Section 3: Describing Food Systems

The purpose of this section is to demonstrate how food systems can be described and introduces a tool for getting started with the process.

Describing a Typical Food System: key features

Food System Stakeholders and their Roles

The key stakeholders include smallholder farmers, who are the backbone of agricultural production; large-scale commercial farmers, who focus on cash crops; agricultural processors, who transform raw materials into food products; distributors, who facilitate the movement of food from producers to consumers; retailers, who sell food to consumers; consumers, who make purchasing decisions; policymakers, who create and enforce regulations; and NGOs and development agencies, who support various aspects of the food system.

The food system impacts different social groups through factors such as food access, affordability, and nutritional outcomes. Women, in particular, play a crucial role in food production and household food security, but they often face barriers to accessing resources and decision-making power.

Food System Activities

Agricultural production is a foundational food system activity, encompassing both crop and livestock farming, and fishing. There's a notable push towards diversification, moving beyond reliance on single crops like maize to include small grains and horticulture. Food processing and distribution form a crucial link between agricultural production and consumption. This activity involves transforming raw agricultural products into consumable food items, followed by their transportation and distribution to markets and consumers. Food consumption patterns and nutritional intake are central to the food system. There's a growing emphasis on promoting the consumption of nutritious foods, including indigenous varieties and biofortified crops, to improve public health. Food safety and control are also vital, with ongoing efforts to fortify food control systems, guaranteeing the safety of food from farm to fork.

Power Dynamics

Power dynamics within the food system are significantly shaped by land ownership (which determines control over resources and production methods) and corporate interests (which control post-farm gate activities and markets). Unequal access to capital amplifies these imbalances, restricting investment for smaller-scale actors and concentrating influence. This interplay affects market power, where dominant entities dictate prices and trade policies, often disadvantaging marginalized producers and limiting consumer choice. Consequently, economic relationships are defined by fluctuating commodity prices and trade regulations, while social interactions are influenced by cultural norms, community networks, and the efficacy of local organizations. These interconnected factors highlight how power structures profoundly impact economic opportunities and social equity throughout the food system.

Food and Nutrition Security

The food and nutrition security situation faces persistent challenges, exacerbated by factors like climate change, economic instability, and poverty. A significant portion of the population

experiences food insecurity, with vulnerable groups, including children and those in rural areas, disproportionately affected. Climate-induced shocks, such as droughts, disrupt agricultural production, impacting food availability. Economic hardships, including high inflation and unemployment, limit access to nutritious food. Efforts are underway to improve food security through national policies and strategies, focusing on sustainable agriculture, improved food distribution, and enhanced nutrition programs. However, ongoing challenges require sustained and coordinated interventions to ensure adequate food and nutrition for all citizens.

Environmental Impacts

The environmental impacts of food systems are substantial, encompassing deforestation driven by agricultural expansion, soil degradation from intensive farming, and water pollution stemming from fertilizer and pesticide runoff. Conventional agricultural practices, with their reliance on synthetic inputs and monocultures, exacerbate these pressures, threatening biodiversity and ecosystem health. However, sustainable practices are gaining traction, including the promotion of agroecological farming methods that prioritize ecological balance and minimize chemical use. Improved water management techniques, such as efficient irrigation and rainwater harvesting, aim to conserve this vital resource. Furthermore, reducing post-harvest losses through better storage and infrastructure can significantly decrease the environmental footprint of food production by minimizing waste. These sustainable approaches offer pathways towards a more environmentally responsible and resilient food system.

Socio-economic Wellbeing and Livelihoods

The socio-economic wellbeing of the actors in the food system is influenced by factors such as agricultural productivity, market access, and trade policies. Smallholder farmers often face challenges accessing credit and markets, while large-scale commercial farmers are more economically viable. Economic opportunities include developing value-added agricultural products, improving market infrastructure, and promoting agricultural diversification. Challenges include limited access to finance, market volatility, and climate change.

Social equity is influenced by factors such as land ownership, access to resources, and gender inequality. Low-income communities and marginalized populations often face challenges accessing nutritious food and participating in agricultural value chains.
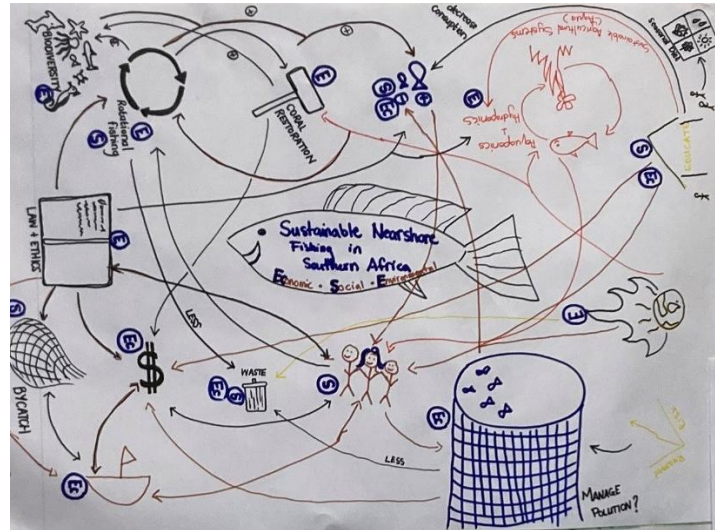
Rich Pictures

A rich picture is a free-form, visual representation of a complex situation, designed to capture the diverse perspectives and subjective experiences of those involved. It's not about creating a precise, technical diagram; instead, it's about sketching out the messy reality of a situation using symbols, doodles, words, and connections. The purpose is to explore and understand, rather than to define or solve. Rich pictures are particularly valuable in food systems analysis because they allow us to capture the inherent complexity and subjectivity of these systems. They acknowledge that food systems are influenced by a multitude of factors, including social, economic, environmental, and cultural elements, and that these factors are often perceived differently by different stakeholders.

For example, a rich picture of a local food market might include drawings of farmers, consumers, vendors, and government officials, along with symbols representing resources, challenges, and relationships. It might also include speech bubbles to capture the diverse opinions and concerns of these actors. Crucially, a rich picture is not intended to be a definitive

representation of the situation. It's a tool for exploration, a way to spark conversation and generate insights. It's a snapshot of a particular moment in time, reflecting the perspectives and biases of those who created it.

Example Rich Picture

This example of a rich picture from a Southern African context explores a food system centered on fishing. The picture is messy, with the figures drawn from different directions, with many arrows depicting relationships. The purpose of the rich picture is to develop a detailed and 'messy' understanding of the situation at hand and is designed to make sense to those who have drawn it. It is part of a pre-analysis phase and can be used as an initial step to get stakeholder collaboration started.

Example (Bad) Rich Picture
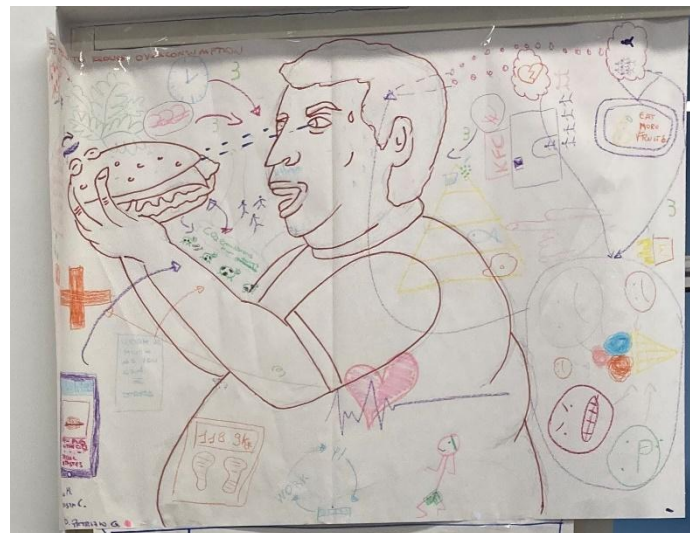
This is an example of how rich pictures can be dominated by a single individual who may block others from giving their input. This example indicates the value of careful facilitation and a guide of engagement shared with each group member to ensure that all voices are provided the space and time to engage.

Section 3 Review

Before moving on, take a moment to reflect on what you've learned in this section. Consider the following questions as a way to review the material and think about how you can apply these concepts in real-world situations:

Question 1:

Using an example from your portfolio, how would you begin to map this system? What are the key actors, challenges, and opportunities you observe? Reflect on how creating a simplified 'map' of your own food system could help you identify potential areas for positive change or intervention.

Question 2:

Think of a complex situation you're currently navigating. Applying the principles of a rich picture, begin to sketch out the different actors, relationships, and influences involved. How does the process of creating this visual representation help you understand the situation differently? What new insights or perspectives emerge as you use symbols, images, and text to capture the 'messy reality' of the situation?

In the next section, we will be exploring how to investigate interventions.

Sources

Barbrook-Johnson, P. and Penn, A.S., 2022. Systems Mapping: How to build and use causal models of systems (p. 186). Springer Nature.

Checkland, P. and Poulter, J., 2020. Soft systems methodology. Systems approaches to making change: A practical guide, pp.201-253.