What are food systems and how do they change (or not)? What does this mean for the CGIAR?

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Presentation for Webinar Series 'Taking Transformation Seriously: Implications for CGIAR' – First webinar: What is a food system – and can we actually transform it? January 16.00 2024







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ORIGINAL PAPER



The Science, Sociology and Economics of Food Production and Access to Food

Deringer



How food systems change (or not): governance implications for system transformation processes

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Webinar series: "Taking transformation seriously: Implications for CGIAR." FIRST WEBINAR: What is a food system - and can we actually transform it?

- Clarifying 'food systems thinking'
- What do we know about 'system transformation'?
- What roles for research in transformation?
- [How serious does/can the CGIAR take system thinking?]

SYSTEMS RESEARCH IN THE CGIAR AS AN ARENA OF STRUGGLE

Competing discourses on the embedding of research in development

Cees Leeuwis, Marc Schut and Laurens Klerkx

AGRONOMY FOR DEVELOPMENT The Politics of Knowledge in Agricultural Research

PATHWAYS TO SUSTAINABILITY



A representation of a Food System

By: High Level Panel of Experts on Food Security and Nutrition (HLPE) / UN Committee on World Food Security (WFS)

Innovation, Biophysical and Political and Socio-cultural Demographic technology and environmental economic drivers drivers drivers nfrastructure drivers drivers Leadership Population growth Culture Globalization and trade Changing age distribution **Religions & rituals** Natural resource capital Innovation Conflicts and humanitarian crises Urbanization Social traditions Ecosystem services Technology Food prices and volatility Migration& forced Women's empowerment Climate change Infrastructure Land tenure displacement Food Food supply chains environments Food availability and Farmers, indigenous peoples, Production agribusiness, land and plantation Nutrition physical access (proximity) systems owners, fisheries, financial entities Consumer and health Diets behaviour Economic access outcomes Storage and Transporters, (affordability) Quantity agribusiness, distributors distribution Choosing where Quality and what food to Promotion, advertising and Packing plants, food and acquire, prepare, Diversity Processing information beverage industry, small and cook, store and eat Impacts and packaging Safety medium enterprises Food quality and safety Retail and Retailers, vendors, food Social outlet owners, traders markets resauranters, wholesealers Economic Environmental Political, programme and institutional actions Sustainable Development Goals 👿 🐟 📶 🗞 🖲 🛄 🐜 🗛 😽 🔛 😵 AVAILABILITY ACCESS UTILIZATION

Figure 1 Conceptual framework of food systems for diets and nutrition

Another representation of a Food System

By: Van Berkum et al., 2018



Another representation of a Food System



Figure 3 Food supply chains and food environments

Source: Adapted wheel concept from Ranganathan et al. (2016).

What do these images portray?

We are dealing with complex wholes



 Interacting entities: Actors, Activities, Tasks, Organisations, Technology, Drivers, Regulations, Policies, Processes, Behaviours, Chains, Agroecologies, Environments, Outcomes, Impacts etc.

We use 'systems thinking' to 'perform' something

 make tangible? suggest control? organize and position ourselves? attract attention?



Systems thinking: Interactions in complex wholes resulting in 'emergent properties'

The whole is more than the sum of the parts'



Emergent properties can be <u>desirable</u> or <u>undesirable</u>







disergy

Pollution Climate change Poverty Etc

synergy

In AR4D & CGIAR we tend to emphasize the problematic outcomes



Pollution

disergy

- Poverty
- Climate change
- Polarisation
- Obesity
- Biodiversity loss
- Inequity
- Disease outbreaks



Outcomes emerge through diverse `modes of ordering' in a web of interactions





To a considerable extent as the unintended consequence of many intentional actions Actors do not consider the same 'system'. This is true for both scientists and the stakeholders who constitute the system!



Achieving system change is far from easy! Relevant system features:

- competing views and goals
- multiple levels, siloes and spheres
- diversity and unequal power
- existing systems are resilient
- no actor in full control



It is not a matter of simple `engineering'!



How do systems change? There exist different modes of systems thinking

- Systems seen as:
- Machines'
- Organisms'
- Meanings'
- Psychic prisons' Shock therapy

- Change & governance strategy:
 - Engineer & optimise towards a goal
 - Re-balance and adapt
 - Dialogue, learning, agreement
- Arenas of struggle' Coalition building, competition
- `Rules'
- Tipping points'
- Change incentive systems
- Learning- and negotiation-based building of discourse coalitions

Historians: Transformation involves changing the 'modes of ordering' of the existing system



This critically involves innovating the 'rules of the game' (institutions) to alter interaction

Food system transformation may e.g. require:

- fair international trade regulations
- true pricing / responsible finance mechanisms
- redistribution of revenue & risks in value chains
- shared funding of inclusive service delivery
- stronger role of states



Historical research suggests that successful transformation requires e.g.

- Sufficient pressure on the existing system
- Redundancy of options/interventions (technical and institutional) experimented with in society ('variation')
- Societal learning to make options more mature and competitive
- Effective formation of coalitions (political and discursive) around novel options



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Collaborative research can be a vehicle for all of this!

In sum: 'Taking transformation seriously' in the CGIAR involves recognizing that:

Research may strengthen or weaken existing food systems

Having transformative ambitions (or not) is deeply political

The process of doing research is at least as important as the findings



Thank you for your attention!



