

UPSIDE

**Northern Uganda Resilience Initiative (NURI) –
Extension 2023**

NURI

Danida



**Pilot Activity report on Food Forest Maintenance,
Source Protection of Water Ponds and Protected
Springs**

December, 2023

PILOT ACTIVITY REPORT

Pilot Title:	Follow up of Food Forest Maintenance and Source Protection of Water Ponds and Protected Springs
Brief description of pilot	<p>NURI Program closed in December 2022 and in the implementation of NURI extension 2023, CSA Units took over the follow up on maintenance of 796 food forests (517 established at institutions and 279 on individual land), and source protection by greening of 228 protected springs and 78 water ponds which were already handed over by Danish Refugee Council to intended beneficiaries across all the 13 districts. The follow ups done after commissioning of these assets was specifically aimed at;</p> <ul style="list-style-type: none"> • Strengthening sustainable management of food forests, protected springs, and water ponds. • Ensuring socio-economic and environmental benefits of created assets. • Improving ownership and preservation of established assets. <p>Out of the created assets handed over to the CSA implementing partners for monitoring, 741 assets (496 food forests, 209 protected springs and 36 water ponds) were followed up by the CSA partners and of which 565 (51%) i.e., 370 food forests, 153 protected springs and 42 water ponds were being maintained by the benefiting institutions and or communities. With much concentration at institutional levels, overall, 72% of the forests were maintained by the institutions at the closure of NURI extension period. The follow up period also entailed reestablishment of forests with low survival rates (< 30%)</p> <p>Premised on ensuring greening and operational sustainability of the created assets, the institutions and individuals were sensitized on their roles (site specific meetings were conducted on maintenance obligations, access and ownership rights to the assets). Consequently, they benefited from trainings and mentorship on maintenance of the protected springs, water ponds, and trees /vegetation planted including development and implementation of management plans to foster ownership of food forests.</p> <p>Other than staffing costs including medical insurance, transportation expenses on e.g., fuel and lubricants as well as communication, this pilot had no budget for direct activity costs like trainings and input procurement.</p>
Brief description of context	<p>Weather: This was characterized by intermittent rainfall with prolonged dry spell which affected implementation of the pilot. The inconsistent rainfall was an impediment to timely distribution and transplanting of tree seedlings which left limited time for follow up of the food forests whilst also deterring refilling of some food forests with tree seedlings obtained from alternative sources like Kijani, NFA, district nurseries e.g. in Agago etc. The dry spells subjected trees to destruction by termites and stray animals due to scarcity of pasture hence affecting survival.</p> <p>Security: The area has been peaceful during the period of implementation of the project except a case of insecurity at Moyo border with South Sudan which did not deter access of NURI staff to project sites for follow up.</p> <p>Land availability and access: During the maintenance follow ups, it was realized that some projects were located on private land with unresolved disputes such as in Sube primary school in Ofua sub county, Adjumani district. This affected timely and appropriate maintenance of the assets.</p> <p>Refugee response: The regions continue to host refugees from South Sudan and other neighboring countries at marked settlements. New influx was registered in some of these settlements notably Rhino Camp, Imvepi, Palorinya and Palabek. There was also relocation of some refugees within these settlements and from reception centers as and when deemed right by OPM and UNHCR. World Food Programme in collaboration with UNHCR and OPM developed and commenced implementation of a food aid prioritization strategy where several households have been phased off food aid leaving the extremely vulnerable still receiving food aid. The influx however, did not impact of the follow-up and maintenance of these forests.</p> <p>Coordination and Collaboration: NURI Extension Pilot Program maintained close working</p>

	<p>relationships with the Local Governments, Institutions, Individuals and communities owning the created assets and other partners in the regions like UNHCR, OPM, NARO, ZARDI's, NFA, DCA, Kijani including the private sector. Under the food forest follow up, the CSA partners linked institutions/farmers with NFA and Kijani for tree seedlings that were used to refill food forests with very low survival rates and those intending to expand the forests in next year.</p>
<p>Key project successes</p>	<p>Key results include:</p> <p>Agroforestry practiced in the food forests: Most institutions practiced agroforestry in the establishments as a means of achieving increased biodiversity and keeping the trees weed free. Under the practice, cover crops were encouraged to minimize competition for sunlight, nutrients, and space.</p> <p>Strengthened ownership of food forests Institutional food forest management plans were generated with support of the implementing partners and there was a deliberate effort to incorporate in the respective schoolwork plans for approval by executive committees and subsequent implementation. Most of the institutions were maintaining the food forests although not timely. The plans helped to inspire ownership of the food forests.</p> <p>Institutional willingness to expand the food forest: Efforts to maintain and gap fill the food forest by institutions sparked the need to expand the food forests. During the implementation, the institutions were linked to organizations providing free tree seedlings e.g., UNHCR, DCA and government entities like NFA and district nurseries (Agago). Incidentally, most institutions have adequate land in their possession.</p> <p>Use of the created assets for learning in schools: Some schools have incorporated the use of food forests for practical lessons enabling young pupils to understand the benefits of trees thereby inspiring maintenance and ownership as well as replication.</p> <p>Follow up monitoring by knowledge partners: The continuous monitoring and technical backstopping by DLGs and the technical project leads provided a platform for the CSA partners and beneficiaries to receive correct advisory information. Additionally, the DLGs technical staff maintained close contact with the institutions to give guidance when needs arise.</p> <p>Community Sensitization: Involvement of School Management Committees PTA Chairpersons and community leaders during sensitization on the benefits of trees broadly opened their minds on the need for environmental conservation.</p> <p>Farmer Managed Natural Regeneration (FMNR): Emphasis on FMNR minimized destruction of indigenous tree species, as institutions were advised on the comparative advantage of indigenous species being better adapted. Their preservation also enhances species diversity by providing conducive habitation for wide range of both flora and fauna</p>
<p>Project shortcomings and solutions</p>	<p>Information gap: During handover of created assets, most institutions were not represented which contributed to their delay in commencing maintenance activities. There was also communication gap between DRC staff and end-users (Institutions), information flow between the cash for work (CFW) groups and the institutions was limited thus most institutions lacked clarity on their obligations which arguably contributed their delay in commencing maintenance. The follow up visits by CSA Units helped to activate maintenance in some institutions.</p> <p>Poor state of food forests and other projects: At time of handover of these projects some were in very poor state in terms of plant establishment and maintenance hence the need for refilling. Some institutions in Adjumani, Obongi and Agago districts were linked to actors like NFA and Kijani among others.</p> <p>Weather variability: Unpredictable weather patterns significantly affected the reestablishments of food forests with low survival rates and/or gap filling,.. These gaps mostly affected food forests in districts along the Albert Nile belt like Pakwach. Consider mulching and watering of seedlings where possible to mitigate dry spells</p> <p>Unexpected workload on staff: Level of the extension workforce was generally incommensurate to the scale of work to be executed within the extension period coupled with vast geographical area over which the pilot was implemented. This affected intensity and</p>

	<p>coverage of advisory services on recommended practices and management of trees. This was reinforced by CF and DLG staff participating in the follow ups.</p> <p>Pests and diseases incidences: Incidences of pests and diseases in some food forests affected the survival and vigor of trees. The extension workforce from the CSA implementing partners came on board later after full establishment of the food forests. However, some institutions received technical backstopping on organic pesticide formulation use to mitigate pests and diseases.</p> <p>Land disputes: Cases of land disputes in areas with established food forests delayed the timely management of the created assets which constrained the follow up efforts by CSA implementing partners especially in selected institutions in Adjumani and Koboko districts. Some institutions registered scenarios of malicious destruction of the established food forest attributable to unresolved land disputes. Engagement of local authority was key in resolving land issues and signing of the land donation agreement.</p> <p>Limited enforcement of by-laws: Overall, there was a limited initiative by local authorities in supporting Project User Committees and institutions in implementing by-laws. The destruction of established and young trees by stray animals and bushfires as well as inappropriate use of water ponds was unchecked in almost all the districts. Engagement of subcounty authorities to some extent help to address issues of stray animals</p>
<p>Lessons learned</p>	<p>Coordination and transition of ownership: Involvement of end users of food forests (School Management Committee (SMC), Parents Teachers Association (PTA), administrators and learners) from onset of food forest establishment albeit by Cash for Work groups (Independent entities) enhances seamless transition of responsibilities and requisite sense of ownership.</p> <p>Agro-forestry in Food Forests: Most institutions found maintaining food forests incorporated crops in them to ease maintenance. Most trees in such food forests were better maintained as weeding is more promptly done along with the crops. This was particularly visible in food forests with less tree canopy. Many also used this technique to safeguard trees from stray animals.</p> <p>Site-species matching Vs beneficiary preference. Apart from inter-species and site-species matching to enhance survival of trees which is an incentive for maintenance, beneficiary preference to certain extend also influences degree of attention. For example, considering the institutions preference when selecting tree species to inform choice of tree species for establishing institutional food forests, regular and timely information sharing among others are incentives for increased ownership.</p> <p>Integration of theoretical and practical knowledge. The water retention structures such as bioswales are being used as practical instruction materials for soil and water conservation in some institutions.</p> <p>Governance and operational strategies. To ensure sustainability of the food forests, a few institutions are spearheading establishment of governance bodies and operational maintenance strategies for instance allocating PTA funds to finance maintenance and involving parents in maintenance of food forest events on behalf of learners which is guided by the management plans developed. This initiative has a potential to be replicated by other institutions thus attainment of operational sustainability of the institutional food forests.</p> <p>Land ownership and tenure security. Understanding the contextual land use tenures are critical considerations while siting food forests in communities. Therefore, inclusion of stakeholders at various levels during implementation of long-term and economically vital investment projects like food forests.</p> <p>Inter-species spacing and natural regeneration: Much as the planting pattern of food forests is well outlined in the RI and WRM manuals, the indigenous species on ground were not documented to enhance integration of the exotic species with indigenous ones and hence gaps in terms of inter-species spacing noted during the monitoring exercise.</p> <p>Knowledge gap on FMNR: There is significant knowledge gap among beneficiaries on the</p>

	<p>importance of indigenous tree species.</p> <p>Maintenance capacity: Institutions scored high maintenance percentage due to availability of resources which was not the case at individual establishments.</p>
<p>Follow-up Actions</p>	<p>Involvement of school management: At the initiation and establishment of the food forest projects, the school management weren't involved which affected sustainability of most food forests. To counter that, management of the institutions ought to be engaged during implementation of the created projects.</p> <p>Linkage for complementary support: To address the need for refilling of food forests with low survival rates, plans of expansion of food forests and woodlots as well as narrow the extension gap in institutions, linkages to organizations and or programmes such as UNHCR, ICRAF, DCA, NFA and private actors like nursery operators for tree seedlings and extension should continue.</p> <p>Beneficiary selection criteria: Despite most institutions having resources as land, it is important that master plans are presented as requisite for siting food forests. It enables the institutions to effectively prioritize investments and avert land disputes with neighbours.</p> <p>Site-species matching: Future programming should ensure comprehensive site-species matching coupled with inter-species spacing are given keen attention for better survival of trees and performance. Additionally, focus should be on management of established trees in pest and diseases as well as preservation of pre-existing trees and most especially the indigenous ones.</p> <p>Identifying credible capacities: Even though the extension staff of CSA implementing partners with background in agronomy were trained on tree growing, they generally exhibited limited hands-on knowledge and experience in tree growing. Therefore, employment of qualified foresters with proven field experience to oversee the food forests is strongly recommended.</p> <p>Theft of tree seedlings: At some districts, some seedlings were vandalized by community members and planted in their own gardens, an indication of demand for seedlings at individual level which ought to be considered in future.</p> <p>Conclusion</p> <p>Though overwhelmed with the workload from several pilot activities within restricted time, the follow up engagements conducted by the CSA Units greatly improved the level of care and attention of beneficiaries & institutions as reflected in this report. It has increased the level of awareness and interest towards environmental greening which most institutions demonstrated willingness to undertake. The need for sufficient sensitization and training as well as adequate skilled workforce should not be underestimated.</p> <p>Scaling up of similar concept at institutional level is recommended given the fact that labor force for maintenance is guaranteed except at sub county headquarters and other institutions. Many forests these were not well cared for and this was as a result of Resource constrains.</p>