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## The impact of climate change on crop production in West Africa: an assessment for the Oueme River Basin in Benin

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The study conducts a spatially explicit evaluation of climate change effects on farm income in the Oueme River Basin, Benin, factoring out for the main crops cultivated the constituent effects on yields, area, and net revenue per ton, thereby accounting for farmers' adjustment mechanisms and price effects. We find that under average rainfall conditions with climate change the current low yields are not reduced, provided that cropping patterns are adjusted, while price increases partly compensate the remaining adverse effects. Hence, in absence of interventions, farm incomes remain relatively stable, albeit at low levels. Yet, increases in the occurrence of extreme droughts leads to a rise in crop failures. Policy simulations of biophysical and hydrological interventions show that losses can turn into gains. Especially the reduction of fallow is promising as it requires few adjustments in prevailing farming practices, exploits the potential of uncultivated land, improves the water use efficiency and maintains the Basin's capacity to absorb migrants in the future.