Food and Agriculture Organization of the United Nations

FAO AGRICULTURAL DEVELOPMENT ECONOMICS POLICY BRIEF 47

CLIMATE-SMART AGRICULTURE

Reducing vulnerability to weather shocks through social protection in Ethiopia


©FAO/Giulio Napolitano

Climate change is associated with greater incidence and severity of environmental disasters and extreme weather events. Sub-Saharan Africa is one of the regions most affected by changes in climate. The capacity to reduce the vulnerability of the most exposed and vulnerable groups to these shocks crucially depends on the existence of policies that support access to information, credit, insurance, markets, technology, and extension services. This brief suggests that by integrating climate risk management objectives with social protection instruments, it is possible to improve the livelihood conditions of vulnerable groups while reducing their sensitivity to climate related shocks.

Ethiopia's Productive Safety Net Programme

Ethiopia's Productive Safety Net Programme (PSNP) is a large national social safety net programme that aims to respond not only to chronic food insecurity among Ethiopia's poor, but also to shorter-term shocks, mainly droughts. The public work component of the PSNP is a notable example of how social safety nets can be designed to meet the social protection needs of the most vulnerable while simultaneously reducing the risks associated with climate-related shocks. It is designed to support a local enabling environment for community development by transferring payments (in cash or in-kind) to households that contribute to labor-intensive activities, such as integrated community-based watershed development, including soil and water conservation measures.

The PSNP reduces vulnerability to droughts but not to other types of shocks

The objective of the analysis underlying this brief is to estimate the causal impact of the participation in the PSNP on beneficiaries' adaptive capacity and food security in the aftermath of shocks of different nature.

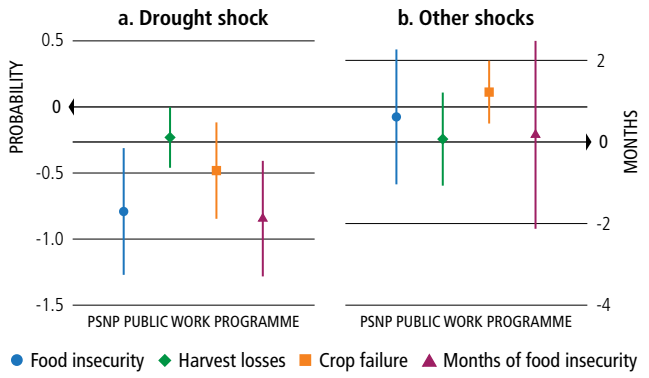
KEY MESSAGES

- The public work component of the Productive Safety Net Programme (PSNP) in Ethiopia improves beneficiaries' adaptive capacity reducing their vulnerability to droughts as well as their food insecurity.
- These benefits also affect the beneficiaries' peers within the community, although not directly involved in the programme.
- The PSNP, however, is not effective in reducing vulnerabilities related to other types of shocks (such as fire, pests, insects, wild animals, thefts, shortage of farm inputs and prices).
- The integration of climate change adaptation objectives in social protection programmes is expected to generate positive synergies and magnify the effectiveness of the interventions.

The empirical findings indicate that households participating in the public work component of the PSNP are 79 percent less likely to experience food insecurity due to droughts and are food insecure for a relatively shorter period (-1.9 months shorter, on average) as compared to the households not participating in the programme. Moreover, PSNP beneficiaries are 23 percent less likely to experience crop losses and 48 percent less likely to experience complete crop failure due to drought (Figure 1a). On the other hand, the PSNP does not have any significant effects on the households who have faced distress associated with other shocks such as fire, pests, insects, wild animals, thefts, shortage of farm inputs and prices (Figure 1b). This is most probably due to the nature of the public work activities of PSNP (which primarily focus on watershed development and soil and water conservation measures).

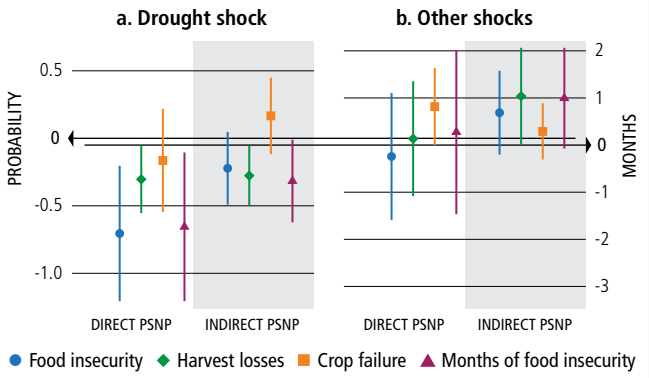
JULY 2022 ISSN 2520-6540 (online) / ISSN 2520-6532 (print)

FIGURE 1. Impact of PSNP public work programme by type of shock



Source: Authors' own elaboration.

FIGURE 2. Direct and indirect impact of PSNP public work programme by type of shock



Source: Authors' own elaboration.

The PSNP also benefits participants' community peers who are not directly involved in the public work programme

The beneficiaries' peers living within the same community are 28 percent less likely to experience harvest losses and experience a smaller period of deprivation (-0.76 months) after a drought episode, compared to non-beneficiaries' peers. This is likely to be because the PSNP public works mainly consist of building infrastructures that reduce the vulnerability of the entire community.

Notably, after controlling for the indirect impact on the community peers, the direct effect on the PSNP beneficiaries' vulnerability to drought is still statistically significant. PSNP participants are still significantly less likely to experience food insecurity or crop losses after a drought episode (Figure 2a). This suggests that, besides the impact of the community structure built through the public work activities, both the money received, and the skills acquired through the programme favour the replication of the strategies learnt, in the beneficiaries' own fields.

Consistently with previous results, both direct and indirect impacts of the PSNP are negligible for both direct beneficiaries and the community's peers when the distresses are not related to droughts (Figure 2b).

Developing adaptive social protection interventions in countries highly exposed and vulnerable to climate shocks

The policy implications from this study may be extended to other countries characterized by high levels of rural poverty and high exposure to the risk of weather shocks. In what follows, we discuss our main policy recommendations:

- Social protection programmes can be effectively leveraged to increase the adaptive capacities of the beneficiaries to climate shocks. This is possible by incentivizing the adoption of climate-risk-reducing practices, relaxing budget constraints, and by stimulating the transfer of skills and knowledge. In a context of limited resources, combining programmes dedicated to poverty relief and vulnerability-to-climate reduction can be particularly important to optimize resources and maximize results.
- Increasing the synergies between different programmes (and implementing institutions) is expected to magnify the effectiveness of every single intervention without necessarily increasing the resource budget dramatically.
- The specificity of the programme is important to consider when one designs adaptive measures and identifies expected outputs. In the case of PSNP, the programme has been found to reduce vulnerability specifically to drought, and not to other shocks, most probably because of the nature of the public work implemented through the programme.
- Strengthening the markets for credit and insurance remains crucial to reduce the vulnerability to other not covariant shocks not directly linked to the public work implemented. That is true, particularly in rural contexts, where these markets are still missing or incomplete.
- The public work component of PSNP generates positive spillovers to the beneficiaries' community peers, highlighting that building resilience to locally covariant shocks is a common goal of the communities, which entails coordinated actions of all the stakeholders involved as well as among local and national institutions and policymakers.

CONTACTS

Agrifood Economics Division – Economic and Social Development
ESA-Director@fao.org

Food and Agriculture Organization of the United Nations
Rome, Italy

Required citation: FAO. 2022. *Reducing vulnerability to weather shocks through social protection in Ethiopia.*FAO Agricultural Development Economics Policy Brief, No. 47. Rome. https://doi.org/10.4060/cc0740en

This brief was prepared by Antonio Scognamillo, Marina Mastrorillo and Ada Ignaciuk based on findings from the FAO Agricultural Development Economics Working Paper 22–02 *Reducing vulnerability to weather shock through social protection – Evidence from the implementation of Productive Safety Net Programme (PSNP) in Ethiopia.*(available at https://doi.org/10.4060/cc0824en).

The FAO Agricultural Development Economics Policy Brief series is available at **www.fao.org/economic/esa/policy-briefs**