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## Forecasting shortages in staple crop production in Burkina Faso to inform early warning systems

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Almost half of the Burkinabe population is moderately or severely affected by food insecurity. Due to ongoing armed conflicts and the outbreak of COVID-19 in 2020 negatively affecting households' income and access to markets, the number of food insecure people is expected to increase. Moreover, climate change further jeopardizes domestic food production and thus food security. Early warning systems can provide information about the expected harvest, which allows governments to adjust food imports in case of expected harvest losses or ask for external food assistance. Thus, early warning systems can contribute to increased food security.

In this session, we would like to discuss how a forecast of staple crop production can inform early warning systems of food security. Based on a statistical crop model, we provide a within-season forecast of crop production for maize, sorghum and millet in Burkina Faso. Moreover, we compare actually supplied calories with those usually consumed from staple crops, allowing us to provide early information on shortages in domestic cereal production on the national level.

Results show that despite sufficient domestic cereal production from maize, sorghum and millet on average, a considerable level of food insecurity prevails for large parts of the population. This highlights the importance of a comprehensive assessment of all dimensions of food security to rapidly develop counteractions for looming food crises.