Community-x-ray: considering real life impact with community-driven tools

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Abstract. Community-x-ray Project is experimenting new approaches to research, monitoring and evaluation in northern Mozambique. Innovations being developed and tested propose a different approach to development by implementing a set of technologies and community-driven tools to provide NGOs, companies, associations and others with useful information about projects' social impacts and potential interventions. Community-x-ray is empowering because it gives expression to what is important to people in their everyday life. That is, people self-identifying relevant activities and the related time allocation. Its tools and techniques ("Field Diaries" and "Photo Project") allow project implementers and the community alike to consider real life impact.

Keywords. Community-driven tools, self-identifying method, innovation's impact, potential interventions.

1. Introduction

Across the world, efforts by NGOs, companies and other sectors aimed at helping communities often fail due to the lack of "on the ground knowledge" about the communities in which they operate (Couvinhas et al., 2012). This is especially the case in Industrially Developing Countries (IDCs) where projects can fall short of their original intent and design because of cultural believes or different priorities. For instance, there is the classic example of mosquito nets being distributed to fight malaria only to have the inhabitants of coastal regions use the mosquito nets for fishing as this is a higher economic priority.

The recent rapid growth of the forestry industry in Mozambique is a complex and unfolding story bound together by challenges and promise. Since 2010, the forestry industry has invested over $150 million dollars and added 5,100 new jobs. Over the next decade, forestry companies plan to invest more than $4 billion in the country, plant over 1 million hectares of trees and employ over 100,000 workers. Taken together, individuals and families living in new forestry villages will have an opportunity for wage paying work - often for the first time - in nurseries, in the planting and tending to trees, as laborers in saw and pulp mills, and in the construction of dams and other industry-related

infrastructure.

Economists have long been interested in studying behavioral change after interventions. But much of this information comes from surveys, which typically do not have very good data on time allocation. Similarly, monitoring and evaluation efforts by NGOs are primarily geared toward data collection in the service of satisfying donor requirements and often presented in numbers, i.e., the amount of jobs created, hectares of farm land under production, number of beneficiaries. But such numbers alone do not always reveal real situations and real impacts on lives. When a project is implemented, communities unavoidably experience small and big changes that can be positive and negative, evident or not, short term or long term. To understand something of its meaning, we are interested in the dynamics of work, the social context, and in the overlap of history and practice. Mostly, we are interested in the combination of these themes and the issues they raise.

To help understand something of the industry's impact, TechnoServe Mozambique set up the "Community-x-ray" project. It proposes a different approach to development by implementing a set of technologies and community-driven tools (Coelho et al., 2012) to provide useful information about social impacts and potential interventions. Communities are dynamic and the "Community-x-ray" techniques can not only collect information but, in doing so, help identify positive and potentially negative elements of a development project.

The tools and techniques of the "Community-x-ray" ("Field Diaries" and "Photo Project") allow project developers and the community to jointly measure impact.

1.1 TechnoServe Mozambique and broader impact globally

Since 2010, "Community-x-ray" technology has been tested and operated in rural areas of Northern Mozambique within TechnoServe. The NGO's mission is to work with enterprising people in the developing world to build competitive farms, businesses and industries. Its operating model is to support and advise high-potential industries across the value chain, with particular focus on unlocking economic and social impact through rural business development.

Yet, one of the main goals of "Community-x-ray" is to provide its technology for others to incorporate as a means to have a broader impact globally: *"The most recurrent mistake made by successful organizations is the failure to assess the impact of ongoing changes on their costumers and stay with the same strategy assuming continuity in environmental conditions."* (Zink, 2008) In addition, we also consider that in Mozambique is also needed to assess the impact of ongoing changes in companies' employees (Scott, 2009) because most part of them is having the first employment experience with TechnoServe.

2. Innovative approach with community-driven tools

"Community-x-ray", composed of the "Field Diaries" and the "Photo Project", is the original technique that the "Observatory" (TechnoServe Mozambique's Research and Analysis unit) developed and has been experimenting. The central idea is to collect and process community-identified and driven data in the areas in which Agro-Forestry Projects are currently, or will be, implemented.

"Field Diaries" are daily journals, recorded by project village residents (see Figure 1). Participants, selected by local leaders, write and keep a diary, listing all the activities that they and their family do during a month. These are then collected four times a year and

timed in accordance with agricultural seasonality (see Figure 2). This bottom-up localized approach to information gathering, gives expression to what is important to people in their everyday life.

The diaries provide useful information about habits, customs, hobbies, recreation, and farming practices. The central idea is that such chronicling allows us to learn more about the complexity of such rural places. In this way, "Field Diaries" are an attempt to describe the early stages of a particular episode of rural industrialization through the everyday acts and choices of people, particularly forestry workers, as they shape and define work and economic and social life. Put simply, "Field Diaries" help us address the question, 'what happens when the company comes to town?'

FIELDIARIES + PHOTOPROJECT
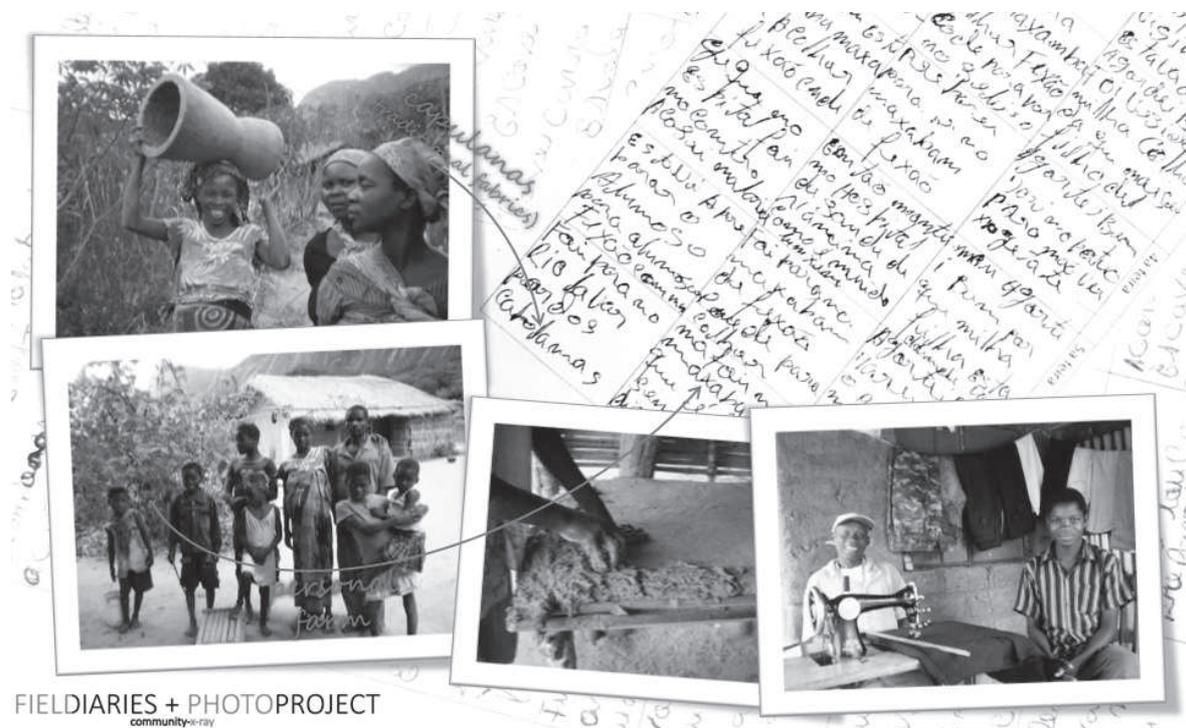community-x-ray

Figure 1- Information about daily activities - provided by locals

The diaries are further strengthened by placing them within a broader context of documentary evidence, including additional field research and interviews with farmers, workers, managers, and community members. Other sources consulted include forestry industry archives, documents, and trade journals and together examined from a multi-disciplinary perspective. In addition to written sources, TechnoServe Mozambique has also provided photo cameras and training to the leaders of the volunteer groups that are working on the Field Diaries. In a sense, the "Photo Project" gives a visual representation of the diaries. That is, capturing everyday life through community photography. Together, the two methodologies form a "Community x-ray," which features generally considered invisible to the human eye can be made visible.

1. Site selection
2. Speak with community leader
3. Volunteer selection
4. Interview volunteers
5. Trainings (journals + photos)
6. Volunteers do journals + photos
7. Data collection + Discussions
8. Interpretation + Data entry
9. Categorization of data
10. Analysis of data
11. Publish reports + Share research
12. Share with community and volunteers

Figure 2- Bottom-up approach of "Community-x-ray"

2.1 Scaling and replication potential

As a community-driven locally defined project, the "Community-x-ray" is especially well-suited to scaling up and replication. Indeed, for its part, one of "Observatory" goals is to present this model for others to replicate and adapt to local circumstances in other countries. This technology can easily be customized because it is based on a bottom-up process in which locals have an important role on gathering information. It empowers locals that identify the issues and offer the solutions.

3. Results

As in most village economies there exist a fairly narrow set of work identities: smallholder, wage earner, vendor/merchant, migrant/itinerate worker. These categories, of course, may also overlap at times as farmers may temporary work for wages and workers may utilize free time to farm or participate in the market place. These categories of work also have multiple meanings in terms of independence and security. A smallholder might be independent and not subjected to the vagaries of the market place or have to sell his labor power to company or have a boss. Yet, the most independent may also be the least economically secure, lacking the security and purchasing power often enjoyed by wage earners.

With the introduction of rural wage labor the predominant work culture of small scale agricultural production is gradually being transformed from one governed by a set of established customary roles and rules to one meeting the requirements of flexibility, specialization and adaptation. It might be said that the labor process therefore shifts from autonomy and household production and control to one in the service of profit

maximization and commodity production (see Figure 3). Within the context of a subsistence or village economy the impact of these changes can be disruptive and transformative. And while work is not the only concern - but rather among a host of other considerations and influences from family life, social obligations, and religious life (see Figure 4) - nursery and plantation labor requires a sea change in how people approach work in both its physical and social realm.
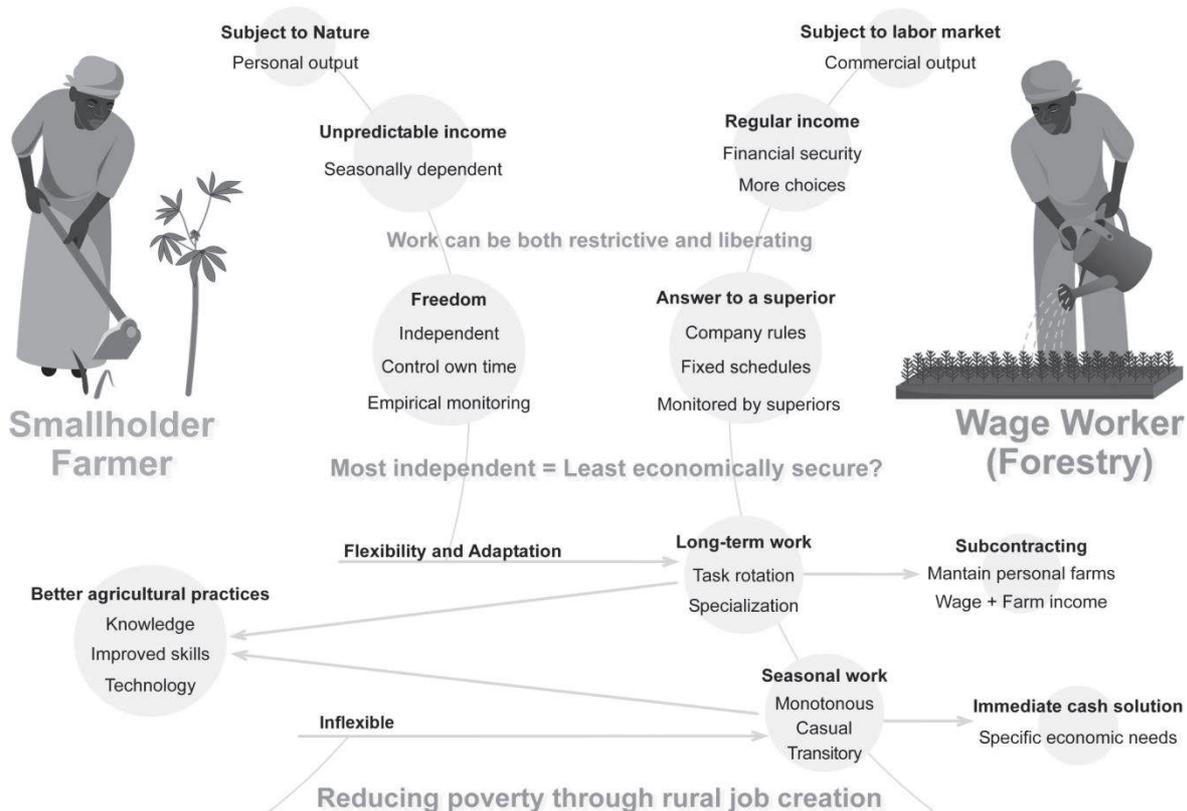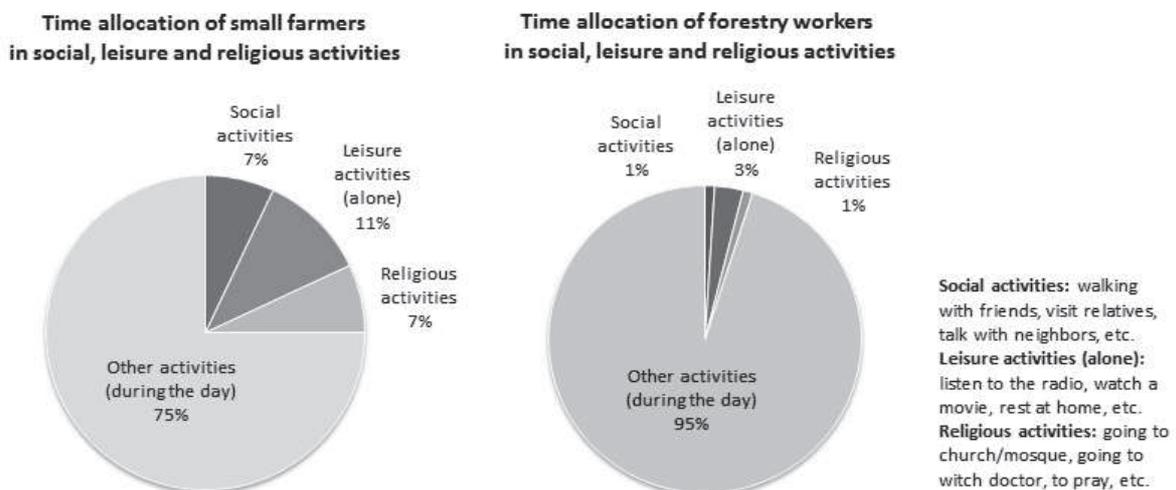

Figure 3- From smallholder farmer to wage worker

Figure 4- Time allocation in social, leisure and religious activities

What is fundamentally different, between small farmers and wage workers, is that

people are selling their labor power and getting a wage for their time, as opposed to being engaged in family farming. The return to workers is in the form of a wage not in their ability to extract value from the land in the form of food or market sales. Put differently, land and labor are in the service of commercial interests outside the household.

Employees' receive a monthly salary and typical expenditures include home construction and improvements, food, school fees for their children, and motorbikes. Due the time constraints of full time work, several employees hire others to take care of their personal fields. Evidence from the "Field Diaries" seems to suggest that an increase in the number of household members working off the farm correlates with greater knowledge uptake and the adoption of new technologies in farming.

4. Discussion and Conclusion

It is now possible to have a better understanding as to how people allocate their time in comparison to the Agro-Forestry Projects start date and this is useful for defining future business opportunities. It also gives the possibility to identify interesting and important features like the surprising "discovery" that forestry workers are now employing other people to farm their personal fields, which suggests that the job creation rates of the Agro-Forestry Projects are higher than what was first anticipated.

"Community-x-ray" is emerging as an important tool for informed economic development as it studies local resources and the markets over several years. Furthermore, it is identifying the trends and future [business] opportunities that are useful for the communities. "Community-x-ray" is a methodology that helps for-profit enterprises, NGOs and associations alike choose better investments according to each local community.

The presented technology permits the adaptation of the methodology to each and every community avoiding "textbook" theory or preconceived ideas of how life is and how it should be. Rather, it is the community itself that provides information to companies, not the company that arrives to a community, trying to implement a previously defined idea.

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