will incur less transport costs.					

DESCRIPTION OF PILOT PROJECT SITE

Project Name: MUYEMBE Pilot Project (Group-4)
District: SIRONKO

1. Location	Distance from the District Centre		Distance from Sub-county Centre	
	12 km east of Sironko		5 km northeast of Muyembe	
2. Area	18.0 ha		Latitude	Longitude
			N 01°23.6' – N 01°14.1' (N 52.00 - N 54.00)	E 33°10.26'–E 33°11.28' (E 43.00 – E 46.00)
3. Administration	County	Sub-county	Parish	Village
	1) Bulambuli	1) Muyembe	1) Nabbongo	1) Bunamono
	2)	2)	2)	2)
4. Present Land Use	- Land reclamation has been performed on only 9.5 ha that are mainly for paddy production. - Greater remain is lying under tall-cum-dense wild swampy-grasses, i.e. sedges, reeds, wild millets, etc.			
5. Beneficiaries	Farmers who grow paddy or intend to do so in the subjected wetland which belongs to Bunamono village in Muyembe Sub-County.			
6. Land Holding and Tenure		Household (No.)	Owned Area (ha)	Cultivation Area (ha)
	1) Owner Farmers 2) Tenant Farmers	48	96	9.5
	Total	48	96	9.5
	The average land holding in the area is 5 acres per owner. Approximately 10% has been under cultivation.			
7. Existing Irrigation Facilities	-			
8. Cropping Pattern	Jan / Feb / Mar / Apr / May / Jun / Jul / Aug / Sep / Oct / Nov / Dec: Swampy Grasses (100%)			
9. Major Crops and their yields and production	Crop	Yield (ton/ha)	Production (ton)	
	1) Paddy (few)	1.50	14.25	
	2) -			
10. Farmers' Organisation (Bunamono Farmers' Group)	Year Established	No of Members (Male, Female)	Registration	Type of Organisation / Membership Fees (Collection Rate) / Subscription (Collection Rate)
	2004	39 (UKN)	Sub-County-	- / 5,000 (N.A) / 10,000 (N.A.)-
	- This is just a new group in which farmers are strongly intending to develop irrigated paddy field and realize economic jump through paddy production.			
11. Major Constraints and Problems with their Priority Orders	- The most urgent problems to be tackled were identified as knowledge in paddy farming. Farmers have expressed their willingness for commitment.			
12. Relevant Organisations for Farming	- Farmers identified UNFA (Uganda National Farmers Association), BFG (Bunamono Farmers Group) and BUCG, and NBCG (North Bukedi Cotton Growers) as most relevant organisations involved in farming. They mostly provide seeds and technical advice.			
13. Access to Training	- The training is provided by the various organisations as indicated by the farmers. However, there is no training for paddy growers. - The rice growers in the area migrated from Doho Irrigation Scheme.			

DESCRIPTION OF PILOT PROJECT SITE

Project Name: NAMBIGWA Pilot Project (Group-1)
District: NAMUTUMBA (IGANGA)

1. Location	Distance from the District Centre		Distance from Sub-county Centre	
	37 km northeast of Iganga		13 km south of Namtumbe	
2. Area	9.0 ha		Latitude	Longitude
			N 00°43.734'	E 33°40.433'
3. Administration	County	Sub-county	Parish	Village
	1) Busiki	1) Namutumba	1) Nawampandu	1) Namuwondo
	2)	2)	2)	2)
4. Present Land Use	Most part of wetland section has been reclaimed and used for paddy production			
5. Beneficiaries	22. Farmers who grow paddy in the Nawampandu Swamp			
6. Land Holding and Tenure		Household (No.)	Owned Area (ha)	Cultivation Area (ha)
	1) Owner Farmers	8	9.4	3.4
	2) Tenant Farmers	14	-	5.6
	Total	22	9.4	9.0
7. Existing Irrigation Facilities	- No irrigation facilities have been developed yet so far. Paddy then grows under rain-fed conditions. - On-farm development (reclamation and paddy farm plot formation) is also not perfect yet, though 25 years of rice production activities have passed. - Drought hazard is serious during the period between mid-November to early March, and July to August.			
8. Cropping Pattern	Jan / Feb / Mar / Apr / May / Jun / Jul / Aug / Sep / Oct / Nov / Dec First Paddy (100%) Second Paddy (30%) Shortage of irrigation water			
9. Major Crops and their yields and production	Crop		Yield (ton/ha)	Production (ton)
	1) 1st paddy		1.75	15.75
	2) 2nd paddy		1.50	4.05
10. Farmers' Organisation (Agali Awamu Farmers Association)	Year Established	No of Members (Male, Female)	Registration	Type of Organisation	Membership Fees (Collection Rate)	Subscription (Collection Rate)
	2004	20 (17, 3)	Not Registered	N.A.	2000 (70%)	N.A.
	· The representative of the group is not aware of Community Wetland Management Plan. · The challenges that they face is the illiteracy and ignorance of the members and lack of management skills. · The ties between the members seemed to be weak and still very unstable stage in organisation formation.					
11. Major Constraints and Problems with their Priority Orders	The most critical issue in the area was the seasonal fluctuations of water availability followed by pests and disease of rice along with the lack of adequate technical skills.					
12. Relevant Organisations for Farming	· There is no organisation providing technical support on paddy cultivation. · The extension worker is the only person who offers farmers technical advice on paddy growing. · The Africa 2000 Network provides training on farming.					
13. Access to Training	· The person attended the training programme organized by the Africa 2000 Network. · He spoke to 3 other people after the training. · The training was on banana, pineapples and vegetables. · The cost of attending such workshops: Ush. 3,000 for lunch and transport, which was met by the organizer. · The handouts are translated in the local language.					

DESCRIPTION OF PILOT PROJECT SITE

Project Name: MWENGE Pilot Project (Group-1)
District: BUTALEJA (TORORO)

1. Location	Distance from the District Centre		Distance from Sub-county Centre	
	34 km west of Tororo		2 km west of Busolwe	
2. Area	27.1 ha		Latitude	Longitude
			N 00°51.309'	E 33°56.243'
3. Administration	County	Sub-county	Parish	Village
	1) Bunyole	1) Busolwe	1) Busolwe	1) Nakwiga
	2)	2)	2)	2)
4. Present Land Use	The subjected wetland section has been reclaimed entirely and used for paddy cultivation.			
5. Beneficiaries	The number of farmers identified as direct beneficiaries is 20 rice growers within the selected pilot project area. However, more than 500 rice growers who grow paddy in and around the wetland sections would be exposed to technical demonstration effect as well as development impacts.			
6. Land Holding and Tenure[1]		Household (No.)	Owned Area (ha)	Cultivation Area (ha)
	1) Owner Farmers	18	27.1	22.6
	2) Tenant Farmers	11	-	4.5
	Total	20	27.1	27.1
7. Existing Irrigation Facilities	- The rice growers themselves have developed traditional small-scale irrigation system. - Irrigation water is fed from plot to plot in most cases. Accordingly, irrigation efficiency of this system is as low as subsistence level. - Drainage function is poor, and thus, long-cum-deep water stagnation arises every main rainy season and causes difficulty of careful management of both paddy plant and cultivation practices. - Blessed with rich irrigation water resources throughout the year, farmers grow paddy almost twice a year. Performance of seasonal cropping is estimated to be 95% of the total paddy plots in the main rainy season and 85% in the second rainy season.			
8. Cropping Pattern	Jan / Feb / Mar / Apr / May / Jun / Jul / Aug / Sep / Oct / Nov / Dec First Paddy (95%) Second Paddy (85%)			
9. Major Crops and their yields and production	Crop		Yield (ton/ha)	Production (ton)
	1) 1st paddy		1.85	47.6
	2) 2nd paddy		1.50	34.5

10a. Farmers' Organisation (Namadete Rice Growers' Association)	Year Established	No of Members (Male, Female)	Registration	Type of Organisation	Membership Fees (Collection Rate)	Subscription (Collection Rate)
	2000	16 (8, 8)	Sub-county	NAADS	2,000 (100%)	N.A.
	- The group receives assistance from NAADS. - No Community Wetland Management Plan in the area. - Sasakawa has come to provide assistance but eventually did not develop well, which discouraged the farmers in the area. - Members expect financial assistance. - Lack of technical skills in water control.					

10b. Farmers' Organisation (Nakwiga Farmers' Association)	Year Established	No of Members (Male, Female)	Registration	Type of Organisation	Membership Fees (Collection Rate)	Subscription (Collection Rate)
	2000	25 (15, 10)	Sub-County	NAADS	200 (40%)	500 (40%)
	- The group is not aware of the need of Community Wetland Management Plan. - The problem they face is the poor payment of fees, and farmers are not cooperative. - NAADS Training programme on banana, moringa cultivation, poultry keeping (free of charge) - Although NAADS programme seedlings, they were provided in the dry season. They should be provided in the rainy season.					

[1] The land in the area was distributed long time ago even before the 1995 constitution. It is customary ownership.

10c. Farmers' Organisation (Sideway enterprises)	Year Established	No of Members (Male, Female)	Registration	Type of Organisation	Membership Fees (Collection Rate)	Subscription (Collection Rate)
	2001	25 (15, 10)	District	Company	5,000 (100%)	30,000[2]
	- Members collect rice and sell together once a year, which will be used for subscription. - The members are all tenants and do not see the needs of Community Wetland Management Plan. - Access to land is very limited. - This organisation was not included among the direct participants of the pilot project.					
11. Major Constraints and Problems with their Priority Orders	The most critical problem was rampant weeds (i.e. silimu) followed by the lack of improved skills in water control and frequent flood during the rainy season, which last more than a month.					
12. Relevant Organisations for Farming	- NAADS has been in operation in the area. - Fellow farmers in the area share the farm implements and advices as well as help each other in the farming activities.					
13. Access to Training	- The cost of attending training programme was Ush. 20,000. - Farmers expect to learn practical skills rather than theories. - Some farmers have gone to Doho to learn water management and transplanting skills. The cost was Ush. 15,000, which was met by the group members' contribution. - Inform the farmers directly rather than the officials. Otherwise the information on the training programme will not reach farmers.					

[2] All the members paid half the subscription after consensus.

DESCRIPTION OF PILOT PROJECT SITE

Project Name: NAWANKOKO Pilot Project (Group-2)
District: MAYUGE

1. Location	Distance from the District Centre		Distance from Sub-county Centre	
	8 km south of Mayuge		4 km north of Kityerera	
2. Area	10.4 ha		Latitude	Longitude
			N 00°23.725'	E 33°31.371'
3. Administration	County	Sub-county	Parish	Village
	1) Bunya	1) Kityerera	1) Kaluba	1) Butangala
	2)	2)	2)	2)
4. Present Land Use	Major part of the wetland section has been reclaimed and use for diversified crop production. Paddy is the most predominant crop and grows in the low-lying land.			
5. Beneficiaries	The direct beneficiaries are 20 farmers who grow paddy in the selected pilot project area. There are many rice growers in the same wetland sections. Thus, the Pilot Project could give them good development impacts, either directly or indirectly.			
6. Land Holding and Tenure[1]		Household (No.)	Owned Area (ha)	Cultivation Area (ha)
	1) Owner Farmers	13	10.4	5.2
	2) Tenant Farmers	7		2.8
	Total	20	10.4	8.0
7. Existing Irrigation Facilities	- Farmers using spring water have developed traditional small-scale irrigation facilities. - Irrigation and drainage facilities are well maintained through communal work organized amongst the beneficiary farmers. - Recently, water shortage in irrigation has become priority hazard to be urgently improved.			
8. Cropping Pattern	Jan / Feb / Mar / Apr / May / Jun / Jul / Aug / Sep / Oct / Nov / Dec First Paddy (90%) Second Paddy (70%)			
9. Major Crops and their yields and production	Crop	Yield (ton/ha)		Production (ton)
	1) 1st paddy 4) Maize	1) 1.85	3) 1.25	1) 13.3 (0.9) 4) UNKN
	2) 2nd paddy 5) Beans	2) 1.50	4) 0.85	2) 8.4 (0.7) 5) UNKN
	3) Chewing cane	3) -		3) -UNKN

10. Farmers' Organisation (Africa 2000 Network)	Year Established	No of Members (Male, Female)	Registration	Type of Organisation	Membership Fees (Collection Rate)	Subscription (Collection Rate)
	1990	33 (20, 13)	Not Registered	N.A.	None	None
	· The group is engaged in poultry farming and zero grazing and organized specifically for the purpose. · No Community Wetland Management Plan since the group's activity is not involved in wetlands · Members are not cooperative in group activities. · Poor leadership skills and weak ties between members.					
11. Major Constraints and Problems with their Priority Orders	· The most serious problem to the farmers in the area is lack of technical skills followed by poor seeds and pests and disease.					
12. Relevant Organisations for Farming	· Most relevant organisation in the area includes Africa 2000 Network and ADRA. · Extension worker links farmers with the NGOs and provides technical skills.					
13. Access to Training	· The training on cross breeding of livestock and modern farming was organized by Africa 2000 Network. · The participant of the training has spoken to more than 10 people about the programme he attended. · It costed him Ush. 4,000 for transport.					

[1] The land in the area was distributed long time ago even before the 1995 constitution. It is customary ownership.

DESCRIPTION OF PILOT PROJECT SITE

Project Name: SIBIMBA Pilot Project (Group-2)
District: Busia

1. Location	Distance from the District Centre		Distance from Sub-county Centre	
	16 km west of Busia		2 km west of Bulumbi	
2. Area	9.6 ha		Latitude	Longitude
			N 00°20.068'	E 33°55.350'
3. Administration	County	Sub-county	Parish	Village
	1) Samia Bugwe	1) Bulumbi	1) Buyunda	1) Buhonge
	2)	2)	2)	2)
4. Present Land Use	Most part of the land has been reclaimed as paddy fields. Remaining land is covered with the wild grasses, i.e. sedges, reeds, wild millets, etc.			
5. Beneficiaries	Some 22 farmers who grow rice in the selected pilot project area will be the direct beneficiaries. There are more than 350 rice growers in and around the wetland sections. They will also get development impacts, either directly or indirectly.			
6. Land Holding and Tenure		Household (No.)	Owned Area (ha)	Cultivation Area (ha)
	1) Owner Farmers	4	15.0	3.2
	2) Tenant Farmers	16		6.4
	Total	22	15.0	9.6
7. Existing Irrigation Facilities	- Paddy cultivation has started rather recently since 1996. - Traditional small scale irrigation facilities were developed in some parts. But the majority of farmers grow rice under rain-fed conditions. - Farm plots were formed but were not precisely leveled yet. - Blessed with high soil moisture conditions throughout the year, double cropping of paddy is being practiced to a significant extent (cropping intensity: 1.50)			
8. Cropping Pattern	Jan / Feb / Mar / Apr / May / Jun / Jul / Aug / Sep / Oct / Nov / Dec First Paddy (90%) Second Paddy (40%) Shortage of irrigation water			
9. Major Crops and their yields and production	Crop		Yield (ton/ha)	Production (ton)
	1) 1st paddy		1.85	16.0
	2) 2nd paddy		1.50	8.60

10. Farmers' Organisation (UNKN)	Year Established	No of Members (Male, Female)	Registration	Type of Organisation	Membership Fees (Collection Rate)	Subscription (Collection Rate)
	2000	22 (16, 6)	Sub-county	-	5,000 (100%)	1,000 (100%)
	- No knowledge about Community Wetland Management Plan - Difficulty in collecting membership fee on time.					
11. Major Constraints and Problems with their Priority Orders	The most critical constraints stressed by the farmers in the area are the lack of knowledge and skills on paddy growing followed by inadequate farming equipments and sickness of farmers caused by the leeches in the paddy area.					
12. Relevant Organisations for Farming	- NAADS and BDEA are the most relevant to the farming activities. NAADS provides seeds, guidance on improved technologies and breeding of poultry and piggery. BUDEA provides similar services to NAADS in addition to loan schemes. - A local group named Bugiri Banda Rice Farmer Group was identified. It was not very relevant to the farming activities in the locality. However, it is a labor group of rice farmers who help each other in weeding and etc.					
13. Access to Training	- The respondent attended the NAADS livestock training programme. - Being a leader of the farmer group and also a political leader (Councilor), the respondent has extended his knowledge to his group members. - The NAADS training was free of charge for participation. However, if the training is to be carried out outside of the village, the transport allowance shall be given to the participants.					

DESCRIPTION OF PILOT PROJECT SITE

Project Name: TEMBELELA Pilot Project (Group-2)
District: MANAFWA (MBALE)

1. Location	Distance from the District Centre		Distance from Sub-county Centre	
	20 km southeast of Mbale		4 km west of Butiru	
2. Area	12.3 ha		Latitude	Longitude
			N 00°50.603'	E 34°16.521'
3. Administration	County	Sub-county	Parish	Village
	1) Bubulo	1) Butiru	1) Bukhofu	1) Buwanyama
	2)	2)	2)	2)
4. Present Land Use	In the subjected wetland, land reclamation has reached 7.8 ha of paddy field. Remaining is under natural vegetation of such grasses as sedges, reeds, wild millets, etc.			
5. Beneficiaries	Total 25 farmers who grow paddy in the subjected wetland.			
6. Land Holding and Tenure		Household (No.)	Owned Area (ha)	Cultivation Area (ha)
	1) Owner Farmers	23	11.5	7.0
	2) Absentee Owners	1	0.8	UNKN
	3) Tenant Farmers	2		0.8
	Total	26	12.3	7.8
7. Existing Irrigation Facilities	- The rice growers group has developed traditional communal irrigation system. - Seasonal flooding especially in March and April seriously disturbs cropping and/or causes crop damages to a significant extent. - Water shortage in the dry season (November to February) also causes difficulty to adjust paddy cropping pattern.			
8. Cropping Pattern	Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec First Paddy (80%) Second Paddy (30%) flood hazards Shortage of irrigation water			
9. Major Crops and their yields and production	Crop		Yield (ton/ha)	Production (ton)
	1) 1st paddy		1.50	9.36
	2) 2nd paddy		1.50	3.51
10. Farmers' Organisation (Buwanyama Rice Project)	Year Established	No of Members (Male, Female)	Registration	Type of Organisation	Membership Fees (Collection Rate)	Subscription (Collection Rate)
	2000	25 (15, 10)	District	CBO	5,000 (95%)	7,500 (80%)
	- Collection of the subscription fee is difficult due mainly to instability of cropping - Opening an account at the bank is difficult. - There is no advisory or sensitisation on developing "Community Wetland Management Plan".					
11. Major Constraints and Problems with their Priority Orders	- The seasonal flooding in the month of March and April is the most serious constraint in paddy cultivation followed by the shortage of irrigation water during the dry season period from December to February. - A lack of knowledge and technical skill are also the priority constraints requiring urgent improvement.					
12. Relevant Organisations for Farming	- They have identified, extension workers, Bukhofu farmer association, Mbale Farmers Association, FETUS are relevant by providing them trainings and inputs. Especially, the extension worker in the area helps the farmers to network with other service providers. - Community Development Officer and S/C environmental councilor sensitise farmers and help them organize groups. - There is no NAADS in the S/C.					
13. Access to Training	- The representative of the group had attended the "Private Sector Training." - He has extended his knowledge to 25 people who are the members of the group. - Attending such training cost Ush. 2,000 for transportation and Ush. 1,000 for lunch. - The training programmes should be organized within the locality of the participating farmers otherwise the transport costs can be rather high..					

DESCRIPTION OF PILOT PROJECT SITE

Project Name: IGOMBE Pilot Project (Group-2)
District: KALIRO (KAMULI)

1. Location	Distance from the District Centre		Distance from Sub-county Centre	
	72 km northeast of Kamuli		5 km south of Bumanya	
2. Area	16.6 ha		Latitude	Longitude
			N 00°58.491'	E 33°31.028'
3. Administration	County	Sub-county	Parish	Village
	1) Bulamogi	1) Bumanya	1) Kyani	1) Kyani
	2)	2)	2)	2)
4. Present Land Use	Almost all of the wetland section has been reclaimed and used for paddy cultivation. Natural pastureland remains in a limited extent.			
5. Beneficiaries	21 farmers in Igawalo Swamp and rice growing farmers in the Kyani Swamp. They mostly live in Kiyunga village.			
6. Land Holding and Tenure		Household (No.)	Owned Area (ha)	Cultivation Area (ha)
	1) Owner Farmers	16	UNKN	12.8
	2) Tenant Farmers	5		3.8
	Total	21		16.6
7. Existing Irrigation Facilities	- Farmers in the area started paddy growing in the 1970s. - No irrigation facilities as well as on-farm works (farm plot formation) have been developed so far. - Paddy is thus growing under rain-fed conditions. - Production of paddy has been unstable year after year, but double cropping has been practiced in parts where the soils are sufficiently moistened by shallow water table.			
8. Cropping Pattern	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec First Paddy (80%) Second Paddy (20%) Upland Crop Upland Crops Shortage of irrigation water			
9. Major Crops and their yields and production	Crop	Yield (ton/ha)	Production (ton)	
	1) 1st paddy	1) 1.50	1) 19.9	
	2) 2nd paddy	2) 1.50	2) 4.95	
	3) Millets	3) 0.35	3) UKN	
	4) Beans	4) 0.65	4) UKN	
10. Farmers' Organisation (Kyani Farmers' Cooperative Society)	Year Established	No of Members (Male, Female)	Registration	Type of Organisation	Membership Fees (Collection Rate)	Subscription (Collection Rate)
	2002	50 (35, 15)	Not yet registered at the Ministry[1]	Cooperatives	2,000 (UNKN)	One Share of 5,000
	- No community wetland management plans, as they did not think it was relevant to them. - Mobilization of farmers to 50 members was difficult.					
11. Major Constraints and Problems with their Priority Orders	- Inadequate paddy production skill was the most critical constraint in the locality followed by pest and diseases problems in the paddy cultivation; and low market price caused by unreasonable bargaining by the middle man. - In regard to the pest and diseases, farmers claimed that the Supa variety, which is the most commonly grown in the area, is seriously damaged by the yellow-mottling-disease.					
12. Relevant Organisations for Farming	- There are no significant organisations which provide support on paddy growing although there area has some organisations such as FETUS, KADIFA and NAADS which are operational. - Neighbors are the most relevant in the area, since they help each other in harvesting, planting and land preparation.					
13. Access to Training	- 6 days Poultry training was provided by NAADS. - The organizer charged Ush.500 per individual. - The participant did not extend his knowledge to other people. - Farmers should be given some lunch or transport refund for participation. - The purpose of attending such trainings will be good in making acquaintances.					

[1] The farmers have already been in touch with the District Cooperative Officer so that he could register them with the Ministry. However, the cost of Ush. 800,000 was suggested for registration by the DCO, which they have not yet met. Therefore, the registration procedure was on suspension.

DESCRIPTION OF PILOT PROJECT SITE

Project Name: GWERI Pilot Project (Group-4)
District: SOROTI

1. Location	Distance from the District Centre		Distance from Sub-county Centre	
	25 km west from the district headquaters			
2. Area	No particular site has been selected for pilot project. Key farmers to be selected from the farmers' organisation members will be trained in pilot projects in other districts.		Latitude	Longitude
3. Administration	County	Sub-county	Parish	Village
	1) Soroti	1) Gweri	1) Gweri	1)
	2) Soroti	2) Gweri	2) Dokolo	2)
4. Present Land Use	· Lowland paddy · Rice growing farmers concentrate in Dokolo Parish · Average land holding varies between 5 and 300 acres.			
5. Beneficiaries	Paddy Farmers in the Dokolo Parish			
6. Land Holding and Tenure		Household (No.)	Owned Area (ha)	Cultivation Area (ha)
	1) Owner Farmers 2) Absentee Owners 3) Tenant Farmers	Many farmers cultivate paddy rice in community owned seasonal swamp.		
	Total			
7. Existing Irrigation Facilities	Participants commented that they grow paddy only one season due to the lack of water since they cultivate in seasonal wetlands. During the dry season, water is not sufficient for cultivation of paddy.			
8. Cropping Pattern of Paddy	Jan / Feb / Mar / Apr / May / Jun / Jul / Aug / Sep / Oct / Nov / Dec Single cropping of paddy This pattern is flexible depending on rainfall and floods.			
9. Major Crops and their yields and production	Crop	Yield (ton/ha)	Production (ton)	
	1) Lowland paddy (rice) 2) Maize 3) Millet 4) Sweet potato	1) 1.6 (rice) 2) 2.5 3) 1.5 4) 2.2		
10. Farmers' Organisation (Amusiya-Akuya Rice Growers)	Year Established	No of Members (male, female)	Registration	Type of Organisation / Membership Fees (Collection Rate) / Subscription (Collection Rate)
	2002	15 (13, 2)	Not Registered	N.A. / 2,000 (100%) / 20,000 (50%)
	· They have member list but not the constitution. · The group does not have a Community Wetland Management Plan. "We are afraid of the wetland policies that we can be identified and be chased out of the wetland. (Excerpts from the comment of the respondent.)" · The members are always reluctant to attend meetings and payment of subscription fee. · The group leader is not aware of how to register the group.			
11. Major Constraints and Problems with their Priority Orders	The farmers claimed that there is a lack of training by service providers on paddy cultivation. One of the causes is that the government has not carried out research on the crop and thus the service providers/ extension staff were incapable of providing relevant technical advices. Furthermore, such advices are less demanded as the government policy on wetland has deterred many farmers from the paddy growing.			
12. Relevant Organisations for Farming	· Aukot Amorichan farmers group provides labor and seed multiplication in upland rice. · Dokolo Rice Growers also provides labor, seeds and skills. · There are several rice growers group within the locality: Awoja Rice growers, Amusia Akuya Rice Growers, and Omugenya Rice Growers.			
13. Access to Training	· The respondent attended the training of project proposal writing provided by Northern Uganda Social Action Plan (NUSAF). Participation to the training was free of charge as it was held at his village. · The respondent has not shared much of his knowledge with group members. . · Farmers time should always be considered and therefore provide some transport refund in addition to lunch.Farmers time should always be considered and therefore provide some transport refund in addition to lunch.			

DESCRIPTION OF PILOT PROJECT SITE

Project Name: WERA Pilot Project (Group-4)
District: AMURIA (KATAKWI)

1. Location	Distance from the District Centre		Distance from Sub-county Centre	
	23 km east from the district headquarters			
2. Area	No particular site has been selected for pilot project. Key farmers to be selected from the farmers' organisation members will be trained in the pilot projects in other districts.		Latitude	Longitude
3. Administration	County	Sub-county	Parish	Village
	1) Amuria	1) Wera	1) Wera	1)
	2) Amuria	2) Wera	2) Amolo	2)
4. Present Land Use	· Lowland paddy. The swamp is owned by the community. · Farmers who grow paddy in Wera and Amolo parish. · The land is owned by the community.			
5. Beneficiaries	Rice growing farmers in Wera and Amolo Parishes.			
6. Land Holding and Tenure		Household (No.)	Owned Area (ha)	Cultivation Area (ha)
	1) Owner Farmers 2) Absentee Owners 3) Tenant Farmers	Many farmers cultivate paddy rice in community owned seasonal swamp.		
	Total			
7. Existing Irrigation Facilities	Paddy cultivation using flood water is commonly practiced in this area. Paddy plots were developed by individual farmers and most of them have bunds so as to keep flood water longer.			
8. Cropping Pattern e.g.(Paddy-Paddy)	Jan / Feb / Mar / Apr / May / Jun / Jul / Aug / Sep / Oct / Nov / Dec Single cropping of paddy This pattern is flexible depending on rainfall and floods.			
9. Major Crops and their yields and production	Crop	Yield (ton/ha)	Production (ton)	
	1) Lowland paddy (rice) 2) Millet 3) Sorghum 4) Cassava	1) 1.7 (rice) 2) 1.0 3) 1.2 4) 6.3		
10. Farmers' Organisation (Emorikikinosi Farmer Group)	Year Established	No of Members (male, female)	Registration	Type of Organisation	Membership Fees (Collection Rate)	Subscription (Collection Rate)
	2003	20 (12, 8)	Not Registered	N.A.	2,000 (99%)	N.A.
	· The group does not have a constitution and member list. The group is not aware of the registration procedure as a CBO or other type of organisation. · The group member is not aware of the community wetland management plan. · The challenges they face is that they have little funds are not sufficient. · Some people are not committed and not attending meetings.					
11. Major Constraints and Problems with their Priority Orders	Farmers claimed that the lack of skills and knowledge in paddy cultivation was the most critical problem in the area. This derived from two causes. One is that the demand for the technical advice on paddy is not significant compared to other crops since many farmers are discouraged from growing rice after the sensitisation on the use of the wetland. This has caused the government to pay little attention to paddy growers. The other cause was incapability of he service providers/ extension workers to provide the services as the government has invested little in researching rice cultivation due to the government policy on the wetland and its limited budget.					
12. Relevant Organisations for Farming	· In the area SOCADIDO and TEDO provides the improved seeds, advice on skills and micro-finance. Awjamam Farmer Association carries out seed multiplication. · Katakwi District Farmers Association offers services on capacity building. · NUSAF provide grants and training on project management. · However none of the above provides assistance for paddy farmers. They are mostly concentrated on upland crops.					
13. Access to Training	· The information on the training is communicated through sub-county and village councilors. · In attending training, the participant needed to meet his own expenses. He sold his produce for that. · After attending the training programme, he spoke to about 30 people, who are mostly the group members, about what he learned. · The training programme should be carried out at the grass roots level since some people cannot afford the transport cost. The training should also provide with lunch if the training will end in the evening.					

DESCRIPTION OF PILOT PROJECT SITE

Project Name: KALAKI Pilot Project (Group-4)
District: KABERAMAIDO

1. Location	Distance from the District Centre		Distance from Sub-county Centre	
	20 km from the district headquarters			
2. Area	No particular site has been selected for pilot project. Key farmers to be selected from the farmers' organisation members will be trained in the pilot projects in other districts.		Latitude	Longitude
3. Administration	County	Sub-county	Parish	Village
	1) Kalaki	1) Kalaki	1) Kakure	1)
	2)	2)	2)	2)
4. Present Land Use	· Lowland paddy · The wetland is owned by the community.			
5. Beneficiaries	Farmers who grow paddy in Kakure Parish			
6. Land Holding and Tenure		Household (No.)	Owned Area (ha)	Cultivation Area (ha)
	1) Owner Farmers 2) Absentee Owners 3) Tenant Farmers	Many farmers cultivate paddy rice in community owned seasonal swamp.		
	Total			
7. Existing Irrigation Facilities	Paddy cultivation using flood water is commonly practiced in this area. Paddy plots were developed by individual farmers and most of them have bunds so as to keep flood water longer.			
8. Cropping Pattern	Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec Single cropping of paddy This pattern is flexible depending on rainfall and floods.			
9. Major Crops and their yields and production	Crop		Yield (ton/ha)	Production (ton)
	1) Lowland paddy 2) Maize 3) Millet 4) Sim-sim 5) Beans		1) 1.7 (rice) 2) 3.7 3) 1.0 4) 0.5 5) 0.37	
10. Farmers' Organisation (Lubanga Engen Rice Farmer Group)	Year Established	No of Members (male, female)	Registration	Type of Organisation	Membership Fees (Collection Rate)	Subscription (Collection Rate)
	2003	19 (11, 8)	Not Registered	N.A.	2,000 (99%)	N.A.
	· The members in the group do not have the money to pay the membership or the subscription fees. However, they do catering service as a group and earn some money. · The group does not have a constitution. · The group does not know anything about Community Wetland Management Plan. · However, the group finds it difficult in operation since the funds are not enough. · Some members of the group do not attend meeting especially the women. They stay at home from morning to evening. · The group is not aware of the process of registering the group.					
11. Major Constraints and Problems with their Priority Orders	Farmers have been sensitized on the government policy of wetland. Thus the extension services for the paddy cultivation are not adequate while the demand for such services is low. Furthermore, since the paddy is not the staple food, the farmers are not very serious of growing rice.					
12. Relevant Organisations for Farming	· Soroti Catholic Diocese Development Organisation (SOCADIDO) provides supports on skills, seeds, restocking and aforestation. · Teso Development Organisation provides seeds and agriculture kits and hoes. · Katanga Women's Association is the rice labor group.					
13. Access to Training	· The respondent has not had any opportunity to attend training on farming.					

1.6 Plans for Each Pilot Project Area

It was planned to implement all the four programmes formulated in the D/P (draft) in a small-scale in the 4 P/P areas selected from the A/P areas with area-specific constraints. In 9 P/P areas selected from A/P area with overall constraints, however, it was planned basically to implement only two programmes of production technology development and organisation and institutional development, with the exception of P/P areas in the northern three districts in which some parts of environment conservation programme is implemented.

The P/P plan was thus formulated respectively for the P/P areas in Budaka (Pallisa), Bugiri, Kumi and Sironko district. For other 6 P/P areas in Namutumba (Iganga), Butaleja (Tororo), Mayuge, Busia, Manafa (Mbale) and Kaliro (Kamuli), the P/P plan was formulated collectively as the one plan. Another one plan was formulated collectively for 3 P/P areas in northern three districts of Soroti, Amuria (Katakwi) and Kaberamaido. Since several training programmes and crop experimental works were planned to be implemented using the facilities of Doho Rice Scheme, these plans were also collectively formulated as the technical training P/P.

A total of 7 PDMs was thus prepared for the above mentioned P/P areas and groups of P/P areas as shown in Table 1.6.1. For more clear understanding, the relationship between the P/P areas and the P/P components/programmes in each PDM is outlined in a matrix presented in Table 1.6.2.

1.7 Actual Implementation Schedule of Pilot Project

The implementation schedule on actual basis is presented in Table 1.7.1. In general, the software development (e.g., capacity building of local government staff and representative farmers) was implemented during the 3rd Field Work period, and the hardware development (e.g., irrigation and drainage facilities) was implemented during the 4th Field Work period.

1.8 Supporting Works for MAAIF-NEMA Coordination for Implementation of Pilot Projects

1.8.1 Preliminary EIA Workshop

A preliminary EIA workshop was convened at Mbale on 7th to 9th January 2004, which gathered district representatives in agriculture, environment and wetland conservation from 12 districts covered by the Study, namely Iganga, Mayuge, Bugiri, Busia, Tororo, Mbale, Pallisa, Kamuli, Sironko, Kumi, Soroti and Katakwi. The objective of this workshop was to initiate a dialogue between various stakeholders concerned with environmental conservation, environmental impacts and policies related particularly to wetlands improvement and/or rehabilitation for sustainable agricultural production. NEMA and WID made presentations on EIA procedures in

Uganda and on the national policy governing the wise use of wetlands, respectively. The workshop led to several valuable findings on wetland use and permitted to identify several issues related to rice cultivation on wetlands. The information was entered in the Project Briefs (Refer to Table 1.8.1 for the content of a project brief) that were prepared for NEMA's screening of the project, which led to the waiving of the EIA process during the Pilot phase of the study by NEMA and to the granting of permits to start necessary construction works for the project by the same authority. Details regarding the project briefs and the coordination with NEMA are presented below.

1.8.2 Project Briefs

(1) Process following the Submission of the Project Briefs to NEMA

In the 2nd Field Work in Uganda, which ended on 9th September 2004, MAAIF submitted to NEMA on 16th August 2004 project briefs for 4 P/P areas located in wetlands of Budaka (Pallisa), Bugiri, Kumi and Sironko districts for scrutiny and approval. NEMA responded to the project briefs on the 7th of October; raising its main points on the necessity to conduct comprehensive assessment and that it discouraged opening up of new wetlands. On 15th October 2004, MAAIF submitted counter-comments on NEMA's issues and waited for reaction to the same. NEMA reacted on its 19th November 2004 letter (refer to Appendix 1-1), which issued formal approval for the environmental aspects of the 4 P/P areas but raised a number of other wetland conservation issues. Salient of these was the lack of clarity on the implementation stages of the raised issues and the request for application and acquisition of permits for carrying out activities within regulated ecosystem as provided in the National Environment (Wetlands, River Banks and Lake Shores Management) Regulations, 2000. It was then urgent to clarify the above mentioned issues in order to avoid further delay of the construction works for the 2 P/P areas in Budaka (Pallisa) and Bugiri districts as such issues have resulted into rescheduling the construction works from January/March to October/December 2005.

The most important part of the 3rd Field Work in Uganda's assignment for the Environmentalist of the Study Team, December 2004 to March 2005, was to clear out the above-mentioned wetland hurdles, which necessitated a steady coordination work between MAAIF and NEMA.

(2) MAAIF-NEMA Coordination

At the beginning of the 3rd Field Work mission, a meeting was arranged and was to be held on 22nd December 2004 between NEMA, MAAIF, DWD, WID and the Study Team to discuss the wetland issues on NEMA's response. These issues were exhaustively discussed in the above-mentioned joint meeting and the different viewpoints were recorded as shown in the record of discussion shown in Appendix 1-2. However, the question of permits remained pending as the NEMA representative promised further consultation with his peers and get back to MAAIF/Study Team in due course. But several later contacts with the NEMA representative did not entirely

solve the issue, and MAAIF/Study Team were left with no option other than a request to government to waive off the permit issue, which would facilitate the P/P implementation and subsequently the undertaking of the construction works. The process of getting a permit waiver was initiated by a letter of the Study Team to MAAIF Permanent Secretary inciting the latter to enhance discussions with NEMA for a smooth implementation of the P/P (refer to Appendix 1-3). The Permanent Secretary reacted through a letter addressed to the Executive Director of NEMA requesting him to waive off permits issues to facilitate the establishment of pilot project sites for a Study on Poverty Eradication through Sustainable Irrigation in Eastern Uganda (refer to Appendix 1-4). Both letters were submitted to NEMA on 11th January 2005, and appointment was made the same day by MAAIF/Study Team to meet with NEMA Executive Director in person for further clarification of the letters and the Study.

The meeting was quite meaningful and successful in that the Executive Director recognized and endorsed the full concerns of MAAIF/Study Team and promised to waive the permits issue to allow the Study including the P/P small-scale irrigation development to continue. His formal answer to MAAIF Permanent Secretary (refer to Appendix 1-5) was to grant the waiver for the permits during the pilot project stage and to request MAAIF to apply for the said permits during the wider project implementation of the A/P and D/P. The letter also requested MAAIF to regularly submit to NEMA monitoring reports of the pilot project activities.