



**POLITECNICO
DI TORINO**

Honors thesis

COURSE OF MASTER OF SCIENCE IN ECODESIGN

Abstract

Barriga llena, corazón contento.

Systemic Approach applied in San Cristóbal Norte

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This project aims to help develop a sustainable community, empowered by urban agriculture, to improve the nutrition of the population and boost an alternative economy in San Cristóbal Norte, a neighborhood located in Bogotá. With the support of *Biofuturo* foundation, which has been working with this community for the last years developing a nutritional assistance programme, the main objective of the project was articulated:

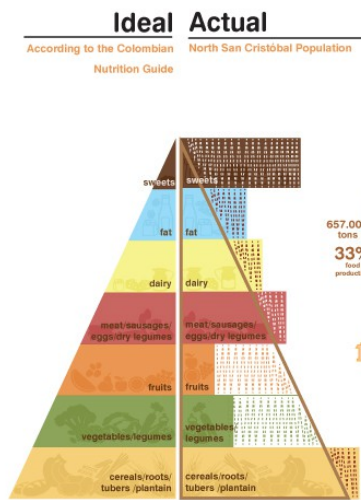
To develop a systemic strategy, in which the community is empowered through labor that generates resources and allows them an access to goods and healthy nutrition based on education and knowledge.

First, a revision of the state of the art regarding the territorial, economic and nutritional scope was carried out. It was possible to identify that the physical and geographic characteristics of this area, such as the weather and soil; present optimum conditions to cultivate many of the fruits and vegetables that are locally consumed. On the other hand, the inhabitants are resourceful and skilled at constructing structures out of recycled available materials. Furthermore, due to the social and political situation in the countryside, many people have moved to the city in order to find better economic opportunities. Most of these migrants are farmers who have knowledge and experience with agriculture. This represents a success factor since the target population counts with the technical capabilities to undertake this kind of projects.

Concerning the state of nutrition among inhabitants, it was possible to identify that it is unbalanced; an excess of sweets and carbohydrates is evidenced as well as the lack of fruits and vegetables. This is mainly explained by two related factors: on

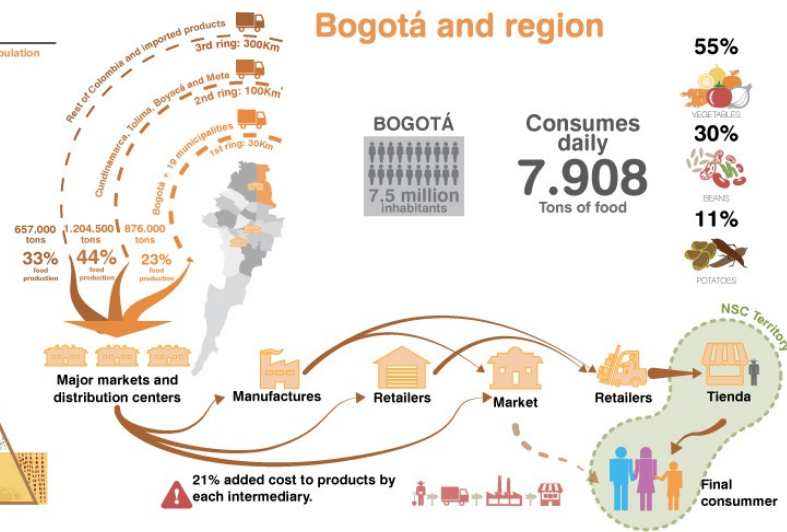
one hand, the large and fragmented supply chain for healthy products, such as fruits, leads to high distribution costs that people cannot afford due to their economical situation. On the other hand, people give priority to eating large quantities of food instead of quality food. Thus, large carbohydrate consumption prevails because it is less costly.

Food Pyramids



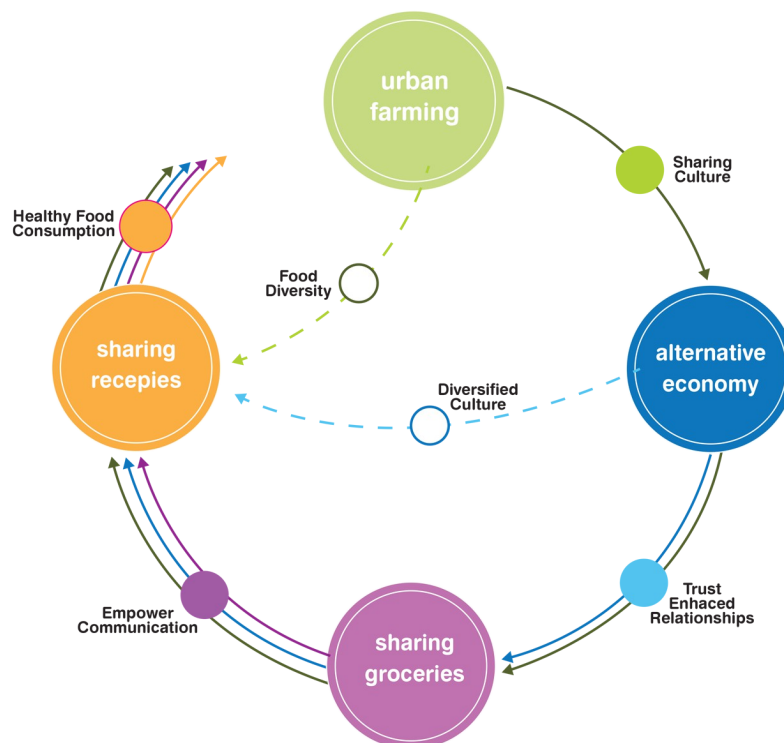
Supply chain

Bogotá and region



The second phase consisted in the analysis of the previous scenario through a cause-consequence assessment, making possible to identify that the previous causes led to a poor nutrition. As a result, the proposal was a *Healthy Food Consumption* strategy. Moreover, it was possible to establish an impact on the social and economic aspects of the community. For instance, the use of the available resources would enforce the community and provide them with goods that would eventually help their economy.

In order to mitigate the problems mentioned above, a four-step strategy was proposed, seeking to promote a *Healthy Food Consumption* lifestyle:

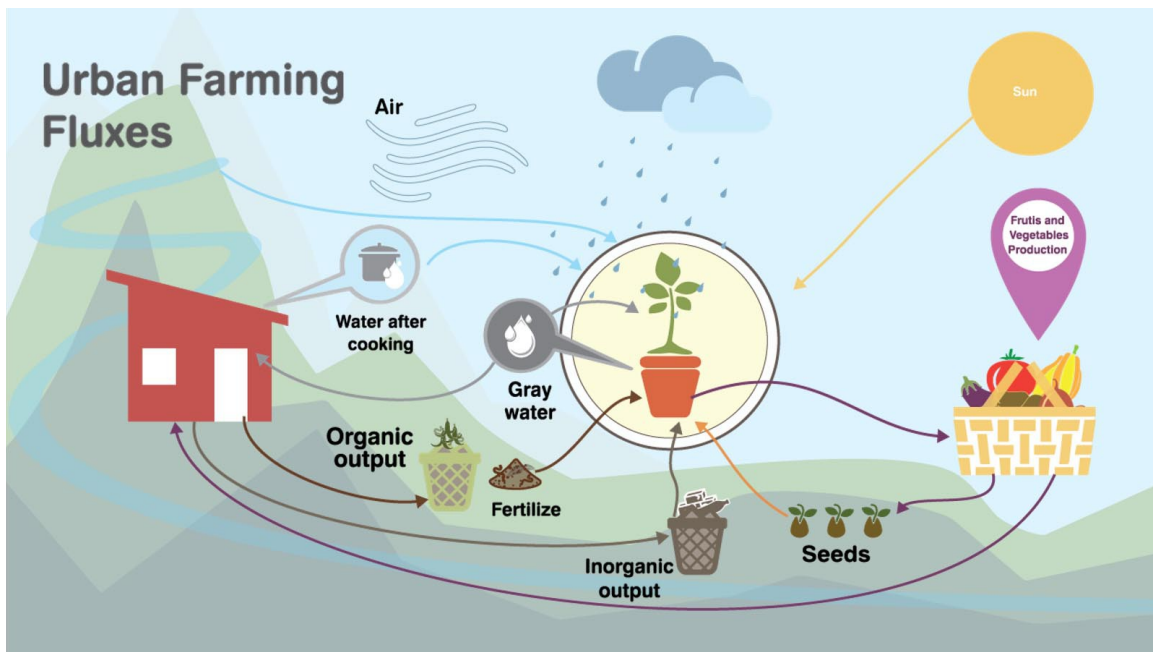


1. **Urban Farming:** Construct urban farms, facilitating the means and knowledge to the community to create its own adapted crops. Each family cultivates two different vegetables or/and fruits; promoting diversity of products.
2. **Alternative Economy:** Create an alternative economy where products and services are interchanged. It is based on constructing trust and reinforcing the community's network over the time and through self-production.
3. **Sharing Groceries:** Create a common fund among a group of families to buy long-lasting products that can not be cultivated in the region. The groceries would be distributed and more variety and quantity would be available for the families at a lower cost.
4. **Sharing Recipes:** Educate people, give them different recipes and help them create new ones with available ingredients. The cultural exchange will enrich social interactions and will empower their healthy food consumption.

The final step consisted on the planning of the implementation stage. Workshops were chosen as methods of communication and participation, given that they provide the opportunity to involve people into a participatory process promoting the sense of belonging.

The workshop for the *Urban Farming Strategy* was developed over the following pillars:

1. **Notice:** Get to know the community, their skills, eating habits and reasons why they feed themselves this way. Identification of the territory's characteristics and potential.
2. **Appropriate:** Educate about the health and economic properties/ benefits of fruits and vegetables. Teach the community about urban farm types, plant care, maintenance and harvest.
3. **Take Action:** Construction of urban farms with recycled materials and seed plantation.



As a conclusion, it was possible to notice that through design interventions, it is viable to empower new activities that allow the utilization of the resources of a territory, promoting a sustainable and economic autonomy, additional to the cultural valorization of the community.

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