

EQUITY CASE STUDY



**Integrating equity into agroecology
to improve the resilience of dryland
communities in the Sahel**



Integrating equity into agroecology to improve the resilience of dryland communities in the Sahel

The experience of the Agroecology Plus Six program by Groundswell's West Africa network members

A regional initiative undertaken by the Groundswell West Africa network

*Report written by Sasha Mentz-Lagrange (Independent researcher)
& Peter Gubbels (Groundswell International)*

Design and layout by Dorét Ferreira (Dotted Line Design)

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Cover Photo

A village assembly in Kaffrine, Senegal.

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List of acronyms

AE+6	Agroecology Plus Six program
AEC	Agroecological Committee
ANR	Assisted natural regeneration
APC	Agroecology Promotion Committee
CPA	Committee for the Promotion of Agroecology
CPRC	Chronic Poverty Research Centre
CSO	Civil Society Organization
ECOWAS	Economic Community of West African States
FANTA	Food and Nutrition Technical Assistance Project
FAO	Food and Agriculture Organization of the United Nations
GRP	Global Resilience Partnership
HFIAS	Household Food Insecurity Access Scale
NGO	Non Government Organization
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PRA	Participatory Rural Appraisal
SIDA	Swedish International Development Agency
UACT	<i>Union des agriculteurs du cercle de tominian</i> (Tominian Farmer Association)
USAID	United States Agency for International Development
WMC	Warrantage Management Committee

Executive Summary

- An estimated 12 million small-scale farmers living in the ecologically fragile, risk prone drylands of the Sahel are in a crisis. They have become chronically vulnerable to food and nutrition insecurity because of land degradation, declining soil fertility and climate change.
- A growing percentage of dryland farm households have become ultra-poor, living on less than 0.50 US dollars a day. They suffer from hunger, not only in bad but also in good rainfall years. They are forced to adopt negative coping mechanisms, including taking exploitative loans, selling their animals, eating their seeds stocks, and reducing the number of daily meals.
- Many dry land farm families are caught in a vicious downward spiral of declining productivity and loss of assets. They end up in a **“hunger–poverty trap” characterized by a severe “resilience deficit”**. They are so vulnerable that even the mildest shock generates a widespread crisis across the Sahel requiring humanitarian aid.
- The Agroecology+6 (AE+6) program was developed by Groundswell International West African network to address this resilience deficit. It was conceived as a “proof of concept” action research initiative undertaken over 18 months in three sites in the Sahel (Burkina Faso, Mali and Senegal). The overarching premise of this initiative was to provide evidence that **“agroecology” is the essential foundation on which effective resilience activities in dryland areas must be based**.
- However, to be effective in strengthening resilience, the approach to agroecology must give particular attention, and **tailor specialized support to the poorer, most vulnerable households**. This is rarely done in conventional agricultural development.
- One of the key 6 strategies of the AE+6 program was to learn how to effectively integrate a strong equity dimension for programs undertaken with communities where major socioeconomic disparities prevail.
- In the dry land Sahelian context, this inequity issue is multi-pronged: firstly, large socio-economic disparities exist within rural communities; secondly, ultra-poor farm households cannot extricate themselves from the ‘hunger-poverty trap’ without specialized external assistance; training in agroecological methods helps but is not enough. Thirdly, agricultural interventions tend to focus on better off farm households thereby exacerbating inequity in villages.
- A key lesson of the AE+6 initiative is that even though adoption of agroecology is often relatively low cost, aside from labor, because it depends on ecological knowledge rather than expensive external inputs, it is essential to specifically identify the most vulnerable households, diagnose the mechanisms that prevent them from escaping from the hunger-poverty trap, provide tailored support to address the specific needs of these households, and regularly monitor their progress in developing resilient, self reliant livelihoods.
- Tackling equity within rural communities can cause tensions if not handled well because it requires entering into complex community dynamics. It entails fostering social changes brought about by inclusive and participatory dialogue with the whole community, and building on traditional values of solidarity.
- AE+6 country teams rooted the design of their equity-focused activities on an informed understanding of how participating communities were structured, categorizing all households into different socio-economic categories, assessing the livelihood situation of the poorest, most vulnerable households. In close consultation with the wider community, AE+6 teams provided specialized support and material assistance to these households, particularly the women in those households, as a key component to the wider agroecology program in the community.

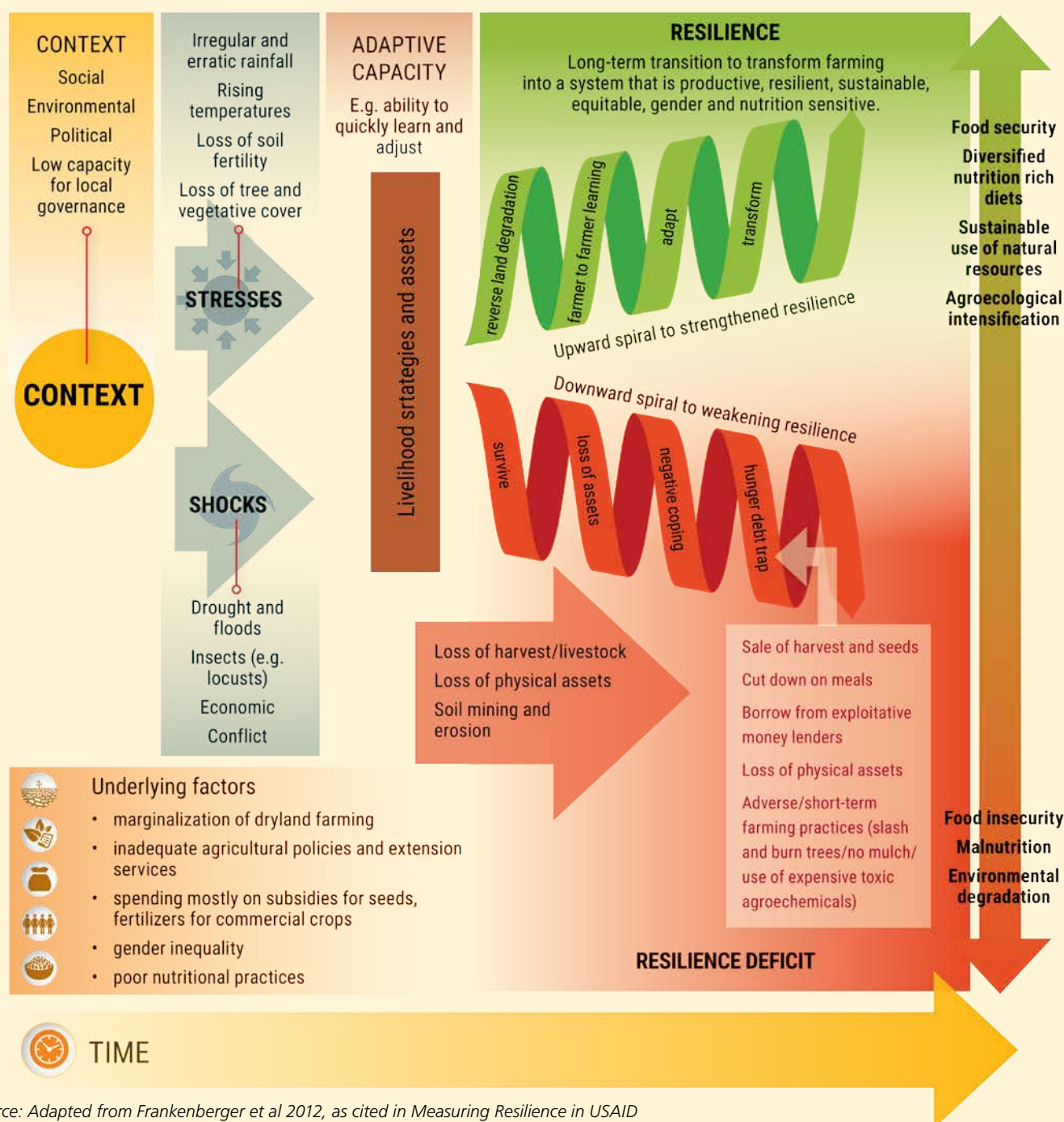
- Specific equity-focused activities, in addition to training in low cost agroecological techniques to restore soil fertility, included the development of “warrantage” (collective grain storage) schemes; the establishment of seed banks; the selective donation of improved, short cycle seeds; the selective rotation-based donation of pregnant livestock, all essentially focused on the most vulnerable households and individuals.
- The experience of the AE+6 teams in Senegal, Mali and Burkina unequivocally indicate that to significantly strengthen resilience in the drylands of the Sahel, and overcome growing food insecurity, all programs to transform farming systems through agroecology must be purposively designed to address the specialized needs of highly vulnerable groups, and progressively counterbalance growing social inequalities in rural areas.
- To achieve this requires strengthening institutional capacities to facilitate and apply new ways of working to address the differentiated needs of the poorer rural households, and engage them to become the primary actors of strengthening their resilience. This means replacing the existing approaches that are often non-inclusive, socially non-differentiated and gender-blind.
- This AE+6 case study shows that in a relatively short time, well designed equity-oriented activities within a wider agroecology program generated significant initial results in enabling the poorest households to strengthen their livelihoods, their self reliance, improved social cohesion, and greater inter and intra-community solidarity.

Introduction

The resilience crisis in the Sahel

A growing percentage of the Sahelian population is becoming chronically vulnerable to food and nutritional insecurity. In December 2016, the number of food insecure people in the Sahel was estimated to 30.1 million, with at least 12 million people needing emergency food assistance.¹ The structural reasons include the progressive degradation of fragile and drought prone ecosystems, high demographic pressure, and the low capacity of vulnerable populations to adapt to the stresses of rapid environmental change and climate shocks.² This complex web of problems is captured in figure 1.

Figure 1: Dynamics of Resilience and Vulnerability for dryland farmers in the Sahel



Traditional farming practices can no longer sustain livelihoods. Gender inequality, poor nutritional practices, and inadequate technical and social services exacerbate the problem.

In order to survive, an ever-increasing percentage of households engage in negative coping mechanisms. These include selling much of their harvests to pay back loans, eating their seed stocks, borrowing money from usurers, cutting down on the number of their daily meals, and selling their physical assets.

These desperate responses to shocks further increase the vulnerability of these populations who then suffer from a “resilience deficit”.

Weak governance, marginalization, non-inclusive development policies, inappropriate technical advice, and the inability of small-scale farmers to influence policies and government institutions to better address their priority needs are underlying drivers of this growing crisis. Figure 1 illustrates how an increasing number of rural households, already vulnerable, are being caught in a vicious downward spiral because of their reduced capacity to cope with stresses and shocks.

This case study documents an action-research initiative in three countries on how to address the equity dimension in a program designed to strengthen resilience of rural communities in dryland farming areas of the Sahel. The essence of this resilience strategy was to apply agroecological principles and practices to address the stresses of declining soil fertility, degradation of natural resources, erratic rainfall, and the periodic shocks of major droughts.

A critical assumption of this strategy was that agroecology is essential to transform existing farming practices and to strengthen the absorptive and adaptive capacities of rural communities. Once a foundation of intensified agroecological farming is in place, it serves as the basis on which to integrate complementary resilience activities in equity, women’s empowerment, and nutrition, tailored to the needs of the most vulnerable groups.

The case studies conducted in three regions, Senegal, Burkina Faso and Mali, asked the question: what are the combination of tailored activities, beyond training in agroecological innovations, to address the specialized needs of the poorest, most vulnerable farm households, within a wider community led program to strengthen the resilience of the farming system, reverse land degradation and adapt to climate change?

Equity: an often neglected issue in agricultural development

Groundswell and its regional partners rooted the AE+6 design in the observation that the benefits of agroecology-based measures for dryland farming systems would have only a limited impact for resilience, if embedded power imbalances and the related exploitative mechanisms within communities went unchallenged.

Although discussion of social inequity may initially cause unease within rural communities, engaging village people on this sensitive issue was paramount. This entailed getting buy-in from the wider community on the need to provide specialized support and material assistance to the poorer, most vulnerable households, in order to avoid resentment against the AE+6 program for providing differentiated levels of support to households and also to ensure the sustainability of activities for their long-term impact.

Purpose of the case study

This case study documents the action research process used to develop mechanisms through which actors involved in the promotion of agro-ecology to transform farming systems can better integrate equity considerations in their programmatic interventions to effectively strengthen local resilience.

This case study is meant to be relevant to a range of actors - particularly national governments, technical and financial donors, international development agencies, and Civil Society Organizations (CSOs) working at national level. The key lessons are about how to foster a transition to agroecological farming that takes

into account and genuinely empowers the most vulnerable within the ecologically fragile, drought prone areas of the Sahel, as the foundation for strengthening the resilience of rural livelihoods.

The findings indicate how project activities aiming at improving local resilience through agroecology should think of these as a social process as much as a technical process. This case study not only spells out the series of actions that were implemented (and how they were implemented) to foster equity within local communities, but also attempts to unpack how the collective action of a community sharing a similar objective can promote improved social processes in support of equity and women's empowerment.

This case study is one of a series of six closely related studies documenting the main findings and lessons of the integrated AE+6 approach for resilience.

The AE+6 program

The AE+6 program was conceived as a “proof of concept” initiative to spread agroecological practices across the Sahelian region. The design assumed that lessons learned could be applied widely to build the resilience of an estimated 12 million small-scale farmers in the drylands, particularly those caught in the hunger-debt trap.

The impact of conventional high external-input agricultural technologies, based largely on agrochemicals, monoculture of certified seeds, mechanization, growth corridors and large-scale irrigation schemes favored by the Green Revolution approach, has exacerbated these trends.

This productivist approach underlying the push for a “modern agriculture” has been strongly decried by many actors globally^{3 4}, across Africa^{5 6} and in the region⁷, including the Economic Community of West African States (ECOWAS), which in 2008 sounded an alert to how this model, “largely dependent on natural resources and poorly paid labor, (had) become unviable”.⁸

The industrial model, based on Green Revolution technologies, fails to address critical issues of dependence to importation of food to feed the Sahel⁹ and the critical need to adapt to a changing climate. Recent research conducted in the Sub-Saharan African region has extensively documented how the push for high, agrochemical-based input farming methods had disrupted subsistence practices, exacerbated poverty, corroded local systems of knowledge, trade and labor and curtailed land tenure security and autonomy.¹⁰

Groundswell network partners in the region bear testimony of how an over-reliance on “modern” farming practices has led to the loss of agro-biodiversity, loss of agricultural knowledge and the related culinary knowledge, and environmental degradation (notably soil erosion and degradation and pollution through the bio-accumulation of agro-chemicals in soils and water bodies).^{11 12}

The AE+6 program was officially launched in January 2016. Field operations began in April 2016 and lasted until September 2017. The Global Resilience Partnership (GRP), an initiative conceived by USAID, the Rockefeller Foundation and the Swedish International Development Agency (SIDA) provided financial support. Groundswell International through its West Africa network of non-governmental organizations (NGO) partners, assumed the regional coordination of the project.

The underlying premise of AE+6 was that the progressive agroecological intensification of farming systems is the essential foundation of any effective approach to resilience in the drylands. This is because the underlying causes of growing chronic vulnerability include declining soil fertility, degradation of natural resources (trees, water, pasture, vegetative cover), and climate change (erratic rainfall, rising temperatures, and periodic drought). Agroecology is suited to do this; conventional agriculture is not.

Box 1

What is agroecology?

Agroecology is an approach to farming that mimics the functioning of local ecosystems,¹³ allowing for “food production that makes the best use of nature’s goods and services while not damaging these resources.”¹⁴ It is a science that applies ecology to the design of farming systems; uses a whole-systems approach to farming and food systems and replaces “external inputs by natural processes such as natural soil fertility and biological control.”¹⁵ Agroecological farming systems are “developed on the basis of farmers’ knowledge and experimentation”¹⁶ and link ecology, culture, economics and society to create healthy environments, food production and communities. It is a multi-functional approach to farming that is productive, economically viable, socially just, resilient to climate change, sustainable and nutrition sensitive.

Without enabling small-scale farmers to adapt to climate change and transforming their farming system to reverse land degradation, all other initiatives to strengthen resilience cannot succeed over the long term, because the basis of almost all rural livelihoods depends on the natural resource base.

A second assumption of the AE+6 approach was that while beneficial, such measures would not adequately address resilience. Agroecology, as promoted by AE+6, is therefore not only about substituting unsustainable agricultural practices with ecological ones, but how to reconfigure food systems as a whole, so that these restore a social, nutritional, economic and ecological balance.¹⁷

To achieve this, complementary measures are required to meet the specialized needs of the most vulnerable groups (women, children, and poorer households). This entails integrating effective social and governance mechanisms to address gender inequality, poor nutritional practices, and inadequate community capacities for adaptation.

A review of the evidence shows that measures focusing on increasing agricultural yields often neglect the specific needs of women and resource-poor farm households through non-inclusive, socially non-differentiated and gender-blind activities.

Consequently, the AE+6 regional team led by Groundswell developed complementary resilience strategies that built on the foundation of agroecology. These formed the foundation of the AE+6 resilience framework. It entailed a series of progressive, layered and multi-sectoral interventions that primarily addressed “livelihood promotion” and “risk reduction” dimensions, as well gender, equity, and nutrition.

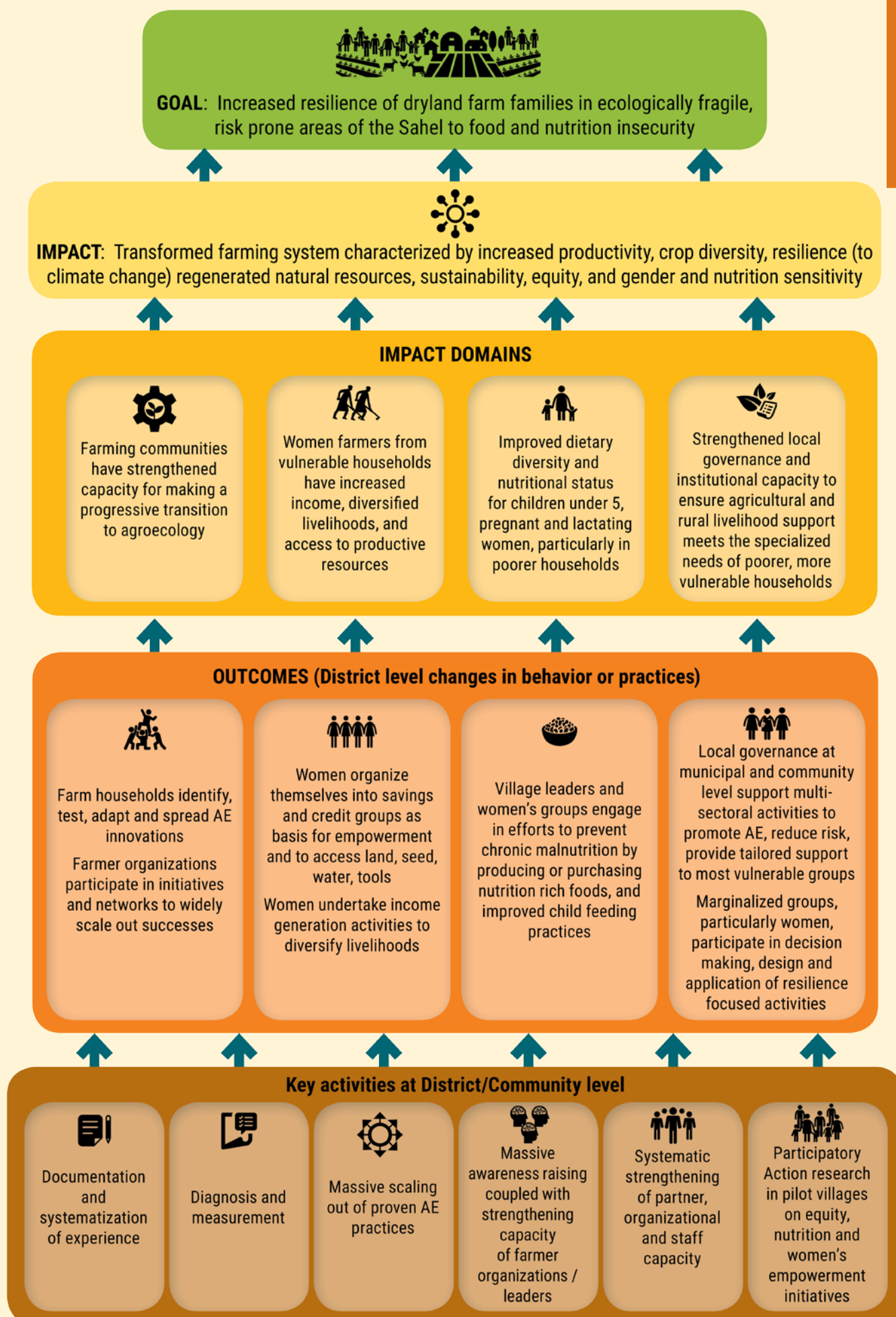
The dimension of **equity** is the focus of this case study.

Each of the six dimensions of the AE+6 program, particularly the improved agroecological practices, had been undertaken before. The AE+6 approach was different and innovative because it aimed at:

1. exploring how to integrate nutrition, equity, women’s empowerment progressively into the overall strategy of agroecology for resilience, so as to optimize potential synergies
2. learning how rapidly to scale out (spread) the overall process, at low cost, in order potentially to cover hundreds of villages in a short time
3. learning how to sustain the AE+6 resilience process by strengthening local governance at community and municipal levels

Figure 2 illustrates how the AE+6 program was conceived and how it addressed the afore-mentioned issues.

Figure 2: Overall AE+6 program architecture



The AE+6 resilience team employed a comparative analysis across three Sahelian countries; Burkina Faso (Eastern Region), Mali (Tominian Cercle of Ségou) and Senegal (Kaffrine Region) to determine the contextual factors supporting and constraining the results. Groundswell West Africa's network of NGO partners tested this approach each in their own countries. These were Association Nourrir sans Détruire ("Association for Feeding without Destroying") in Burkina Faso, Sahel Eco in Mali and Agrecol Afrique in Senegal (see the annexure for detailed information about these three partner NGOs). Most of the strategies of AE+6 were relatively new to the Groundswell West Africa network members.

Because AE+6 for resilience initiative covered a short implementation period (18 months), the research findings documented in this case study captures an initial snapshot of lessons learned and good practices, although sufficient to arrive at conclusions for the "proof of concept".

1. Rationale for integrating equity into agroecology for resilience

1.1 Understanding poverty dynamics to design agro-ecological interventions

Poverty is not a homogenous, static and simple phenomenon

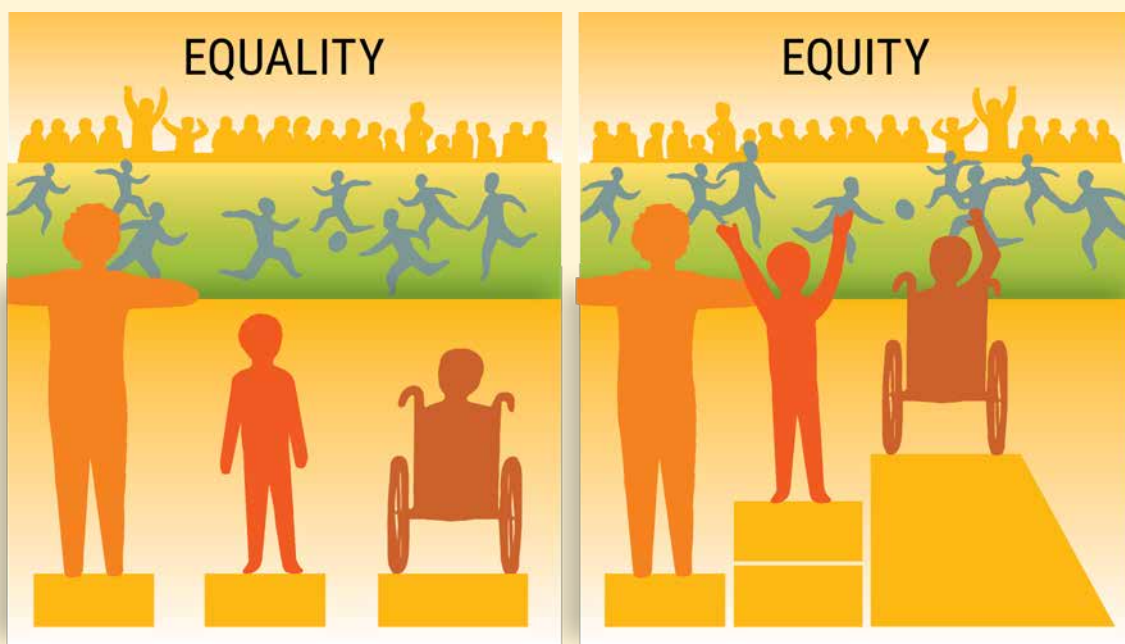
In the popular imagination, social inequality is often seen as a phenomenon confined to the mushrooming urban areas in Africa, where people living in shantytowns, often close to an affluent emerging middle class, are barely managing to earn a living.

However rural communities are not homogenous entities where all villagers are in relatively similar circumstances as small scale farmers. This would overlook important nuances within the social fabric of Sahelian rural villages. It would also disregard the wide body of research that has been gathering evidence about poverty over the past years. Household economy assessment (HEA) studies across the Sahel have revealed a huge gap in food security between relatively poorer households and wealthier households within the same communities. For example, better-off households often make up less than 20% of the rural population, (compared to about 30% for the very poor), but possess 50% of the cultivated land, 65% of the sheep and goats, and often more than 75% of the cattle.¹⁸

Such socio-economic disparities foster exploitive relations, and erode traditional solidarity systems¹⁹. **They also indicate that not all households in a rural community are equally resilient, even if subject to similar shocks and stresses.** The following image illustrates the concept of "equity" and how it differs from equality.

However rural communities are not homogenous entities where all villagers are in relatively similar circumstances as small scale farmers. This would overlook important nuances within the social fabric of Sahelian rural villages.

Figure 3: Understanding equality versus equity



Source: Reproduced from University of Greenwich and the Natural Resources Institute (2018).²⁰

Many agricultural programs address only “equal treatment” in their programs. This assumes that everyone in the community has the same opportunity to benefit from the same support activities (i.e., awareness raising, training, material assistance). **It is much more rare to have agricultural development programs that address the principle of “equity”** in which everyone, in particular the households which have far less access to productive assets, or lower capacity for adaptation, and who are more vulnerable to food and nutrition insecurity to have **support tailored to their specific needs**. This can be called “affirmative action” or “positive discrimination” for addressing equity. In the context of the Sahel, this applies most specifically to women from the most vulnerable households.

A casual visitor to a rural community in the Sahel would easily assume that most households have similar livelihoods and assets. Everyone lives in adobe huts with grass thatch roofs. Only a few compounds have iron sheet roofing. Everyone is farming. All households in the community may appear to be equally at risk to the effects of climate change. The reality, however, is very different. The level of assets and the nature of vulnerability between rural households in the Sahel vary significantly, and women within households are more vulnerable than men. No resilience initiative can be effective that does not take robust measures to address this reality of differential livelihoods and differential capacity to cope with or adapt to stresses and shocks.

“To just say that rural communities as a whole are poor masks important disparities within communities as well as the exploitive mechanisms that are deeply embedded in the economies of rural areas”.

Peter Gubbels, AE+6 team leader.

Box 2

The 4 “Ds” of poverty²²

A useful typology often used in the field of poverty study is that of the 4 Ds of poverty – this is a phenomenon that is indeed best understood through a **disaggregation** of data, an analysis of its **duration** and **dynamics** and that call for **differentiated** policy response.

- **Disaggregate:** not all poverty is the same, in terms of severity, duration, the dimensions of deprivation and people’s occupations and in terms of social categories (gender, age, socioeconomic status).

- **Duration** is an important dimension of poverty. Most severely poor people are also chronically poor but there are people who are poor over long periods who are not severely poor. The long duration of chronic poverty suggests that it is structural.

- **Dynamics:** there is need to understand why people move into and out of poverty to fathom why people are trapped in poverty, with consideration given to transient poverty.

- A **differentiated** policy response is required to address the different causes of chronic poverty and impoverishment, and to identify and assist the drivers of escape from poverty.²³

The Chronic Poverty Research Centre (CPRC) has undertaken important work to understand poverty. When engaging in efforts to promote rural development, the CPRC calls for taking into account the “4Ds” of poverty.²¹ (Box 2)

This forms a valuable analytical lens to shape equity-focused interventions in the context of agroecology. This theoretical framework also helps with better understanding vulnerability dynamics because members of the poorest households are highly likely to be among the most vulnerable to food and nutrition insecurity and to be caught in the poverty-hunger trap.

The poverty-hunger trap

In designing the AE+6 program Groundswell and its network partners reviewed, from a resilient perspective, the mechanisms that kept some small holder farm families in the hunger trap, in order to identify complementary measures to agroecology that could help them break out of those exploitive mechanisms. Illustration 4 below depicts the complex ramifications of the poverty-hunger trap in a rural African context.

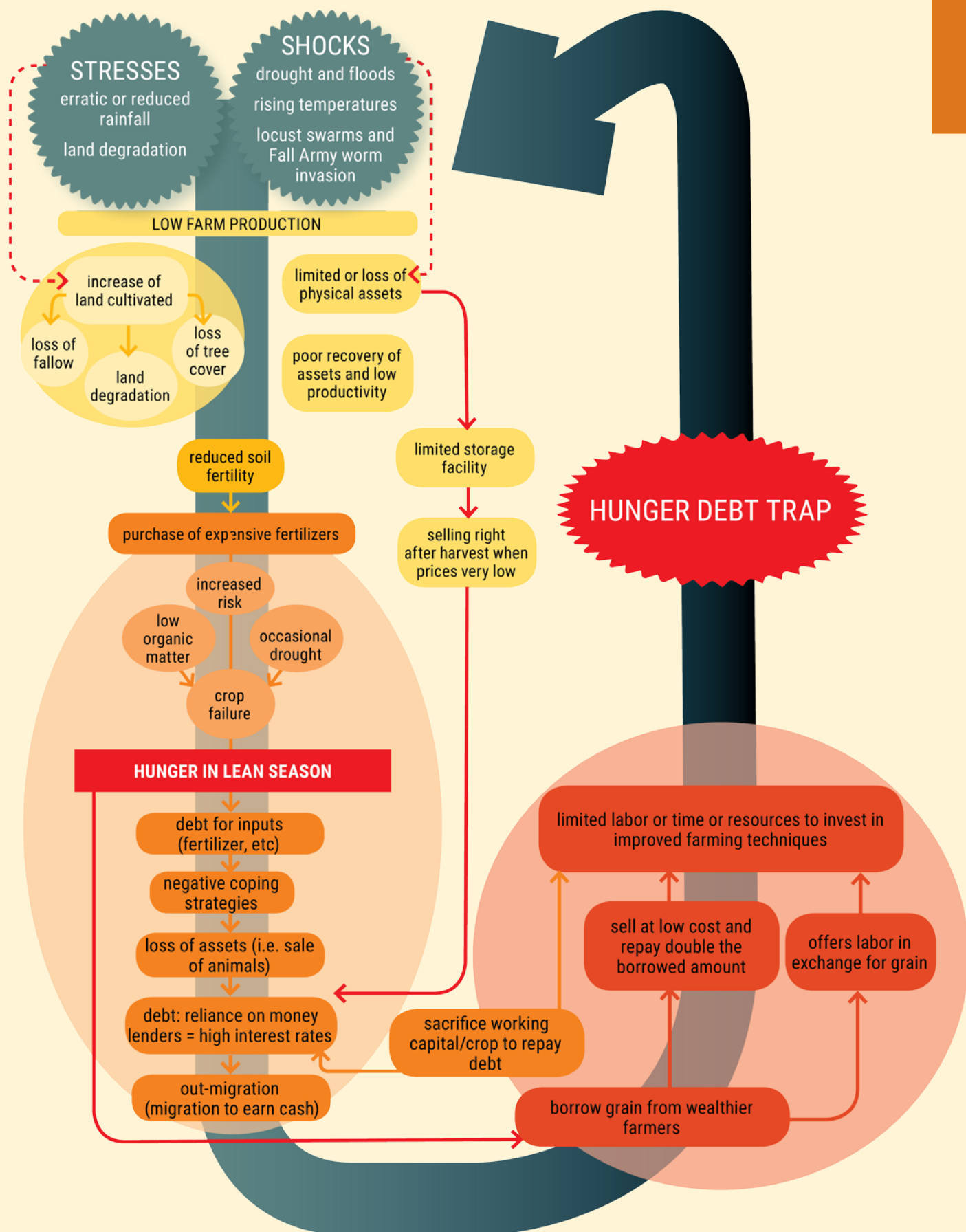
As this illustration shows, the vulnerability of poor households is multi-faceted and complex. On the one hand, they own few assets and limited access to productive resources. This means they are less likely to be able to produce a surplus for market, and often not even enough food to meet their own consumption needs.

Stresses (erratic or reduced rainfall and land degradation/decreasing soil fertility) add to their burden and contribute to low yields. As a result, farmers increase the surface of land under cultivation to make up for lower yields. This in turns this accelerates the loss of fallow and tree cover, thus further aggravating land degradation. In addition to these stresses, farmers are confronted by increasingly violent and frequent **shocks** (such as drought and flooding), which incur a loss of assets (animals die or are sold to buy food and seeds originally saved for the next planting season are eaten as food).

To cope with decreasing fertility, those farmers who can afford it buy chemical fertilizers. However, low organic matter levels in the soil mean that chemical fertilizer uptake and use is sub-optimal. Even if expensive fertilizers improve yields, occasional drought will generate crop failures. Resorting to external inputs (i.e., fertilizers) to cope with low soil fertility increases risks to farmers. It can easily get them into debt.

The cumulative effect of both shocks and stresses leads an increasing number of farm families to suffer from severe hunger in the lean season, before the next harvest arrives. This obliges poorer farmers to borrow grain from wealthier farmers in exchange for their labor for land preparation or weeding. This leaves poorer farmers with less time to cultivate their own fields or, if the coping strategy was to send a son on migration to earn money. It means a loss of labor.

Figure 4: Vulnerability to shocks of Sahelian households



Source: Groundswell international

After harvest, the most vulnerable farmers have to pay back debts by selling part of their harvest, just when prices are at their lowest. They often have to pay back double what they borrowed (i.e., two sacks of grain for every one sack borrowed roughly 50% interest).

Because of the precariousness of their livelihoods, vulnerable farmers are less likely to obtain the financial means to access productive resources, as they are not deemed to be credit worthy by regular credit institutions. This means that vulnerable farmers, who do not have enough food to last until the next harvest have to borrow again in the lean season from local money lenders, when the price of food is often the highest. This further depletes them of their labor or resources to invest in improved farming techniques. And so downward spiral continues into a hunger-poverty trap.

1.2 How to avoid the risk of deepening inequity

Rural development practitioners have observed that when adopting a homogenous approach in the agricultural sector, often it is the better-off households (not only those that are the wealthiest but also those who are more literate and open to new ideas) who reap most of the benefits.²⁴ They are in a way an “easier” constituency with which to work. The poor are often less able to participate or take a risk to engage in testing new technologies.

So paradoxically, resilience initiatives in the agricultural sector may tend to further entrench inequity, as the poorest (and most vulnerable) households are often not able to participate fully because of their circumstances.

It follows that organizations seeking to strengthen resilience through agricultural development need to systemically address the underlying factors of inequality and social exclusion.

Most of the time, organizations working on bolstering local resilience haven’t developed differentiated approaches. They often assume that all households in a rural community are relatively homogenous. This in turn results in adopting a homogenous approach to agricultural development interventions.

This tendency often applies to practitioners of agroecology. The assumption that “no cost or low cost” innovations, based on knowledge of agroecological processes, will inherently benefit both better off and poorer households is a false one. To have a wider impact on reducing vulnerability to food insecurity, it is essential that practitioners of agroecology tailor their support to address the differentiated needs of rural households. As importantly, they must make provision for tracking to what extent resource poor households are indeed benefitting.

Specific interventions conceived to break the poverty trap and to “give voice to the voiceless”, as Sahel Eco put it, included the following activities:

- conduct participatory households surveys and household wealth ranking to identify the most vulnerable households
- develop “warrantage” (collective grain storage) schemes
- establish seed banks
- provide the most vulnerable households with improved short cycle seeds
- promote the selective and rotation-based donation of pregnant livestock (sheep, goats)
- establish a dedicated fund to provide regular cash grants for women in the most vulnerable households

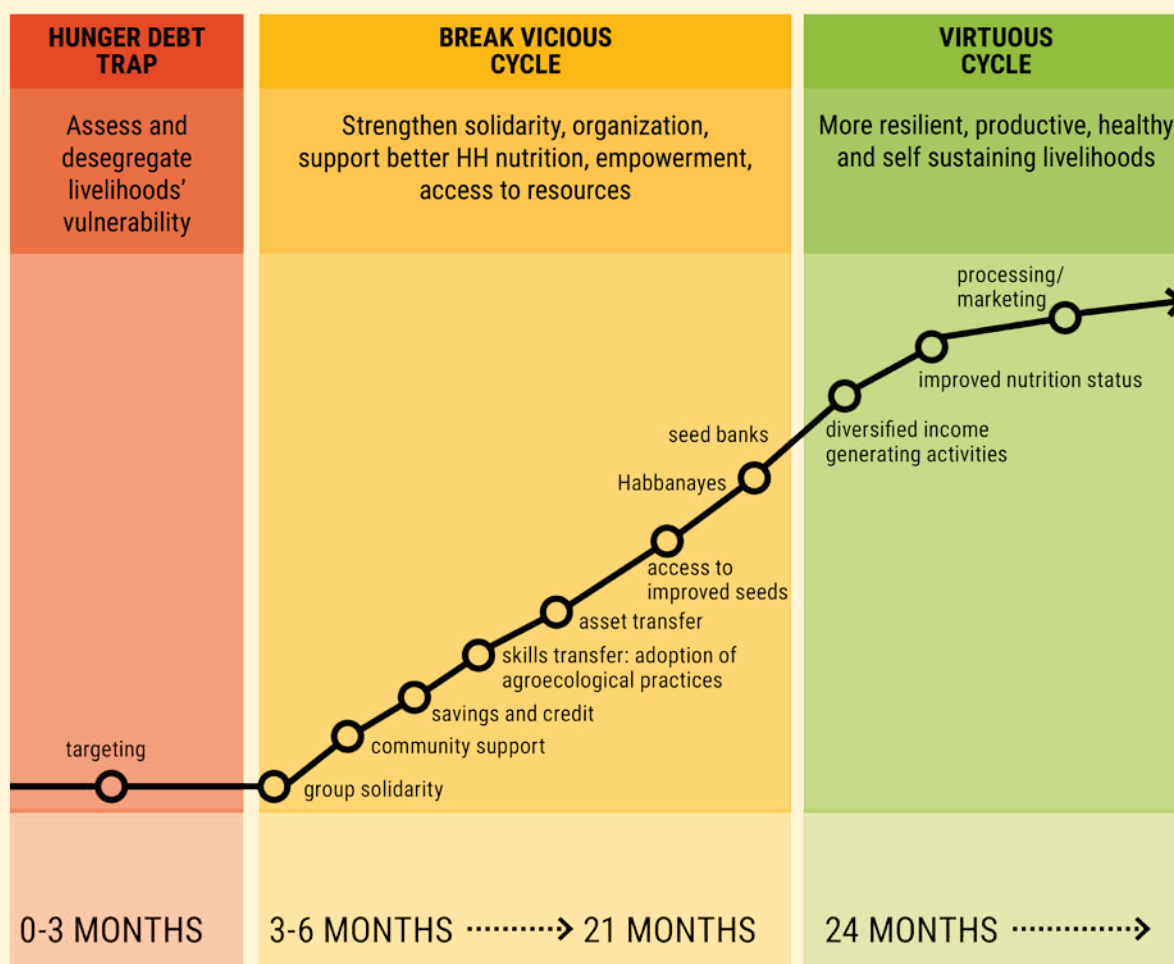
“The agroecological movement itself has not been giving sufficient attention to this issue of equity and of the need to target activities to benefit the ultra poor to ensure that the issue of resilience is tackled at the core”

Peter Gubbels, AE+6 team leader.

An adaptation of the “graduation model” presented in figure 5 below shows aspects of the hunger-poverty trap and how these interventions by AE+6 teams acted as leverage points to break the vicious cycle.

These are discussed in more detail below.

Figure 5: The AE+6 graduation model: enabling vulnerable household climb out of the poverty-hunger trap



Source: Adapted from Hashemi and de Montesquiou (2011).

2. AE+6 experience in integrating equity into agroecology work

The overarching approach of the AE+6 project for embedding equity issues in the design and planning of field activities was to ensure that the poorest, most vulnerable households fully participated in all stages of the process, from design, to implementation and assessment.

The first step taken by AE+6 teams was to categorize all households by wealth and food security status within local communities, through participatory household surveys.

Box 3**The challenge of determining the socio-economic status of households in Sahelian rural communities**

Measuring wealth in rural areas where the economy is not as monetized as in urban areas may be seen as challenging. The field of development studies underlines how distinctions based on social class may prove irrelevant in contexts where (such as the rural Sahel), the vast majority of people have essentially the same livelihoods: subsistence farming. The experience of the AE+6 country teams was that to overcome this challenge, it was best to use a very simple and effective way to define wealth; ask the villagers themselves what criteria best constitutes wealth or poverty in their community (bearing in mind that they can be variants from one village to the next). A generic question to ask would thus be: “How does one recognize wealthy people in your village?” Poverty can be defined in a similar manner.

2.1 Tools to categorize households by wealth/poverty levels

Specific research focusing on poverty alleviation tends to draw a distinction between the poorest, the chronically poor, “or the persistently vulnerable”.²⁶ The AE+6 country partners’ interventions did not disaggregate levels of poverty to such an extent. Instead, they adapted the participatory rural appraisal (PRA) “household wealth ranking” tool. This allowed them to work with community leaders to identify the poorest, and perhaps also most of the chronically poor.²⁷ This categorization process was carefully and diplomatically managed, to ensure accurate data and to prevent ill effects.

Step 1: Undertake awareness raising on equity for partner teams

As the first step in the planning of resilience building, the AE+6 team conducted awareness raising among the pilot villages on the issue of equity, and on relevant tools to assess it. Groundswell undertook the training of AE+6 teams on this topic during the inception workshop in January 2016 in Mali.

Step 2: Conduct Participatory rural appraisals to disaggregate households according to wealth levels

AE+6 country teams established PRA wealth ranking processes with community leaders themselves serving as the key actors. AE+6 teams explained the need to identify the most vulnerable to provide specialized support, within the wider agroecological program benefiting the community as a whole.

The awareness-raising on equity and the participatory approach was critical to help all community members to understand why only some households received direct subsidized support. This was to avoid any jealousies and potential resentment against the program.

After conducting a mini-survey to take a census of all households in a community, and writing the names of each household head on cards, key informants, selected by village leaders, defined local criteria of wealth, and then placed each household card into one of several wealth categories, ranging from best off, to the poorest groups of households.

In most villages, across all three countries of the Sahel, key informants identified the amount and quality of land, the amount of family labor, the number of animals, and ability to self-produce enough food to last 12 months of the year, as the key criteria on which to systematically categorize households.

In Burkina Faso, the household’s level of food security (i.e., whether the household had enough food to last through the lean season, without going hungry) was a key criterion. The number of poultry,

small animals (sheep or goats) or cattle was another major criterion. The wealthiest households almost all had herds of cattle.²⁸ The poorest often had only poultry and perhaps a few sheep or goats.

For Sahel Eco in Mali, the types of dwellings households lived in and the means of transportation they had were also cited as criteria.²⁹

In Senegal, Agrecol's engagement with communities also generated the criteria of food security (access to land, labor, animals, and housing, etc.).³⁰ Box 4 below gives an overview of how household survey and ensuing ranking of wealth quintiles happened on the ground.

Box 4

A practical experience of a community-based poverty disaggregation process

1. The process often began by engaging with the village as a whole, so that everyone understood the process. Sahel Eco for instance called for a village assembly; other AE+6 partners found it more practical to conduct this process with a handful of key informants (often with the chief and the council of the elders). ANSD entrusted the process to the delegates of the highly representative agro-ecological committees (AECs) formed in each village (see the report on integrating resilience in local governance planning).
2. Either the village assembly or selected key informants defined wealth /poverty criteria in a participatory manner, reflecting their specific context and local perceptions. This process gave the community a stronger sense of ownership throughout the household survey process.
3. Next step was to conduct a participatory household mapping exercise with key informants, to use a "mini-survey" for a census of the entire village, neighborhood-by-neighborhood, household-by-household. The facilitators wrote the name of each household head, and a symbol for their neighborhood on a small card.
4. Facilitators asked key informants to review each household card in turn, and place the card in a different wealth category pile, starting with two categories: a) the wealthiest households in the village and b) the poorest households. Any household, which did not fall in one of these two categories, was defined as "middle" (i.e., not among the poorest, but not among the wealthiest).
5. Often the "middle category became much too large. If so, the facilitators asked key informants to categorize all these households into two new piles. The first was to identify middle households who were "more similar to the poor". The second was to identify the middle households who were "more similar to the better off households". This often generated 4 socio-economic categories.
6. The facilitators cross-checked this categorization in several ways. For example, they would take several of the "middle poor" households and asked what justified them being closer to the poorer households, and not in the middle better off category. In this way, the facilitators established a quantitative range for each of main wealth criteria (land, labor, animals, food security).
7. Using this process, the community key informants themselves identified the poorest and most vulnerable households and established verifiable criteria to justify the list of beneficiaries for specialized support.

This process provided the AE+6 households with important knowledge for how to target its support activities. Generally speaking, the AE+6 teams implemented awareness raising and training activities to all interested households in the entire community.

However, the extent of participation of the poorest households was monitored, and when necessary, specialized support was provided to these households only.

ANSD underlined that it was modifying its monitoring and evaluation process to use this approach to assess socio-economic benefits and disaggregate these by households in the communities reached.

Another tool used by the AE+6 teams to complement household wealth ranking was the Household Food Insecurity Access Scale (HFIAS). This method was developed by the FAO's Food and Nutrition Technical Assistance Project (FANTA). This tool, used most often at the height of the lean season, measured the prevalence of hunger within households by assessing whether a given household experienced food insecurity over the last 30 days.

Because food security was such a key criterion in villagers' perceptions for assessing levels of wealth, AE+6 teams used the HFIAS to cross-check the outcomes of household wealth ranking surveys. The HFIAS was also used as an alternative entry point to determine levels of equity within a community.

2.2 Activities designed to promote equity

For the AE+6 partners, the overarching approach for promoting equitable and inclusive development entailed involving people in making decisions about activities designed to benefit them, strengthening their capacity to participate, and engaging the support of the wider community (local governance), and providing tailored livelihood support to foster adoption of agroecology, but also to overcome the mechanisms of the hunger-debt trap.

1) Improving local governance for equity

AE+6 partners established "Agro-ecological committees" (AECs), comprised of key members of the local community (usually representatives of various interest groups potentially involved in agricultural activities). These committees played a key part in fostering equity.

Firstly all members of the AECs agreed to serve on equal terms within their committee, despite their social status in the village.³¹ Community members with different socio-economic circumstances sat together to strategize on how best to promote and spread agroecology, and how to ensure all households would benefit. They served as a *de facto* "think tank" of the village, discussing how to address community issues related to livelihoods and food security.

Secondly, the AECs became an important organizational vehicle to further discuss the issue of equity, create awareness about it, and generate agreement about specialized initiatives to assist the most vulnerable. This is discussed in greater detail in the AE+6 case study focused on local governance.

2) The warrantage system (communal seed storage)

AE+6's primary focus was to support smallholder farmers to progressively transform their farming system through agroecological principles, thereby increasing production, resilience and sustainability. Yet, greater yields alone often are not sufficient to ensure the food security of vulnerable households.

Because they have so few assets, the poorer farmers are price takers. They are obliged to sell their crops as soon as these are harvested to pay debts and meet critical expenses, just when the prices are the lowest. Later, as their food stocks from their harvest are almost gone, these farmers have to borrow money from usurers at exploitative rates.



A man standing next to cereal stocks in a newly set up warrantage room in the village of Sanda (Mali).

Credit: Groundswell international

In Burkina Faso, ANSD reported that local moneylenders are known to apply interest rate of up to 100%. Often they required repayment in kind, (i.e., two bags of grain for every bag of grain borrowed). This is tantamount to “plundering the farmer’s harvest”.³² Special support measures were necessary to help the most vulnerable farm households extricate themselves from this hunger-debt trap.

A key strategy used by AE+6 teams to achieve this was to establish a “warrantage system” This system has the power to “break the insidious cycle of usurer’s interest rates”.³³

Warrantage is a type of inventory-credit system, which enables poor households to obtain a much higher level of revenue (often double), for that part of the harvest they wanted to sell. It involved enabling poor households to store the portion of their harvest that they intend to sell to meet their urgent expenses.

This stored grain served as a warranty (or collateral) kept in a collective storeroom, managed by a Warrantage Management Committee (WMC). Based on the amount of grain stored, the participating households obtained a cash advance (often equivalent to the low prices prevailing at the end of harvest). The participating farmers used this money to meet basic needs, or pay expenses required to go on migration, or set up an income generating activity.

Months later, when the prices of basic grains started to rise, reaching almost double the low prices right after harvest, the WMCs arranged to sell the stored grain, and paid each of the participating households the balance of their money (i.e., the sale of their stored grain, minus some storage costs, and minus the advance payment made).

The experience of ANSD with establishing warrantage systems in 10 of their “action research” villages is captured in box 5 below.

Box 5

How to set up a warranty system in a rural village – the experience of ANSD

1. The AECs (see the case study on strengthening local governance for more detail on these committees) identify, in a consultation with the community, a group of farmers who will serve as the Warrantage Management Committee.
2. ANSD works closely with this committee to locate an appropriate storage facility where the grain will be collectively stored. Sometimes, the WMC rents an empty storeroom, or in some cases, they oversee the construction of a dedicated storage room for the Warrantage system.
3. In the cases where the community decides to erect a new storage facility, they take responsibility for obtaining a building site, proving community ownership of this site, sourcing all the building materials required (sand, gravel and stones) and mobilizing labor for the building of the warrantage structure.
4. The members of the WMC open a bank account (at a commercial bank or through local credit and saving facility). This is required to receive the funds needed to provide the working capital for the Warrantage scheme, and more specifically, the advance payments that will be made available to participating households. (In some cases, ANSD, as the supporting NGO, provided some of the working capital. If so, ANSD signed a loan contract with the WMC, ensuring the full meaning of the contract is explained to the signatories).
5. After the account is opened, ANSD convenes a village assembly to have public reading of the loan agreements in the presence of key community stakeholders (e.g., village chief, members of the agro-ecological committee, and representatives of the Village Commission for Development). Once completed, ANSD provides the funds.
6. The WMC in turn signs individual contracts with each participating household who decide to store part of their harvest in the collective storeroom. Once signed, these families bring the grain, and receive the advance payment (never more than the current market value of the grain when it is brought). For example, if a farmer stores 100 kg of crops valued at 10,000 CFA francs on the market, the WMC will provide an advance payment (or loan) of up to 8,000 CFA francs to mitigate against the risk of the price of grains dropping instead of increasing on the market after harvest).
7. Three scenarios can then follow:
 - i) at any time, the farmer may refund all the money borrowed and then get his grain back
 - ii) if the farmer refunds the money, he can still decide to leave his grain at the warrantage store and sell when market prices are higher
 - iii) the farmer doesn't refund the money borrowed but can still access his or her own grain at a reasonable price, thus avoiding having to borrow from a money lender

This warrantage system can also provide benefits for better off farmers who also could earn more by holding onto their harvest until prices are higher.

However, the system is designed primarily to benefit the poorest households, to help them break out of the hunger-debt trap.

The warrantage system helped ensure that farmers who produce the grain and other crops, retain access to it in their own village. The food crops remain in the community, while the farmers obtain the higher market prices that invariably prevail several months after the harvest, for any grain they had planned to sell after harvest to get money for family needs. This system has become a key factor of food security in the community.

In Burkina, the experience of ANSD was that the warrantage system has emerged as a platform through which linkages with micro-finance organizations, which may provide needed finance for extending the warrantage system in the future.

Aware of the post-harvest risks posed by insects, particularly for cowpeas,³⁴ ANSD has also distributed triple bottom storage bags. These are promoted by a national agricultural research agency as an improved technology to prevent post-harvest losses.

3) The rotational gift of pregnant livestock

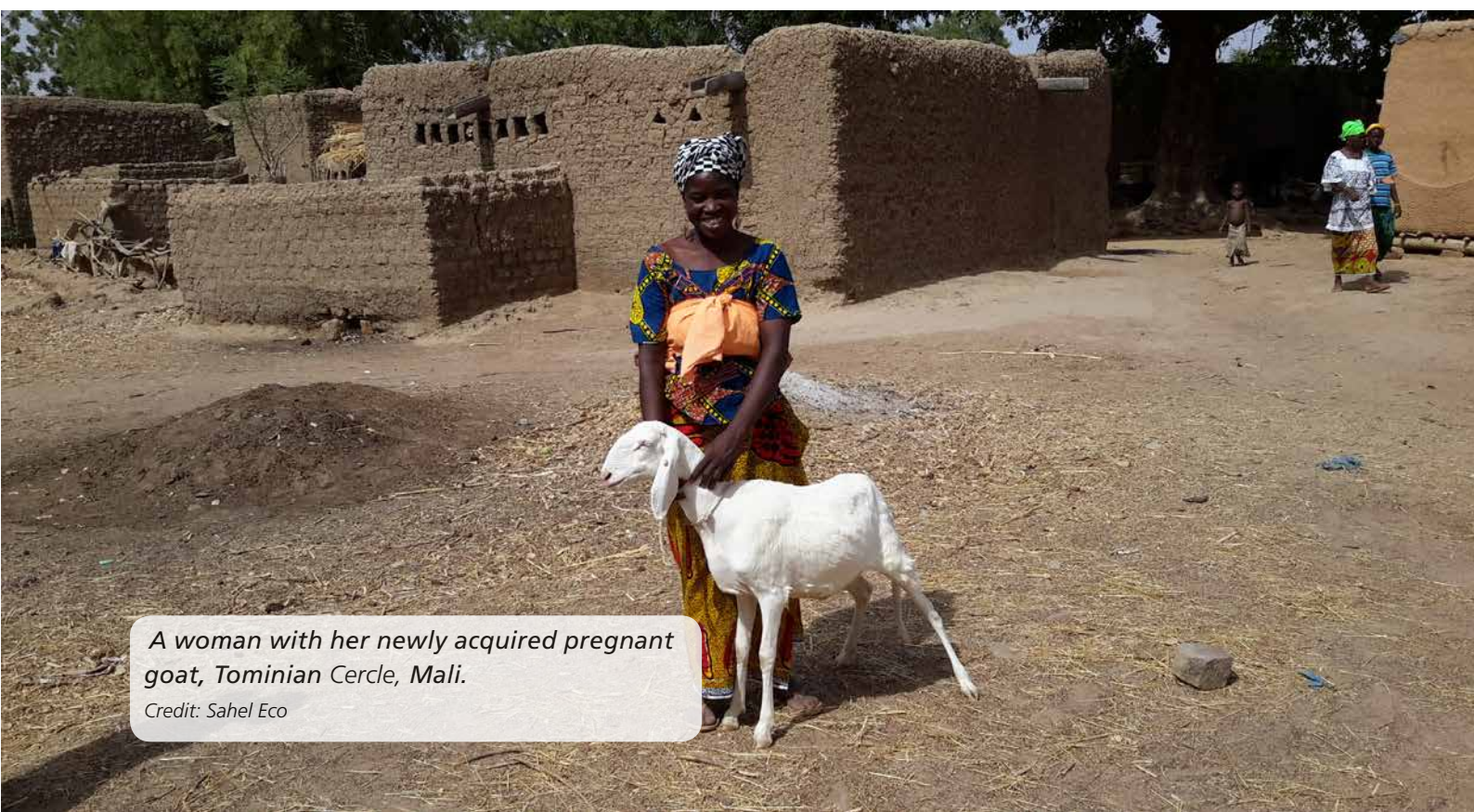
The rotational animal gift strategy based on the tradition of “*habbanaye*”, takes its roots among *Peul* herders. If an individual *Peul* household loses some or most of their animals because of drought or sickness, the tradition calls on wealthier herdsmen to provide loans, in the form of pregnant female animals, to enable them to re-build their livelihood of livestock production.

In each country, the AE+6 teams adapted this traditional solidarity mechanism to provide the poorest farm families with pregnant sheep, goats or poultry.

Box 6

Testimony: Rasmané Bikienga's experience of warrantage.

Rasmané Bikienga is a 40-year-old farmer who hails from the village of Yassoumbaga, in the commune of Bilanga (Burkina Faso). “I stored my cereals and received a loan of 100 000 FCFA that I used to buy and fatten 5 sheep. When selling the sheep I made a profit of 50,000 F CFA and I still have the 5th sheep I haven't sold. I think I can make a 10 000f CFA profit”. Ramané is delighted because thanks to the warrantage, he managed to pay his children's school fees. He will be storing his harvest in warrantage again in the next season.



A woman with her newly acquired pregnant goat, Tominian Cercle, Mali.

Credit: Sahel Eco

AE+6 implemented this strategy to promote the equity principle to identify and “positively discriminate” by benefiting the poorest, most vulnerable households.

Box 7

Agrecol Afrique’s experience in implementing the rotational gift of pregnant livestock

1. The community selects the beneficiaries of the rotational gift of animals in a participatory manner. Agrecol, jointly with the members of the Agroecology Promotion Committees (APC), defines the selection criteria for the allocation of these animals. The APC takes responsibility for coordinating this activity. The criteria usually entail households a) being among the most vulnerable in the community; b) proving they have a dynamic work force to ensure proper care of the animals; c) have not benefitted from the donation of animals from other projects.
2. The APC identifies the eligible vulnerable families for each neighborhood in the village, taking into account also the ethnic representation, ensuring that ethnic minorities also benefit.
3. The APC, with the support of Agrecol, initiates a dialogue with the identified beneficiaries, to ensure everyone is clear about the process, responsibilities, and to decide on the types of animals each household will receive (usually small ruminants or poultry).
4. A representative management group (identified by the APC members) signs an agreement with Agrecol, spelling out the terms of the rotational gift of animals, on behalf of all village beneficiaries.
5. The terms and conditions for receiving animals are as follows: pregnant animals are purchased and given to the beneficiaries, who commit to in turn give the offspring of the first birth to other eligible households.
6. Agrecol transfers the funds so that animals can be purchased. Animals are usually bought on the local markets, with the support of the APC and Agrecol.
7. After the weaning of the offspring from the first birth, the APC identifies the next wave of beneficiaries to which the female young are given.

4) Distribution of improved seeds and seed multiplication

The selective donations of improved (often short cycle) seeds helped vulnerable farmer families improve their production.

For the AE+6 partners, the term “improved seed” does not necessarily refer to certified seeds (i.e., seeds that are formally registered in the national seed catalogue). Ideally, AE+6 partners provided seeds in support of agro-ecological activities that came from local farmer varieties,³⁵ with the intention that the receiving farm families would be able to recycle these improved seed varieties over several seasons. This precluded not only genetically modified (GM) seeds but also hybrid seeds. Both these types of seeds are known to create dependence, because they have to be purchased every year.

For improved seeds, AE+6 teams identified and promoted shorter cycle seeds to help local farming systems adapt to erratic and irregular rainfall, and also to diversify crops.

Sahel Eco for instance sourced short cycle, drought resistant seeds from the “*Union des Agriculteurs du cercle de Tominian*” (UACT) (Tominian farmer association) and distributed them to the vulnerable households. Farmers who received such seeds appreciated being able to generate an early harvest, and being able to break the lean season several weeks earlier than usual.

The AE+6 partner NGOs also supported activities aimed at enabling local farmers to produce their own seed, which constitutes a critical dimension of building local resilience.

Based on this donation of improved seeds, ANSD for instance established a series of “**seed banks**”. This system consisted of donating seeds to a number of vulnerable households, who on harvest would refund the donated seeds into a local village seed bank, so that other households could in turn receive improved seeds. The initiative has benefitted over a hundred vulnerable households in the Gayéri and Bilanga municipalities in Burkina Faso.

Sahel Eco facilitated seed multiplication in collective fields across 8 villages, over a total surface area of 8 hectares. Farmers received *in situ* training at the time of seeding. They also received technical training on improved seed varieties adapted to the sahelian climate. This was done during a seed exhibition fair organized jointly with the UACT and the research station of Cinzana. The seed varieties that were multiplied were sesame and beans; the community fields yielded 580 kg of beans seed (against an initial supply of 170 kg) and 910 kg of sesame seed (against an initial supply of 240 kg). A portion of this production was used to provide seed for collective fields for the following years and the remnant was given to vulnerable households.

5) Start-up fund for vulnerable households

As part of its efforts to support the most disenfranchised in the communities, Sahel Eco decided to experiment with a **cash fund** to support women in vulnerable households to initiate income generating activities. Forty-five vulnerable households received a revolving lump sum of 25,000 FCFA (approximately 45 US dollars) to start animal raising activities. With this start-up capital, the benefitting household would buy a female goat, or sheep or pigs that they raised for 3 months; the animals would then be sold and the household would refund seed capital (with some profit) to allow other households to access these funds. A committee was set up dealing with the management of this revolving fund mechanism. The provision of such a start-up fund is well appreciated in local communities, as they often lack opportunities to access credit, as they are deemed credit “unworthy” by traditional financial institutions.



A multiplication plot for improved bean seeds, managed by a farmer (Tominian Cercle, Mali).

Credit: Sahel Eco

6) Advocacy targeting local leadership

A final important leverage point to promote equity consisted of engaging with local leadership to improve accountability mechanisms and encourage local leadership to become genuine agents of change, based on local values.

Agrecol's experience in this respect was compelling. The AE+6 team engaged with the local municipalities and village chiefs to rethink traditional solidarity mechanisms. Local municipal councils were persuaded to support the most vulnerable farm households through subsidized inputs (improved seed) and by facilitating access to land. They engaged community members in a dialogue to jointly define the best support measures to support the most vulnerable.

Agrecol recommended that municipalities establish a local tutoring mechanism between the farmers; under the auspices of the mayor, better off farmers were encouraged to mentor and support a vulnerable farmer in his neighborhood. This mentoring model is still in its early phase. Agrecol's vision is to reward the best tutors with an honorary certificate and prizes.

3. Challenges

AE+6 partners flagged the short duration of their resilience initiatives as the main impediment to achieving the full potential of the AE+6 approach. At the same time, all of the AE+6 teams reported that much had been achieved in a short 18 month period, indicating within the "proof of concept" that significant improvements are feasible, with a nuanced and effective strategy, even in a short time frame.

3.1 Challenges related to cultures and mindsets

The most critical challenge faced by AE+6 teams was how to address the sensitive issue of equity within the communities.

"People are uncomfortable with the issue of equity; it can create unintended tensions in a community as we are effectively providing additional training and assets to the poor, which can be a cause of resentment from other households who are arguably better off and who do not receive such benefits. We therefore need to change people's attitudes. A key measure in this respect is to help people in government and Farmers' Organizations and local NGOs to get over these concerns so that they can fulfill their mandate of getting everyone treated in an equitable way."

Peter Gubbels, AE+6 team leader.

On the other hand, by virtue of being external agents undertaking a wider community development program on the relatively "neutral" ground of agroecology, AE+6 partners had room for maneuver to promote pro-equity interventions. The AE+6 teams concurred that the best way to address the challenge was to carefully secure the understanding and agreement by communities about the need for additional support to the most vulnerable. A careful balance is required to proceed with surveys differentiating people's socio-economic status within a close-knit community, without undermining people's dignity by being identified as among the poorest.³⁶

3.2 Challenges inherent to the village-based strategies

Habbanaye:

The main challenge identified by the AE+6 teams with the *habbanaye* was pertained to providing adequate shelter for the animals. Beneficiaries were encouraged to keep their newly acquired animals in a stable. A side benefit of this was to collect their manure for compost making, but the main reason was to prevent disease, loss or theft. When stabled, animals also tend to have less of a gap between pregnancies.

Traditionally, however, sheep and goats in the Sahel are not stabled during the day. Instead, the normal pattern is to allow animals to roam the fields to eat the stalks and leaves after harvest as feed. For the poorer households, it was often a struggle to obtain sufficient fodder to feed their sheep and goats during the dry season.

Another key challenge was obtaining veterinary services in the relatively remote program areas. To address this, AE+6 teams encouraged participating farmers in the program communities to pool their resources to cover the transport costs and the fees of a veterinarian.

With time, AE+6 partners envisage setting up ethno-veterinarian training courses, targeting women in general, to build basic knowledge for keeping their livestock healthy.

From an agro-ecological perspective, the benefit of a “free grazing” approach for a large portion of the day is that animals are able to engage in their natural behavior, and naturally seek the food they need for medicinal properties.

Warrantage:

The warrantage program activity had one of the largest impacts on addressing equity. The main limitations included the cost of finding suitable grain storage facilities, and establishing an initial working capital fund. Success depended also on enabling a community to provide effective management and record keeping.

4. Results and impacts of the AE+6 activities

4.1 Baseline: how did AE+6 country teams deal with equity before?

The experience of Groundswell’s project partners with integrating equity into their agricultural activities before AE+6 varied greatly.

In its past agricultural programs, ANSD often made use of participatory tools to allow men and women to express their viewpoints separately, so that they would be free to speak. So ANSD was familiar with disaggregating groups on a gender basis. With AE+6, the ANSD team sharpened its approach to equity by introducing equity objectives and indicators as well as specific strategies targeting the most vulnerable households. This assisted ANSD with analyzing impact data from an equity perspective. This was not done before. ANSD has now adopted a systematic methodology to classify households by wealth in all villages in its program areas, and to track participation and benefits for each category.³⁷

In Senegal, Agrecol Afrique’s support activities had historically targeted the poorer households. This was done by relying on data collected by local government in the context of social welfare programs. However, Agrecol itself had not developed its own database of the most vulnerable households. Nor did Agrecol distinguish between the needs of different categories of households by wealth level.

Through AE+6, the Agrecol team has developed a ranking system through which they identify the 60% poorer quintile, the 25% poor (“average”) quintile and the 10-15% “most affluent” quintile. In this system, it is the

community itself who categorize households between these categories. Agrecol relied on a “committee of knowledgeable elders” to do so. Today, Agrecol’s goal is to ensure that each of their programs in Senegal include at least 20% of the poorest households.³⁸

4.2 Economic benefits heralded from these village-based activities

In general, AE+6 teams indicate that the combination of various equity-focused activities succeeded in generating significant economic benefits, but also “avoided losses”. In the context of the rural Sahel, given the pervasiveness of the downward spiral sending many vulnerable households into a hunger debt trap, a key way to promote equity is to help avoid asset losses due to negative coping mechanisms. In this respect, AE+6 teams strongly felt that the most vulnerable households:

- avoided exploitative interest rates from local money lenders because of warrantage and the capital obtained from women’s saving and credit groups
- saved income from having to sell agricultural produce cheaply just after harvest thanks to the warrantage system
- avoided having to sell animals and other assets at low prices to meet food needs
- did not have to purchase as much food during the lean season, at very high prices because their overall food production increased, and because the first harvest came sooner, due to improved short cycle seeds, thereby shortening the lean season

4.3 Reversing inequitable practices

Through its tailored material support and assistance in the villages, AE+6 teams targeted the most vulnerable households and women. Through this positive discrimination, AE+6 partners have reversed the trend (in many agricultural programs) whereby the better off farmers tended to benefit the most from improved seeds, material assistance, technical training and follow up support.

The activities focusing specifically on women and the more vulnerable households contributed to “balancing out” the impact of agroecology across the wealth categories. It helped ensuring that those households who were in the best position to reap development benefits were not the sole beneficiaries.³⁹ To the contrary, the poorer households who are often marginalized also benefited from the support given by the AE+6 program.

4.4 The resurgence of intra and inter-communal solidarity

A significant threat to local resilience in the Sahel is the weakening of traditional solidarity mechanisms. With reduced social cohesion, vulnerable households cannot rely as much on local social assistance when impacted by shocks and stresses, including climate change.

All of Groundswell’s AE+6 network teams reported that work to integrate equity in the design and implementation of agroecology had helped strengthen community mechanisms in support of solidarity.

The AE+6 teams witnessed and reported greater community awareness of the issues of social and gender equity, and an acceptance to take steps to address these issues.

Such assertions are difficult to validate in a systematic and rigorous way without specialized studies. Nor is it clear if this trend will persist after such a short period of intervention.

However, the AE+6 teams’ observations and collection of inspiring anecdotes provide emerging evidence of initial effects. This evidence suggests that it is possible to strengthen community solidarity as part of an adaptive capacity for enhanced resilience, particularly with longer-term resilience initiatives.

The most compelling examples of solidarity witnessed by the AE+6 teams occurred between groups of women.

Inter-community solidarity

Strengthened solidarity and linkages between neighboring communities appeared to be emerging as another manifestation of social change. ANSD attributes these strengthened inter-community relationships to the “cascading training” approach that it used to sensitize communities on governance issues. Through this training, facilitators helped villagers understand how environmental resources are best conserved through cooperation between communities, in order to avoid “leakages” of negative natural resource management practices. For example, if one community is trained on and begins to promote Farmer Managed Natural Regeneration of trees (to regenerate tree densities on the village territory), it became essential that people from neighboring villages do not come to cut down or burn newly established trees.

This shows how the AE+6 agroecology approach rests **on getting communities to look at ecosystems in a landscape approach**, and to construe development from a territorial local governance perspective, rather than only from an individual household focus.

AE+6 teams have observed that convening representatives from neighboring village to discuss and address common issues resulted in greater inter-community solidarity.

Intra-community solidarity

One activity initiated by AE+6 teams was to organize competitions on best practices (i.e., best overall agro-ecological farmer, best practitioner of agroforestry, and communities showing the greatest progress in promoting agroecology, etc.). These local contests not only raised awareness on agroecology. They also had the side effect of fostering greater social interactions between people in the communities. The winners were proud to be recognized within their communities, and the most successful communities were proud of the public recognition of their actions.

The most compelling examples of solidarity witnessed by the AE+6 teams occurred between groups of women. AE+6 teams documented many cases of a women’s saving and credit group volunteering to guide interested women from neighboring communities to learn about their experience, particularly the process and organizational functions, and to apply this knowledge back home. The creation of women’s savings and credit groups had a major positive impact on the dynamics of relationships among women. A woman leader supported by Agrecol Afrique in Senegal commented: “Before one knew of each other but we didn’t socialize, women just stayed in their house. But with the EPC (i.e., savings and credit groups), women now meet on a weekly basis. They share far more about their experiences”.

Such testimonies provide anecdotal evidence emerging sociological changes in communities that are supportive of resilience. This revival of solidarity within a given community is illustrated in box 8.⁴⁰

Box 8

A compelling story of how inequity was overcome in a Senegalese village

A man had recently settled in the village of Gouye Madiboury in the region of Kaffrine (Senegal). As he didn't originally hail from this village, he was granted a very limited and marginal piece of land for farming. This resulted in him harvesting only meager amount of crops. His situation was exacerbated by a usual abuse of power one encounters in rural villages, where exploitative moneylenders demand gigantic interest rates for cash or goods loaned to people in desperate situations. In this instance, a local seed merchant had given this man a 120 kg of peanut seed. In repayment, this man was expected to give him 800 kg of his peanut harvest several months later.

Agrecol sensitized the village chief about such exploitative practices within the context of the resilience aims of the AE+6 program. He made a considerate effort to allocate him a bigger and better piece of land on which to farm. In addition, the Agrecol AE+6 team intentionally made this man and his family a priority beneficiary. He was one of the recipients of improved seeds distributed by Agrecol. He also was benefited from the animal husbandry activity, receiving thirty chicks.

Both of this man's wives became members of the women's savings and credit scheme started in the village. He also took part in the collective dry season gardening initiative and received on-going technical support.

By enabling this man and members of his household to take part in community-based, "equity oriented" activities (as opposed to the normal pattern of being excluded) Agrecol created a real turning point in this man's life. Agrecol subsequently designated him as a main focal point in helping to manage these initiatives in the village. This increased the social interaction between him and many community members in terms of the wider effort to promote agroecology.

This story illustrates how differentiated support, and special support for the most vulnerable, can help households escape the hunger debt trap, and overcome mechanisms that foster social inequity.

In the words of Moustapha Gning, the Agrecol Program Leader, *"as this man, who was so poor, managed to extract himself out of poverty (through these measures), he became a living example for others but also become a great advocate of equity"*.

4.5 Snapshot of results achieved in each Groundswell country partner

The key indicator used by AE+6 to ascertain whether program activities were ensuring greater equity was the number of men and women from the poorest households who (in pilot villages) engage in designing and making decisions about resilience-focused activities tailored to their needs.

ANSO

- conducted several awareness -raising sessions on the issue of equity. This reached a total of 3,500 people in 10 villages). The result was agreement about the need for integrating a strong equity dimension in the rollout of AE+6 activities. This agreement was reflected in decisions made by community-based organizations responsible for the management and coordination of the AE+6 programs
- established seed banks for the benefit of over a hundred vulnerable households in the Gayéri and Bilanga municipalities, leading to improved yields, increased income and earlier harvests through the sale or distribution of improved varieties
- enabled poorer households to acquire and cultivate 15 hectares of land
- set up three warrantage systems for three villages in the Bilanga municipality

ANSO plans to generalize the practice of warrantage across all the villages where it intervenes, starting with the ten AE+6 action research pilot villages. To date, only 3 villages (i.e., Yassoumbaga, Moaka and Tindané) have built up food stocks amounting to approximately 6 tons of cereals and 14 tons of peanuts. Close to 50 households received over 3,600 dollars US as advances based on their grain inventory to initiate income-generating activities (petty trade, livestock fattening, meat processing, etc.).

Sahel Eco

- involved a total of 4,242 people in warrantage activities, including 2,163 women
- distributed animals to 42 women (out of total of 45 beneficiaries) as part of the rotation-based gift of animals
- set up a revolving fund benefitting 45 households – of which 42 women were among the direct recipients- to start-up animal rearing activities
- provided 140 vulnerable households with improved seed varieties of maize, sorghum, groundnut and rain-fed rice
- organized an improved seed fair, which aimed to spread knowledge about such seeds as well as their wider uptake, notably through seed multiplication fields

Agrecol Afrique

- established three APCs across three municipalities, to oversee, support and monitor equity focused activities
- organized a total of 478 women within 21 saving and credit solidarity calabashes (as saving and credit groups are locally known in Kaffrine)
- ensured that vulnerable women became members and were part of the leadership within these 21 solidarity calabashes
- fostered 39 community initiatives undertaken with funds generated through the savings and interest generated through these solidarity calabashes, focusing essentially on the bulk purchasing of seeds
- fostered 362 “solidarity credits” granted to members to meet the medical and food needs of households and to pay for the children’s schooling
- provided 478 women from vulnerable households with subsidized farming inputs
- enabled 300 people (of which 240 were women) to take part in warrantage activities
- trained and mentored 10 highly vulnerable households to adopt agro-ecological initiatives

5. Lessons learned on best practices

5.1 Factors that fostered integration of equity in project activities

For all agricultural development practitioners engaged with rural communities in the Sahel, the AE+6 program initiative across three countries identified the following “success factors” for integrating a strong equity dimension, which is essential for strengthened resilience.

Key success factor # 1: Raising awareness to get grassroots buy-in on pro-equity agro-ecological support

One key factor contributing to success in integrating of equity within the agroecology approach was to facilitate a strong advance preparatory process. This resulted in the AE+6 teams obtaining informed agreements from the community to include in the wider agroecology resilience program for the whole village, specialized support tailored to the specific needs of resource-poor households, particularly women farmers.

AE+6 teams achieved this through first by engaging with local leadership (village chiefs, religious leaders, local governance representatives) and secondly by conducting village assemblies. This ensured that the community as whole reached consensus, and agreed that some households would receive specialized support and mentoring, material assistance such as tools and seeds, whereas other better off households would not.

This process of extensive communication and consultation avoided a situation of misunderstanding, resentment and jealousy, which could have undermined the resilience effort, if not result in its failure in the community.

Key success factor # 2: Ensuring genuine participation

AE+6 program teams found that embedding widespread participation and inclusive consultation in the design and planning of their activities, particularly for sensitive issues revolving around equity and gender, was essential to success. A framework used extensively in the agricultural sector, which helped inform this process is one developed by Jules Pretty⁴¹. He defined a typology of NGO perceptions of grassroots participation, which can be summarized in the following way, along a continuum from weakest to strongest:

1. the NGO acts autonomously without consulting with the beneficiaries of the intervention
2. the NGO tells the beneficiaries about the intervention without requesting any input
3. the NGO consults with beneficiaries of the intervention without really taking their input into account
4. the NGO consults with beneficiaries of the intervention while taking their input into account
5. the NGO partners with the beneficiaries of the intervention in order to solve the problem
6. the NGO cedes responsibility for making appropriate decisions to the beneficiaries of the intervention

In the stories shared through this case study, it is obvious that the AE+6 teams in Burkina Faso, Senegal and Mali acted at levels 5 and 6 in sharing the responsibility of the design and implementation with the communities reached. Key to success requires involving the community itself with the responsibility of determining who shall benefit from equity focused activities. An example was AE+6 teams giving the community itself the task of conducting a household census and categorizing each household by wealth level, providing only guidance and backstopping.

Key success factor # 3: Supporting participatory processes through which communities can disaggregate levels of wealth within the community

Disaggregating⁴² rural households by levels of wealth was key to developing relevant interventions and to differentiating support to suite the specific livelihood needs of each socio-economic category within a given community.

Participatory processes, in which the community determined the criteria for assessing households' relative wealth level indicated that asset-based approaches proved a most effective manner to identify the poorer households and in particular the chronically poor.⁴³

A related factor was to assess the dynamics of the how households fell into a hunger poverty trap. This is because, for the agroecology as the foundation for resilience, a critical strategic aim is to enable the most vulnerable households to break out of the downward vicious poverty spiral that entrap many of them.

This is something a community can be empowered to do through engaging in a PRA approach facilitated by an outside agency. This approach can help foster the emergence of community leaders as champions and advocates of equity, assuaging any possible discontent or resentment, or at the very least, it can help disarm active opposition.

Key success factor # 4: Improving local governance and social cohesion in support of equity

AE+6 teams found that establishing inclusive and representative AECs as a governance platform for the village was a key success factor. Part of the AECs' core mandate was to design resilience strategies (in alignment with the local development plans) and to promote and spread these within their communities. AECs would typically include representation from all key groups and activity sectors in the village, including women. This provided community members of different socio-economic circumstances the opportunity to meet regularly, and discuss issues of common concern. In effect, the AECs have taken the role as a local platform within their village to design, review and oversee development activities, and address issues such as equity.

Engaging with the local municipalities and village chiefs and leaders to trigger reflection on traditional solidarity mechanisms often had a positive impact. If persuaded about resilience and equity, local municipal councils can provide support to the most vulnerable households within their own activities, providing mentoring and subsidized support, and catalyze local tutoring initiatives.

Key success factor # 5: Promoting equity resilience initiatives based on local values supporting solidarity

Agroecology-based resilience strategies based on indigenous value systems can help facilitate the design, implementation and monitoring and evaluation of activities from an equity lens. This can contribute to ensuring that community led initiatives and external support allocate a percentage of support specifically to vulnerable households, as captured in table 1 below.⁴⁴

Table 1. Example of activities that agro-ecological projects can develop with an equity focus

Example of activity	Vulnerability lens	Nature of support
Setting up women credit and saving group	Exclusive benefit to women	Advisory support with setting up the groups – operational modalities left to the discretion of the group
Establishment of local seed banks	Vulnerable/poor farmers or women only	Material assistance of seed stocks – mentoring on production of seeds
Material assistance of improved seeds	Vulnerable/poor farmers only or women only	Material assistance and mentoring
Rotation-based grant of pregnant livestock,	Vulnerable/poor farmers only or women only	Material assistance and mentoring
Setting up warrantage (collective grain storage) schemes	The community as a whole – shields from usurers	Donation of building materials to built the store room (in cases where no vacant building is available) and allocation of startup capital

Key success factor # 6: Sharing and disseminating experiences and lessons learnt

The approach of combining the piloting of equity activities in a limited number of “action research” villages while scaling out tested and proven agroecological practices in many villages proved successful in all three program areas. It generated enthusiastic support for “resilience” across many villages, and created credibility. This contributed to a positive reception to the more complex “second wave” of equity and gender sensitive resilience-oriented activities.

AE+6 program teams learned that disseminating experiences and lessons learnt can be done through different means and media, including community radio broadcasts or making short documentary films. Traditional ways of reaching remote rural communities also included the staging of theatre plays or the organization of itinerant caravans, where the targeted audience (in this case village-based leadership) had an opportunity to learn about and directly observe the successes and challenges to building rural resilience strategies.

Key success factor # 7: Making provision for the long-term sustainability of interventions

A key lesson is to promoting local buy-in and genuine participation. This contributes to sustaining the impact of resilience initiatives in the long term. The aim is to ensure that new practices and ways of working for resilience become internalized within social fabric and leadership of the community.

Another strategy to ensure longer-term sustainability is to identify the most influential individuals within a community and persuade them to act as “guardians” of equity principles. This requires careful review of potential “candidates” i.e., the village chief, religious leaders, the local mayor. However, the AE+6 teams found that informal leaders, such as the influential elders can play this role.

This is illustrated by Agrecol’s experience in Senegal with the “community aunt” (known as the “*Badienou gokh*” in Wolof). This “aunt” is often the village’s midwife. She has become the repository of most of the medicinal and general knowledge held in the community. Such women are still trained by government with the aim of promoting (often health related) awareness into the rural areas. Agrecol has worked with these women not only to convey messages about nutrition in villages, but also to convey messages relating to equity.

Conclusion

The overall aim of the AE+6 initiative led by the Groundswell West Africa network was to develop a “proof of concept” of how to strengthen the resilience of farming systems and livelihoods of small-scale households located in ecologically fragile, drought prone drylands areas in the Sahel.

Agroecology is inherently conducive to equity because few expensive external inputs are required. What matters more is the innovativeness of farmers in intensifying their knowledge and use of ecological processes to restore soil health and tree cover on their land, making compost, adopting water retention and absorption measures.

However this case study report shows that in practice, despite this apparent inherent characteristic of agroecology in favor of equity, many factors in the drylands can act as strong impediments against the widespread adoption of agroecological practices by the poorer and more vulnerable households. Even if these households succeed in adopting agroecology, the benefits may not be sufficient to extricate them from their hunger debt trap without some additional livelihood support.

One impediment to the poorer households is access to knowledge. This is a constraint in communities affected by high illiteracy rates. Another constraint is lack of time and ability to take risks in changing farming practices. The AE+6 teams have reported how the elites or the most affluent households tend to participate at much

higher levels for agricultural development opportunities, compared to the more vulnerable households, who tend to be socially marginalized, particularly women farmers.

Other critical barriers to the expansion of agroecology/resilience include exploitative mechanisms, such as abusive interest rates practiced by local money lenders taking advantage of the desperation of poorer farmers whose household members are going hungry, and the limited access to land for the women farmers, who traditionally have no security of tenure.

This particular case study documents how the Groundswell network partners in three countries undertook strong action research initiatives to learn how to develop a strong pro-equity dimension within agroecology programs in support of resilience. This entailed:

- systematically and carefully tailoring support to meet the specific livelihood needs of the most vulnerable
- ensuring their participation in all stages of the design, implementation and training process
- dedicating specific and subsidized support to the most vulnerable households so as to redress imbalances across households of different wealth categories to apply and adapt agroecological practices to their respective farming systems and livelihood strategies
- providing-going support to accompany the vulnerable through the learning process
- systematically monitoring engagement of and benefits to the most vulnerable groups

Many of the emerging lessons and results of the AE+6 program have significant implications for overcoming the growing crisis of chronic food and nutrition insecurity in the Sahel.

In terms of ensuring a pro-equity approach to agricultural development generally (and agroecology in particular) for resilience, this case study indicates that organizations and practitioners need put the following conditions into place:

- ensure that equity forms an intrinsic cross-cutting dimension of the strategy to strengthen community-based resilience
- systematically seek to understand the socio-economic fabric of the communities where they intervene, in terms of different wealth categories of households, and how this affects livelihood strategies and relative opportunities
- engage the communities themselves to conduct the disaggregation process according to levels of wealth, so as to identify the most vulnerable households in the communities
- assess and understand the exploitative mechanisms, including the negative coping mechanisms that the chronically vulnerable household use to survive, in order to find ways to help them escape from the hunger debt trap
- develop context specific, grounded resilience strategies using a participatory action research approach to observe, diagnose, test, adapt, assess, and share experiences to address equity
- positively discriminate in the allocation of support and material assistance to favor the most vulnerable groups, so that they are enabled to play an active part in re-dressing imbalances in their ability to adopt agroecological practices, aggravated by the stresses and shocks affecting the drylands of the Sahel
- identify and revalorize values and traditional mechanisms that support community solidarity
- foster new social innovations and structures for mobilizing human resources, such as the agroecological village committees, farmer-to-farmer and community-to community learning, the creation of an extensive network of well trained community based leaders and volunteer promoters, in order to build adaptive capacity based on local knowledge

Contacts of project partners

Groundswell International

Peter Gubbels, Director for Action Learning/Advocacy (West Africa): Groundswell International

pgubbels@groundswellinternational.org

+233 20 1379708

Fatoumata Batta, Regional Coordinator (West Africa): Groundswell International

fbatta@groundswellinternational.org

+226 70 268850

+226 50 307306

Agriculture écologique en Afrique (Agrecol Afrique)- Senegal

Agrecol Afrique is originally an association, founded in Switzerland in 1983. It became a Senegalese NGO in 2002 and has since then continuously been supporting the practice and expansion of organic and ecological agriculture in Senegal and more broadly in West Africa. Its core aim is to help farmers increase agricultural yields in a sustainable manner, so that local populations can overcome the lean season and indebtedness and become actors of environmental conservation, to ensure food security for all. The AE+6 project was implemented in the region of Kaffrine.

Contact: Djibril Thiam, Executive Secretary

thiamdjibril@yahoo.fr

+221 339514206

+221 771139716

Association Nourrir Sans Détruire (ANSO)- Burkina Faso

ANSO was founded in 2011 – and legally recognized in 2012- with the mandate to support local rural development. ANSO's goal is to strengthen farmers' capacity and the organizations representing them to become contributors of food security and to fight poverty, while protecting natural resources. ANSO currently works with over 100 communities from 3 municipalities in the Easter region of Burkina Faso.

Contact: Tsuamba Bourgo, Executive Director

btuamba@yahoo.fr

+226 76675133

Sahel Eco: Mali

The Sahel Eco association was founded in 2004 with the mission to work with the Malian populations and neighboring countries to improve their livelihoods through better environmental management, based on the principles of good governance. The triptych "ecology, economy and listening" guides Sahel Eco's activities. In Mali, AE+6 was implemented in six communes located in the Tominian Cercle in the Ségou region.

Contact: Pierre Dembele, Executive Secretary

pierre.sahelco@afribonemali.net

+223 20293004

+223 762397 80

References

- 1 United Nations Office for the Coordination of Humanitarian Affairs (OCHA). 2018. Sahel crisis. [Online] Available at: <https://www.unocha.org/legacy/sahel> [Accessed on 2 May 2018]
- 2 Gubbels, P. 2015. *Changing business as usual: assessing development policy and practice in the Sahel through a resilience lens*. A joint publication: CARE International and Groundswell International.
- 3 Food and Agriculture Organization of the United Nations (FAO). 2007. *The State of the World's Animal Genetic Resources for and Agriculture - in Brief*. Food and Agriculture Organization of the United Nations, Rome.
- 4 IPES Food. 2016. *From uniformity to diversity*. [Online] Available at: http://www.ipes-food.org/images/Reports/UniformityToDiversity_FullReport.pdf. [Accessed on 6 May 2018]
- 5 GRAIN. 2007. *Une Révolution Verte pour l'Afrique?* [Online] Available at: <https://www.grain.org/article/entries/137-une-nouvelle-revolution-verte-pour-l-afrique>
- 6 African Centre for Biodiversity. 2012. *Alliance for a Green Revolution in Africa (AGRA): Laying the groundwork for the commercialisation of African Agriculture*. Agriculture, Energy and Livelihoods Series. [Online] Available at: https://acbio.org.za/wp-content/uploads/2015/02/AGRA_critique.pdf [Accessed on 25 April 2018]
- 7 See <https://groundswellinternational.wordpress.com/where-we-work/burkina-faso/> for specific issues raised in the context of Burkina Faso. [Accessed on 6 May 2018]
- 8 ECOWAS. 2008. Regional Agricultural Policy for West Africa, ECOWAP. ECOWAS Commission. [Online] Available at: https://www.diplomatie.gouv.fr/IMG/pdf/01_ANG-ComCEDEAO.pdf (quote from 2008:4) Accessed on 8 April 2018]
- 9 Inter-Réseaux. 2016. *Bulletin de Synthèse pour la Souveraineté Alimentaire : Quel Bilan pour la Politique Ouest-Africaine Dix ans après son adoption*. [Online] Available at: http://www.inter-reseaux.org/IMG/pdf/bds19_ecowap_mars2016.pdf [Accessed on 25 April 2018]
- 10 Dawson, N. Martin, A. and Sikir, T. 2016. Revolution in Sub-Saharan Africa: Implications of Imposed Innovation for the Wellbeing of Rural Smallholders. *World development*. Volume 78, February 2016, pp 204-218
This study further documents how in Rwanda, it is only a wealthy minority that is able to benefit from the “enforced modernization” entailed by the Green Revolution paradigm and that “policies appear to be exacerbating landlessness and inequality for poorer rural inhabitants”(2016:204).
- 11 Food and Agriculture Organization of the United Nations (FAO). 2015. *States of the World's Soil Resources*. [Online] Available at: <http://www.fao.org/news/story/en/item/357059/icode> [Accessed on 8 May 2018]
- 12 ELD Initiative. 2015. Report for policy and decision makers: Reaping economic and environmental benefits from sustainable land management. Economics of Land Degradation Initiative, Bonn.
- 13 Third World Network (TWN) and Sociedad Científica Latinoamericana de Agroecología (SOCLA). 2015. *Agroecology: key concepts, principles and practices*. Main learning points from Training courses on Agroecology in Solo, Indonesia and Lusaka, Zambia.
- 14 Groundswell International. N.d. Agroecological farming. [online] Available at: <https://www.groundswellinternational.org/approach/agroecological-farming/> [Accessed 2 May 2018].
- 15 Altieri, M. A. 1995. Agroecology: The science of sustainable agriculture. *Agroforestry Systems* 35: 111-115.
- 16 De Schutter O (2010) Report submitted by the Special Rapporteur on the right to food. UN General Assembly. Human Rights Council. Sixteenth Session, Agenda item 3 A/HRC/ 16/49.
- 17 IPES Food. 2018. *Mettre en lumière des alternatives agroécologiques en Afrique de l'Ouest*. Rapport de mi-parcours – Document d'orientation.
- 18 Gubbels. 2014. *Changing Business as Usual: Assessing development policy and practice in the Sahel from a resilience lens*, unpublished report for CARE West Africa. p.8
- 19 In the countries where the AE+6 program is implemented, the afore-mentioned intra-community socio-economic disparities are rife. In the areas of intervention of ANSD in Burkina Faso for instance, people still help each other with activities around the land (someone needing help with weeding his/her field will get support from his/her neighbours for free, and a hungry households will be given food by his/her neighbours), but it is also observed that, as the finances of households come under greater pressure, and as they might be less food secure as they used to be, they might also be less inclined to help those in need (Bourguou 2018).

- 20 University of Greenwich and the Natural Resources Institute. 2018. Excerpted from a Webinar PowerPoint *Exploring the equity dimensions of Sustainable Agricultural Intensification (SAI)* Research and Learning in Africa webinar, held on 21st May 2018
- 21 Shepherd, A. 2011. *Tackling chronic poverty: the policy implications of research on chronic poverty and poverty dynamics*. Chronic Poverty Research Centre (CPRC) (2011 :14).
- 22 Shepherd, A. 2011. *Tackling chronic poverty: the policy implications of research on chronic poverty and poverty dynamics*. Chronic Poverty Research Centre (CPRC) (2011 :21).
- 23 Narayan, D., Pritchett, L. and Kapoor, S. (2009). *Moving Out of Poverty: Success From the Bottom Up*. Washington, DC: Palgrave Macmillan and the World Bank.
- 24 Bourguou, T. 2018. Pers. Com. (ANSD Executive Director)
- 25 Hashemi, S. and de Montesquiou, A. 2011. *Reaching the Poorest: Lessons from the Graduation Model*. Focus Note No. 69 CGAP.p.3
- 26 Gibson, S. 2011. *Chronic poverty in policy: a reflection on the CPRC's impact on donor policy and national policies, 2005-2010*. Manchester, UK: Chronic Poverty Research Centre (CPRC).
- 27 The linkages between severe poverty and chronic poverty are complex and recent data has shown that severe poverty is therefore an inadequate proxy for chronic poverty, as extreme poverty can substantially underestimate the numbers living in chronic poverty. The chronically poor are defined as people who are "poor over many years, and may pass their poverty on to the next generation. One of the reasons for interest in the extent to which and why people are poor over long periods of time is that it may become harder to escape poverty the longer (they) are poor" (Shepherd, A. 2011. *Tackling chronic poverty: the policy implications of research on chronic poverty and poverty dynamics*. Chronic Poverty Research Centre (CPRC) 2011 :14)
- 28 Bourguou, T. 2018. Pers. Com. (ANSD Executive Director)
- 29 Gana, D. 2017. Pers. Com. (Sahel Eco project coordinator)
- 30 Gueye, A. 2018. Pers. Com. (Agrecol Afrique project coordinator)
- 31 Gueye, A. 2018. Pers. Com. (Agrecol Afrique project coordinator)
- 32 Bourguou, T. 2018. Pers. Com. (ANSD Executive Director)
- 33 Bourguou, T. 2018. Pers. Com. (ANSD Executive Director)
- 34 To mitigate against this risk, village committees have for now decided to only accept millet, sorghum and peanuts as crops that could be stored in warrantage banks. These can safely be stored for a longtime, as opposed to cowpea, which is a more tricky culture to store. As their experience and techniques improve, committees might decide to further diversify the types of crops stored.
- 35 Farmer varieties are defined by the African Centre for Biodiversity as "germplasm and seed either derived from indigenous landraces and their variations under continuous cultivation, or introduced varieties that have been maintained, adapted and absorbed into local seed and food production over time (i.e., conventional seeds) (which can even be one season from formal acquisition). " Source: ACB.2018. *Towards national and regional seed policies in Africa that recognise and support farmer seed systems*. ACB policy discussion document.
- 36 Batta, F. 2018. Pers. Com. (Groundswell International deputy team leader & ANSD President)
- 37 Batta, F. 2018. Pers. Com. (Groundswell International deputy team leader & ANSD President) & Bourguou, T. 2018. Pers. Com. (ANSD Executive Director)
- 38 Gueye, A. 2018. Pers. Com. (Agrecol Afrique project coordinator)
- 39 Batta, F. 2018. Pers. Com. (Groundswell International deputy team leader & ANSD President)
- 40 This story was recounted by Moustapha Gning, (AE+6 team manager for Agrecol) (2018, Pers, com.)
- 41 Institute of Development Studies. (1994). Alternative systems of inquiry for a sustainable agriculture. *Institute of Development Studies Bulletin*, vol. 25, pp. 37-48, as cited by the French Development Agency (FDA) in its Manual about participation intended for humanitarian actors. [Online] Available at: http://www.urd.org/IMG/pdf/MP_CHAPITRE1.pdf [Accessed 10 October 2017]. [Accessed on 25 April 2018]
- 42 The poverty alleviation sector has developed an analytical grid, according to which poverty can only be understood through the 4 "D's", namely disaggregation of data, an analysis of its duration and dynamics, so that differentiated policy responses can be formulated. (Shepherd, A. 2011. *Tackling chronic poverty: the policy implications of research on chronic poverty and poverty dynamics*. Chronic Poverty Research Centre (CPRC) (2011 :21)

- 43 The chronically poor are defined as people who are “poor over many years, and may pass their poverty on to the next generation.” (Shepherd, A. 2011. Tackling chronic poverty: the policy implications of research on chronic poverty and poverty dynamics. Chronic Poverty Research Centre (CPRC) 2011 :14) The linkages between severe poverty and chronic poverty are complex and recent data has shown that severe poverty is therefore an inadequate proxy for chronic poverty, as extreme poverty can underestimate the numbers living in chronic poverty.
- 44 See the AE+6 case studies on equity for a detailed description of these activities.