SLU GLOBAL

Policy brief

Enhancing smallholder farmers' access to seeds during crises

This policy brief highlights the importance of social capital in facilitating smallholder farmers' access to seeds that are adapted to local climatic contexts. Focus is on the structure of farmers' informal seed systems, where the majority of seeds are distributed.

Seeds are the foundation of agriculture and are key to ensuring food security, nutrition, livelihoods, and achieving Sustainable Development Goal 2 – Zero Hunger. Well-functioning seed systems have a large positive impact on smallholder farmers' everyday life and health – especially in low- and middle-income countries, where agriculture accounts for a large share of the economy and people's livelihoods. Seed systems also play a vital role in efforts to adapt food production to climate change [1], and ensuring that they are robust and resilient to shocks is critical to safeguard agriculture as a whole. It is therefore vital to understand potential weaknesses in seed systems, how these affect different groups of society, and the social factors that contribute to resilient seed systems.

KEY MESSAGES

- Smallholder farmers have limited access to high-quality seeds due to the narrow structure and few actors of formal seed systems. Smallholders instead tend to obtain the majority of their seeds through informal seed systems.
- Informal seed systems are vital when government institutions and NGOs have limited presence, or when formal supply chains break down – as in the case of sudden or protracted shocks and crises.
- Smallholders' main concern during shocks and crises is usually their limited access to seeds, rather than scarcity of seeds per se. Initiatives that re-enforce social capital within seed systems can enhance access to available seeds.
- Enhancing social capital by supporting the development of farmers' networks can reduce inequalities in seed systems, increase resilience to shocks, and function as a local safety net.

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Traditional sorghum storage in Burkina Faso.

What is a seed system?

Formal seed channels such as government agencies, research institutions, NGOs, agro-dealers and other private sector actors supply only a minority of smallholder farmers' seed needs – including less than 10% in sub-Saharan Africa [2]. Formal seed systems often build on scientific breeding to develop new seed varieties adapted to climate change impacts such as drought and heat stress [3]. National seed policies, regulations and quality control furthermore contribute to formal seed systems and promote the distribution of high-quality seeds (such as those which are disease free, genetically improved, locally appropriate, and certified) of selected varieties that improve crop productivity for farmers *(Figure 1)*.

However, formal seed systems have a limited reach among smallholder farmers in particular, as certified seeds tend to be more expensive and demand access to additional tools, knowledge, and high-input techniques [4]. The formal seed sector also has difficulties in reaching the most vulnerable and rural communities due to smallholders' relatively limited social capital and ties to formal seed sector actors. For this reason, smallholders tend to obtain the majority of seeds through informal seed system networks [2, 5].

Informal seed systems – also referred to as the local/traditional/farmers' seed systems – are especially vital when government institutions and NGOs have limited presence or when formal supply chains break down – as in the case of sudden or protracted shocks and crises (extreme weather events, conflicts, etc.). In acute situations such as these, seed system security assessments (SSSAs) [6] have consistently shown that informal seed systems account for about 90% of seed supply [5]. Within informal seed systems, seeds are primarily accessed through farmers' previous harvests, social networks, community seed banks, and local markets *(Figure 1)*. Informal seed systems involve mainly uncertified seeds and are largely decentralised and unregulated. Further, they revolve around the local context, indigenous knowledge, local seed storage methods, and entrepreneurship [4-6].

Social capital as a key support for smallholder farmers

Social capital has been defined as "features of social organisation such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit" [7], or as "resources embedded in one's social networks, … that can be accessed or mobilised through ties in the networks" [8]. Applied to seed systems, the concept of social capital is vital, as research highlights that smallholder farmers' main concern during shocks and crises is usually their limited access to seeds, rather than the scarcity of seeds per se. Thus future initiatives and interventions can gain from seeking to re-enforce social capital to enhance farmers' capacity to access available seeds.

"Social capital within seed systems can also be re-enforced by working with vulnerable groups among smallholder farmers."

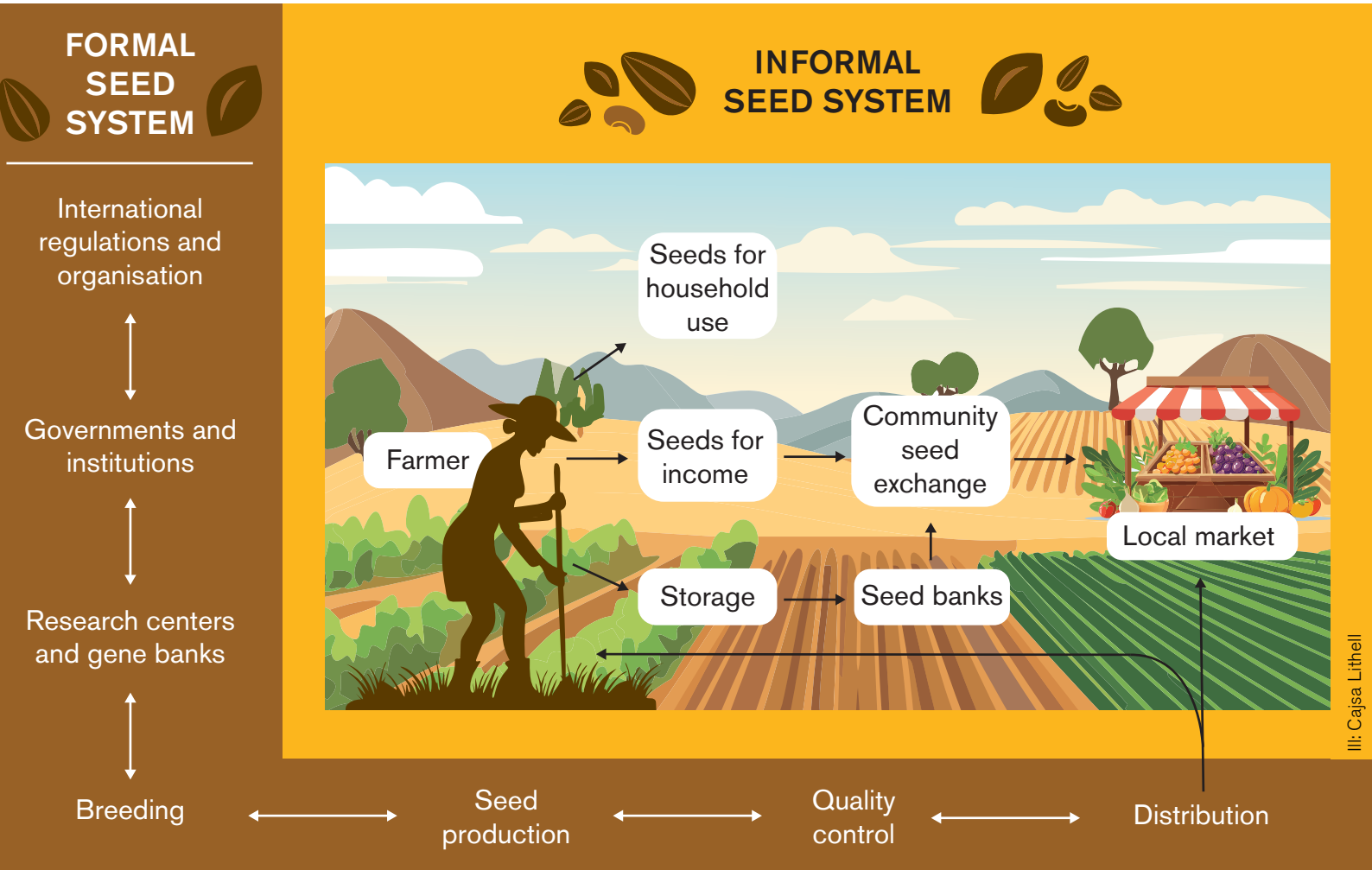

Figure 1. Illustration of formal and informal seed systems. (Modified from Almekinders and De Boef, 2000 [3].)

An important method to re-enforce social capital within seed systems is to support the universal capacity of the community, which can be achieved by facilitating collective action and inclusiveness in programme interventions [9], local entrepreneurship, and action by civil society organisations such as farmer cooperatives and other social groups. Particularly during protracted crises, supporting social capital can reduce the risk of communities becoming aid dependent and shorten their recovery period [9, 10]. A robust local community functions as an informal safety net, which reduces the risks of long-term poverty due to shocks.

Social capital within seed systems can also be re-enforced by working with vulnerable groups among smallholder farmers [1, 6, 9]. Through in-depth analysis of the structure and local context of the given seed system, prevailing barriers for different groups of farmers to access high-quality seeds can be identified. Well-informed interventions are particularly important to reduce inequalities, and empower marginalised groups such as women, non-stereotypical family constellations (who are often overlooked by policy), and other groups that are disadvantaged and/or discriminated (e.g. due to social constructions, age, ethnicity, race and class) [1]. This is vital as marginalised groups are less likely to obtain certified seeds that are adapted to manage shocks, rendering them more vulnerable to shocks and stresses (re-enforcing inequality).

Key action points

• Analysis of how different intervention methods have been used during and/or after various shocks and crises (climatic disasters, conflicts, etc.) can better guide formal actors on how and where to allocate resources to aid farmers' recovery, as well as increase their adaptive capacity to manage future hazards. This can be done through methods such as Seed System Security Assessment (SSSA) [6] and increased participatory involvement of smallholder farmers and local actors in guiding interventions.

• Increased attention and targeting of the underlying reasons for differences in marginalised groups' access to seeds is essential to better empower these groups and thereby achieve more equitable seed systems. Formal actors can gain this type of socioeconomic information by adopting more 'intersectional approaches' within pre- and post-intervention analyses [1, 9].

• Enhancing synergies and linkages between informal and formal seed systems helps to establish more robust and sustainable seed systems [2]. Strengthening cooperation between informal cooperatives (community seed banks etc.) and suppliers, and increased market integration with farmers' cooperatives are key means to achieve this.

Kalawash women collecting seeds.

Diverse seeds shown by Concepta Makokha, a farmer who also runs the seedbank at Vihiga, Kenya.

Authors: **Ella Byström and Paul Egan,** SLU Global
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Contact: **global@slu.se**

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