

Topical Synthesis Paper

Developing the Seed Sector in Fragile States



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This report synthesises learning from the action research and dialogue activities conducted under the Integrated Seed Sector Development in Africa (ISSD Africa) programme, 2019-2023.

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Under the ISSD Africa topic “Developing the seed sector in fragile states” Mercy Corps, SeedSystem and partners conducted activities in Burundi, Mozambique, Niger, Nigeria and South Sudan.

Cover photo:

A Program Officer collecting data in Nigeria

Credit: Corinna Robbins for Mercy Corps

1. Background

Fragile states -- those suffering or recovering from a crisis such as violent conflict, political or economic upheaval, epidemics or natural disasters -- are often characterised by unstable political systems with weak governance; institutional degradation and corruption; low levels of economic investment; labour displacement; unstable security situation; and a society with a short-term focus on securing its basic needs rather than on long-term development. Conflict is often the centrepiece of fragile states, being a driver and a result of fragility, now compounded by the effects of climate change, the food crisis and the COVID-19 pandemic. Natural and man-made disasters can spark or aggravate conflicts further, with effects that often spill over to all economic sectors, particularly hampering agricultural production systems.

Seed systems in fragile states differ from those in more stable environments and offer unique opportunities and challenges. They are often ineffective, with weakened institutional capacity to produce, distribute and control seed quality. For effective seed response, humanitarian agencies, donors and other stakeholders must understand these contexts and adapt their interventions to the unique challenges and opportunities inherent therein. More effective interventions help build the foundation for functioning seed systems that ensure sufficient amounts of quality, preferred seeds are available, accessible and utilised, and improve the systems' long-term resilience.

2. Approach and ambition of the topic

Over the last three years, the Mercy Corps-led ISSD Africa Action Learning Topic, [Developing the Seed Sector in Fragile States](#), has worked to answer two key learning questions:

- What are the characteristics of seed systems in fragile states and how are they affected by conflict?
- How do we adapt assessments, interventions and learning in conflict-affected environments to promote more resilient seed systems?

Mercy Corps partnered with other conflict and seed systems experts to identify the characteristics of seed systems in fragile states, how conflict might impact seed systems, and what needs to be considered differently in these settings. Through a comprehensive desk review and discussions with partners such as the Food and Nutrition Security Resilience Program (FNS-REPRO) in South Sudan and International Fertilizer Development Center (IFDC) in Burundi, existing information on seed systems in fragile states and their particular challenges and opportunities was gathered and consolidated. This review included an assessment of existing tools for evaluating seed sector development in fragile states and confirmed the need for a context analysis approach specifically related to seed systems, resulting in the [Context Analysis Tool \(CAT\)](#).

Developed in partnership with [SeedSystem](#), the CAT helps seed system stakeholders in conflict-affected areas to characterise conflicts, as linked to agriculture and seed systems, and outlines a methodology for assessing context-specific scenarios with the aim to support seed system functioning. The CAT was discussed and disseminated with the broad implementing community during a [webinar](#) in mid-2022 and pilot-tested in Northeast (NE) Nigeria ([Pilot-testing report, 2023](#))

In addition to learning captured during the review, examples were collected from the implementing community to identify different models that had worked in fragile contexts. This resulted in a series of case studies that are included in the CAT and in a separate collection of case studies on [Models for Strengthening Last Mile Seed Production and Distribution](#), produced together with the USAID/Bureau for Humanitarian Assistance (BHA)-funded [SCALE Award](#). These cases provide examples of approaches to reach smallholder farmers in fragile contexts, highlighting what seems to work, what might best be dropped, and how to respond to various challenges and were written with IFDC in Burundi; International Rescue Committee (IRC) in South Sudan; National Cooperative Business Association (NCBA) CLUSA in Mozambique; and Catholic Relief Services (CRS) in Niger. They were translated into [French](#) and presented in a [webinar](#) in early 2022.

Each of these activities contributed to our overall aim of supporting humanitarian actors in fragile contexts to understand how conflict dynamics impact seed systems and how they can adapt their seed-related assessments and interventions to promote the resilience of the overall system.

3. Outcomes and lessons learned

3.1 Characteristics of seed systems in fragile states and how they are affected by conflict

3.1.1 Formal, informal and intermediary seed systems may be differentially vulnerable in the face of conflict

Conflict can affect both crops and seed channels in varied ways. The formal commercial or government channels, for example, may weaken or collapse, which subsequently affects hybrid seed supplies such as maize supply. In contrast, local markets often continue to operate to some degree, meaning that seed of crops accessed in these venues, like common beans or small grain cereals like millet or sorghum, remains more readily available (see CAT, page 8). Understanding the formal and informal seed systems, how farmers interact with each, and how they are differentially vulnerable to and affected by conflicts is the foundation for guiding seed system interventions in fragile and conflict-affected areas. For example, Case Study 2 in the CAT (page 24) details a shift in humanitarian response from importing seeds to procuring locally-produced sorghum, groundnut, and sesame following a detailed seed security assessment (FAO, 2014).

3.1.2 There are multiple features of conflict that humanitarian actors might consider when analysing the potential of conflict to affect agricultural and seed system programming.

Drawing on examples from Africa, Table 1 (presented on Page 10 in the CAT, and below) details examples of conflict features and examples of how these have changed farmers' crop, seed, or management choices. While many effects of conflict are negative, it is important to consider what might be positive changes due to the expansion of coping strategies or the creation of new supply options. More information can be found in Section 1 of the CAT.

Table 1 Seed systems in conflict contexts: examples of immediate change

Conflict feature	Type of change	Example(s)
Length of stability period	Changes in crop choice and management practices	North Kivu, DRC Farmers plant crops earlier to not coincide with rebel attacks.
Theft		North Kivu, DRC Farmers change crop choice to those less susceptible to theft, such as crops that require further processing before consumption (e.g.,soybean) or more time to harvest (e.g.,groundnut).
Labor (changing access to labor and labor sharing arrangements)		South Sudan Workers/children no longer scare away birds because it makes too much noise and attracts enemies, leading to a loss of sorghum.
Risk of displacement		Ethiopia Farmers change to smaller sized vessels which are put underground to hide the extent of seed stored and to be able to move vessels quickly.
Military tactics		Northern Uganda Military controlled the height of field plants such as cassava so that rebel fighters cannot easily hide.
Market access: formal markets	Changes in formal seed channels: commercial system collapse	South Sudan Seed companies (e.g.,in Yei) shut down as soon as conflict escalates. Rwanda Potato seed and production collapse due to stalling formal seed supply systems causing scarcities of clean seed, fungicide, and fertilizer.
Market access: informal markets	Changes in informal seed channels: market and mobility issues	South Sudan People are not able to travel from one local market to another, leading to scarcity of local seeds in some areas.
	Change in variety diversity	Sierra Leone Rice diversity increased due to influx of aid (although this may be partly negative as farmers may have been obliged to import non-local types from outside the region).
	Change in supply channel	Mali Farmer cooperatives organize and respond to relief seed calls with adapted pearl millet seed.

The data from the NE Nigeria pilot test revealed numerous ways in which the agriculture and seed systems have been affected by conflict, in particular conflict related to insurgent activity. For example, restrictions on growing tall crops such as maize so that insurgents cannot hide within them; farmland inaccessible due to insurgent activity; and fewer merchants at markets due to fear of armed opposition groups ([Pilot-testing report, 2023](#)) Knowing this contextual information can help implementers better understand and diagnose the seed security problems and potential intervention opportunities.

3.2 Adapting assessments, interventions and learning in conflict-affected environments to promote more resilient seed systems

3.2.1 When conducting assessments in conflict-affected areas, practitioners need to be both conflict-sensitive and conflict-savvy, and give special consideration to their data collection practices.

Following the review of numerous seed system assessment tools and conflict analysis tools, there was a clear gap in guidance that brought the two together. The [Context Analysis Tool \(CAT\)](#), which helps humanitarian actors learn the effects of conflict on seed system functioning in their operating area, aims to close that gap. However, having an assessment tool is just a starting place; the manner of data collection is as important as the process for harnessing technical insights.

To be **conflict-sensitive**, actors must understand the conflict context and how the proposed program interacts with that context. The aim of conflict sensitivity is to ensure that the program *minimises* any potential negative effects it may have on the conflict and *maximises* any potential positive effects. Practitioners need to apply conflict-sensitive skills to the assessment and analysis processes on the ground. For example, asking questions too directly may not be effective or safe as conflict is a sensitive topic; first, trust must be built.

Conflict-savvy refers to a set of skills someone might have that allows them to navigate the peculiarities or dangers of the conflict and to continue to complete the tasks at hand. While not all humanitarian actors follow formal conflict sensitivity processes, most of them will rely on a certain level of conflict-savviness in order to conduct their work in a way that does not put them or the communities they work with in danger. For instance, a conflict-savvy informant can advise on which villages are accessible or which roads are mined; a conflict-savvy trader might know where to find scarce and adapted seed and how to move it even in turbulent times

Additionally, **data collection practices** need to be considered in fragile states. This includes considerations such as whether data will be collected in-person, remotely, or by a mixture of the two, as well as how to engage different stakeholders. The emergence of COVID-19 has led to more remote data collection methods, and these can be used in high-conflict areas when in-person data collection may not be feasible. Depending on the situation, a combination of in-person and remote data collection might be considered. For example, a team may gather initial assessment information remotely, then complement it with in-person focus groups in farming communities, facilitated by local personnel or community members (CAT, Sperling *et al.*, 2022.)

3.2.2 Conflict and seeds assessments are typically siloed in humanitarian responses. Bringing them together provides richer analysis and can support better seed-related response choices.

Pilot testing the CAT offered lessons learned and highlighted opportunities for future adjustments to the tool. Conflict and seeds analyses are typically siloed in humanitarian responses; the peace and conflict teams may conduct a conflict analysis while the agriculture team conducts the seed system assessment, rarely coming together to assess whether and how the conflict is affecting the seed system functioning. Drafting the tool required both seed system and conflict expertise from SeedSystem and Mercy Corps. It was then reviewed by 11 seed experts from the United States Agency for International Development (USAID), Wageningen University and Research, Mercy Corps, Al Fashir University in Sudan, IFDC, and NCBA CLUSA. Further, the tool was discussed at the ISSD Africa synthesis conference in Kigali. A resounding comment from reviewers and practitioners was that this tool is needed, *and* that further discussions and work on seed systems in conflict settings is needed.

3.2.3 There has been little documentation on seed security interventions in fragile states, especially those affected by conflict, and even less information on their effects, whether good or bad.

When intervening in conflict contexts, humanitarian actors have typically relied on quick and direct seed distribution (DSD), often transporting seeds long distances. However, depending on the nature of the conflict and humanitarian access capabilities (e.g., if interventions on-the-ground are possible), there are additional response options that practitioners can consider to bolster seed availability, seed access, seed quality (health and variety suitability), or access to accurate and up-to-date information, which is critical in a conflict context (CAT, Sperling *et al.*, 2022).

For example, if seed availability is the identified constraint, one may use responses such as improving seed storage, moving seed stocks (informal seed) from one region to another, and supporting local markets. The CAT summarises eight case studies throughout Africa that can be used as inspiration by other humanitarian actors when considering seed-related interventions. Table 4 (found on page 22 of the CAT) summarises the examples, while recognizing that a given

response may be appropriate for some conflict contexts but not for others.

Table 4 Summary of case studies presented

Seed security constraint	Case study example response/country
Seed availability	1 Storage pits/bags – Ethiopia, DRC
	2 Locally produced seed moved laterally: modified direct seed distribution – Mali, South Sudan
	3 Local market support: subsidy to traders – South Sudan
Seed access	4 Peace and Rights Days with direct seed distribution – Sierra Leone
	5 Digital voucher transfer linked to small seed suppliers – Northeast Syria
Seed (and crop) quality	6 Multi-year quality seed production (dual focus on new varieties and seed health) – DRC
	7 Conflict-resilient crops – Rwanda, Ghana
Information	8 Critical remote tools (for information, training, and feedback) – Sierra Leone

3.2.4 Conducting seed-related activities with refugees and IDPs can be especially challenging and potentially contentious. Seed security programs involving new arrivals thus require special considerations.

Successful emergency seed work for refugees and IDPs depends on a number of factors, such as whether the agroecology of their new location is the same as their home areas and whether the displaced population is a cohesive one. The more unlike the new locale is from the old, the greater the challenges for a seed-related program. Before engaging in seed-related activities, practitioners should consider the population’s access to land; access to non-seed agricultural inputs; and appropriate crops and seed varieties. Given these considerations, unless a practitioner has the financial resources to support refugees and IDPs through an adjustment process, they should consider non-seed responses (CAT, Sperling *et al.* 2022).

Additionally, in conflict or protracted crisis areas where refugees and host community farmers are co-located, especially where natural resources are strained, projects must engage in collaborative problem solving with refugee and host community farmers. For example, including non-seed activities that focus on building non-violent dispute resolution skills and that promote social cohesion (Models for Strengthening Last Mile Seed Production & Distribution, 2022.)

3.2.5 Good practices for last mile seed production and distribution in fragile contexts also apply to those in stable contexts.

The four case studies on [Strengthening Last Mile Seed Production and Distribution](#) provide useful lessons and point to intervention pathways that can better reach last mile producers in fragile contexts. These include:

- **Focus on market-based approaches.** Market-based approaches to seed distribution – which take into account both demand and supply side constraints to seed access, availability and quality – are more likely to achieve project outcomes and to continue after an initiative ends. In fragile contexts, focus should include developing the enabling environment for private sector investment.
- **Create partnerships among local market actors.** Creating partnerships between and with local market actors (e.g., seed suppliers and farmers' associations) contributes to the sustainability of interventions. Where operational stability is not guaranteed, as is the case in fragile contexts, such partnerships should focus on enhancing quality seed production and seed business skills for local seed producers and marketers.
- **Couple seed access with social and behavior change approaches.** Access to seed alone is not sufficient. Coupling access with demonstrations or training on good agricultural practices (e.g. those provided by agrodealers or seed producers) has been shown to be more effective in facilitating behavior change. Knowledge gained through training can provide farmers with an effective coping mechanism while improving risk management skills for farmers in unstable operating conditions.
- **Understand farmers’ seed preferences.** Understanding farmers’ seed preferences is critical to matching producer and agrodealer supply with demand. In fragile contexts, where farming objectives change quickly and seed/variety supply must adapt to new preferences, it is especially important to understand preferences.
- **Use diagnostic approaches such as seed system security assessments.** In stable and fragile contexts, such assessments take into account the informal and formal seed systems and help ensure that intervention design is determined by the real seed needs and the unique challenges surrounding seed availability, access, and quality among last mile farmers.

4. Conclusion and next steps

First and foremost, there is very limited documented evidence of what types of seed-related activities work in conflict-affected areas. More work is needed to collate, document and disseminate learning on the effects of conflict on seed system functioning; what types of interventions do and do not work, especially for different populations and genders; and, ultimately, to improve intervention design and implementation. The eight case studies within the CAT are a starting point but more documentation is needed. During the Kigali synthesis conference session, stakeholders shared excellent examples from Mali, the Democratic Republic of the Congo (DRC) and other locations; however, these examples are not documented for others to learn from. A future priority is to convene stakeholders working in various conflict-affected areas to discuss their experiences and, ultimately, to document them for widespread dissemination.

Additionally, uptake and use of the CAT remains a priority. The tool helps implementers to identify practical entry points for designing and implementing seed security-related interventions to bolster seed systems in fragile contexts but it can only help if it is disseminated and used. As more implementing partners use the tool, additional feedback combined with lessons learned from pilot testing in NE Nigeria is critical to inform a second version of the tool.

Humanitarian actors' experience of linking seed system work to peacebuilding efforts needs to be broadened significantly and quickly. There is an opportunity to use the CAT to facilitate understanding across sectors and enhance collaboration between conflict and seeds experts. The tool currently focuses on Do No Harm principles; there is an opportunity to push the thinking and responses beyond doing no harm and into peacebuilding.

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