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Local adaptation to climate change in the Volta Basin, West Africa

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Although global climate change is the topic of many discussions, the actual impact of climate change should be evaluated at regional level. The 4th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) mentions that African regions are likely to become drier while the rainfall regime, in general, will become 'rougher'. In West Africa, specifically the area below the Sahel, climate change takes a more subtle form. Many farmers state that they plant two to three weeks earlier than their fathers used to do, suggesting that the onset of rainy season has shifted forward in time. Also detailed atmospheric modeling over the West African region shows that the onset of the rainy season will shift to later periods in the year, roughly from April towards May. The end of rainy the season as well as the total amount of rainfall will remain more or less fixed. This implies that adaptation strategies should be twofold. The first part of a comprehensive adaptation strategy would be a continuation of the efforts to produce faster growing rainfed crop cultivars, mainly corn and sorghum. The second part would consist of increased water storage during the wet season for use during dry season. This presentation focuses on storage-based adaptation and the different forms this can take.