

**UPSIDE**

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

**NURI**

**Danida**



**Pilot Activity report on Household Level Tree  
Growing  
December, 2023**

## PILOT ACTIVITY REPORT

<b>Pilot Title:</b>	Household Level Tree Growing
<b>Brief description of pilot</b>	<p>Premised on the experience gained from the tree growing pilot implemented by AFARD in Pakwach district in 2022 using a cost sharing model, this phase of tree growing pilot was expanded to 12 districts NURI programme covered, excluding Agago. It targeted 440 NURI CSA groups of the following categories; national farmer groups, refugee women and mixed refugee/host community groups. Its objectives were to test tree growing at household level using a cost-sharing approach and to restore and conserve productivity and resilience of the farming landscapes in supported areas of Northern Uganda while contributing to household incomes and resilience. Specifically, it addressed the following issues;</p> <ul style="list-style-type: none"> <li>• Knowledge and skills gaps in tree growing and environment protection</li> <li>• Depletion of vegetation cover and resultant environmental degradation</li> <li>• Limited access of small-holder households to biomass energy</li> </ul> <p>At an estimated average size of 25 members per group, this pilot targeted 11,000 households. Selection of households was through application by submitting filled expression of interest forms depicting willingness to meet 30% cost of tree seedlings. Based on the lessons learnt in Pakwach pilot, the average number of tree seedlings per household was dropped from 50 to 30, translating to a projected total of 462,000 seedlings for the 11,000 households inclusive of projected 40% for gap filling. The farmers benefited from capacity building on tree growing, advisory / extension services and subsidized cost of tree seedlings. i.e., 30% of seedling price met by farmers and 70% by the programme</p> <p>A number of Extension Officers were recruited to oversee this pilot, with one (01) Agriculture Extension Officer deployed to support about 30 farmer groups in addition to implementing other pilots. This meant a relatively high ratio of 1AEO: approximately 750 households. Additional skilled workforce with forestry background was considered to reinforce the AEOs over 5 months period.</p> <p>Resilient greening approaches entailing use of the concept of resilience designs premised on soil and water conservation in establishment of trees was incorporated to enhance survival of the trees. Likewise, Farmer Managed Natural Regeneration concept was introduced during staff training to promote preservation of indigenous tree species. Midway through its implementation, a concept of farmer-to-farmer extension was introduced to enhance outreach of extension services.</p> <p>Approximately a budget of UGX. 669 million was used to implement this pilot alone, less staff cost (Salaries inclusive of statutory deductions, transportation costs covering fuel, lubricants, maintenance and repair services as well as communication costs) across the 12 districts of operations.</p>
<b>Brief description of context</b>	<p><b>Weather:</b> This was characterized by intermittent rainfall which affected implementation of the pilot. The inconsistent rainfall was an impediment to timely distribution and transplanting of tree seedlings and consequently survival of the trees.</p> <p><b>Security.</b> The regions and all the refugee hosting districts enjoyed relative peace during the period of implementation of the project except a case of insecurity at the Uganda border with South Sudan that nearly spilled into Palorinya Settlement. However, it was resolved by the concerned authorities.</p> <p><b>Land availability and access:</b> Land as a requisite for tree growing greatly influenced farmers decisions in terms of tree species selection, siting, quantity and the planting pattern of trees. Most households faced with land shortage opted for boundary planting.</p> <p><b>Food security situation:</b> The regions remained relatively food secure in the third and fourth quarters of 2023 but with some reported cases of food shortages in some households as there was little harvests from season A of 2023. Food stuffs like, cassava, vegetables, sweet potatoes, maize, sorghum, millet, rice, beans, pigeon peas, sesame, ground nuts, were in high demand across the regions. Food as a basic</p>

	<p>necessity is one of the short-term priorities that partly slowed the pace of cost sharing for tree growing and a recognizable reason for poor participation of refugee households in this pilot.</p> <p><b>Economic activities:</b> Farming remained one of the main economic activities in these regions with most farmers including refugees actively engaged in both crop production alongside livestock and petty businesses. Tree growing continues to face stiff competition with these economic activities due to urgent short-term priorities and needs.</p> <p><b>Refugee response:</b> The regions continue to host refugees from South Sudan and other neighboring countries at marked settlements. 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. This reform in food aid, a core survival needs of refugee households compounded their inability to cost share for tree growing, owing to the ever-increasing pressure to survive.</p> <p><b>Coordination and Collaboration:</b> NURI Extension Pilot Program maintained close working relationships with the Local governments, farmers with whom NURI programme cost-shared tree growing pilot and other partners in the regions like UNHCR, OPM, NARO, ZARDI's, NFA, DCA, Kijani including the private sectors. Under tree growing pilot, the CSA-IUs linked farmers with NFA and Kijani for complementary support.</p>
<p><b>Key project successes</b></p>	<p><b>Key results include:</b></p> <p><u>Expression of interest in household level Tree Growing:</u> Overall, there is very high interest in tree growing among small scale farmers. E.g.,288,209 households from 447 NURI supported groups including non-NURI beneficiaries completed and returned interest forms reflecting willingness to grow at least 1,297,715 trees across the 12 districts. More farmers registered interest to cost share for tree growing upon distribution to those who responded timely.</p> <p><u>Willingness and ability to cost share:</u> Despite being uncommon, the cost sharing model proved practicable, with at least 83% (9,175hh) of targeted 11,000 households able to cost-share timely, for assorted 366,322 (79%) of total (462,000) seedlings planned. In Nebbi, Zombo and Pakwach districts, non-group members also cost shared for tree seedlings through NURI group members and/ or their spouses</p> <p><u>Increased knowledge and skills in tree growing:</u> Supported farmers were more knowledgeable about the best practices in tree growing after the trainings conducted by AEOs. The knowledge gap in tree growing and management has also been bridged since most programmes implementing reforestation give limited attention to knowledge and skills provision.</p> <p><u>Increased access to tree seedlings:</u> Farmers' access to high quality tree seedlings increased as NURI supported delivery of tree seedlings closer to their vicinities while some households were linked to the private tree nurseries and complementary programs/organizations like NFA, Kijani etc for additional tree seedlings.</p> <p><u>Integration of trees in farming landscapes:</u> The programme has contributed to increased tree cover with at least 360,079 assorted tree seedlings transplanted. Survival as of October, 2023 is 76% (Survival data of 273,330 out of 360,079 trees transplanted by 9,175 households)</p>
<p><b>Project shortcomings and solutions</b></p>	<p><u>Adverse weather variability:</u> Weather shifts did not only delay distribution and transplanting of tree seedlings but also affected survival rates. Weather condition further affected the distribution patterns as seedlings meant for gap filling were delivered together with seedlings for initial establishments. This left no room for gap filling using seedlings cost shared in some units. Restricting transplanting to only season A wasn't possible as some planting slipped second season due to rampant occurrence of dry spells.</p> <p><i>Seedling distributions were halted until favorable weather conditions were experienced.</i></p>

	<p><i>Soil and water conservation measures like mulching and water retaining features were introduced to minimize soil moisture losses.</i></p> <p><u>High extension staff to farmer ratio i.e., averagely 1:750 households:</u> The level of extension workforce was generally incommensurate to the scale of work to be executed within the extension period coupled with vast geographical area in which the pilot was implemented. This affected intensity and coverage of advisory services on recommended practices of transplanting and management of trees. <i>Farmer to farmer extension approach was introduced to disseminate extension services to ensure every farmer timely gets the advisory services. Though not promptly applied in all districts, this approach worked very well in Koboko and few groups in Lamwo district where it was applied.</i></p> <p><u>Theft of tree seedlings:</u> Some farmers lost tree seedlings they cost shared to theft by unknown persons and they were unable to replace them timely. This reduced survival rates in some locations. <i>This is a sign of increasing awareness on benefits of tree growing and high demand for seedlings in the region. Future programs should consider extensive trainings on local tree seed collection and propagation targeting progressive farmers to increase access to tree seedlings and integration of other socio-economic activities for more inclusiveness.</i></p> <p><u>Project duration:</u> The Time frame of one year is inadequate to effectively oversee the pilot activities and systematically provide the necessary mentorship at appropriate time as trees growing progresses. <i>Tree growing being a process, necessitates allotment of ample time for adequate monitoring and mentorship. Where tree growing will be implemented it should factor duration.</i></p> <p><u>Poor mindset on tree growing:</u> Most farmers did not give trees the same level of attention given to crops, despite cost sharing. Some farmers did not transplant seedlings timely or take care of them. This negatively affected their survival and performance. <i>Extension services and rigorous awareness creation needed at onset and throughout implementation period.</i></p> <p><u>Limited enforcement of by-laws:</u> Generally, Local Authorities are not supporting farmers in implementing bylaws. Destruction of young trees by stray animals was rampant in all districts. <i>Involvement of sub-counties to intervene worked well in many sub-counties.</i></p> <p><u>Free supply of seedlings by other organizations and programmes</u> affected farmers' response towards the cost sharing concept. This is coupled with the fact that farmers are challenged by other HH needs. <i>Sensitization on the benefit of cost sharing such as extension services provision alongside socio-economic benefits of tree growing and freedom of choice are key.</i></p> <p><u>Management of farmers contributions/cost sharing:</u> Units/partners did not manage cost sharing records well and hence met challenges with reconciliations which compelled penalties imposed on some Units due to non-compliance to prescribed guidelines. Besides, most farmers were not keen on proper record keeping e.g., quantity of trees they planted and survival rates. Majority could not readily account for survival of their trees. <i>Proper record keeping is key with cost sharing for tree growing so that farmers money does not disappear. Proper and flexible procedure of collecting farmers contributions is necessary. Farmers should be involved in record keeping from onset and continuously mentored.</i></p> <p><u>Land access:</u> Limited access to land in some areas was a deterrent to higher number of trees planted. Consequently, boundary planting was more common in areas faced with land shortage and fragmentation.</p>
<p><b>Lessons learned</b></p>	<p><b>Involvement of beneficiaries and key stakeholders in species selection:</b> Consultation with farmers and key stakeholders in tree species selection and/or matching positively contributes to acceptance and timely remittance of their contributions.</p> <p><b>Management and care for the Trees:</b> Trees planted and managed by either women and or children are well established with good survival rates compared to trees cared for and</p>

	<p>managed by men. This is attributed to the attention and care rendered to the growing trees.</p> <p><b>Cost sharing:</b> Some farmers are willing to cost share for tree seedlings. However, this is often jeopardized by other programs giving free seedlings. On the other hand, the fact that beneficiaries invest their resources in tree growing is not a guarantee for their proper and timely maintenance. Majority of the beneficiaries do not attend to trees as required despite cost sharing. Mobilization of cost sharing is time consuming and requires good record keeping.</p> <p><b>Farmer to farmer extension:</b> The provision of extension services is key in tree growing as farmers lack the basic knowledge and skills. It also motivates them to manage and nurture trees for better quality of desired products and ecosystem services.</p> <p><b>Program implementation:</b> Tree growing should be integrated along other program interventions and not a stand-alone intervention for cost efficiency. Though easily adoptable, it requires a lot of extension services through home-to-home visits. It requires proper planning with ample time for preparatory and inception phases of implementation, e.g., when to start the activity, mobilization of farmers' contributions, training of farmers, mapping of tree nurseries, procurement and distribution of seedlings; and follow up of farmers. This improves the results and outcome of tree growing. Inclusion of soil and water conservation measures is very crucial for higher survival rates. Tree growing can be implemented at household level and does not necessarily require cash for work to compel adoption and ownership.</p> <p><b>Preferences of the tree species:</b> Women prefer fruit and short-term species while men opt for timber and pole species. Whilst species matching is a requisite for good survival, the influence of preference on ownership of investment by beneficiaries is a factor worth noting.</p> <p><b>Access to land:</b> Both women and men seemed to access land for tree growing without so much dynamics in the household decisions. e.g., no cases of domestic violence resulting from the pilot were registered but rather many cases of spouses co-financing were registered. Whereas boundary planting is common in fragmented areas with high population density.</p> <p><b>Adaptation to adverse weather variability:</b> Indigenous tree species are less affected by weather extremes as compared to exotic ones. The current shifts in weather patterns affect survival rates even with transplanting at onset of first season rains. Area based species matching is not enough but should be furthered to microscale species-site and species-species matching. Tree cover restoration and diversity would be realized more faster and cheaply by promoting and conserving indigenous species.</p>
<p><b>Follow-up Actions</b></p>	<p><u>Beneficiary targeting:</u> At household level, tree growing which entails timely and proper maintenance of trees beyond transplanting, in order to achieve good survival and high product quality, is faced by many setbacks including lack of finances to meet pressing needs and labour for maintenance, limited access to extension services and poor mindset towards long term investments. This calls for assessment of farmer's capacity to manage trees beyond merely their interest and willingness to participate in tree growing. Linkage of supported groups to complimentary support from forest departments and other actors should also continue for expansion of tree growing and sustainability.</p> <p><u>Duration for preparatory activities:</u> Ample time should be allowed for preparatory activities like awareness creation, establishment of soil and water conservation structures like bioswales, half-moons etc, compost making and trainings. 6 to 8 months recommended for these prior to transplanting of seedlings so that farmers are better prepared.</p> <p><u>Staff recruitment and deployment:</u> Adequate staff should be planned for adequate extension and mentorship through home visits. This is in consideration of strategic integration of tree growing at household level rather than group level to foster ownership</p>

whereas the group approach eases mobilization and knowledge transfer. And those employed should have both technical qualifications in forestry and field experience for better results.

Training approaches: A combination of group trainings and individual home visits are recommended for delivering trainings to farmers. Whereas the farmer-to-farmer extension approach initiated, shows promise in increasing outreach and sustainable access to information, there is need for reinforcement by qualified staff.

Strengthening adoption: Tree growing should be integrated into household planning (Visioning) as it contributes to overall household development and necessitates close attention, to foster ownership.

Promotion of indigenous species: Since indigenous species are less affected by weather extremes than exotic species, trainings on Farmer Management Natural Regeneration (FMNR) a low-cost land restoration technique, introduced in this pilot, should be strengthened to facilitate the growth of important indigenous tree species.

**Conclusion:** Despite the restricted duration of this pilot, the key achievements registered of this pilot present sufficient prove that household level tree growing using cost sharing approach is possible, moreover with due consideration of recommendations enlisted. The need for ample duration of implementation with due attention to preparatory activities coupled with adequate technical workforce and attention to record keeping should not be underestimated. Despite time constraint to determine the outcome if this pilot, its core purpose of greening NURI has been achieved among targeted households, to a greater extend.