

Sustainable Food Systems: Operationalizing The Approach

Anchita Borah

M. Sc. Scholar, Department of Soil Science and Agricultural Chemistry, Central Agricultural University, Imphal

ARTICLE ID: 62

Introduction

Food systems (FS) comprise the full spectrum of actors and their interconnected value-adding activities. Food products that come from agriculture, forestry, or fisheries, as well as elements of the larger economic, societal, and natural environments in which they are embedded, are produced, aggregated, processed, distributed, consumed, and disposed of.

A sustainable food system (SFS) is a food system that delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised. This means that:

- It is profitable throughout (economic sustainability);
- It has broad-based benefits for society (social sustainability); and
- It has a positive or neutral impact on the natural environment (environmental sustainability)



Sustainable food systems and holistic approach

Sustainable food system adopts holistic approach and provides a better understanding of the linkages between all the elements of the food system.

Holistic approach aims to pinpoint

- The root causes behind a system's under-performance;
- The governance mechanisms that could change behaviors within the system
- Also involves identification of binding constraints and leverage points in order to determine how to best address the complex challenges found in a food system.

Governance

It is a fundamental concept for sustainable food systems development and refers to the mechanisms by which relationships and transactions among food system actors are governed and coordinated, based on rules and other factors such as market power, trust and services.

Root causes

Since food system elements are linked, the causes of a problem in any part of the food system may lie not only in one part of a food system, but also in other parts of the system. It is therefore essential to use systems thinking and to keep asking 'why' until we get the root causes of the problem. The **iceberg model** is often used for root cause analysis.

Leverage points

- These are points in the system where if change happened, it would have a big impact on the rest of the system.
- There are two kinds of leverage points. When applying an equal amount of change, a low leverage point causes a small change in the system's performance, while a high leverage point causes a big change in a system's performance.

Binding points

It is a constraint that needs to be tackled first in the sequencing of interventions. If not, it will block the progress of the whole system, even when other constraints are resolved. To illustrate this point, Liebig's barrel concept can be used.

Operational approaches to sustainable food systems development

There are four operational approaches for sustainable food systems development:

- **Business models:** It is the rationale through which businesses create, deliver and capture values in many value chains of food systems.
- **Market systems:** It refers to the exchange by which goods and services are delivered and the supporting functions and rules that are performed and shaped by a variety of stakeholders.

- **Territorial approaches:** It focuses on a geographical area with the aim of understanding its local context and characteristics in order to develop tailored policies and interventions.
- **Value chains:** It consists of full range of farms and firms and their successive value-added activities, which produce particular raw agricultural materials and transform them into food products.

Comparison of four operational approaches:

	Business models	Market systems	Territorial approach	Value chains
STRENGTHS	<ul style="list-style-type: none"> • Provides insight into an enterprise's operation and processes. • Beneficial when aiming to strengthen the producer and first buyer linkage. 	<ul style="list-style-type: none"> • Can have impact at scale from the start, as markets are typically relevant for several commodities at the same time (e.g. strengthening linkages with financial services for smallholders). 	<ul style="list-style-type: none"> • Addresses the entire local food system in a given geographical area. • Provides contextual opportunities and local 'bottom-up' stakeholder engagement. 	<ul style="list-style-type: none"> • Provides a holistic view of a single commodity, from farm to fork. • Can be adapted to a specific lens (e.g. nutrition, gender, employment).
LIMITATIONS	<ul style="list-style-type: none"> • Difficulty in replicating lessons learned from one business case to another. • Depends largely on enterprise's capacity, incentives and investment. 	<ul style="list-style-type: none"> • Focuses on one particular market, therefore often requires constraints on other market systems to be resolved, in order to be effective at food system level. 	<ul style="list-style-type: none"> • Focuses on one specific geographical area, so can be difficult to scale up to a larger territory, or replicate in another region. 	<ul style="list-style-type: none"> • Focuses on one commodity, so can be insufficient to tackle food system-level dimensions, such as nutrition (e.g. healthy and diversified diets).

Conclusion

Sustainable food systems approach requires probing for the root causes of food system as well as recognizing the binding constraints and leverage points in the system. To operationalize food system thinking, we need to move from food system level, which is highly complex to a workable level. There are at least four operational approaches that can be utilized to operationalize SFS approach.