

Nuup: Emergent Blueprints for the Regenerative Economy

By: Linda Peia*

*Senior Director, Ashoka

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Abstract

Our climate crisis requires a new economic model that aligns economic growth with social and environmental well-being. Social entrepreneurs are envisioning new solutions that integrate economic and environmental objectives. Mexico-based organization Nuup is enabling the shift to regenerative production while ensuring their economic well-being for small-holder farmers. The work is pointing to emerging blueprints that can solve multiple problems, also known as multi-solving. An essential element is the creation of economic incentives for farmers to shift to sustainable practices. Central to Nuup's holistic approach is the engagement of diverse coalitions spanning the private sector, civil society, the public sector, and academia to collectively design and implement solutions on the ground.

Introduction

To address the climate crisis, we need to rethink our economic systems. Regenerative economic systems offer a path forward as they focus on human and planetary health. The shift to regenerative economies is supported by the widespread recognition that our planetary boundaries are finite, and that economic growth cannot be pursued independent of environmental well-being.

Regenerative economy models are likely to require significant changes at multiple levels. They include technology, consumer practices, policies, infrastructure, and more. To study these shifts, also known as social-technical transitions, new areas of inquiry have emerged, such as Multi Level Perspective.

Social entrepreneurs alike are building new holistic, multi-solving solutions that balance social, economic, and environmental goals. Mexico-based organization, Nuup, supports small-scale farmers in their transition to regenerative agriculture, while making the food production value chain more equitable, transparent, and sustainable.

Challenge

Small-holder farmers account for two in every three farmers in Mexico. They produce 40% of the food consumed nationally. Most of these farmers and their families live in poverty. Their needs are diverse and complex due to fragmented markets, limited access to financing and know-how, and lack of technology. These patterns are not unique to Mexico. There are more than 500 million small-holder farmers worldwide. Most of them live in abject poverty for the same reasons. Global crises such as climate change and the pandemic add to these challenges.

Organizations that work with small-holder farmers generally direct their support either towards increasing their income *or* supporting their transition to sustainable production. However, very few actually propose solutions that tackle both goals holistically. Clearly, regenerative practices without access to viable markets and capital (e.g., access to finance or technical assistance), will always fall short. But, market-based solutions that do not prioritize balancing ecosystems leave small-holder farmers ill-equipped to deal with soil degradation and the effects of climate change. These concerns have direct impact on their livelihoods. For example, greater market access for cattle producers encourages cattle grazing. This leads some farmers to clear-cut forest for pasture, degrading local environmental resources. Such siloed thinking negatively impacts farmers because success in some areas can lead to failure in others, particularly if potential tradeoffs are not carefully evaluated.

When we stop viewing social, economic, and environmental goals as mutually exclusive, we can start building holistic solutions that recognize the complexity of the systems we operate in and rebuild them from the ground up. This requires that we convene actors to pool each other's expertise and resources and collectively create a more informed perspective to design coordinated solutions that create better outcomes for society and nature.

The Emergence of Multi-solving Blueprints

Nuup's mission is to create a fairer, more transparent, and regenerative agri-food system. To achieve this, Nuup designs flexible and emergent solution blueprints that can solve several problems at once and evolve as things change.

In its early days, Nuup focused on a major gap that was not being addressed effectively: market access for small-holder farmers. The organization worked with coffee cooperatives in Mexico to create direct market access to domestic wholesale buyers. Market access was also seen as a leverage point that could trigger changes in other systems, such as financing.

As Nuup gained a better understanding of farmers' diverse challenges, it started experimenting with more holistic solutions on ground. For example, the Madre Tierra initiative co-designed by Danone and Nuup enables strawberry farmers to transition to regenerative production while providing access to market and financing. This experience helped design a more holistic solution that integrates economic and environmental goals. One key element of this blueprint is the role of

demonstrative plots or labs in showing farmers the positive impact of adopting sustainable practices.

To design solutions, Nuup identifies patterns and experiments with solutions in different systems such as financing, market access, sustainable practices, technology, technical assistance, organizational structures, and more. Instead of seeing farmers' needs in isolation of one another and solving one problem at a time, Nuup focuses on their experience as a whole. This has allowed Nuup to learn about different systems at play and cultivate trustworthy relationships with a range of partners. Central to its approach is the engagement of diverse coalitions spanning the private sector, civil society, the public sector, and academia to collectively design and implement solutions on the ground.

Nuup currently designs solutions with two things in mind:

1. Modularity: creating blueprints that can be deployed in whole or in part;
2. Multi-solving: pooling "expertise, funding, and political will to solve multiple problems with a single investment of time and money."ⁱ

Multi-solving in Practice: An Example

The state of Guanajuato is facing water scarcity. Some fast-growing areas of the state are facing severe water deficits, and it is estimated that 17 of the state's 20 aquifers are under stress. Water scarcity is being driven by changing rain patterns caused by climate change and by water-intensive agriculture. Agriculture currently uses 84% of water available in the state and the most frequently grown crops are grains. Barley is particularly important because it is used in the production of beer, an important industry in the state. Current irrigation practices in cereal farming are extremely inefficient. However, simple technological fixes, like switching to drip irrigation are not cost-effective for most cereal farmers.

To address this issue, Nuup partnered with the Fondo de Agua Guanajuato as part of the "Cauce Bajio" initiative in the state of Guanajuato. Nuup systematically investigated the problem through a series of interviews with farmers, research institutions, government bodies, technical assistance providers, irrigation companies, agro-businesses, and investors. It then designed a multi-faceted strategy, taking into account a wide range of perspectives and activities. To make work effective, Nuup builds on existing efforts, coordinates them, and directs efforts toward common goals. Nuup also ensures everyone understands how their individual actions impact the state-level water supply, grounding them in a shared understanding of the farmers' needs and a holistic approach.

To put their strategy into action, Nuup is now designing a holistic solution blueprint to reduce farmers' water footprint while ensuring their economic wellbeing. Among its core elements are:

- *Crop Rotation*: Diversifying part of the land to higher value-added crops has proven to increase profits for farmers. It also incentivizes them to invest in water-saving technologies such as drip irrigation, a capital investment that would not have been cost-effective for barley monocultures.

- *Experimentation*: Nuup is developing laboratories to pilot practices that are complex or require demonstration prior to scaling. Nuup has used this approach to test inter-cropping models or precision agriculture technologies that reduce water consumption. This type of intervention is more complex and has risks, and needs a focused piloting phase prior to scaling.
- *Technical Assistance*: Previous research demonstrates that by adopting better practices for furrow irrigation, some cereal farmers can double their water efficiency level. In particular, levelling, smoothening, and shaping of the field surface for conveyance and distribution of irrigation water is as important to efficient surface irrigation as any other single management practice the farmer employs. Best practice suggests that cereal farmers carry out these field operations every three to four years. Unfortunately, land levelling requires machinery and investment that cereal farmers cannot afford.
- *Market Access*: Nuup plans to work with buyers to establish new purchasing programs with preferential market conditions (such as better payment terms) as incentives for farmers to implement sustainable practices and reduce their water footprint.
- *Financing*: Nuup is leveraging a mix of public, philanthropic, and private funding to create the right incentives for the farmers. For example, Nuup intends to create a water savings fund through which companies can purchase water offsets. The funds will then be used as cash payments for farmers who successfully reduce their water footprint.

Principles

Nuup's example demonstrates several principles and key questions relevant to other organizations seeking to work holistically and to solve more than one problem at a time.

- 1) **Address the interconnectivity of issues and find the co-benefits.** Systems change requires understanding both the intended and unintended consequences of solutions and the feedback loops they play into, addressing multiple parts of the system simultaneously and making all these connections visible. Nuup has gained a 'system of systems' view through on-ground experimentation. As a result, they are nudging the agri-food production system towards more sustainable, equitable, and more transparent outcomes.

In the case of Nuup, the transition to sustainable practices and crops needs to be compatible with economic well-being and risk-management. Farmers will not transition to sustainable crops or practices unless there are mechanisms to manage their market and financial risks. For example, Nuup seeks to manage the risks of farmers in transitioning to new crops by securing long-term partnerships with buyers and negotiating preferential conditions for those who adopt regenerative practices.

- 2) **Move beyond the narrative of sacrifice and tradeoffs.** What is often positioned as being in conflict is in fact inextricably inter-woven—harming the environment has a negative impact on human health and well-being, and regenerating nature has positive impacts on

human health and well-being. This interconnectedness does not have to result in a zero-sum game. The conventional narrative of tradeoffs not only turns people away from climate action but also puts undue burden on vulnerable populations, like small-holder farmers, who become the target of such ‘sacrifice’.

- 3) **Co-creation drives innovation.** Nuup evolved from convening actors to do more of what they were already doing, to convening actors to co-create new solutions. For co-creation to happen, mere convening of actors is not enough; the role of the backbone organization, such as Nuup, needs to function more like an innovation lab. For example, with the support of W. K. Kellogg Foundation, Nuup is currently designing origination incentives as well as cash incentives for financial institutions to create new products in-house for small-scale farmers. In some cases, the backbone organization may need to create a new market altogether.

This new role has implications for the appropriate organizational structure of a backbone organization. Nuup, which is a non-profit, is currently exploring incubating other sister organizations that can contribute to its vision and be a more natural fit for certain activities. For example, it is exploring setting up a company builder or for-profit joint ventures that could develop new products with farmer organizations and investors.

The team and combination of skills and experiences that Nuup puts together will be critical. It is important to have those comfortable with navigating uncertainty, entrepreneurial in spirit, and are empathetic listeners and seekers of insights. While they may be experts in certain domains (economics, agronomy, technology, etc.), they need to see how their work contributes to a larger puzzle and must be able to operate fluidly within a team of teams.

- 4) **Fund systemically and holistically.** Currently, climate-related causes receive less than 2% of global philanthropic giving.ⁱⁱ Donors and investors often prefer short term projects with quantifiable results. There is a prevalence of funding for technical inventions or direct service over collaborative approaches that address the interconnectivity of environmental, social, and economic issues over a multi-year timeframe. Furthermore, there is often an artificial delineation between environmental and social programs, despite the interconnectedness of climate and human issues. We need to start using blended finance models that consider non-for-profit and for-profit activities while we leverage private, public, and philanthropic capital. Whereas some activities can be financed with private capital (e.g., working capital), other activities (e.g., market creation or technical assistance) need philanthropic capital or subsidies.

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ⁱ Dr. Elizabeth Sawin: Sawin, Elizabeth. (2018). The Magic of “Multisolving”. Stanford Social Innovation Review. (Online) Available at: https://ssir.org/articles/entry/the_magic_of_multisolving (Accessed on November 5, 2021)

ⁱⁱ Roeyer, H., Ahmad, M., Fox, M. and Menon, S. (2020). Funding Trends: Climate change mitigation philanthropy. Climateworks Global Intelligence. (Online) Available at: <https://www.climateworks.org/report/funding-trends-climate-change-mitigation-philanthropy/> (Accessed on November 5, 2021)