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## Participatory Guarantee Systems: Agroecological Certification to Enhance Small-Scale Family Farmers’ Adaptive Capacity to Climate Change

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### Abstract

Food production is behind the success of developed nations. Once the food issue is solved, human and financial resources can be allocated to address other areas of development. But since the advent of the green revolution and its rapid spread over the world, the food production system has proven to be a major driving force of environmental change by destabilising the phosphorus and nitrogen cycle, biodiversity, freshwater usage, land use, and forest coverage. Additionally, climate change poses serious challenges to an already vulnerable food production system, with more frequent extreme weather events reducing crop yields. Therefore, the food production system needs to undergo a transformation that can guarantee foodstuff for nations constantly and effectively whilst in harmony with the earth system, resilient enough to withstand unforeseen human or natural driven shocks. Participatory Guarantee Systems (PGS) are alternative mechanisms for regulating food production standards. They rely upon the active participation of multiple stakeholders to provide an affordable quality assurance certification for local producers. Using a case study approach comparing two PGS from Peru, this article highlights how PGS contributes to strengthening farmers’ adaptive capacity to climate change by empowering farmers, enhancing their food security and market access, and stimulate the implementation of agroecological practices. Using a non-probabilistic purposive critical case sampling technique secondary data from the period 2017–2020 of 54 farmers were collected to analyse the trend on agroecological practices, this was complemented with interviews to stakeholders of the organisational structure of both PGS to qualitatively assess farmers empowerments, enhanced food security and enhanced market access. The analysis shows that year after year farmers keep on implementing agroecological practices to get a certification, improving their practices based on inspectors’ recommendations. The results from the interviews show farmers have access to more information on agricultural practices, make better decisions about their farm management, have a sustained food production through the year, and sell their agricultural products easier with a certification.

**Keywords:** Adaptive capacity, agroecological practices, certification, climate change