

For sustainable agricultural innovations in the Sahel, pathways for the **sustainability** of DeSIRA projects

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

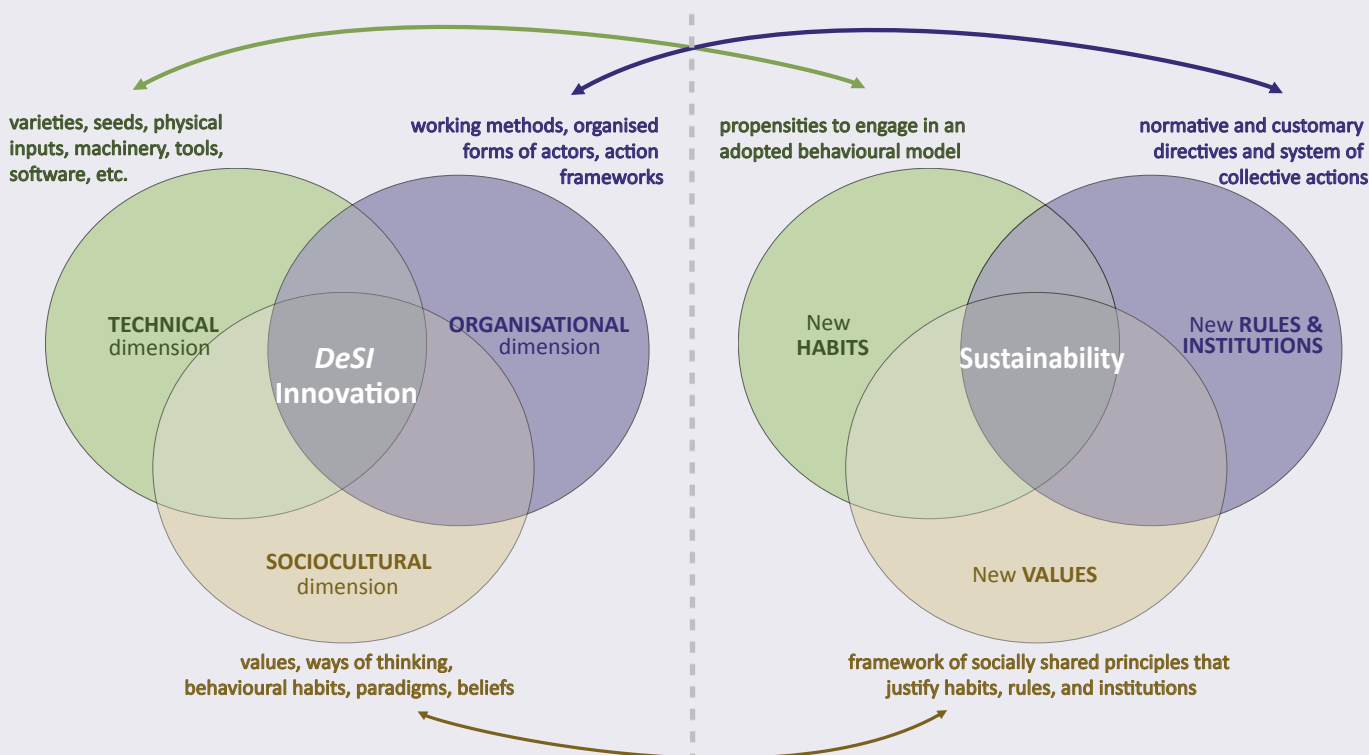
DISSEM-INN IN A NUTSHELL

Funded by **AFD** and coordinated by **CIRAD**, the project “Dissemination of innovations in the Sahel region (**DISSEM-INN**)” concerns a set of **eight projects**¹ launched under the European **DeSIRA**² initiative and implemented in the Sahel region. These projects contribute to the development of sustainable, climate-resilient agri-food systems by focusing on innovation processes, each in a specific field. DISSEM-INN aims to capitalise on their practices and invites them to collectively reflect on the sustainability and the scaling of their innovations.

The innovation approach specific to these projects – called **DeSI** (Development Smart Innovation) – is characterised by three common principles: a **multi-stakeholder approach** that is **co-constructed** and **multidimensional**. The third principle, multidimensionality, indicates that the projects innovate not only on the technical level, but also on the organisational and sociocultural levels (see *diagram* below).

From this initial finding, DISSEM-INN hypothesized that the **sustainability of agricultural innovations is based on their multidimensional nature** (technical, organisational and sociocultural).

Illustration of assumption and definition of its elements



¹ 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).

² 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.

An analytical framework to study sustainability

The sustainability of agricultural innovations is understood here *as the maintenance over time, beyond the project's intervention, of the results achieved by the project among the beneficiaries with which it works in the geographical areas concerned*. This is a crucial issue for sustainable development in the Sahel and an expected outcome of the projects. DISSEM-INN tested its hypothesis during a regional workshop, **applied to 16 DeSI innovations** characteristic of the eight DeSIRA projects for which it conducts its

cross-cutting capitalisation activities. To this end, DISSEM-INN has developed a framework to analyse the mechanisms at work in the sustainability of innovations, seen as a process of change that alters individual and collective practices and behaviours. This framework assumes that the multidimensionality of *DeSI* innovations is what guarantees their sustainability, as it ensures new practices become **habits, rules and institutions**, driven and legitimised by new **values**.

A characterisation of four attributes to understand sustainability

The process of sustainability thus entails actions related to four attributes that are interconnected and form the core of this analytical framework. The activities carried out during the workshop identified the most influential actions at work for each of them.

1) **Habituation** is the assimilation of new practices into the way individuals exposed to these practices think and act. It is strongly dependent on the characteristics of the innovations (quality, availability and adaptability), which must be perceived as superior to those already existing. It is facilitated by the repetition of these new practices over time, enabled by gathering points, whether physical (demonstration fields) or virtual (meetings, platforms), that encourage mutual exchange and learning.

2) **The emergence of new rules** associated with new practices concerns socially transmitted directives. It is based on the formalisation of

frameworks (guides, protocols, procedures, standards, partnership agreements) that stipulate the behaviours to be adopted around these practices.

3) **The creation of institutions** involves forms of organisation embedding these rules and shaping social interactions. This consists in creating formal networks (supply chains, expert networks) or multi-stakeholder exchange spaces (platforms, consultation frameworks, village committees), which foster the uptake of innovations.

4) **The emergence of new values** is characterised by the uptake of new practices and rules, changes in relationships between actors, and shifts in perceptions (or ways of thinking). It thus encompasses all socially shared principles that justify habits, rules and institutions, and not only results from the changes occurring in the previous three attributes, but also contributes to reinforcing them.

Lessons and potential paths of action to strengthen sustainability

The analysis of sustainability actions for *DeSIRA* projects has validated the hypothesis tested and produced several lessons and potential paths of action for future interventions for agricultural development in the Sahel involving innovations of the same type.

The fact that these projects innovate on a **technical** level enables them to contribute to the habituation

process (1). The first lesson concerns the **performance of the innovation**, since the quality, availability and adaptability of its results have been identified as important in fostering uptake. This is a necessary but not sufficient condition, as it requires to be combined with other vectors, especially iterative processes enabled by the **long-term involvement of local actors**.

The fact that for the same innovation, projects also operate on the **organisational** level enables them to simultaneously contribute to the emergence of rules (2) and institutions (3). A second lesson highlights the crucial role played by the **formalisation of rules, agreements and institutions** in establishing the emergence of new practices. The creation of **multi-stakeholder networks or exchange platforms** is thus essential for fostering co-construction and thereby guaranteeing the involvement of beneficiaries in all stages of the innovation process, from design to evaluation. This involvement facilitates the adaptation of innovations to local contexts and their uptake.

The attention paid by *DeSIRA* projects to the **sociocultural** dimension enables them to contribute to the emergence of new values (4). A third lesson indicates **that changes in the relationships between actors or their ways of thinking** play a crucial role in the acceptance of innovations. This is especially true given that these values are not only driven by the new practices, rules and institutions, but also reinforce their legitimacy.

In summary, **the fact that the DeSIRA projects develop innovations with technical, organisational and sociocultural dimensions enables them to collectively address the four attributes of sustainability** (see *table* above).

A final lesson from the combination of these four attributes and interactions between them highlights the **importance of the long-term involvement of actors**. Indeed, the ongoing engagement of local actors is essential to bring about the changes in rules, institutions and values necessary for the sustainable adoption of new practices. The timeframe of projects, usually between three and five years, needs to be reconsidered in light of these findings, particularly given the frequent requests for project extensions observed.

The key potential path of action for DeSIRA projects thus suggests **planning sustainability from the project design phase** by taking a holistic approach that integrates the technical, organisational and sociocultural dimensions. It should be viewed as a **process requiring long-term support for local actors** through dedicated human resources and skills.

Illustration of sustainability vectors in relation to the three dimensions of DeSI innovation

Dimension	Attributes of sustainability	Main vectors identified	Illustration with innovation examples
Technical	1. Process of habituation	Performance of the innovation	<ul style="list-style-type: none"> • Quality: Maralfalfa forage (n°4 - ACCEPT) • Availability: SPIR data (n° 9 - CASSECS) • Adaptability: solar pumping kit (n°13 - IRRINN)
Organisational	2. Nature of rules	Formalisation of action frameworks	• Agreements between herders and farmers (n° 15 - S&T)
	3. Nature of institutions	Support for networks/arenas	• Farmer seed cooperatives (n°5 - APSAN)
Sociocultural	4. Essence of values	Shift in perception	• Cashew nut residues reclassified as recyclable materials (n° 6 - BIOSTAR)
		Change in relationships between actors	<ul style="list-style-type: none"> • From confrontation to cooperation (n°14 - S&T) • Producers becoming experimenters (n°10 - FAIR)
		Uptake of practices and rules	• Participatory methodology for defining product profiles (n°1 - ABEE)

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



NOTE N°1

Presents the analytical framework



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NOTE N°3

Focuses on scaling



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POLICY BRIEF

Translates these notes into pathways of action



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Source

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

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