

**Uganda Programme for Sustainable and Inclusive
Development of the Economy (UPSIDE)**

Northern Uganda Resilience Initiative (NURI)

2019 – 2022

**ANNUAL REPORT 2022 &
FINAL PROGRAMME REPORT
WATER RESOURCES MANAGEMENT**

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GOVERNMENT OF UGANDA

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LIST OF ACRONYMS

Abb.	Full Text
BOQ	Bill of Quantities
CAO	Chief Administrative Officer
CAR	Community Access Road
CF	Coordination Function
CRRF	Comprehensive Refugee Response Framework
CSA	Climate Smart Agriculture
Danida	Danish International Development Assistance
DEC	District Executive Committee
DFA	District Farmers Association
DHO	District Health Officer
DKK	Danish Kroner
DLG	District Local Government
DRC	Danish Refugee Council
DSA	Daily Subsistence Allowance
DTPC	District Technical Planning Committee
FPO	Focal Point Officer
GoU	Government of Uganda
IMC	Implementation Monitoring Committee
IP	Implementing Partner
KM	Kilometre
LC I, II, III, V	Local Council Chairpersons, Village, Parish, Sub- County, District respectively
LLG	Lower Local Government
MOH	Ministry of Health
OPM	Office of the Prime Minister
PDC	Parish Development Committee
PDP	Parish Development Plan
PICOT	Partnership in Community Transformation
PMC	Project Management Committee

Abb.	Full Text
RAU	Resilience Agricultural Unit
RDC	Resident District Commissioner
RDE	Royal Danish Embassy
RI	Rural infrastructure
RWC	Refugee Welfare Council
SOP	Standard Operating Procedure
Ugx/Ushs	Uganda Shillings
UNHCR	United Nations High Commission for Refugees
VSLA	Village Savings and Loan Associations
WRM	Water Resource Management

EXECUTIVE SUMMARY

The NURI WRM program was implemented in 8 micro-catchments (mC) namely Yelulu mC shared between Terego and Madi-Okollo, Ora mC in Zombo, Nyarwodho mC in Nebbi, Ayila Abongo shared between Nebbi and Pakwach, Ogowapoke mC in Kitgum, Nyivura mC in Adjumani and Iboa shared between Moyo and Obongi. Projects under these mCs are benefiting both refugees and host communities including the three refugee settlements of Rhino camp, Palorinya, and Pakele. During the implementation of NURI – WRM, a number of issues affected implementation, notably; coordination with district-level and other stakeholders, weather conditions, access to land and security, trade and other economic activities, and COVID-19 pandemic.

The majority of investment plans were prepared, presented and approved during the year 2020 and 2021. In the year 2022, only Ora and Awic mC IPs were presented towards the beginning of February. The total number of WRM projects across all 8 micro-catchments is 435. Two impactful projects namely, Riba Gravity Flow Scheme and Waka Flood Control Works on River Kochi are worth noting in terms of their contribution and multiplier effect to the communities they are serving.

District and Sub County level Sensitization meetings drew 2,050 (1,240 males and 810 female) participants. The district participation was 303 (204 M and 99 F), while 1,747 (1,036 Males and 711 females) participated in sub-county level sensitization meetings across the micro-catchments.

A total of 187 Site Dialogue Meetings (SDM) took place with total attendance of 11,571 (6,341 men and 5,230 women). Even though turn up for SDM was high, men still dominated the meetings as seen from the 55% attendance compared to 45% of women and most critical decision making were observed to be a preserve for the senior male members in the meetings. 2904 (1451 females, 1453 males) members of PMCs were formed and trained in theory and practice of construction and maintenance of Green Roads for Water, Food Forests, protected springs, Riverbank Restoration and soil and water conservation techniques by the District Technical and Sub-County staff.

By the end of 2022, the total number of completed projects across all micro-catchments stood at 429 (98.6%) out of 435 projects. Five GR4W projects were rolled over to 2023 due to delay in procurement processes and unsuitable weather conditions and 1 SWC project in Ayila Abongo micro-catchment is pending fencing. Under Monitoring and Supervision by DTPC, DEC, LLGs and OPM/RWCs, 1,218 visits took place. These visits were organized to supervise implementation, ensure quality control of projects being implemented and to encourage progress on water related interventions. 115 radio talk shows were conducted during the reporting period to create awareness to stakeholders, emphasize stakeholder's roles and responsibilities on operation and maintenance of the created assets among others.

Out of the Ugx **23,498,181,184** allocated for the eight micro-catchments, **Ugx 22,029,220,783 (94%)** was spent. The 6% balance is committed for retentions

The major challenge during this reporting period has been the erratic and uneven rainfall distribution across the micro catchments which has not only delayed the timely completion of Food Forest activities but also diminished the survival rates of established projects, which now require significant gap filling. WRM has enjoyed a little success from the practice of holding a series of preliminary social, economic and technical assessments and meetings to settle land conflict issues and ascertain acceptability of projects. This has significantly reduced the number of land conflict related cases and abandoning projects mid-way implementation. It is also noted that NURI's WRM mode of working within micro catchments fits within the newly adopted government's Parish development Model as all the identified projects are picked from the prioritised water and natural resources issues identified within the micro catchment and merged with Revalidated Parish Development Plans. This approach should be strengthened and continued.

In conclusion, WRM component of the NURI programme was successfully implemented in the eight micro catchments and the created assets and interventions are in use and benefiting the community

1. BACKGROUND

The Northern Uganda Resilience Initiative (NURI) is one of the eight development engagements under the Denmark-Uganda Country Programme 2018 – 2022. The Country Programme aims to contribute to poverty reduction through inclusive and sustainable economic growth, promoting democracy, good governance and human rights and support Uganda's stabilizing role in the region. The Country Programme is divided into two Thematic Objectives: UPSIDE (Uganda Programme for Sustainable and Inclusive Development of the Economy) and UPGRADE (Uganda Programme for Governance, Rights, Accountability and Democracy).

NURI is one of three Development Engagements under UPSIDE and its objective is to enhance resilience and equitable economic development in Northern Uganda, including in refugee settlements and host communities. This objective is being achieved through three strategic interventions: Climate Smart Agriculture, Rural Infrastructure (RI) and Water Resources Management (WRM). Water Resource Management activities address water and natural resources issues in the selected micro-catchments within the Ministry of Water and Environment's wider plans for Northern Uganda water management zone while improving livelihoods of the local communities and enhancing resilience and adaptation to climate change.

The NURI program was implemented in 13 districts in the West-Nile and Acholi sub-regions, namely Arua, Madi Okollo, Terego, Nebbi, Zombo, Pakwach, Koboko, Adjumani, Moyo, Obongi, Lamwo, Kitgum and Agago. The WRM component was implemented at the micro-catchment level. Out of 13 districts, 11 are hosting micro catchment (mC) namely: Yelulu mC shared between Terego and Madi-Okollo, Ora mC in Zombo, Nyarwodho mC in Nebbi, Ayila Abongo shared between Nebbi and Pakwach, Ogowapoke mC in Kitgum, Nyivura mC in Adjumani and Iboa shared between Moyo and Obongi. Projects under these mCs are benefiting both refugees and host communities in three refugee settlements of Rhino camp, Palorinya and Pakelle.

The main activities conducted during the programme implementation period included;

1. District and Sub-county sensitization meetings, screening of identified implementable projects from micro-Catchment Management Plans (mCMPs) developed by Ministry of Water and Environment (MWE) through Upper Nile Water Management Zone (UNWMZ)
2. Presentation and approval of the Investment Plans
3. Site Dialogue Meetings (SDM) and signing of voluntary land donation (VLD) agreements
4. Formation of Cash for Work (CfW) groups
5. Selection and training of Project Management Committees (PMC)
6. Procurement and distribution of project tools
7. Establishment (Planting) of Food Forests and River Bank Systems

8. Public work activities on Green Roads for Water (GR4W) formation of Project User Committees (PUCs) and Water User Committees (WUCs)
9. Radio talk shows
10. Project Implementation and Monitoring by District Executive Committee (DEC) District Technical Planning Committee (DTPC), micro-Catchment Management Committee (mCMC) and Sub-County staff.

2. IMPLEMENTATION CONTEXT

During the implementation of NURI WRM activities, several issues affected implementation, notably coordination with district-level and other stakeholders, weather conditions, access to land and security, trade and other economic activities, and COVID-19 virus outbreak as discussed below.

Coordination with District-Level and Other Stakeholders: Coordination with both the District and Sub County authorities was overall constructive and effective, with the stakeholders welcoming and supporting DRC's implementation of NURI WRM activities. This was evidenced by the high attendance and participation in project meetings and trainings. Resident District Commissioners (RDCs), Chief Administrative Officers (CAOs), Sub-County staff and local community leaders particularly took lead in mobilization of communities in the implementation of WRM projects in all micro-catchments especially in their contributions to securing land for the projects. District Local Governments (DLG) technical staff were instrumental in providing technical guidance during screening and costing projects, PMC trainings, review and approval of designs. While coordination continued to be overall effective, there were instances in which competing priorities with other development initiatives over-stretched DLG and LLG staff. In such instances, DRC observed that DLG and LLG staff tended to prioritize engagements where they were offered the most favorable allowances. This had a slightly negative impact on the implementation of WRM projects, for example, the delay in forming a Water User Committee for the Akinio valley tank project under the Yelulu micro catchment.

Access to Land: The practice of holding site dialogue meetings (SDMs) and signing Voluntary Land Donation forms (VLD) forms between landlords and Sub-counties immediately upon approval of Investment Plans (IPs) has greatly improved access to land for programme activities, however, during the implementation period, isolated cases of land conflicts were registered in Yelulu, Iboa, and Nyarwodho mC. These cases were handled by respective local governments and alternative sites for the affected projects were identified. Overall, DRC continued to receive community support for the implementation of NURI projects. DRC required landowners to endorse and sign voluntary land donation agreements acknowledging their acceptance of the project planned to be implemented on their land. This reduces the number of complaints by landowners. It should also be noted that all land conflicts/disputes were fully resolved during the programme implementation period, which is largely attributed to the positive support from district and lower local governments.

Weather Conditions: In general terms, weather conditions have been characterised by dryness with average precipitation of 102.18mm for most parts of the implementation period in all micro catchments. Iboa, Nyivura, Nyarwodho, Ayila Abongo and Ogwapoke mCs experienced

unseasonably dry spells between July and August 2022, which required DRC to delay the establishment of food forests projects and riverbank restoration activities until mid-September 2022. Waiting for conducive changes in weather conditions has not only delayed the timely completion of planned activities but also diminished the survival rates of established projects, hence requiring gap filling of seedlings. On the other hand, flash floods in fourth quarter of 2022 destroyed road structures and dam embankments. This majorly affected and delayed completion of GR4W in Nyarwodho and Ayila Abongo mC in Pakwach and Nebbi district

Trade, Socio-Economic and Political Activities: The region engaged majorly in trade in agricultural commodities with major traders bringing items from districts of Gulu, Lira, Mbale and Luwero districts. Some traders from South Sudan were also reported especially during the first quarter of the year 2022 purchasing agricultural inputs. The crops traded were sesame, soybeans, sunflower, beans, sorghum, millet and cassava. High prices of merchandise and fuel subsequently increased prices for produce and general merchandize across markets. Fuel prices for petrol and diesel, in particular, remained in the range of 6,000 to 7,000 UGX, which indirectly increased the prices of basic essential goods and services. This made some vendors to abandon delivery on their contracts. DRC proactively negotiated with the affected vendors and retendered some contracts to address the problem of escalating prices within the markets. This slowed the progress of installation of structures on Gr4W. In all mCs, CfW groups preferred not to work on either local markets days or days coinciding with food distributions taking place within the refugee settlements. Both resulted to low turn up on such days. While the political transitions from the Uganda's February 2021 general elections was largely peaceful, high levels of anxiety and uncertainty followed thereafter the conclusion of the elections. Iboa mC in particular, (on the Obongi side) experienced massive change in leadership as a majority of incumbents were voted out of office. This subsequently presented a notable loss of institutional memory. In response, DRC organised sensitization meetings in all NURI districts as a means to ensure newly elected leaders were fully aware of the NURI programme.

The COVID-19 Pandemic: Living with the COVID-19 pandemic became the "New normal". The outbreak of COVID-19 pandemic had drastic effects on all segments of the population and is particularly detrimental to members of those social groups in the most vulnerable situations, i.e., people living in poverty situations and older persons. Early evidence indicates that the health and economic impacts of the corona virus are being borne disproportionately by poor people. DRC Office in Zombo hosting Ora mC was closed for a fortnight following the confirmation of positive Covid-19 cases at the district headquarters in particular the water office which was part of screening exercise of priorities of Ora mC and thus some DRC staff were primary contacts to infected persons. Samples were taken from all the DRC Zombo staff and office was closed for 14 days as per guidelines of MOH, results of which all came out negative to Covid-19. This therefore delayed the execution of activities for Water Resources Management (WRM).

The Government of Uganda imposed lockdown which included movement restrictions between districts, requirements to reduce staffing numbers in places of work, limitations on the number of people allowed to gather for meetings and work, and curfew greatly affected the implementation of WRM in all mCs. In response, DRC developed the country program's business continuity plan and made modifications to daily NURI operations including breaking down the CfW groups into smaller shifts and providing hand washing facilities and taking the temperature of CfW participants. Although COVID-19 continued to pose a risk, case numbers decreased allowing lockdown restrictions easing in 2022 which provided some relief to the program. Furthermore, despite the restrictions and risks experienced during the reporting period, DRC was able to safely maintain operations without significant disruption.

2021 General election: Uganda held election of various political positions both at the lower local government, District and at national level (presidential and Parliamentary) in 2021. The process started with election of flag bearers for various political parties. These had some negative impacts on project implementation as most people were preoccupied with attending political gatherings. It also became challenging to engage the local leaders who were also busy canvassing for votes for re-election for another term in office.

Refugee situation: Refugees continued to be registered into Rhino Camp (Yelulu mC), Palorinya (Iboa ,mC), and Palabek (Awic ,mC) settlements as Uganda continues to implement its progressive refugee policy of open door to all refugees. This is exacerbating the pressure on agricultural livelihoods, economic infrastructure, social services, access to land and natural resources. In spite of the COVID-19 lockdown and closure of boarder points with neighboring countries, huge sections of refugees crossed from South Sudan, DRC and Rwanda into Uganda. Uganda government through the Office of the Prime Minister, Ministry of Disaster preparedness and Refugees and District Local Governments negotiated with landlords to avail land for settling refugees. Land allocated to each refugee measures 30mx30m for both construction of houses and farm land. Arable land is limited hence affecting agricultural production. Refugees hire land from host communities to supplement their agricultural land. Refugee and host communities form joint associations and the hosts provide land for farming. Settlement access roads opened by UNHCR agency are in dire state and some locations are impassable. Efforts made by UNHCR to rehabilitate the roads is minimal and often is mechanized. NURI labor based rural infrastructure development approach especially of Green Roads for Water (GR4W) fits to offer alternative access to service centers and income generation for both refugees and hosting communities. Violent clashes between the host community and refugee community over sharing common water points in the settlement are still common and often leaves casualties and arrests by security agencies. Consequently, some of the refugees have relocated to Kyriadongo and, Adjumani. The hostile environment made it difficult for staff to supervise and monitor the scarification and compaction of

CARs, the maintenance aspects of food forests and formation of project user committees especially in Yelulu mC.

3. IMPLEMENTATION PROGRESS

This section gives an account of the chronological activities carried out during the programme implementation period

3.1. Software activities before actual Implementation of Approved Projects

This subsection provides a narrative of preparatory activities conducted over the course of implementation of NURI WRM programme which included; District and Sub-county sensitization meetings, screening of Identified implementable projects from mCMPs developed by MWE through UNWMZ, presentation and approval of the Investment Plans.

3.1.1 District and Sub- County Sensitization Meetings

As a result of Uganda’s general elections held in February 2021, many districts and sub-counties received new leadership. To ensure the newly elected leaders were well informed of the NURI programme, DRC in coordination with Resilience Agricultural Units (RAU) and the NURI Coordination Function organised district and sub-county sensitization meetings in all districts hosting the 8 micro-catchments. The meetings aimed at introducing the Districts and Sub counties to the NURI programme and the programme’s objectives, outputs, and the role of stakeholders in supporting implementation. Across the micro-catchments, a total of 303 (204 males a 99 female) people participated in District-level sensitization meetings, while 1,747 (1,036 male and 711 female) participated in sub-county sensitization meetings. Attendance in Ayila Abongo and Nyivura micro catchments was low attributed to conflicting priorities within the districts. No sensitization was done in 2022 however DRC continued to remind the District and Sub county stakeholders on their roles in supporting the programme implementation activities. Overall, the sensitization meetings were seen as successful as districts have exhibited a strong understanding of the NURI programme.

TABLE 1: Attendance to District and Sub-County Sensitisation Meetings

Micro-Catchment	District		Sub-Counties		Total
	Male	Female	Male	Female	
Awic	42	12	115	61	230
Ayila Abongo	49	17	74	49	189

Iboa	13	7	182	115	317
Nyarwodho	9	6	137	98	250
Nyivura	13	8	93	59	173
Ogwapoke	21	11	107	71	210
Ora	9	6	174	120	309
Yelulu	48	32	154	138	372
Total	204	99	1036	711	2050

Using statistics from Table 1 above, out of the total attendance, 1,240 were male (representing 60.5) while 810 were female (representing 39.5 %). As a general observation, the rate of involvement of women in the meetings was low compared to that of men, with a majority of the talking and decision-making done by men. To address this, DRC always encourages NURI staff to develop a comprehensive understanding of the hierarchies, attitudes, beliefs and power dynamics in communities, so as to anticipate possible barriers to participation. Furthermore, DRC ensures that meetings are conducted in a language everybody understands and commonly used in the villages, and ensures the involvement of female. DRC staff do try to encourage participation of women.

3.1.2. Project Screening Activities Conducted from 2019 - 2022

DRC received the micro catchment management plans (mCMPs) from UNWMZ for Yelulu, Ora, and Nyarwodho in March 2020 , for Ayila Abongo, Nyivura and Ogwapoke micro catchments in December 2020 and the one for Awic was received in 2021. The selected implementable projects underwent , social, environmental and technical screening to match it with the village priorities that were submitted to the sub counties. Screening of Water resources projects were accomplished jointly with the District technical planning team (DTPC), including the District Engineering, Forestry and Water departments. The purpose of conducting the screening was to ascertain the viability of the identified projects for implementation within NURI-WRM project scope. DRC engineering spearheaded the screening and costing of the selected projects to come up with an investment plan for Water Resources Management projects which were eventually presented to the DTPC, UNWMZ and the Chairpersons of Albert Nile and Aswa Catchment Management Committees (CMC) for approval.

3.1.3. Preparation and presentation of Water and Natural Resources Investment Plans for Approval by catchment Management Committee (CMC) and DTPC

Eight Investment plans were prepared and approved for implementation in the eight micro-catchments of Ayila Abongo, Iboa, Nyarwodho, Nyivura, Ogwapoke, Yelulu, Awic and Ora. For Ayila Abongo, Iboa, Nyarwodho, Nyivura, Ogwapoke, and Yelulu mCs, presentation and approval was done between 2020 and 2021 whereas Awic and Ora mC investment plans were prepared and

approved in 2022. A total of 435 implementable projects were approved in the 8 micro-catchments out of which 108 projects were approved in 2022 in Awic and Ora mC with detailed breakdown in table 2 below. However, two projects which were not initially planned for implementation under WRM were requested to be implemented by District authorities in Zombo and Obongi

One of them is Riba Gravity Flow Scheme (GFS) in Ora mC in Zombo. DRC under Ora mC earmarked funds for the re-construction of Ora GFS in Zombo District, which was intended to supply potable water to communities in Ayaka and Amuda Parishes in Akaa sub-county. DRC carried out an initial yield assessment in 2020 when the catchment was still intact, this assessment indicated a good yield of appropriate water supply for GFS and subsequently led to the organization conducting socio-economic and topographical surveys to further inform the proposed re-construction. Preparations were in place to develop a detailed engineering design of the scheme in partnership with district technical department and Ministry of Water and Environment, however, a pre-requisite for the detailed design was re-assessment of yield/discharge to determine reliability. Two assessments were carried out and both showed very low yield values (i.e., 0.75m³/hr and 0.94m³/hr) compared to the demand of 0.06m³/person/day even before considering environmental flows and other demands. This led to a decision to cancel the Ora GFS design workshop. Subsequently, a team from MWE, under the northern umbrella for water and sanitation, Zombo DLG and DRC conducted yield assessments on two other schemes - Ngume and Riba GFS. Ngume GFS was found to have a yield of 0.31m³/hr at the faucet. Riba GFS discharge was 0.6m³/hr at each of the five tap stands and up to 3.4m³/hr at the source. Comparative analysis of the two GFS found Riba to be the most viable option. Furthermore, the Zombo district DLG had already designed the Riba flow scheme with an option of an extension to serve the villages of Omoyo West, Omoyo East, Mbunya and Nyarka, however, they had been waiting for funds for construction to improve the reservoir and other extension works. DRC proceeded with the Riba GFS project by having a design review workshop attended by a team of Engineers from the different stakeholders from Northern Umbrella of Water and Sanitation (NuWS), UNWMZ, Zombo DLG and DRC for 5-day design workshop aimed at coming up with a detailed design of RIBA GFS. After the design, DRC completed the project with the major components being abstraction structure at Riba Spring source, Sedimentation tank (25m³ Break Pressure Tank), distribution mains, laterals and 11 Public Stand Pipes (PSP).

The second one is Waka Flood Control Works on River Kochi in Obongi district. This project was undertaken to address flooding that affected Waka parish and the villages of Kochi Boma, Kochi Central and Gborokonyo in Iboa mC, Itula sub-county. Notably, 3 community access roads, 1 primary school (Waka P/S), 3 Health Centre IIIs (Waka Old H/C, Waka H/C and Belle H/C) and Gborokonyo trading center were fully submerged. The cause of flooding was believed to be related to the attempted construction of a bridge on the Kochi River connecting Obongi to Yumbe, which left a waterway that gradually widened. Furthermore, blockage of the natural stream due to siltation

and poor fishing practices forced the flow through other routes. DRC was able to control the flooding through the implementation of river bank restoration works combined with resilience design approaches. The specific activities completed included:

- i) Unblocking of the natural water course - 25m wide.
- ii) Blocking a burst point by constructing a 30m wide earth dam with a 17m long key way, 15m long X 3m wide X 2m compacted embankment layering 300mm. The inner dam wall plugged with piled soil from the river bed to ground level created a seal for the dam wall.
- iii) Construction of 1.5km long X 4m wide X 0.75m deep bioswale to slow, spread and sink the excess spillage from the River Kochi.
- iv) Opening an access road which was destroyed by water. A total of 4.3km from the main road at Kochi Boma through Waka Health Centre to the Waka restoration site was opened to enhance accessibility for locals to their farmlands which had been destroyed by flooding.
- v) Planting of vetiver, Napier, bamboo and trees to further stabilise the river embankment and reduce siltation of the river.

TABLE 2: Summary of Projects as per Approved Investment Plans

Micro Catchments	Green Roads for Water	Valley Tank	Food Forests	Springs	Water Ponds	Soil and Water Conservation	Gravity Flow Scheme	Total
Ayila Abongo	2	0	68	11	12	4	0	97
Awic	5	0	38	0	5	0	0	48
Iboa	5	0	36	1	6	2	0	50
Nyarwodho	4	0	27	16	2	5	0	54
Nyivura	5	0	30	6	5	2	0	48
Ogwapoke	5	0	36	1	6	1	0	49
Ora	3	0	25	29	2	0	1	60
Yelulu	3	1	19	2	1	3	0	29
Total	32	1	279	66	39	17	1	435

3.2. Implementation of approved projects

This sub section provides details of the stepwise activities conducted to implement the **435** projects approved in the eight mCs. The activities undertaken included, site dialogue meetings (SDMs) and signing of VLD forms, formation of Cash for Work (CfW) groups, selection and training of PMC,

distribution of project tools, establishment (planting) of Food Forests (FF) and River Bank Systems, public work activities on GR4W, formation of PUCs and WUCs, radio talk shows, project implementation and monitoring by DEC, DTPC, mCMC and Sub-County staff.

3.3. Site Dialogue Meetings and Signing Voluntary Land Donation Forms

A total of **187** site dialogue meetings took place over the course of implementation with participation by a total of **11,571** individuals (6,341 male and 5,230 female). Of these, **71** site dialogue meetings were conducted in 2022 where 7,566 individuals (3,947 males, 3,619 female) participated. The meetings contributed to minimizing potential land dispute issues, and provided space for addressing community concerns and questions. Cash for work beneficiary modalities, groups formation criteria, payment rates and modalities, voluntary land donation forms and the nature of work were also explained to the community during the meetings. Curious to note, men dominated discussions in the meetings with the senior male members of communities referred to for decision-making. In such instances, women were invited to sit together for mutual support and explicitly invited to speak. DRC also promoted open discussions and stressed that there are no 'right' opinions before decisions are taken. After the meetings, voluntary land donation agreements were signed between the Sub counties and the land owners. Over the course of the implementation, turnout for the meetings was high, owing to high enthusiasm by communities.

TABLE 3: Summary of site dialogue meetings conducted during the programme implementation period

Micro-Catchments	Groups	Participants		Total
		Male	Female	
Ayila Abongo	33	2251	2353	4604
Awic	50	735	803	1538
Iboa	8	414	236	650
Nyarwodho	27	285	300	585
Nyivura	13	188	155	343
Ogwapoke	23	1332	966	2298
Ora	26	660	214	874
Yelulu	7	476	203	679
Total	187	6341	5230	11,571

3.4. Community Groups Formation

Majority of community group formation activities were completed over the course of 2021 however, some micro-catchments for example Awic and Ora formed community groups in 2022. A total of **557** groups with 17,468 group members were formed where, **9,326** (53.4%) were women, **8,142**

(46.6%) were male, **10223** (58.5%) were youth and 1,050 (6%) were refugees. Out of the total **557** community groups formed for cash for work activities, **176** groups of **5,975** members comprising of **3,298** women, **2,677** men, **3,618** youth, **2357** adults and **320** refugees were formed in 2022. During the programme implementation period, participation of cash for work participants in the refugee-hosting micro-catchments of Yelulu, Awic and Nyivura were low. This was attributed to clashes with market days as well as in-settlement food distributions. In response, DRC organised planning meetings before public works are started to agree with community members on the most appropriate days of the week and times for scheduling work. . Furthermore, it should be noted that public works groups were encouraged to work for only 3 days a week and for a maximum of 4 hours a day. The low participation of refugees was also as a result of the projects being beyond walking distances in the refugee hosting mCs

TABLE 4: Community Groups Formed

Micro-Catchment	Groups	Total Participants				Youth				Adults			
		Female		Male		Female		Male		Female		Male	
		National	Refugee	National	Refugee	National	Refugee	National	Refugee	National	Refugee	National	Refugee
Ayila Abongo	97	1190	0	1180	0	743	0	739	0	447	0	441	0
		Total: 1190		Total: 1180		Total: 743		Total: 739		Total: 447		Total: 441	
		Sub-Total: 2370				Sub-Total: 1482				Sub-Total: 988			
Awic	50	611	224	462	128	238	143	196	100	229	186	186	147
		Total: 835		Total: 590		Total:381		Total:296		Total:415		Total:333	
		Sub-Total:1425				Sub-Total:677				Sub-Total: 748			
Iboa	54	1534	101	1310	90	942	43	800	36	550	58	552	54
		Total: 1,635		Total: 1,400		Total: 985		Total: 836		Total: 608		Total: 606	
		Sub-Total: 3,035				Sub-Total: 1,821				Sub-Total: 1,214			
Nyarwodho	72	1089	0	1016	0	610	0	553	0	479	0	463	0
		Total: 1089		Total: 1016		Total: 610		Total: 553		Total:479		Total: 463	
		Sub-Total: 2105				Sub-Total: 1163				Sub-Total: 942			
Nyivura	85	1139	0	1186	0	656	0	608	0	483	0	578	0
		Total: 1,139		Total: 1,186		Total: 656		Total: 608		Total: 483		Total: 578	
		Sub-Total: 2,325				Sub-Total: 1,264				Sub-Total: 1061			
Ogwapoke	85	1401	0	1119	0	804	0	716	0	597	0	403	0
		Total: 1,394		Total: 1,119		Total: 804		Total: 716		Total: 597		Total: 403	
		Sub-Total: 2,520				Sub-Total: 1,520				Sub-Total: 1000			
Ora	83	1242	0	862	0	786	0	570	0	456	0	292	0
		Total: 1242		Total:862		Total:786		Total:570		Total:456		Total:292	
		Sub-Total: 2104				Sub-Total: 1356				Sub-Total:748			

Yelulu	31	540	255	537	252	310	146	307	177	230	109	230	75
		Total: 795		Total: 789		Total: 456		Total: 484		Total: 339		Total: 305	
		Sub-Total: 1584				Sub-Total: 940				Sub-Total: 644			
		8746	580	7672	470	5089	332	4489	313	3471	353	3145	276
Grand Total	557	9,326		8,142		5,421		4,802		3,824		3,421	
		Grand Total: 17468				Grand Total: 10223				Grand Total: 7246			

3.5. Formation and training Project Management Committee

During the course of the programme implementation, a total of 726 PMCs of 2,904 members (1,451 women, 1,453 men) were formed and trained. Of the 726 PMCs, 248 PMCs of 992 members (495 women, 497 men) were formed in 2022. Each PMC consisted of a chairperson, vice, secretary and treasurer who were elected by group members in a meeting in which gender was given special attention, at least 50% of the PMCs members were to be female. The PMCs were trained in theory and practice of construction and maintenance of Green Roads for Water, food forests, protected springs, riverbank restoration and soil and water conservation techniques by district technical and sub-county staff. The specific focus of the two-day training included, the technical specifications of the specific projects they will manage, the technical methods to apply and demonstrations of how to use tools safely, basic project cycle management and inter-personal supervision skills, record-keeping for attendance, work norms and conditions, and methods for payment as per the national policy on cash for work, basic training on how to use first aid kits, the DRC's feedback and complaints' mechanism and reporting mechanism for conflicts and risks to relevant stakeholders.

However, over the course of the implementation, PMC training was affected by COVID-19 restrictions placed on the number of people allowed to congregate in one place. DRC responded by dividing trainings into smaller groups, while ensuring strict observation of governmental and organizational standard operating procedures are observed. Table 5 below provides the details of the PMC members selected and trained over the course of the programme implementation period.

TABLE 5: Project Management Committees Formed and Trained

Micro-Catchment	Male	Female	Total
Ayila Abongo	194	194	388
Awic	145	143	288
Iboa	232	232	464
Nyarwodho	140	140	280
Nyivura	248	248	496
Ogwapoke	178	178	356
Ora	180	180	360
Yelulu	136	136	272
Total	1453	1451	2904

3.2.4 Procurement and Distribution of Tools

Assorted tools and materials were procured and distributed to 557 community groups who participated in the implementation of WRM projects during the programme implementation period. These tools and materials included hand hoes, spades, slashers, Pangas, pick axes, axes, strings, measuring tapes, claw hammers, spirit level, wheel barrows, rakes, assorted nails, barbed wires, first aid kits, jerrycans drinking cups, hand washing facilities and soap. Based on each project's infrastructure investment plans and following the standard procedures of the NURI WRM manual for the distribution of tools, different categories and descriptions of tools were procured and distributed to community groups in all the mCs over the course of the programme implementation.

3.3 Implementation status of Approved Projects

Out of 435 projects approved in the investment plans since the commencement of the WRM component of the NURI programme, 429 (99%) have been fully completed by DRC, while 6 (1%) are ongoing and shall be completed and commissioned in quarter one of 2023. Of the 429 completed projects, 374 projects were completed in 2022. The table below provides a comprehensive overview of project completion status:

TABLE 6: STATUS OF APPROVED PROJECTS

Micro Catchment	Green Roads for Water		Valley Tank		Food Forest		Protected Springs		Water Ponds		Soil and Water Conservation		Gravity Flow Scheme		Total		
	Planned	Completed	Planned	Completed	Planned	Completed	Planned	Completed	Planned	Completed	Planned	Completed	Planned	Completed	Total Planned	Total Completed	%
Awic	5	2	0	0	38	38	0	0	5	5	0	0	0	0	48	45	94%
Ayila Abongo	2	2	0	0	68	68	11	11	12	12	4	3	0	0	97	96	99%
Iboa	5	5	0	0	36	36	1	1	6	6	2	2	0	0	50	50	100%
Nyarwo dho	4	2	0	0	27	27	16	16	2	2	5	5	0	0	54	52	96%
Nyivura	5	5	0	0	30	30	6	6	5	5	2	2	0	0	48	48	100%
Ogwapo ke	5	5	0	0	36	36	1	1	6	6	1	1	0	0	49	49	100%
Ora	3	3	0	0	25	25	29	29	2	2	0	0	1	1	60	60	100%
Yelulu	3	3	1	1	19	19	2	2	1	1	3	3	0	0	29	29	100%
Total	32	27	1	1	279	279	66	66	39	39	17	16	1	1	435	429	99%

TABLE 7: PERCENTAGE PROGRESS RATES OF PROJECTS AS OF DECEMBER 2022

Project Type	Percentage of Completed Projects	Progress Rate Details
GR4W	84.37%	Of the 5 GR4W projects which are ongoing, all 5 projects, 3 in Awic mC and 2 in Nyarwodho mC shall be completed by end of quarter 1 in 2023. The delay was as a result of challenges faced in procurement of suppliers for gravel and supplier's slow delivery of gravel and disturbance from the weather.
Valley Tank	100%	The installation is completed and the system is in use. However, the filling of the valley tank has taken long since the area has not received enough rainfall to cause runoff into the valley tank.
Food Forest	100%	All established and maintained
Spring protection	100%	All are protected as planned with their corresponding source protection.
Water Pond	100%	All water pond are completed as planned .
Soil and Water Conservation	99%	Of the ongoing 1 SWC project, all other activities are fully completed except fencing to push the status to completion. Fencing has been delayed against the plan due to the need to engage project stakeholders
Riba GFS	100%	The Riba GFS is completed.

3.3.1 Awic Micro Catchment

CUMULATIVE SUMMARY		A total of 48 projects were planned for implementation in Awic micro catchment as part of the NURI program. From the commencement of the WRM component of the program, 45 projects were completed in 2022. Of these projects, 43
Projects	48	

Planned:			(89.6%) have been fully handed over to the respective districts and sub-country authorities through commissioning ceremonies. The delayed completion of the ongoing projects is attributed to delayed procurement processes for suppliers of gravel and supplier's slow delivery of gravel and manufactured materials. Three road links in Awic will spill over to 2023. The road links were already shared with the CF.
Projects Completed:	45	94%	
Projects Ongoing:	3	6%	
Projects Delayed:	3	6%	

3.3.2 Ayila Abongo Micro Catchment

CUMULATIVE SUMMARY			Under the Ayila Abongo Micro catchment, a total of 97 projects were planned for implementation as part of the NURI program, and 96 projects have been completed by DRC, seven in 2021 and 89 in 2022. Of these projects completed projects only 96 (99%) have been fully handed over to the respective districts and sub-country authorities through commissioning ceremonies. Of the ongoing 1 SWC project, all other activities are fully completed except fencing to push the status to completion. Fencing has been delayed against the plan due to the need to engage project stakeholders.
Projects Planned:	97		
Projects Completed:	96	99%	
Projects Ongoing:	1	1%	
Projects Delayed:	1	1%	

3.3.3 Iboa Micro Catchment

CUMULATIVE SUMMARY		A total of 50 projects are planned for implementation in Iboa micro catchment as part of the NURI program. From the commencement of the WRM component of the
Projects Planned:	50	

Projects Completed :	50	100%	program, 50 (100%) projects have been completed, two in 2021 and 48 in 2022. Of these projects, 48 (96%) have been fully handed over to the respective districts and sub-country authorities through commissioning ceremonies.
Projects Ongoing:	0		
Projects Delayed:	0		

3.3.4. Nyarwodho Micro Catchment

CUMULATIVE SUMMARY			A total of 54 projects are planned for implementation in Nyarwodho micro catchment as part of the NURI program. From the commencement of the WRM component of the program, 52 (96%) projects have been completed, 11 in 2021 and 41 in 2022. Of these projects, 52 (96%) have been fully handed over to the respective districts and sub-country authorities through commissioning ceremonies.
Projects Planned:	54		
Projects Completed:	52	96%	
Projects Ongoing:	2	4%	
Projects Delayed:	2	4%	

Overall, 2 (4%) projects were unable to be completed as planned. The below table provides a summary of the primary reasons for these delays as well as the corrective actions which have been put in place to mitigate further delays:

Project Type	Primary Reason for Delays	Corrective Actions
GR4W	The vendor had challenges in acquiring equipment for grading and damping murrum	The vendor is now on ground proceeding with works

3.3.5 Nyivura Micro Catchment

CUMULATIVE SUMMARY			A total of 48 projects are planned for implementation in Nyivura micro catchment as part of the NURI program. All the 48 projects, were completed in 2022. The 48 completed projects have been fully handed over to the
Projects Planned:	48		
Projects Completed:	48	100%	

Projects Ongoing:	0	0%	respective districts and sub-country authorities through commissioning ceremonies.
Projects Delayed:	0	0%	

3.3.6 Ogwapoke Micro Catchment

CUMULATIVE SUMMARY			A total of 49 projects were planned for implementation in Ogwapoke micro catchment as part of the NURI program, all the 49 (100%) projects were completed in 2022 and have been fully handed over to the respective districts and sub-country authorities through commissioning ceremonies.
Projects Planned:	49		
Projects Completed:	49	100%	
Projects Ongoing:	0		
Projects Delayed:	0		

3.3.7 Ora Micro Catchment

CUMULATIVE SUMMARY			Zombo district planned to implement a total of 60 projects as part of the NURI program under WRM from the commencement of the project implementation. 60 (100%) projects have been completed by DRC, 11 in 2021 and 49 in 2022. All the 60 completed projects have been fully handed over to the district and respective sub-country authorities through commissioning ceremonies.
Projects Planned:	60		
Projects Completed:	60	100%	
Projects Ongoing:	0		
Projects Delayed:	0		

Projects Delayed:	0		
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3.3.8 Yelulu Micro Catchment

CUMULATIVE SUMMARY		
Projects Planned:	29	
Projects Completed:	29	100 %
Projects Ongoing:	0	
Projects Delayed:	0	

A total of 29 projects were planned and implemented in Yelulu micro catchment as part of the NURI program. All the 29 projects are fully completed, 23 completed in 2021 and 6 completed in 2022. All the 29 (100%) completed projects have also been fully handed over to the respective districts and sub-country authorities through commissioning ceremonies.

3.4 DLG/LLG Monitoring and Supervision by DTPC, DEC, LLGs, OPM/RWCs

A total of 1,218 monitoring and supervision visits took place within the 8 micro-catchments of implementation. 928 of the visits of 1,218 were carried out in 2022. The visits were organized to monitor the implementation of projects and to ensure quality control. DRC further used these visits to showcase how water and environment can be conserved using simple resilience design principles. The Ayila Abongo micro catchment was the most visited due to its big number of projects (97) compared to the rest of the micro catchments.

Table 8 Monitoring and Supervision by DTPC, DEC, LLGs and OPM/RWCs

Micro Catchment	GR4W	Protected Spring	Food Forest	SWC	Water Ponds	Total
Ayila Abongo	33	75	187	20	113	428
Awic	2	0	3	0	2	7
Iboa	8	5	4	3	30	50

Nyarwodho	41	49	109	17	4	220
Nyivura	18	9	17	9	35	88
Ogwapoke	41	0	26	5	28	100
Ora	26	116	82	44	11	279
Yelulu	20	3	2	2	19	46
Total	189	257	430	100	242	1218

3.5 Formation of Project User Committees

During the programme implementation period 1,929 (997 female, 932 male) PUC members were formed and trained in the eight micro catchments. Of these, 1,794 (917 females, 878 males) were formed and trained in 2022. During the formation, key local leaders (LC I and LCII members) were present. All PUC members continued to be trained on their roles and were supported in the development of maintenance plans. Other processes meant to enhance the commissioning also took place during the reporting period including, drafting community by-laws for endorsement by the sub-counties, guiding the communities in preparing maintenance plans, and community sensitization meetings for them to understand expectations around ownership of the completed projects.

TABLE 9: PROJECT USER COMMITTEES MEMBERS FORMED AND TRAINED

Micro Catchment	Female	Male	Total
Awic	44	91	135
Ayila Abongo	123	84	207
Iboa	54	72	126
Ogwapoke	116	169	285
Ora	345	204	549
Nyarwodho	99	128	227
Nyivura	188	163	351
Yelulu	28	21	49
Total	997	932	1929

3.6 Field Coordination Meetings

Between 2020 and 2021, DRC participated in 01 Settlement Co-ordination meeting, 04 Sector Working Group meetings and two District stakeholder's coordination meetings in Yelulu and Nyivura micro catchments. DRC also attended 8 field-level coordination meetings organized by DLGs, OPM, World Food Programme (WFP), Sub county and Coordination Function (CF). In these meetings, specific District Development Plans (DDP), improvement of coordination amongst WASH partners, introduction of Cash Based Transfers (CBT) were discussed. Most

partners use this platform for monitoring other partner's activities, share workplans and reports/updates. Furthermore, DRC also attended district inter-Agency coordination meetings on COVID-19 where DRC disseminated information on COVID-19 and recommended SOPs, DRC further provided hand washing soap and facilities to the districts and cash for work groups. However, In this reporting period, there were no eminent donor visits to Ayila Abongo and Ora micro catchments, however Coordination function on their routine spot checks were appreciative on the quality and progress of WRM works in the micro catchments.

In 2022, DRC participated in; two coordination meetings with CF in Ogwapoke mC; one quarterly district coordination meeting in Iboa mC, two NURI CF district sensitization meetings in Nyarwodho and Ayila Abongo mCs and one district monthly coordination meetings organized and chaired by the district lead for agencies in Nyivura mC in Adjumani district.

3.7 Donor Field Monitoring Visits

One monitoring visit by the Royal Danish Embassy to Nyarwodho and Yelulu also took place in 2022. Also, a courtesy visit by UNHCR Country Representative to Yelulu took place in August 2021 which resulted in a commitment by UNHCR to allow DRC use their road equipment for the NURI programme was conducted.

3.8 IMC meetings

Two Implementation Monitoring Committee (IMC) meetings were carried out in Arua and Kitgum districts. The meetings aimed at tracking the progress of implementation of NURI and share lessons learnt during implementation. The IMC of 2022 in Arua was also used to throw more light on NURI extension and prospects for NURI 2. The meetings were attended by the Royal Danish Embassy (RDE) officials, NURI-CF, Line Ministry Officials, LC V Chairpersons, CAOs, FPOs, District Engineers and Production Officers from NURI implementing districts. Field visits were also carried out by IMC participants on a number of WRM projects to inform the course of actions to be taken in the future.

3.9 Technical Audits

One technical audit was carried out by ICS in 2022.. The audit aimed at assessing quality and sustainability of WRM projects. It was also used to evaluate existence and effectiveness of DRC's internal controls. It further assessed safety measures instituted during and after project implementation. A total of 11 WRM projects were visited during the audit; five in Nyivura mC, three in Iboa mC and three in Awic Mc.

3.10 Radio Talk Shows on NURI Project

115 radio talk shows were conducted in total during the programme implementation period to reach beneficiaries and stakeholders with the eight micro-catchments. Out of the 115 radio talk shows, 10 were conducted in 2022; 4 in Radio Maria 90.5 FM in Nebbi, 2 in Trans-Nile Broadcasting Services 98.6 FM in Moyo, 2 on 91.5 Might FM Kitgum and 2 in 90.0 Radio Pacis FM in Arua city. Listeners were taken through the various stakeholders' roles and responsibilities, sensitization on the role of communities in site dialogue meetings, screening of selected projects, costing modalities of screened projects, preparation and presentation of the Investment plans, roles of stakeholders, cash for work modalities and payment rates, tasks and maintenance activities. General feedback from listeners on the implementation of the NURI Programme were received and taken into consideration.

TABLE 10: Radio Talk Shows on NURI WRM Project

Micro-Catchment	Broadcasts	Radio Station	Location
Awic and Ogwapoke	8	Mighty Fire 91.5 FM	Kitgum
Yelulu	4	Pacis FM	Arua City
Ora	16	Maria	Nebbi
Nyarwodho + AyAb	33	Maria	Nebbi
Ogwapoke	9	Mighty FM	Kitgum
Nyivura	31	Amani, Aulogo 103.7 FM	Adjumani
Iboa	14	TBS	Moyo
Total	115		

3.11 Commissioning of Completed Projects

Of the 429 completed projects completed in the eight micro-catchments, 424 projects were commissioned in 2022. Commissioning was done after formation and training of project/water user committees, and preparation of maintenance plans and bylaws. The Table 11 below shows the commissioning status of all mCs.

TABLE 11: TOTAL PROJECTS COMMISSIONED

Micro Catchment	GR4W		Valley Tank		Food Forest		Protected Springs		Water Ponds		SWC		GFS		Total		
	Planned	Commissioned	Planned	Commissioned	Planned	Commissioned	Planned	Commissioned	Planned	Commissioned	Planned	Commissioned	Planned	Completed	Total Planned	Total Commissioned	% Commissioned
Awic	5	2	0	0	38	38	0	0	5	5	0	0	0	0	48	45	94%
AyAb	2	2	0	0	68	68	11	11	12	12	4	3	0	0	97	96	99%
lboa	5	3	0	0	36	36	1	1	6	6	2	2	0	0	50	48	96%
Nyar	4	2	0	0	27	27	16	16	2	2	5	5	0	0	54	52	96%
Nyiv	5	2	0	0	30	30	6	6	5	5	2	2	0	0	48	45	94%
Ogwa	5	5	0	0	36	36	1	1	6	6	1	1	0	0	49	49	100%
Ora	3	3	0	0	25	25	29	29	2	2	0	0	1	1	60	60	100%
Yel	3	3	1	1	19	19	2	2	1	1	3	3	0	0	29	29	100%
Total	32	22	1	1	279	279	66	66	39	39	17	16	1	1	435	424	97%

3.12. Financial Overview

Out of the Ugx **23,498,181,184** allocated for the eight micro-catchments, **Ugx 22,029,220,783 (94%)** was spent. The 6% balance is committed funds for retentions due to be released in the first quarter of 2023 upon rectifications of defects if any at the end of defect liability periods.

TABLE 12: BREAKDOWN OF EXPENDITURE PER MICRO-CATCHMENT

Micro-Catchment	Planned	Spent	Percentage expenditure	Comment
Nyivura	2,937,272,648	2,569,914,944	87%	Balance committed for retentions
Yelulu	2,937,272,648	3,007,301,987	102%	
Ogwapoke	2,937,272,648	2,762,450,865	94%	Balance committed for retentions
Awic	2,937,272,648	2,390,038,485	81%	Balance committed for retentions
Nyarwodho	2,937,272,648	2,696,883,940	92%	Balance committed for retentions
Ayila Abongo	2,937,272,648	2,915,996,230	99%	Balance committed for retentions
Iboa	2,937,272,648	2,840,258,096	97%	Balance committed for retentions
Ora	2,937,272,648	2,846,376,235	97%	Balance committed for retentions
Total	23,498,181,184	22,029,220,783	94%	

4. SUCCESS FACTORS, CHALLENGES, RECOMMENDATIONS AND FUTURE PERSPECTIVES

4.1. Success factors

- Carrying out a series of preliminary social, economic, and technical assessments and meetings to settle land conflicts and ascertain the acceptability of projects before detailed engineering assessments are conducted as well as holding site dialogue meetings (SDMs) and signing Voluntary Land Donation (VLDs) immediately after presentation and approval of investment plans has significantly reduced the number of conflict-related cases and abandoning of projects mid-way.
- Knowledge of resilience design involving the planting of overgrown tree seedlings as opposed to the theory that young tree seedlings establish faster than the overgrown ones has proved to be more successful in Food Forest projects. It has improved the survival rates of trees and reduced gap-filling costs.
- Increased employment, incomes, and social support (and diminished idleness) directly improve self-esteem and self-actualization and reduce hostility, aggression, and the incidence of spouse/child abuse.
- Continuous engagement with local government and partners at project design and throughout the project implementation is very crucial. It is at this time that the different stakeholders are able to identify and commit themselves to their roles. It has also reduced on duplication of activities and projects in the areas of implementation.
- The practice of combining manual labour and machines to implement water ponds, dams, and Valley tank projects has proved to be more efficient in cost and time-saving. Bigger water ponds compared to those done in DAR and RALNUC constructed by this method take a shorter time and at cheaper costs.
- The use of local masons/technicians to construct structures on GR4W proved cheaper compared to the use of Hired established construction firms. DRC was able to construct mega structures (box culverts, vented drifts) at a lower cost than commonly experienced with Government and other implementing partners in the region/country; these implementing partners usually hire established construction firms to do these kinds of

jobs. This was confirmed by the New Plan during their audit visit to West Nile and Acholi in February 2021.

- Testing of construction materials as a means of assuring quality has greatly reduced on losses resulting from premature failure of structures in previous instances. This has improved on the image of NURI Program as well as working relationship between DRC and the local governments.
- High level of collaboration with the ministry's arms, District and lower local government has led to massive support to the NURI programme through sending technical staff to conduct trainings, mobilizing community, supervision of activities in addition to participating in site dialogue meetings to resolve land conflicts. This has smoothed project implementation.
- Selection of right projects, there has been general acceptance and participation for projects which address the needs or challenges of the community. A typical example is the Waka flood control works where community do not want to hear anyone talk ill about DRC just because of the positive impact of the project to local community.
- Involvement of cultural and religious leaders in mediation and dialogue meetings are important as they play an important role in addressing community problems. Cultural leaders are highly regarded and respected in the community as their words are always consider to be final.
- The lessons to be learned from attempts to involve the local population in the maintenance of roads and food forest is that the communities must be involved in the process from the planning stage. Indeed, the community has to view the project as something that they need and not imposed on them from outside. In this respect, it clearly helps if the project is established using local labour as the community is then involved and benefitting from its construction.
- Compared to capital intensive approach, labour-based methods have a significantly higher employment creation potential when compared with equipment-based methods.
- Involvement of the local leaders in the radio talk shows to share challenges with the community and feedback has raised awareness about community participation, interest in project implementation and ownership. Radio talk shows is one of the modes of communication, district leaders asked to participate and pass key project messages to the community. On average, DRC conducts s radio talk shows twice a month with directed messages on maintenance of projects, community mobilization, Cash for Work selection criteria, a status update on the project, and plans for the year among others. It has;
 - increased project acceptance and ownership which will greatly support sustainability,
 - facilitated regular information flow to the community and improved awareness about the NURI program,
 - softened the processes of land donations and participation in the project activities within the micro catchments

4.2. Challenges

- As a result of the transition of local politicians, NURI as a programme, suffered the loss of institutional memory as many incumbents were voted out of office. This was most significantly felt in Iboa micro-catchment (Obongi side), where all incumbents were voted out of office.
- Land conflicts affected project works, cases registered in Iboa, Yelulu and Nyarwodho micro-catchments.
- Conflicting activities lowered participation in cash for work, especially in refugee areas. In some instances, CfW groups prioritized private engagements and led to participants sending children on their behalf. As it is against DRC policy to employ children, these children were sent back by the PMCs.
- Failure of some farmers and institutions to maintain their food forests, led to stunted growth of most trees planted.
- Unseasonably hot and dry weather conditions during the months of July up to mid-August 2022 hardened the soils and affected maintenance activities, while killing many of the established seedlings in food forests across micro catchments. Fruit trees, such as jackfruit, guava, mangoes and bananas, were especially affected. Only drought resistant trees such as teak, neem and acacia survived.
- Stray animals and poorly maintained fencing were also contributing factors of low survival rates within the program's established food forests.

4.3. Recommendations

- New leaders need to be re-sensitized on the NURI programme to gain buy in from the local leaders
- Site dialogue meetings are recommended to resolve land conflicts, and where solutions are reached, voluntary land donation agreement need to be signed between the land owners and the Sub counties.
- Community groups participating in public works activities need to be encouraged to work for only 3 days a week and for a maximum of 4 hours a day to avoid conflicting activities
- Continuous sensitization of institutions and farmers on the need for maintenance to be done followed by relentless follow up on agreed actions. Also, promote integration of cover crops in the food forest as a living mulch that is repeatedly mowed to minimize competition to foster maintenance of the food forests by institutions and communities
- Institutions and farmers to be encouraged to water young trees during prolonged droughts to prevent wilting and possible loss of trees. Heavy mulching around the trees to be done to manage pests in addition to application of biopesticides like neem oil.
- Broken fences and stakes also need to be repaired to deter roaming animals in addition to the institutions and farmers being vigilant

4.4. Future perspectives

- With support from DLGs and LLGs, DRC recommends that a series of dialogue meetings are held to identify conflicts related to land, conflicts/issues emerging within groups, safety concerns and mitigation strategy during the execution of CfW activities.
- In the organisation and planning of CfW days, care must be taken to factor in off-days where participants can focus on their personal activities. At most, 3 days in a week are recommended for CfW activities.
- Periodic review meetings between DRC and the districts should be held to constantly remind the two stakeholders about their roles in every stage of development.
- The NURI WRM mode of bottom top up approach (working within micro catchments) fits within the newly adopted government Parish development Model as all the identified projects are picked from the prioritised water and natural resources problems identified within the micro catchment and merged with Revalidated Parish Development Plans. This approach should be strengthened and continued.
- Some facilitation and motivation strategy need to be planned for some of the Community structures such as PMCs and PUCs like airtime for communication, stationery, T-shirts for identification and more capacity building beyond training to handle CFW activities.
- There is need to revise the cash for work rates for the NURI programme. DRC NURI cash for work rate needs to be revised to consider what other partners are offering to encourage beneficiaries to willingly join cash for work groups and work without feeling overworked

5. CONCLUSION

In conclusion, WRM component of the NURI programme was successfully implemented in the eight micro catchments of Yelulu shared between Terego and Madi-Okollo, Ora in Zombo, Nyarwodho in Nebbi, Ayila Abongo shared between Nebbi and Pakwach, Ogwapoke in Kitgum, Nyivura in Adjumani and Iboa shared between Moyo and Obongi. The created assets and interventions are in use and benefiting the community however it was not possible to establish the outcomes of the programme during the implementation period

6. ANNEXES

6.1. NURI WRM Implementation Progress Per Activity Line

Activity		Indicator name	Target	Achieved	Comments
No.	Name				
3.1 WRM micro catchment plans developed					
	Ministry of water and environment (MWE) and Upper Nile Water Management Zone (UNWMZ) supported to develop catchment plans and bylaws	No. of catchment plans developed & agreed among stakeholders	8	8	All micro-catchment plans developed in partnership between DRC and MWE.
3.2. Implementation of micro-catchment plans by contractor, focusing on water retention, such as multipurpose dams, protection of riverbanks, contour planting, tree planting and other retention structures in the open landscape on farm and off farm.					
	Implementation of micro-catchment plans by contractor. Assist user committees in preparation of maintenance plans	No. of micro-catchment management plans implemented	8	8	All micro-catchment plans have been implemented
		No. of agriculturally related physical and natural water infrastructure constructed or made resilient to climate change	435	429	Implementation is ongoing for some projects.

6.2 Success Stories

6.2.1. Story one

Cash for work funds boosts vegetable farming for a group participant in Lamwo district.

Layet Jane is one of the cash for work member for Cankara David food forest in Alimotiko west, Labigiryang village, Kal sub county. She is a 26-year-old married and a mother of four (4) children.

Mrs. Layet testified that before she was enrolled to the support from DRC under cash for work



FIGURE 2: LAYET JANE POSES FOR A PHOTO IN HER PERMA-GARDEN

group, she had been having her usual business of establishing vegetable seedbed which has taken her 6 years but majorly was on local seeds collection. This is attributed to lack of money to buy and access quality seeds which has market. Layet happily expresses her gratitude to the WRM project where she was selected to be one of the members to get support through cash for work and trained in the

establishment of food forest and Perma-garden. The training was indeed productive on her side, as she has said, because after the training, she went back home with a different thinking of starting to raise quality seeds as a business. After receiving her money, part of it she used it to pay school fees for her children and she used the balance to buy quality seeds to start up a small vegetable nursery. Now as she narrated, she has ready seedlings which are being bought from her by the surrounding people. Her household income started increasing because in average she can earn 10,000 per week from the sale of her seedlings.

After realizing that her family income has increased, she decided to strengthen her VSLA saving from 2000 to 5000 every week. Another achievement she has got from the project was **exposure** because now days they call them “**NURI staff**” whenever they pass and that personally makes her feel good. She is planning to start up a big Perma-garden where she would be selling multiple vegetables to her village. Her dream is also to have a piggery project because from her own assessment, she found out that pigs have high demand in kal sub county and Lamwo district at large.

6.2.2. Story two

A RAY OF HOPE IN KOCHI CENTRAL VILLAGE THROUGH DRC'S RESILIENCE DESIGN APPROACH

On a chilly Friday morning of 12th August 2022, Danish Refugee Council (DRC) met with Omar Ismail, the Local Council I (LC I) chairperson of Kochi Central village, Waka Parish in itula sub-county-Obongi District for an interview. The smile on Omar's face could already give you the impression that he was interested and willing to talk about DRC's interventions and its impacts on the lives of the people in his village. He is a serious farmer just like most of the people in his community and he represents a total population of about 520 members inclusive of children in his village. The maize plantations visible in the village could tell you about the serious farming activities going on. **"See, our soil is very fertile and we get good yields for which we sell and get some income to do other activities like paying fees, changing diets, Omar said"**. He is 53 years old with 3 wives and a proud father of 13 children; 6 boys and 7 girls.

DRC under the NURI programme had intentions to construct a 4km Community Access Road (CAR) linking Belle Health Centre to Waka Health Centre via Waka Primary School. This was a prioritized construction by Itula Sub- County through Waka Parish Development Plan enabling access to health and educational services shared by both nationals and refugees from Palorinya III zone settlement in waka parish. According to Bosco Adriko, Shelter and Settlement Engineering Assistant Obongi, "the road which was to be established using the labor-intensive approach had to be halted due to flooding caused by an out- burst of Kochi seasonal river which needed to be addressed first through resilience interventions.

Before the road was constructed, Waka Parish had been experiencing seasonal flooding since 2008. According to Omar the LC1 chairperson Kochi Central village, Kochi River which covers 3 villages including Boma, Gborokonyo and Kochi Central (the most affected area) burst its banks



FIGURE 3: THEN FLOODED ROUTE FROM BELLE HEALTH CENTER VIA WAKA PRIMARY

causing flooding that displaced residents and affected farming activities in Waka Parish. One side of the river bank had been tampered with by some Engineers who attempted to do leveling with intentions of constructing a bridge connecting Obongi to Yumbe but later didn't continue. Therefore, when it rained heavily, the water would flow through the open channels and flood the village. This flooding made Waka Primary School and Waka Health Centre inaccessible to the nearby host and refugee communities including

establishment of the said Community Access Road. **"We tried to reach out to Moyo and Obongi**

districts for help in vain but we were instead told to leave the village and migrate elsewhere for safety for which we declined because that meant we owned no land, Omar said.”

According to Omar, it was during one of the trainings that DRC conducted for the construction of Belle Health Centre to Waka Health Centre via Waka Primary School CAR for which he was the secretary that he raised the concern of the floods. This project was one of its kind because through the DRC Engineers, an assessment was done to understand the origin of the floods and devise possible solutions to control it which brought Hope. Through DRC **01** spot where the river burst the bank was blocked using earth piled and thoroughly compacted layer by layer using a bulldozer.

The inner wall of the river along this area was lined with sand packed in nylon bags to prevent head cut of the disturbed soil (preventing running water from continuously cutting the soil). Also, **1.5 kms** of bio-swale (a trench constructed on a contour) was excavated to harvest, spread and sink any overflow from the river.



FIGURE 4: A BIOSWALE CONSTRUCTED BY DRC TO HARVEST EXCESS WATER-LEFT AND SAND PACKED IN NYLON BAGS TO PREVENT WATER FROM CUTTING THE SOIL.

“I am very pleased with DRC because it rescued us. From late March and early April of 2021 there have been no floods. Our children can now access school, the health centers and even toilets. As a community, we are enjoying farming because it’s our livelihood. My garden is filled with rice, bananas and maize. Since the Parish Development Model (a Government approach for organizing and delivering public and private sector interventions for wealth creation and employment generation at parish level as the lowest economic planning unit) has come, I am very confident that we will achieve our goals as participants because we now have land to farm. I also liked the bottom-up approach that DRC used to solve our issues because it started from the community and later had the District involved which made our voices heard. Moreover, being a participant for the construction of the CAR that we later did after controlling the floods earned me 150,000 UGX which I used at that time to complete fees for one of my children who was at Lira University. Omar narrated”



“I am very grateful to DRC for the projects brought to us. I intend to gather the community and make a small celebration during the dry season for DRC as an appreciation. In the future if DRC has similar interventions, I request that the channel diverting water is further extended to control any future flood incidents,” Omar remarked.

FIGURE 5: OMAR DURING THE INTERVIEW AT WAKA PRIMARY SCHOOL (THE SCHOOL THAT WAS PREVIOUSLY AFFECTED BY THE FLOODS)

6.2. Activity Photos



(L) SITE DIALOGUE MEETING SESSION IN ZEU SUB COUNTY, (R)PUBLIC WORKS ON GR4W ONGOING IN ALANGI SUB COUNTY



A SYSTEM BASED APPROACH TO WATER HARVESTING AND UTILIZATION IN YELULU MC MARAJU PARISH, URIAMA SUB-COUNTY, TEREKO DISTRICT

ANIMALS WATERING AT A WATER POND EXCAVATED IN OGWAPOKE MC IN YEPA VILLAGE, MUCWINI S/C IN KITGUM DISTRICT



INSTALLATION OF SOLAR-POWERED IRRIGATION SCHEME AT AKINIO SITE

ERIKINYA PROTECTED SPRING IN OLIA VILLAGE, PAKELLE SUB COUNTY, ADJUMANI DISTRICT, NYIVURA MC