



Pathways for the sustainability and scaling of agricultural innovations in the Sahel

Proposals from the Inter-DeSIRA regional workshop, held from 5 to 7 March 2024 in Saly (Senegal)

KEY MESSAGES

The Sahel faces significant challenges in terms of food security and climate resilience. Agricultural innovations are crucial to address these challenges, yet for many, ensuring they are sustained over time and deployed on a larger scale is proving difficult. A framework developed by DISSEM-INN highlights key factors **to address these issues of innovation sustainability and scaling:**

- ✓ **Adopting a holistic approach that encompasses technical, organisational and sociocultural dimensions** for innovations that are both sustainable and conducive to change;
- ✓ **Integrating these two processes into project design** by planning specific activities and allocating dedicated resources and expertise;
- ✓ **Fostering the creation of institutions** (platforms, networks, etc.) **and strengthening their members** (cooperatives, producer networks, etc.), which are central to the success of these two processes;
- ✓ **Adjusting the timelines of projects** to provide long-term support to local actors, which is **essential for far-reaching changes in practices, as well as in the associated rules, institutions and values.**



For more information

A FRAMEWORK BASED ON THREE ASSUMPTIONS FOR INNOVATION SUSTAINABILITY AND SCALING

To identify these key factors, DISSEM-INN has developed a specific analytical framework¹ applied to three main assumptions, resulting from its previous capitalisation work (see diagram below):

- 1. The sustainability² of innovations is based on their multidimensional nature** (technical, organisational and socio-cultural).
- 2. There are connections between these dimensions and the three modes of scaling³** (out, up and deep).

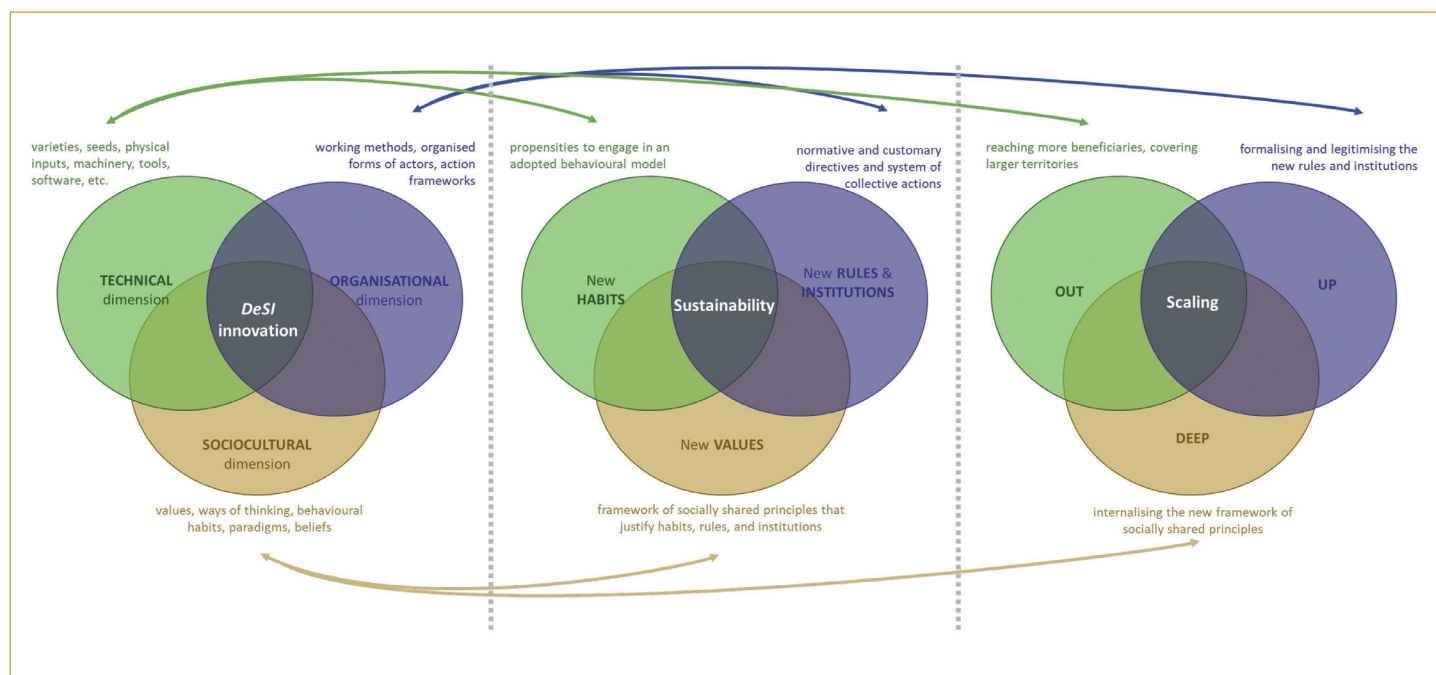
3. Any innovation process that combines these three dimensions holds seeds for scaling.

Within this framework, innovation is seen as a process that, in order to change individual practices and behaviours, also influences the rules, institutions and values existing prior to the intervention. Practice changes are therefore accompanied by the creation of new rules, institutions and values, which in turn endorse these behavioural changes.

→ This framework can thus be used to analyse the sustainability of innovations by examining how they change practices, rules, institutions and values.

1. For more information, see summary note n°1 on this topic.
 2. Understood as the perpetuation of the outcomes produced locally by a project among its direct beneficiaries, extending beyond the duration of its intervention. For more information, see summary note n°2.
 3. Understood as the dissemination of results beyond the spaces and groups targeted by a project to reach other populations in other spaces. For more information, see summary note n°3.
 4. Led by the European Commission, the DeSIRA initiative (Development Smart Innovation through Research in Agriculture) funds more than 60 projects worldwide that promote innovation in agriculture and the transformation of food systems to make them more climate resilient.
 5. These projects are: ABEE, ACCEPT, APSAN-Mali, BIOSTAR, CASSECS, FAIR, IRRINN and Health & Territories. They cover a wide range of fields (crop improvement, agroecology, bioenergy, livestock, irrigation, health) in six countries of the sub-region (Benin, Burkina Faso, Chad, Mali, Niger and Senegal).

Definition of dimensions of innovation and modes of scaling, and illustration of their correspondence.



→ It can also be used to analyse scaling by studying how these changes in practices, rules, institutions and values spread to other individuals in other spaces.

This framework and these assumptions were applied to 16 agricultural innovations characteristic of the eight DeSIRA⁴ projects⁵ in the Sahel with which DISSEM-INN is working. The validation of these assumptions, tested during a workshop by the representatives of these projects, produced lessons that can be used in the conception and design of future interventions of the same type.

A MULTIDIMENSIONAL APPROACH LEADING TO SUSTAINABILITY AND CHANGE

The analysis of the DeSIRA projects shows that simultaneously addressing these three dimensions enables innovations to contribute to all of the attributes of sustainability (habituation, the emergence of new rules, institutions, and values). It reveals the key drivers at work for each of them.

- The **technical dimension** contributes to habituation, an attribute primarily driven by the **performance of an innovation** according to three criteria (quality, availability and adaptability), which are essential for fostering uptake, but also require **iterative processes**, facilitated by the **long-term engagement of actors**.
- The **organisational dimension** enables the creation of **institutions, in the form of multi-stakeholder networks or exchange platforms**, within which the innovation emerges, **supported by a set of rules**,

which are defined collectively and become gradually formalised.

- The **sociocultural dimension** underpins the **dissemination of new values**. Often overlooked, it nevertheless plays a **crucial role in the acceptance and uptake of innovation**. It is manifested, through the combined effects of the previous attributes, by **changes in relationships between actors and their ways of thinking**.

Due to their multidimensional nature, these innovations also carry the seeds for scaling across the three modes of dissemination. The qualitative analysis of these seeds highlights the main drivers at work for each of them.

- Most of the seeds for the technical dimension contribute to **scaling out**, primarily driven by actions to demonstrate the performance of the innovation (experimental site visits, exchange sessions), which are best conducted in a collaboration with other initiatives.
- Most of the seeds for the organisational dimension concern **scaling up**, which requires advocacy efforts to provide political support for the institutions created and to legitimise the rules they develop.
- Most of the seeds for the sociocultural dimension facilitate **scaling deep**, resulting from the combination of the other modes of dissemination. This implies the progressive empowerment of local actors, driven by their growing awareness and gradual skill improvement through long-term support.

Illustration of contributions of dimensions of innovation to vectors of sustainability and scaling.

DeSI dimensions	Sustainability		Scaling		
	Attributes	Vectors revealed	Modes	Dynamics	Vectors revealed
Technical	1. Process of habituation	Performance of the innovation	OUT →	Exchange dynamics	<ul style="list-style-type: none"> • Demonstration of performance of the innovation • Pooling efforts on sharing
Organisational	2. Nature of rules	Formalisation of frameworks of action or behaviour	UP ↑	Creation of local institutions	<ul style="list-style-type: none"> • At beneficiary level • At value chain level • Multi-stakeholder arenas
	3. Nature of institutions	Support for multi-stakeholder networks or arenas		Legitimation efforts	<ul style="list-style-type: none"> • Political support for institutions created • Inscription of co-defined rules
Sociocultural	4. Essence of values	Shift in perception	DEEP ↘	Combination of modes of dissemination	<ul style="list-style-type: none"> • Awareness raising among local actors → : showing by doing ↑ : collectively defined management rules ↘ : changes in relationships between actors
		Changes in relationships between actors			
		Uptake of practices and rules		Empowerment of local actors	<ul style="list-style-type: none"> • Training/skill development of local actors

ANTICIPATING AND FOSTERING SUSTAINABILITY AND SCALING

The validation of the three assumptions thus shows that taking a holistic approach from the design stage of innovations helps to lay the foundations for their sustainability and scaling (see table above).

To succeed, both processes must be taken into account from the project design stage, to ensure that activities contributing to the key drivers mentioned above are planned, with dedicated resources and expertise.

The application of the framework highlights the organisational dimension and the training vector as drivers of these processes due to their versatility. Fostering the creation of networks and institutions (exchange platforms, sectors, multi-stakeholder consultation frameworks) and ensuring skill development for their members (cooperatives, farmer networks, etc.) thus simultaneously supports several attributes of sustainability and modes of dissemination.

While practice changes can occur quickly, changes to rules, institutions and values take more time. Another lesson from the framework thus suggests revising the timelines of projects. In order to ensure these change

dynamics are fully effective, support for local actors, organised within established forms, must be sustained over time.

By forming a continuum between innovation sustainability and dissemination processes, this framework can be a useful tool from the project design stage in order to clarify pathways for change, monitor their evolution and promote their results.

ABOUT

Funded by AFD and coordinated by Cirad, the "Dissemination of innovations in the Sahel region" project (DISSEM-INN) capitalizes on a set of eight projects launched as part of the European DeSIRA initiative and taking place in the Sahel. These projects help develop innovations to make agri-food systems sustainable and resilient to climate change.

As part of its inter-DeSIRA workshop on sustainability and change of scale (March 2024), DISSEM-INN tested three hypotheses (see p.1) on 16 DeSI innovations that are characteristic of the activities of these eight DeSIRA projects.

This Policy brief is therefore based on the results of this workshop.

In the series "For sustainable agricultural innovations in the Sahel", also to be discovered...

Note n°1

Presents the analytical framework

EN VERSION



FR VERSION



Note n°2

Focuses on sustainability

EN VERSION



FR VERSION



Note n°3

Focuses on scaling

EN VERSION



FR VERSION



In the Policy Brief series, also to be discovered...

Policy Brief n°1

Presents ways to meet the challenges of agricultural action-research in the Sahel

EN VERSION



FR VERSION



Policy Brief n°2

Presents ways to meet the challenges of the national agricultural innovation system in Senegal

EN VERSION



FR VERSION



Source

Inter-DeSIRA Workshop Report, *Des clés pour penser la durabilité et l'expansion des innovations agricoles au Sahel, projet DISSEM-INN 2024*

To be accessed through this QR code.



Authors

Robin BOURGEOIS, DISSEM-INN Project Leader
 robin.bourgeois@cirad.fr
 Chloé LESENFANS, Consultant for the DISSEM-INN project
 ext-chloe.lesenfans@cirad.fr



Photo credit: see the Report of the regional exchange workshop, p. 125

