

How can governments harness agroecology to build the resilience of the Sahel ?

At a glance

Policymakers in the Sahel face a set of interlinked challenges affecting their farming and food systems. These include environmental degradation, declining soil health, and chronic vulnerability to climate change that affects the mass of dryland farmers. There is an urgent need to overcome this crisis, to restore the resilience of rural livelihoods, and to reduce the rapidly escalating costs of humanitarian assistance. **Making dryland farming systems more productive, sustainable, and resilient is critical to resolving this crisis.**

With the support of the Global Resilience Partnership, funded by USAID, the Swedish Development Agency, and the Rockefeller Foundation, Groundswell International undertook the action research “Agroecology Plus Six” initiative for resilience to address these critical set of issues. This initiative resulted in the publication of six detailed case studies based on programs in 3 districts in Burkina Faso, Mali, and Senegal. These case studies provide a comprehensive framework for an integrated approach to resilience.

The overarching finding of this action research initiative was that an integrated approach to “agroecology” is the only viable pathway to resilience. Such an approach combines agroecological farming practices with linked activities aimed at strengthening gender, nutrition, equity, and local governance. The current Green Revolution approach to agriculture favors larger-scale commercial farming, extensive use of expensive external inputs, such as fertilizers and pesticides, and monoculture. This way of farming tends to undermine resilience.

This Green Revolution pathway is increasingly shown to fail the most vulnerable: rural women and small-scale farmers in ecologically fragile, risk-prone zones, such as the drylands of the Sahel. It is not effective in enabling farmers to reverse land degradation, nor in adapting to climate change. It also fails to help smallholder farmers in dryland areas overcome ‘lock-ins’ of increasing dependency on expensive external inputs, industrial style monoculture, and on producing export crops for the global market.

This policy paper sets out recommendations, based on the Agroecology Plus Six case studies, for governments of the Sahel to harness agroecology as the foundation of resilience.



Photo supplied by the Center for Indigenous Knowledge and Organizational Development, Ghana



What is Agroecology?

- Agroecology is a set of low-cost farming practices that mimic the functioning of local ecosystems by working with, not against nature.
- It makes the best use out of nature's resources without damaging them, reduces risk and dependence on expensive agrochemicals.
- It is farming that is productive, economically viable, socially just, resilient to climate change, sustainable, and nutrition-sensitive.
- It is also a science and a social movement consisting of many organizations and individuals working to establish a sustainable and resilient future for more people.



Image sourced from the film "The Man who Stopped the Desert" by Mark Dodd <https://www.imdb.com/title/tt1694580/>

The Crisis

According to the **World Bank**, the number of drought-affected people in the African drylands is projected to increase - under the business as usual scenario- from an average of seven to 20% of people vulnerable to drought in 2010 to 60% by the year 2030.

Several structural reasons underly this crisis. One is the progressive degradation of fragile and drought-prone ecosystems due to the "soil fertility crisis" that makes dryland soils among the most degraded in the world. A second is the high demographic pressure. **The drylands' population is on track to double within 30 years**, which has reduced the coping capacity of vulnerable populations. All these factors have contributed to the crisis and a severe "**resilience deficit**" for Sahelian populations.

To address this crisis, national governments need to treble their efforts. Every possible funding mechanism and policy should be harnessed to effectively strengthen an approach to resilience that places a transition to agroecological intensification and greening at its center. At the same time, the policy should integrate the priorities of women's empowerment, nutrition, equity, and improved local governance within the support for agroecology.



RECOMMENDATION 1: Review the Global Alliance for Resilience (AGIR) initiative priorities to firmly embed an integrated approach to agroecology into resilience actions.

It would be prohibitively expensive for governments in the Sahel **to rely on social safety nets** to protect vulnerable households from the adverse effects of droughts and other shocks. Governments spend too much of their scarce public resources on recovering from such shocks. It also dramatically increases national reliance on humanitarian aid.

Under the **Global Alliance for Resilience (AGIR)**, the participating 17 West African and Sahelian countries review their planning and policies **from a resilience lens**, with a particular focus on fostering cross-sectoral synergies and alignment. This process has generated country-specific National Resilience Priorities (NRPs) to strengthen resilience within and across existing programs of all Ministries. However, **few Country NRPs explicitly mention agroecology as a foundation for resilience**. Few identify the potential linkages of agroecology with nutrition and women's empowerment in agriculture.

- support the in-depth transition of dryland farming systems towards soil regeneration, greening and farming practices that optimize the ecological processes within farming systems in order more effectively achieve AGIR's goal to structurally reduce, in a sustainable manner, food and nutritional vulnerability (i.e., Zero Hunger) through its "Four Pillars"
- leverage the AGIR policy tool more effectively to embed agroecology, sustainable land management and farmer-managed natural regeneration of trees (FMNR) for resilience
- integrate the lessons of the Agroecology Plus Six initiative into the **national AGIR platform** priorities and road-map



RECOMMENDATION 2: Support agroecology and greening through farmer-managed natural regeneration of trees as a critical approach for Nationally Determined Contributions (NDCs) to meet global mitigation targets, and to strengthen adaptation to climate change by smallholder farmers.

All Sahelian countries have developed NDCs for the global target to prevent warming over two degrees Celsius compared to pre-industrial levels. A vast effort to recapture carbon from the atmosphere and **store it in and on the land** is essential to prevent climate catastrophe. Potential measures include: ending deforestation to expand farmland, rehabilitating degraded or deforested lands, increasing tree cover on farmland through agroforestry.

Few people realize the enormous role trees play in agricultural systems. Nearly half of agricultural land already has greater than 10% tree cover. In the Sahel, it is entirely possible, with appropriate management practices, to triple this. Dryland farmers, if supported, increase the density of trees on their land through Farmer Managed Natural Regeneration (FMNR) because they earn more income by **combining trees with their annual crop production**. They also see the benefits of trees to reduce the effects of scorching temperatures and to provide increased soil organic matter and improved water retention for drought resistance.

However, the NDCs and National Adaptation Plans (NAP) of Sahelian countries refer to sustainable land management primarily as isolated initiatives. They do not include explicit measures to enable dryland farmers to make a transition to agroecology and greening of degraded land.

For government NDCs and NAPs interventions to effectively contribute to building resilience, they need to:

- ensure that farming communities are fully involved in the design, planning, and implementation of greening initiatives
- provide incentives and support to dryland farmers to adopt FMNR and complementary integrated soil fertility management techniques
- embed agroecology-based land management practices as part of a sequenced, systems-oriented set of complementary activities into NDC and NAPs to transform the farming system



RECOMMENDATION 3: Increase public spending on agriculture to meet the Malabo 10% target while also shifting that spending to enable farmers to sustainably intensify agriculture, reverse soil degradation, adapt to climate change, and meet the needs of vulnerable groups.

Most African countries have agreed, under the African Union's (AU) Malabo declaration, to allocate 10% of public resources to agriculture. However, only a few countries are meeting this target. Not only is it essential to increase public spending for smallholder agriculture, but the orientation of this spending towards sustainable farming through agroecology is critical.

The AU's review criteria for assessing compliance with the Malabo Declaration are mostly commodity-oriented production indicators. They are not well suited to assess progress in reversing land degradation or strengthening resilience to climate change, particularly for dryland farmers who depend on rainfed agriculture.

This lack of an adequate sustainability and resilience focus also applies to the Regional Agricultural Policy for West Africa (ECOWAP) adopted by the Economic Community of West African States (ECOWAS) in 2005. The **policy lacks a strong orientation** to resilience through sustainable agricultural practices and adaptation to climate change.



In this respect, national governments should:

- increase their agricultural spending to reach the 10% Malabo target
- increase the portion of this spending to support and provide incentives for an approach to agroecology that addresses the needs of the mass of dryland farmers
- structure the support for resilient farming systems that also addresses the social dimensions (women empowerment in agriculture, equity, nutrition, and local governance)
- incorporate an integrated approach to agroecology and greening into regional policies and programs, including the Comprehensive African Agriculture Development Programme (CAADP) and ECOWAP



RECOMMENDATION 4: Invest an integrated, resilience sensitive, and sequential approach to agroecology within all sustainable land use commitments:

Evidence shows that **returns from investments in restoring degraded lands** exceed their costs within six years in many settings across drylands.

Overall, researchers estimate that **rural communities can restore 166 million hectares in the Sahel**. Achieving this goal requires the restoration of 10 million hectares per year to achieve Land Degradation Neutrality targets by 2030.

Despite the **progress made** by many land restoration and greening initiatives, such as the African Forest Landscape Restoration Initiative (AFR100), the Bonn Initiative, the African Resilient Landscapes Initiative (ARLI), and the **Great Green Wall of the Sahara and the Sahel initiative** (GGWSSI), such efforts do not adequately address a more “systems-oriented” approach to transforming farming systems for resilience and sustainability. One or two new agroecology practices, even the most important, which is increased tree cover on farmland are not sufficient. Other complementary practices are required, in a suitable combination and sequence for intensifying agroecology. For resilience and equity, governments need to tailor their support for the adoption of new practices to different categories of farmers, particularly the most vulnerable.

- ensure land restoration and greening initiatives (i.e., AFR100, ARLI, the Great Green Wall, and the Bonn Initiative) are more firmly linked with support for dryland farmers to make a gradual transition to agroecology and transform their farming system
- increase support for land and water conservation, crop rotation, integrated soil fertility management, and shorter cycle seeds
- provide specialized support and incentives for the integrated approach to agroecology adapted to the needs of the most vulnerable households



RECOMMENDATION 5: Strengthen the capacity of local governments to integrate equity, gender, and nutrition-sensitive agroecology as the foundation for resilience-based local development planning.

Resilience building requires strengthened organizational and leadership capacities for planning and implementation at both the local government and at the community levels. National governments need to steer local governments on the resilience pathway by promoting **decentralized interventions** in support of an integrated approach to agroecology through collective action at the local level.



National governments should give regional authorities a strong mandate and additional resources to drive inter-communal collaboration and planning for sustainable resource management and greening.

If only one or two communities undertake a resilience-sensitive initiative in a given local municipality, it may fail to address inter-village natural resource management issues such as unauthorized tree cutting or bush fires. To regenerate the drylands landscape, biodiversity, and farming systems requires joint efforts across neighboring communities. Rural municipalities can foster a coordinated approach across communities through the implementation of a joint greening process that spans a broader landscape.

Central governments can put in place incentives and support for local governance structures, including community leaders, to promote the adoption of agroecological farming and greening practices:

- support decentralized, locally elected municipal councils to review their mandate and priorities “from a resilience lens” in the face of increased vulnerability
- ensure the most vulnerable populations receive subsidized organic fertilizers
- set-up agroecological demonstration plots tended by the villagers with the support of local extension services
- embed agroecological principles in the training curriculum of farmer field schools
- develop appropriate, performance-based incentives to motivate participants of “farmer-to-farmer” learning programs to drive widespread adoption of agroecological innovations in their own (and neighboring) communities
- grant leeway to the local communities to determine the interventions for which they need support and best answers their needs; exogenously defined projects too often result in lack of local ownership and project failure
- break traditional silos by fostering cross-sectoral cooperation between decentralized technical services (particularly agriculture and nutrition) at the local level



RECOMMENDATION 6: Negotiate donor support to include an integrated approach to agroecology for resilience, in all relevant policies and programs, as the foundation for resilience in the drylands, and to reduce the humanitarian caseload.

Governments should negotiate and secure support from the donor community to fully integrate an approach to agroecology that is gender and nutrition-sensitive as the foundation for resilience in the drylands. Lobbying for this agenda could entail requesting the following actions from the donor community:

- request that NGOs with a long-standing relationship with communities within a wide agroecological zone be mobilized to drive project design and implementation in coordination with municipal councils
- give a leading role to Farmer Organizations, Rural Women’s Associations, and NGOs specialized in agroecology and community level mobilization and farmer to farmer training
- address the specific needs of women, youth, and the most vulnerable households
- support diagnosis of degraded agroecosystems (loss of topsoil, loss of tree and vegetative cover, depleted water resources) at the rural municipal level to prioritize appropriate innovations for resilience
- engage the full participation of the national equivalents of the Ministries of Local Government in all phases of project implementation



RECOMMENDATION 7: Secure support with the FAO to support specific actions to promote an integrated approach to agroecology within all policies and programs related to agriculture, environment, land restoration, and climate change adaptation, as the foundation for resilience in the drylands.

In 2018, the FAO organized the 2nd International Symposium on Agroecology: **Scaling Up agroecology to achieve the Sustainable Development Goals (SDGs)**. It formulated strong recommendations regarding policy, legal, and financial frameworks to promote agroecological transitions. The aim is to provide technical support to countries and to harness existing international instruments and decisions of intergovernmental bodies, to support a transition to agroecology. A further aim is to **catalyze cooperation** throughout the UN system to strengthen agencies' capacities to support agroecological transition processes.

Governments should reach out to the FAO to obtain such technical support. This support should be focused on horizontal learning strategies and consider the lessons of the Agroecology Plus Six case studies, with the following actions:

- explicitly incorporate an integrated approach to agroecology (for transforming farming to become productive, resilient and sustainable) while regenerating depleted resources (soils, water, tree cover)
- allocate budgetary resources to subsidize natural and organic fertilizers (including fertilizing/nitrogen-fixing tree species) and pest control
- develop specialized support for ensuring the most vulnerable households and women farmers are enabled to adopt new practices for resilience
- set up research projects within national research institutes focusing on the development of agroecological innovations that replace external inputs with ecological processes that reduce dependence on external inputs
- include methods of working with communities to organize extensive networks of village-based volunteer promoters and facilitation of farmer to farmer learning about agroecology in the training of agricultural extension technicians
- support horizontal learning, such as the farmer field schools (FFS) and farmer-to-farmer networks

Note

*A practical experience in applying these recommendations is fully described in the associated Case Study: **Agroecology as the foundation of resilience in the Sahel**. This case study is accessible on the Groundswell International website ([click here](#))*

Authors

Sasha Mentz-Lagrange (Independent researcher) & Peter Gubbels (Groundswell International)

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