

## • Sustainable food systems in the Global South(s)

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### Background

Transforming food systems to make them more sustainable and more resilient is a stated priority for many institutions, in accordance with the Sustainable Development Goals. Providing healthy food for all while limiting the negative impact of agriculture on the environment requires us to rethink our food systems, i.e. the dense web of social, economic, technological and political changes and dynamics which influence food-related activities and actors at the territorial level. The Knowledge Community for Sustainable Food Systems (Cosav SFS) recently studied the specific challenges attendant upon the research in this pluridisciplinary field conducted by IRD and its partners in the Global South in 2022. This article presents the principal results of this analysis.

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#### Further reading

<https://www.ird.fr/la-communaute-de-savoirs-systemes-alimentaires-durables-syad>

## Food systems as trans- and interdisciplinary objects

From the fields to our plates, food production is intended to help meet our essential physiological needs. But food production activities also have a defining impact on the relations between human societies and their lived environments, as well as their social and cultural structures. The present challenges to the sustainability of our political, ecological and nutritional systems necessitate a renewed focus on inter- and trans-disciplinary knowledge in order to maintain harmony in these systems of relations. In order to analyse the manner in which trans- and interdisciplinarity are handled within IRD, a questionnaire was sent out to IRD partners in the South affiliated with recently-formed research teams (JEAI), international joint laboratories (LMI), or International Research Networks (IRN), all of whom are involved with research into the sustainability of food systems. Thereafter, we conducted a round of interviews with some of these researchers, conversations which we continued at the annual Cosav SFS seminar held on 22-24 November 2022\*.

## Research into food systems in the Global South(s)

We identified a total of 20 research structures (LMI, JEAI, IRN) working on food systems, primarily in Africa (65%), Asia (30%) and

Latin America (5%), with the most prominent research topics being:

- the development of agroecological practices (7 structures): e.g. LMI Lapse in Senegal, working to collate knowledge on plant varieties resistant to environmental stresses, in order to secure agricultural yields;
- the development of sustainable aquaculture (3 structures): e.g. LMI Limaqua in South Africa, working to improve aquacultural output in the interests of people's health, while also bolstering their income;
- innovations in agricultural technology (2 structures): e.g. JEAI Jatro-agro in Burkina Faso, working on an innovative procedure for producing bio-fertilizer using jatropha cakes.

Other topics of research include food safety, the impact of pesticides on human health, pastoralism, pressure on land resources and inter-actor conflict, and the adaptation capacities and resilience of indigenous communities. The majority of these research fields are rich in interdisciplinary approaches – bringing together biologists, ecologists, modelling experts, geneticists and agronomists, along with anthropologists, sociologists and economists – in order to take cultural practices into account when seeking to comprehend the catalysts and obstacles associated with the development of new agricultural practices and/or measure the socio-economic impact on those directly affected. These partnered research structures are also keenly aware of the importance of adopting multi-actor approaches in

\* We would like to thank all of the partners who took the time to respond to our email questionnaire, and those with whom we spoke by telephone, particularly Konan Dibi, Ndeye-Helene Diagne Diallo, Éric-Joël Fofiri Nzossié, Hassanebil-Assanou Issou-fou, Ndjido A. Kane, Ousmane Koita, Sitou Lawali, Brett Macey, Ynoussa Maiga, James B. Neya, Kimchhin Sok and Tahina Raharison.



## How can we make food systems more sustainable?

### Local/regional behaviour

- Redistribute profits (better price distribution along the value chain)
- Develop short supply chains (where possible)
- Implement fair trade
- Respond to local demand and honour it
- Be connected to the market
- Eat locally, in season and in smaller quantities (those who can)
- Move away from over-valued individual satisfaction

*P. Janin, E. Fofiri, T. Jourda, S. Racaud, E. Verger, Bill, E. Fourat*

### Policy

- Strengthen powers to regulate and sanction major economic players
- Support family farming and redistribute land more effectively
- Build political will and change standards
- Deglobalise consumption patterns
- Introduce sustainability credit

*P. Janin, E. Fofiri, T. Jourda, S. Racaud, E. Verger (souhait)*

### Participatory governance

- Move away from accommodation policies and make trade-offs transparent
- Remove lobbies from the decision-making process
- Collegial decisions

*P. Janin, E. Fofiri, Bill, E. Fourat*

### Environment

- Preserve the production base and protect the environment
- Improve packaging management
- Encourage organic inputs

*E. Verger, M. Le Bars, C. Vernière, Bill*

### Technical

- Support the transformation of local production
- Technological and social innovations

*C. Vernière*

### Communication

- Behavioural research better integrated into modelling
- Global health (soil, plants, animals, humans)
- Educate young people about the impact of food production on the environment
- Improve communication on sustainability to encourage changes in behaviour

*M. Le Bars*

- Knowledge brokerage between research and local policies
- Economic incentives to strengthen the social and environmental pillars of SFSs
- Circular economy

## Results of the Word café activity at the annual Cosav SFS seminar (November 2022).

order to rethink technological innovations with and for food system actors, while also facilitating uptake by users or consumers.

## Challenges in the South(s)

The dozen or so interviews we conducted with partners from the South highlighted the ways in which the sustainability of their food systems has been weakened by climate change,

fluctuating food prices against a backdrop of demographic growth, and a pressure on land resources which has exacerbated the vulnerability of peasant farmers, in particular. The solutions developed heretofore are often regarded as being short-term (and thus unsustainable), since they regard satisfying demand for food as their sole guiding objective (making them “quantitative” rather than “qualitative”). As one researcher put it to us: “sustainability is about making sure, in a low-resource context, that we are capable of producing

enough.” Examples of this principle in action may include the abandonment of permanent crops in favour of plants grown to order, or less costly varieties with shorter production cycles. Collective discussion of the question “What is preventing food systems from being more sustainable?” revealed a shared vision of the factors holding food systems back from sustainably and efficiently meeting food needs in their entirety: inadequate political visions, conflicts of interest between actors within the food system, social inequality restricting access to information and resources, models of consumption, and finally a lack of transformative actions at the local, micro-social level.

### Towards a more sustainable approach to food systems

We found two, opposing, visions of sustainability: “It is not a new concept, because it is

implicit to agricultural and food knowledge” *versus* “It is an essential concept for shifting the paradigm of food production.” One thing that researchers do agree upon is the work needed to improve the sustainability of food systems. Seven priority themes emerged from our discussions (see illustration): 1) strengthening the capacity for political action by those essential food system actors who are currently under-represented in the debate; 2) strengthening participatory governance at all levels; 3) promoting measures which encourage people to consume local produce (cutting transport requirements while strengthening the local economy and increasing food sovereignty); 4) promoting environmentally-sound production practices; 5) fostering culturally and socially appropriate technological innovation; 6) improving communication on matters of sustainability; 7) promoting a sustainability-based economy (circular economy, economic incentives to change etc.).

#### KEY POINTS

The sustainable food systems knowledge community aims to engage with the major challenges facing food systems and their sustainability. With this goal in mind, the annual Cosav workshop in 2022 provided a timely reminder that research into sustainable food systems is also a matter of:

- ramping up knowledge sharing between academics, development specialists and the people directly affected by such research, in a spirit of participation;
- making research equal and equitable for all research partners;
- reconciling the local and global dimensions of food systems.

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