

1. Introduction

Many organisations are addressing Food and Nutrition Security issues while investing in landscape approaches in parallel. But spatial considerations play a role in Food and Nutrition Security dialogues, while landscape approaches fundamentally seek to improve the food security situations within landscapes. Aren't we missing the synergies between them?

Food and Nutrition Security exists when all people at all times have physical, social and economic access to food, which is safe and consumed in sufficient quantity and quality to meet their dietary needs and food preferences, and is supported by an environment of adequate sanitation, health services and care, allowing for a healthy and active life (UNSCN, 2013).

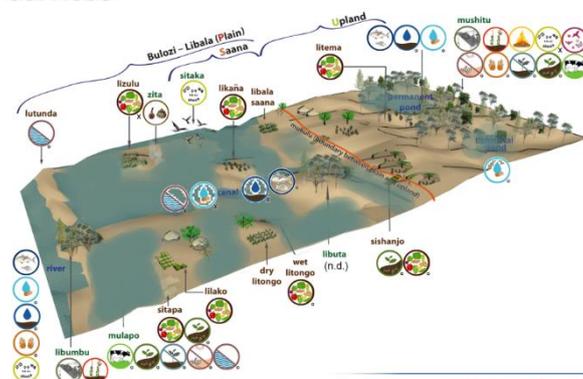
The above mentioned definition of the UN Standing Committee for Nutrition (2013) has a strong rights-based component, acknowledging that access to sufficient and healthy food throughout the year as well as a healthy environment is a basic human right. In practice, many food & nutrition promotion programmes focus on the consumer or 'eater' perspective, including individuals and their households while ignoring the role of the wider landscapes in which the consumers live. However, there is growing evidence that food & nutrition strategies aimed at individuals or households do not yield the desired outcomes because they single out the individuals and households from their spatial context. To overcome this difficulty a landscape approach may help.

A landscape approach to food & nutrition security places the issue of food & nutrition security in a spatial context. This, because it is at the landscape level that natural resources are managed to achieve multiple objectives in terms of food production, income generation and sustainable livelihoods. Hence it is at that level that food & nutrition security can be most strategically positioned.

One of the most important objectives to be achieved in a landscape is optimizing sufficient and nutritious food for its inhabitants, in terms of access, availability, quality and affordability. Nutrition-sensitive landscapes are therefore those landscapes in which diverse types of food are sustainably produced or procured to meet human nutrient requirements, while also protecting the environment from which the foods are sourced. A better understanding of the interactions within a landscape that affect food and nutrition security across different agro-ecological zones can provide insights on how to tackle complex issues related to achieving gains in food and nutrition security while preserving the integrity of ecosystems and the services they provide (e.g. soil fertility, flood control, erosion control, firewood, spiritual and recreation) (The Earth Institute & Bioversity, 2017).

A Nutrition-Sensitive Landscapes approach (NSL) therefore considers the diverse interactions and interconnectivity within a given landscape to optimize the multiple goals of food and nutrition security, sustainable use of natural resources and conservation of biodiversity, both for human health, as well as environmental health within a specific landscape (ibid.).

Land for agriculture and other ecosystem services



2. Key note speech by Natalia Estrada Carmona (Biodiversity)

Diverse CGIAR centres, in collaboration with Wageningen University, are implementing the NSL approach in their action research programmes, amongst others in the Barotse floodplain in Zambia. This programme is focused on the relation between agriculture and food production in wider landscapes. It is built on two hypotheses:

1. Agricultural biodiversity within can lead to more nutritionally diets;
2. Environmental management and agricultural landscapes can be a pathway to improve sustainability.

The programme is based on a learning aims to describe, observe, explain, analyse, plan, design, action, etc.

2.1. Analysis phase

The Barotse floodplain knows a pronounced seasons, thus a strong seasonality in terms of food production and consumption, and is a biodiversity hotspot. It also has a strong culture with pronounced cultural values, norms and traditions. Understanding these dynamics are crucial in creating and maintaining a food & nutrition sensitive landscape.

We made seasonal calendars to analyse food system cycles, and related these to the functional diversity in the landscape. Food consumption is highly dependent on both, as fruit, vegetable and fish seasons fluctuate. How are the relations, and how do these relations change over the seasons? We mapped land use patterns and ecosystem services, to know what happens where and when. We saw that especially the forest is important for peoples' dietary needs, and we found indications that reduced forests directly link to loss of functionality and reduced food & nutrition security.

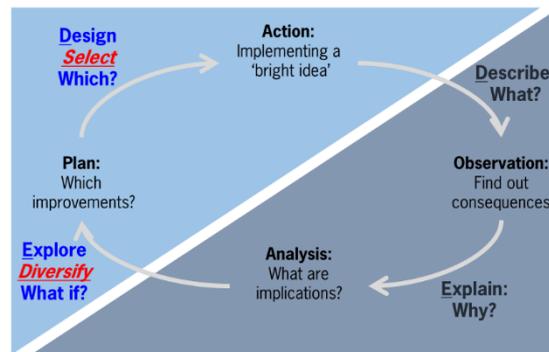
2.2. Joint action

After the analysis phase we started exploring with local people, to identify how we can build more food & nutrition secure landscapes. We introduced all sort of actions such as improved cook stoves, home gardens, nutrition clubs, food fairs, and other actions to bring "old" foodcrops back on the diet. We discussed cooking habits and taboos, developed education materials and seasonal calendars, to support people having a balanced diet.

2.3. Modelling

We used the outcome of these actions to develop models and explore interventions, scenarios, trade-offs and synergies, with the aim to design more effective intervention crops with higher nutritional values. We linked the model to landscape level changes such as infrastructural disclosure and land use change, subsidy programmes and national policies, to map out different scenarios, and contribute to more food & nutrition sensitive regional planning.

Learning cycles



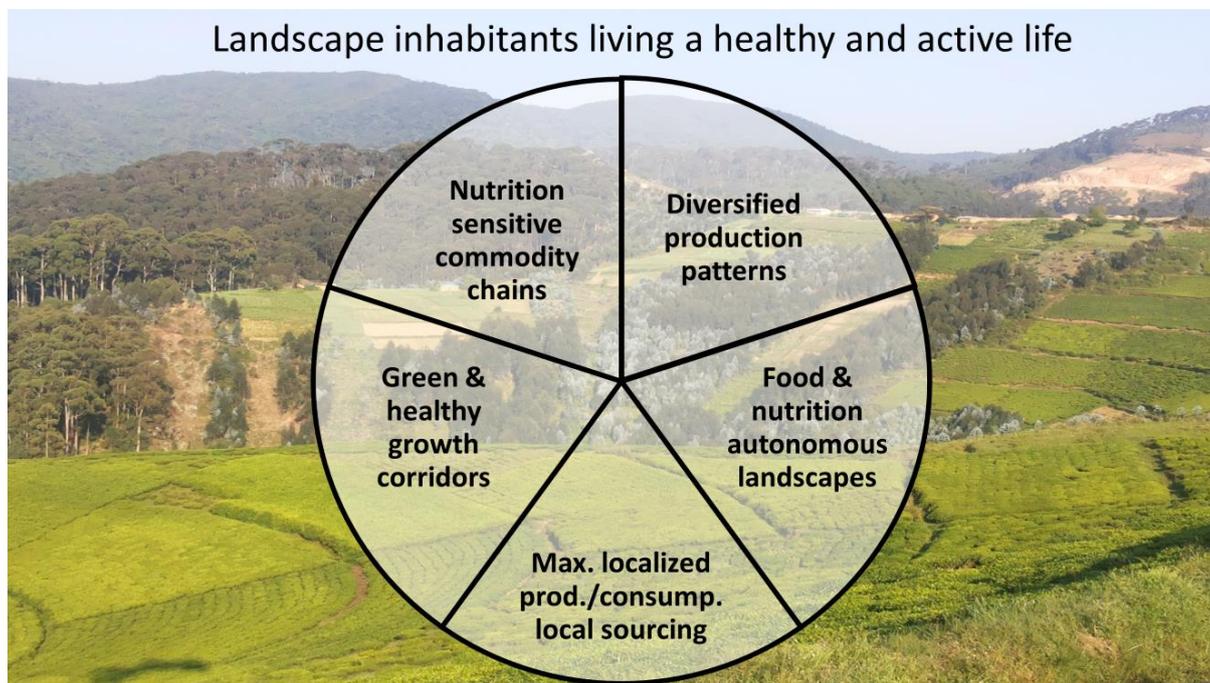
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3. Our cases

In order to organise our own work, network members were asked to bring their own case, and plot these in the predesigned framework representing five potential pathways towards achieving more food & nutrition sensitive landscapes, which are.



Following the five pathways, we had five short presentations of our cases, which more-or-less covered the five pathways of the framework.

Case 1: SPAR Rural hub project: balancing production/consumption, shortening chains

General description: SPAR’s Rural Hub project aims at improving access to fresh vegetables and fruits for SPAR consumers in these rural areas, by including locally sourced products from locally emerging smallholder farmers in SPAR’s assortment. The first area that is being targeted by this project is the Mopani district in the Limpopo Province, in South Africa. In order to gain insights into how the match between the local production and consumption of different food products can be improved in this district, SPAR and WUR first conducted research on the current local production and consumption from different food products as well as on social, ecological and cultural conditions and developments.

Lessons learned: what is needed to arrive at a food & nutrition sensitive landscape?

- Information on the current production, diets and nutritional intakes by the inhabitants of the specific area. What is produced; where is it sold; how do the local diets look like; what factors play a role in decision making regarding production and consumption; what are the farming circumstances?
- Slow upscaling of the project.
- Increase knowledge on nutrition by consumers through activities that are adapted to culture and being organised with local stakeholders and within structures that already exist in this area.
- Increase local knowledge on farming.
- Focus on building more resilience in the landscape by counteracting mono-culture agriculture among the (smallholder) farmers. → crop diversification.
- Assess which crops could be cultivated by the farmers in order to diversify the supply of food products available for the consumers (adopted to their culture and needs).
- Research issues related to climate change, water and land governance and the interrelation

Lessons learned: what are the prerequisites for getting there?

- Willingness of an organisation to get involved and invest, using business structures and facilities that are already in place. It is important that such an organisation would not let other interests or motivations influence the project activities and goal of the project.
- Farmers and inhabitants that see the urge of the goal of the pathway and want to take part in the project.
- Time. Changing behaviour of people (both on production and consumption side) takes time.
- Changes in harvest outcomes, the creation of new (trading) linkages and relationships and consumption patterns can only be seen in the long term. Also, the effects of these changes should be assessed on the long(er) term.
- Sufficient attention being paid to the (social) landscape, execute multi-stakeholder analysis, identify possible change-makers and research existing power relationships and dependencies among these stakeholders.
- Sufficient attention being paid to the specific landscape and changes/trends within the landscape (example of urbanisation).

<p>between the project and the specific landscape (water use and pollution etc.) .</p> <ul style="list-style-type: none"> • Building trust between the retailers and suppliers (and customers). • Facilitate dialogue between stakeholders in order to discuss needs, ideas, and opportunities to engage. 	<ul style="list-style-type: none"> • Take up a gender approach and address differences in needs and qualities of male and female farmers and consumers.
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Case 2: Solidaridad/PBL scenario planning in Honduras

<p>General description: PBL Netherlands Environmental Assessment Agency and EcoAgriculture Partners, with funding from the Netherlands Ministry of Foreign Affairs, are collaborating to develop and assess the use of spatially explicit modelling and scenario tools to help stakeholders in integrated landscape initiatives achieve multiple SDGs. By clarifying stakeholder ambitions, baseline developments and identifying options for action and investment priorities, the project will develop a clearer understanding of the potential of spatial modelling to capture the trade-offs, synergies, and spatial impacts of proposed interventions at the landscape scale, and strengthen capacity of stakeholder groups for long-term collaborative planning and design.</p>	
<p>Lessons learned: what is needed to arrive at a food & nutrition sensitive landscape?</p>	<p>Lessons learned: what are the prerequisites for getting there?</p>
<ul style="list-style-type: none"> • This project does not have its own entry point; it is totally up to local stakeholders to formulate their own landscape objectives. • It is assumed that food & nutrition security is one of the key objectives of landscape inhabitants. But how to make this explicit? And from which angle should this objective be approached? • There is a knowledge gap on how is the relation between expansion of commodity production with local food & nutrition security. This relation will help defining the focus of an intervention. • There is also a knowledge gap on the carrying capacity of the landscapes involved. How many functions can it have? How many services can it provide? • Scenario planning is a valuable tool to be used in designing landscape programmes. • Land use can be an indicator for food & nutrition security, but not always an accurate one, as much depends on decision making and access to/control over land. 	<ul style="list-style-type: none"> • In order to put food & nutrition security on the agenda a more pro-active project approach may be needed. • Local knowledge, and true listening to local actors, will reveal the most urgent needs and demands from a landscape's inhabitants, which need to be taken into account for any landscape intervention. • It is widely acknowledged and proofed that increased commodity production comes hand-in-hand with a decrease in local food & nutrition security. • Carrying capacity of a landscape is a very broad definition. The carrying capacities of a landscape can be enhanced through all sorts of technical interventions, and innovative production systems. • It is hard to define indicators on food & nutrition security. But much can be learned from food science, where such indicators have been identified, and modelling is a widespread practice.

Case 3: CARE-WWF climate change & resilience platform in Great Ruaha, Tanzania.

<p>General description: The SAGCOT agricultural growth corridor in Tanzania was initiated by the government to accelerate improvements in the agricultural sector, and to demonstrate sustainable, inclusive growth, not just for Tanzania but for the region. The pathway to arrive at a food and nutrition sensitive landscape here is thus the use of a growth corridor.</p>	
<p>Lessons learned: what is needed to arrive at a food & nutrition sensitive landscape?</p>	<p>Lessons learned: what are the prerequisites for getting there?</p>
<p>Combat the following challenges:</p> <ul style="list-style-type: none"> • Need for improved land use and water management • Tenure security, as vulnerable households don't have land rights secured, leading to unsustainable land and water management. • Large scale rice paddy farming is taking too much water, inefficient irrigation • Migration, land-use change, deforestation and forest degradation, land/water-based conflicts 	<ul style="list-style-type: none"> • For improved food and nutrition sensitive landscapes proper land tenure, land use and water management are a prerequisite. • Since the growth corridor is highly political there is a window of opportunity • NGOs/civil society are committed, and so is the SAGCOT governing board • Working through the Dutch embassy could be helpful since FNS is a policy aim of the Dutch Ministry and there would be leverage in engaging with supportive donors and investors

<ul style="list-style-type: none"> • Climate Vulnerability & Capacity Analysis is essential, to proceed to adaptation planning with them and with local authorities and service providers. Landscape Governance needs to be developed; an 'inclusive' governance approach could be modelled. • A gender perspective is needed as the gender dimension to nutrition sensitive landscapes makes sense 	<ul style="list-style-type: none"> • Include eco-tourism, to develop a counter balance for businesses, providing opportunities for households, and agro-forestry around parks. • encourage a spatial planning approach and engage the Land Use Planning Commission to seek scale • would be fundamental if we are seeking change at scale • Seek modest impacts on fewer areas at project level and a focus on influencing through modelling good practice on governance • More consensus amongst the multiple actors operating in the area • More attention to inclusive economic development
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Case 4: HIVOS - Life Beyond Maize

From colonial times the agricultural sector is focused on maize. It is now tried to diversify production patterns to achieve food & nutrition security at all levels. Support farmers having more choices; create market opportunities for multiple products; support the government in making more supportive policies. The Zambia Food Lab aims to bring together multiple stakeholders, entrepreneurs, companies, churches, government, to define sustainable and food & nutrition secure solutions which are acceptable to all.

Lessons learned: what is needed to arrive at a food & nutrition sensitive landscape?	Lessons learned: what are the prerequisites for getting there?
<ul style="list-style-type: none"> • Recognize the continuous problem of malnutrition, stunting and obesity related to sole emphasis on maize • Acknowledge that maize is a dead-end street: the production of maize will be going down with climate change going on. It is also time to realize that a different approach is necessary • Acknowledgement of the importance of having a diversified food production system • Diversification of production system • Dismantling of maize subsidies • Enabling policy environment to reach scale • Facilitation and enabling of local stakeholders • Informing stakeholders and empower them to have a say in the policy process 	<ul style="list-style-type: none"> • Finding common incentives and solutions that are acceptable to everyone • Having change-makers to put this on the agenda: a showcase, e.g. a local farmer to set an example. • Having different stakeholder groups together to think about landscapes from different levels and perspectives • Education, information dissemination, collaboration with local partners (radio, tv, newspapers etc.) to inform people about the importance of diversification of diet • Make a nutrition fund, so that people are happy to diversify their fields and provide information/education on the importance of it. • Map information on the various option that farmers have on diversifying crops: which crops provide which kind of products, that is the nutritional value of these products (e.g.. pumpkin seeds, pumpkin, pumpkin leaves), when do they grow best, how do they cope with drought? Provide insight so people can me an informed choice

4. General discussion

It was generally acknowledged that this learning event achieved its objective, as many lessons were learned. In general terms, the level of knowledge on food & nutrition security is low amongst landscape professionals. Most of the participants are used to wider ecosystems and the biophysical or ecological matrix of a landscape. Less is the knowledge on markets, value chains, stakeholder participation and governance. And almost nil is the knowledge about food & nutrition security, and how this can be integrated in a landscape approach.

Specific lessons learned:

1. Economic corridors are defined from a macro-economic perspective, and there is hardly any vision on how to mitigate social and environmental impact of these corridors. Food & nutrition security is one of the less obvious factors to be taken into account. More evidence on the food & nutrition security impact of economic corridors, and pro-active mitigation models are urgently needed.
2. In one landscape there often are many different interventions, donors, programmes and projects. There is often little alignment between these different interventions. This, while governments do not always take their prior responsibility of securing food & nutrition security for landscape inhabitants. Therefore, government involvement is of utmost importance to help governments fulfil their role as basic safeguards of human rights.
3. Policy environments are sticky, and hard to change. Networks, platforms and otherwise landscape level coalitions are helpful in changing the policy environment, and bringing food and nutrition security higher onto the policy agenda.
4. Most of us are facilitators of dialogue within the landscapes we work. It is up to local stakeholders to decide. But who are those local stakeholders? Are these the ones that are least food & nutrition secure? Or do they lack the time to take part in our facilitated dialogue? How do we involve the real change makers, and support them in their sometimes politically sensitive message of food & nutrition security, and human rights?
5. A gender approach is most relevant, and needs to be applied when assessing, analysing and improving food & nutrition security in landscapes. This, because women and men have different perceptions, needs and demands with regard to food & nutrition security; women play an important role in local economies; and women make most of the dietary choices within the household.
6. Before we start intervening in a landscape, we may need to define what we actually want to achieve, so that we can focus, and get the required knowledge to appropriately do so.
7. Scenario planning can be a valuable instrument for achieving the SDGs in an integrated way. But in order to fully cover the food & nutrition security related goals we need to have better indicators to be included in our models (or borrow from food & nutrition science which may have these indicators already).
8. The political economy of food & nutrition security is of utmost importance. Therefore, Embassies and multilateral institutions and investors (World Bank) can be valuable partners to function as leverage to change rules and policies that are necessary to create a favorable climate for realizing FNS landscapes.
9. Many of us are working on commodity chains, but few of us have deep knowledge on food & nutrition security. Through our chain oriented interventions, we may even make things worse for those groups which are most vulnerable in terms of food & nutrition security. So we'd better start focusing more on food & nutrition security.

The discussion revealed that Food and Nutrition Security has a spatial dimension indeed. Successful strategies therefore must have a vision on how to achieve Food and Nutrition security beyond household or community level. Some regional planning is required. However there are no predefined pathway towards food and nutrition sensitive landscapes. There are many. Let us follow them all, while we keep exchanging and learning from each other, for having the best outcome.

Photos from the day

