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Policy brief

Interpretation matters: Exploring the policy outcomes of competing vulnerability framings in rural Burkina Faso

POLICY IMPLICATIONS AND RECOMMENDATIONS FROM THE RD PERSPECTIVE

1. Human vulnerability and food security is directly related to and determined by the resilience of the socio-ecological system. Therefore, climate adaptation policies should secure long-term availability of trees in the parklands and reduce human activities that negatively affect the system's resilience. This would imply managing tree-based resources and harvesting NTFPs in a manner which enables continuous regeneration of natural resources.

2. Policies also should emphasize the role of traditional knowledge and local institutions in support of the traditional agroforestry system.

3. Policies should facilitate opportunities for livelihood diversification in order to decrease dependency on trees and agriculture resources.

POLICY IMPLICATIONS AND RECOMMENDATIONS FROM THE HSDD PERSPECTIVE

1. Trees are not important for reducing human vulnerability or for improving food security, even though they are biophysically indispensable. Policies should promote diversification strategies which reduce the dependence on natural resources. This is also recommended from a resilience perspective.

2. To increase adaptive capacity, policies should alleviate poverty by increasing access to financial and human capital (such as education). Policies should improve the status of marginalised local communities as well as the wider political economy, increasing access and entitlements to food as well as to financial and natural resources.

3. Acknowledging the importance of the wider political economy for adaptive capacity implies a need for policies that address governance of food security and natural resources.

Two women sell own produced Shea butter at local market in Bonogo. Photo: Jenny Friman

This brief explores how two different framings - the Resilience Discourse (RD) and the Human Security and Development Discourse (HSDD), can produce different conclusions about vulnerability in Burkina Faso´s agroforestry system resulting in different actions for different people.

Vulnerability from a RD framing refers to changes that threaten the system's balance. A HSDD framing is concerned with how people and groups are vulnerable and how the context and multiple changes matters for the underlying causes to vulnerability. RD and HSDD framings both have become prominent tools for assessing the vulnerability of food insecurity. Consequently, different actors and decision makers tend to explain vulnerability of people and the agroforestry system differently.

Our findings show that the framing matters for how we look at change and explain vulnerability in agroforestry systems and the role trees have for food security. The RD framing seeks to reduce vulnerability by preserving the traditional agroforestry systems, putting the value of tree-based products at the centre. The HSDD perspective aims at vulnerability reduction through diversification of incomes. A consequence of this is that the policy outcomes will look different depending on the interpretation of vulnerability

Based on a review of more than 50 articles published internationally between 2001 and 2014 we identified four main discursive themes of Resilience and HSDD framing.

The data used for the comparison of the two framings was collected during three fieldwork periods from 2010 to 2012. It aimed at researching the perceptions of the respondents through a combination of survey, unstructured and semi-structured interviews, participatory exercises and techniques.

The comparative analysis of the two framings shows how differences in explanations guide assessments of vulnerability, adaptation and the role of trees for livelihoods and food security to different results.

Food security in Burkina Faso

Situated in West Africa, Burkina Faso is one of the world's poorest and most food-insecure countries. Unequal distribution of resources, low education levels, and few natural resources are factors which contribute to its poverty. Food insecurity basically means that households lack food and resources for a nutritious diet. It is usually also accompanied by the lack of knowledge about nutrition and healthcare, as well as by lack of access to clean water. Access to food is defined by people's physical and economic ability as well as food distribution patterns.

About 25 percent of Burkina Faso's population is undernourished and about 30 percent of all children under five suffer from chronic malnutrition. More than 80 percent of the population depends on rain-fed subsistence farming on lands with low-fertility which are also prone to climatic shocks such as drought, floods, and irregular rainfall. Achieving the UN's Sustainable Development Goal 2 (to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture) would require extreme measures which confront the low levels of education, high levels of poverty, food insecurity, and an agriculture system vulnerable to climate change in a holistic manner.

The case of Bonogo

The village of Bonogo lies 35 kilometres south of the capital, Ouagadougou. As in many other villages, population density (nationally population density in 2013 was estimated to 61.6 people per sq. km) and poverty levels are high (in 2011, 45 percent of Burkina Faso's population lived below international poverty levels). The village depends on a combination of subsistence-based, rain-fed agriculture, forestry, and animal husbandry, complemented by small-scale businesses. Farmland size ranges from one to four hectares per household, with main crops of millet and sorghum and, most commonly, fruit trees such as mango, shea, néré and tamarind.

Degraded parklands

The main agricultural system in Burkina Faso, as in West Africa in general is the agroforestry systems commonly referred to as parklands, where trees are scattered on agriculture land. Farmers usually choose which trees to save when clearing land for cultivation: those which are useful for fruit, oil, wood, and leaves for food and fodder. In Bonogo as in the rest of Burkina Faso parkland trees play an important role in food security, especially for the poorest during the lean period between July and September.

However, numerous reports indicate that Burkina Faso's parklands are increasingly degrading due to complex socio-ecological forces such as increasing market demand for agricultural, livestock and forestry products, inadequate governance, over-harvesting, and recurring droughts. High levels of poverty in combination with high climatic risk, low access to and high dependence on natural resources makes the population in parklands extremely vulnerable. This vulnerability is further amplified by the climate change impacts on agriculture, forestry, water, and livestock breeding. Thus, in order to reduce levels of vulnerability and secure access to food, Burkina Faso needs to link climate change adaptation policies with food security investment plans.

Woman showing her crops. Photo:Jenny Friman.

Interpreting vulnerability

The two interpretations of vulnerability used here are RD and HSDD framings (Table 1). RD framing is based on a human-environment discourse, which draws on ideas from resilience, socio-ecological systems, and adaptive management. The RD framing is focused on global environmental change from how it affects human and environmental systems, both in terms of biophysical and social change.

Table 1. Application of the two framings in relation to vulnerability

Resilience framing	HSDD framing
Resilience refers to the system's internal adaptive capacity to absorb external disturbance and reorganize while undergoing change.	*Human Security text* denotes the aim to keep humans safe from threats to assure long-term human development with respect to equity and human rights.
Emphasises the role and value of local and traditional knowledge for resilience.	*Emphasises* the roles of social, political, and economic relations for access and entitlement to resources, shaping responses to and outcomes of change. Attends to historical and current power relations and unequal distributuin whilst analysing a system.
Vulnerability, defined as the antonym of resilience, it is the tendency and sensitivity of human-environment systems to suffer from exposure to external stresses and shocks which can affect either biophysical or social element of the system.	*Vulnerability* refers exclusively to people, asking who is most vulnerable and why certain regions or social groups are more vulnerable than others, Underlying causes to vulnerability can be explained through the contextual conditions and multiple processes of change.
Adaptation policies should aim for enhancement of socio-ecological resilience in order to reduce vulnerability.	*Adaptation policies* should address constraints to local responses, reduce inequalities, and propose alternative development pathways in order to reduce vulnerability.

HSDD framing is a critical discourse rooted in social theory, post-structuralism, and postmodernism. It focuses on how socio-political and socio-economic relations shape processes & responses to environmental change. It frames climate change as a human-security issue which requires understanding of differential capacities to respond to change.

The importance and role of trees

Within the resilience framing trees are viewed as important element in the agroforestry system. Findings show that despite an increasing demand for agricultural land and claims that trees "steal" water, nobody preferred removing trees from their farmland. Rather, many respondents described interdependence between trees and water and its positive role for soil as well as demonstrated knowledge of which trees are favourable to grow crops under or have other value.

Because all households in Bonogo use tree resources, trees are ranked as more important for livelihoods than money. Trees are considered important not only because of their ability to improve the capacity of households or individuals to cope with changes, but rather for the use and role in the socio-ecological system as a whole. People in Bonogo highlight significance of trees for food security and existence: for example the majority of the population acknowledges high importance of fruits as a supplement of staples and as an additional source of vitamins for children.

In the HSDD framing the importance of trees is related to how the resources are distributed and accessed in terms of equality within a community. Trees are also assessed in terms of an economic value, which is comparably low in relation to other income possibilities. Trading tree-based resources has only a marginal effect on income generation or food scarcity. In other words, trees are not viewed as important for improving livelihoods or reducing vulnerability, and their significance for improving food security is limited. Low investment cost makes trading in tree-based resources attractive for low-income families. Although wealthier households generally refrain from eating leaves, they buy wood and also have better access to timber as well as to non-timber forest products (NTFPs) because they have more land. In general, human security tends to be more associated with accessing financial and human capital than with access to trees per se.

Vulnerability

The RD framing focuses on how the existing system is vulnerable to changes. Thus, vulnerability is linked to what respondents claimed to be the greatest problem for the village: water scarcity and decreasing groundwater levels. This negatively affects food security by impeding crop cultivation, livestock production, tree growth and availability of NTFPs. Respondents witness that tree-based resources are diminishing due to high level of extraction and drought. Women from low-income household are affected the most because collecting NTFPs and wood for trading is usually their

task. When there is not enough tree resources available, people are forced to expand deforestation area, cutting trees illegally.

From the HSDD perspective, the main source of vulnerability in Bonogo is poverty, which often is associated with food insecurity and high dependence on natural resources. The importance of NTFPs for the poor in comparison with wealthier households can be explained by the fact that they lack alternative sources of food and income. Considering the low economic returns from agroforestry activities, the high level of extraction and dependency on tree-based and agricultural resources could be viewed as locking people into poverty and exposing them to high vulnerability to climate change.

Adaptive capacity

Adaptive capacity from the RD framing in Bonogo is focused around three main areas. First, results indicate that existing traditional institutions are important for the collective adaptive capacity. Second, the detailed and in-depth local knowledge of trees and their uses significantly contributes to adaptive capacity. Lastly, income diversification based on NTFPs such as firewood, fruits, and seeds, or on non-natural resources such as labour is important for adaptation and for food security.

The HSDD framing moves the focus away from the ecological system, yet it acknowledges that trees are important for food access, however, not for adaptation. Rather, having sustainable and diversified income, which is not only base on natural resources, is key to adaptation and food security. Education is the most cited long-term factor for increased adaptive capacity in Bonogo, as education is linked to the hope for better job opportunities.

Conclusion

The two framings arrive at one important common conclusion: the presently high dependence on natural resources in general, and trees in particular, needs to be decreased through livelihood diversification. The explanations of why diversification is needed differ between the two framings, however, these differences do not need to be overcome per se. Rather, there is a need to pay more attention to how our assumptions and interpretations of changes in nature and society matter for understanding vulnerability and adaptation and management of natural resources.

Mango trees close to the household compound. Photo: Jenny Friman.

The following documents have been reviewed for this brief

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The views presented are solely the author's.