Restoring natural capital through tree-based interventions to reduce social tensions in humanitarian settings

Duguma Lalisa[1], Okia Clement[1], Watson Cathy[1], Nzyoka Judith[1], Kihumuro Phillip[1], Minang Peter[1], Fungo Bernard[2], Ariani Charles[3]

[1] World Agroforestry, [2] National Forestry Resources Research Institute (NaFFORI) Uganda, [3] National Forestry Authority (NFA) Uganda

Introduction

Uganda hosts over one million refugees, mostly in the north of the country. Due to the influx, pressure on ecosystems has intensified. Host and refugee communities both depend heavily on naturally vegetated areas for farming as well as tree products such as wood for cooking, brick burning, charcoal making, timber, poles, slats for furniture and fruits, and services such as shade and microclimate modification.

Due to lack of alternatives, both communities, but particularly the refugees, intensively cut down and harvest trees and tree products. Exploitation of the surrounding woody vegetation is leading to user right conflicts and straining ecosystem services.

This initiative focused on identifying potential tree-based approaches to protecting and restoring the ecosystem and assessing the enablers for fast-tracking ecosystem restoration in Rhino Camp and Imvepi settlements, Uganda.

Interventions

1. State of degradation in Rhino Camp and Imvepi

- Over 84% of both host and refugee community members believe the ecosystem is degrading, thus causing societal tension.
- A field assessment using stump density as proxy found that 60% of the trees in the landscape had been cut, mostly following the influx in the last 2-4 years.

2. Typologies of restocking options for the landscape

Three broad ways emerged to address loss of woody biomass:

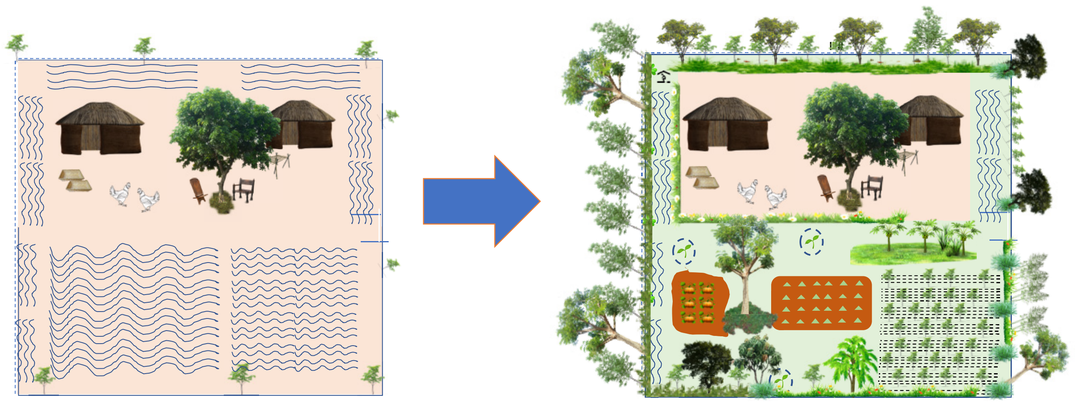
- Conserving existing trees.
- Tree growing (e.g., agroforestry – scattered trees/shrubs on farms/ refugee plots; woodlots; fruit orchards).
- Promoting natural regeneration of sprouting trees.

3. Tree growing niche preferences

Refugees suggested that 66% of trees be planted along plot boundaries and within homesteads. In contrast, host communities suggested that 63% be planted in woodlots. With larger areas of land than refugees, host households were interested in growing between 863 and 1249 trees. Refugees proposed planting 32-50 trees. Host communities stressed natural regeneration as a way of restocking biomass, largely on degraded communal areas.

Aspirations and shared vision

Most refugee plots consist of a home with annual crops and a single shade tree. Refugees aspire to many more trees, particularly fruit trees, while host populations prefer trees for timber.



Current state

In 8-12 years

Figure 1: Vision for increasing tree stocks in household level plots

Conclusion

Bringing back trees can restore natural capital and reduce conflict in the landscape. Further, the shared nature of the endeavor, e.g., joint tree growing, meetings on what and where to plant and how to control grazing and burning, can create a shared vision. In Arua, ICRAF piloted restocking of a refugee-hosting area. Applauded by key authorities, the approach and tools are now being upscaled to other refugee settings, some outside Uganda. In another positive sign, national authorities and humanitarian organizations cooperated to ensure planted trees grow to provide ecosystem goods and services.

Specification of the number of trees to grow at household level

Attributes	Imvepi (n=117)	Rhino Camp (n=117)
Plot perimeter (m)	172 ± 42	116 ± 24
Plot area (m^2)	1549 ± 849	803 ± 407
Total planting ambitions per household	51 ± 68	32 ± 29
- Boundary plantings	34 ± 55	21 ± 22
- Homestead	16 ± 31	9 ± 8
- Woodlots	0.26 ± 3	0
- Scattered on farms	0	1 ± 8
- Degraded lands	0	0.17 ± 2
Boundary planting intensity per 100 m	22 ± 34	18 ± 9
Homestead planting intensity (trees per ha)	140 ± 189	136 ± 128

Participatory action plan development (Annual)

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Seedling production	←	-	-	→								
Training		←	-	→								
Community mobilization		←	-	-	-	-	-	-	-	-	-	→
Land preparation			←	-	-	-	→					
Tree planting				←	-	-	→					
Monitoring the planted trees				←	-	-	-	-	-	-	-	→
Setting up environmental committees	←	-	→									
Law and byelaw enforcement			←	-	-	-	-	-	-	-	-	→
Implementation improved technologies			←	-	-	-	-	-	-	-	-	→
Land acquisition			←	-	-	-	→					
Demonstration of plantings			←	-	-	-	→					

Participatory actors' roles specification

Actors	Roles and responsibilities
Refugee community	Plant and grow trees
	Mobilize local communities and create environmental committees
	Formulate, agree and implement by-laws that ensure the protection and sustainable use of woody vegetation
	Cooperate with entities such as ICRAF, District local government, implementing partners and Office of the Prime Minister in natural resource management initiatives
	Promote sustainable use of forest and tree resources
	Participate in training sessions
World Agroforestry (ICRAF)	Train communities and ensure awareness creation on tree resource management
	Promote sustainable use of forest and tree resources
	Demonstrate tree planting and growing schemes
Office of the Prime Minister	Lobby for land for refugees to grow trees
	Support formulation and implementation of by-laws
	Promote sustainable use of forest and tree resources
District local government	Train communities and ensure awareness creation on tree resource management
	Support formulation and implementation of by-laws
	Promote sustainable use of forest resources
Implementing partners (NGOs)	Distribute farming equipment, e.g., hoes, axes and *pangas*
	Support tree growing

Key Message

If trees are sufficient in a landscape, community requirements for wood, food, fodder, water, shade and other goods and services will largely be met. Conflicts between the host population and refugees will decrease, and everyone will benefit.

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