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WASCAL

West African Science Service
Center on Climate Change and
Adapted Land Use

A general equilibrium economic analysis
of the impact of climate change on food
production and prices in Senegal

Presented by:
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Problem and OBJECTIVES

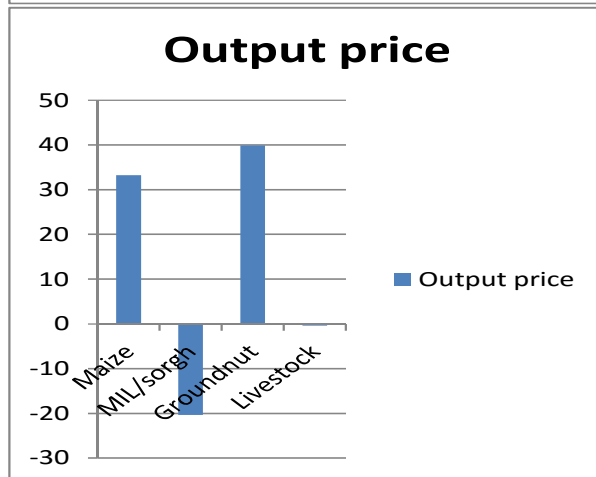
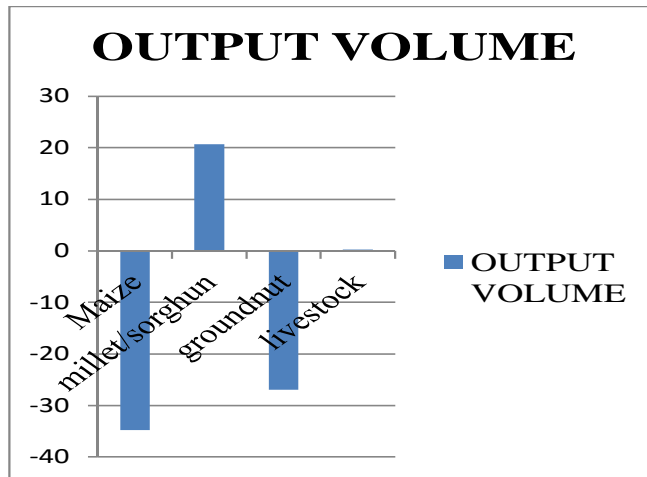
Problem: Climate change leads to more price volatility,
which impacts the poor

OBJECTIVES

- To assess the impact of climate change on production volume of some crops and price levels in food markets in Senegal.
- To test alternative policy instruments that can contribute to mitigate fluctuations of crop quantities and prices.

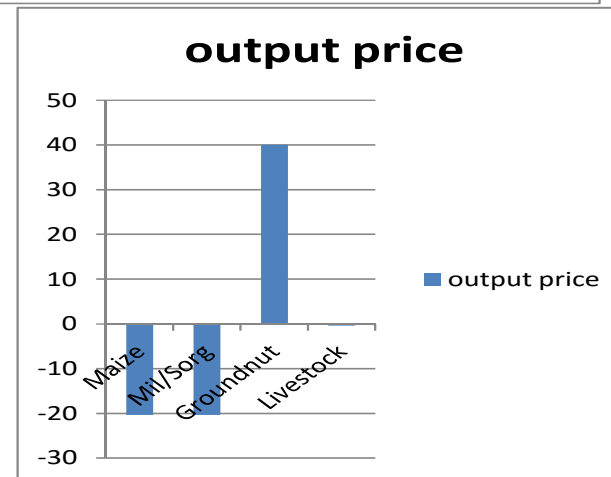
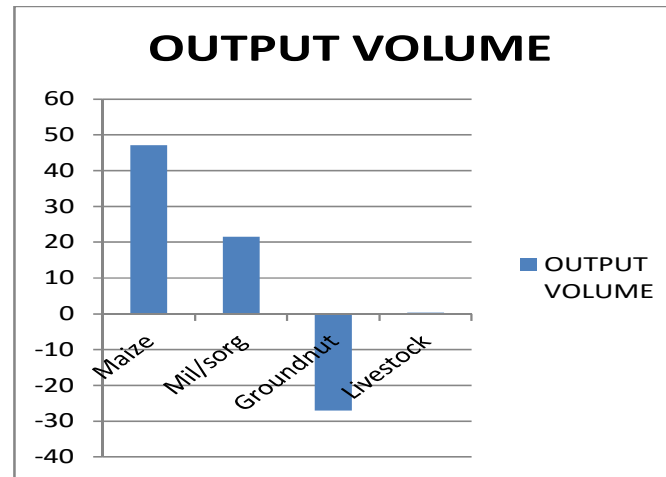
Results for prices and production in the different models

ECHAM5 GCM AND CSIRO Mark 3 GCM



CNRM-CM3 GCM and MIROC 3.2

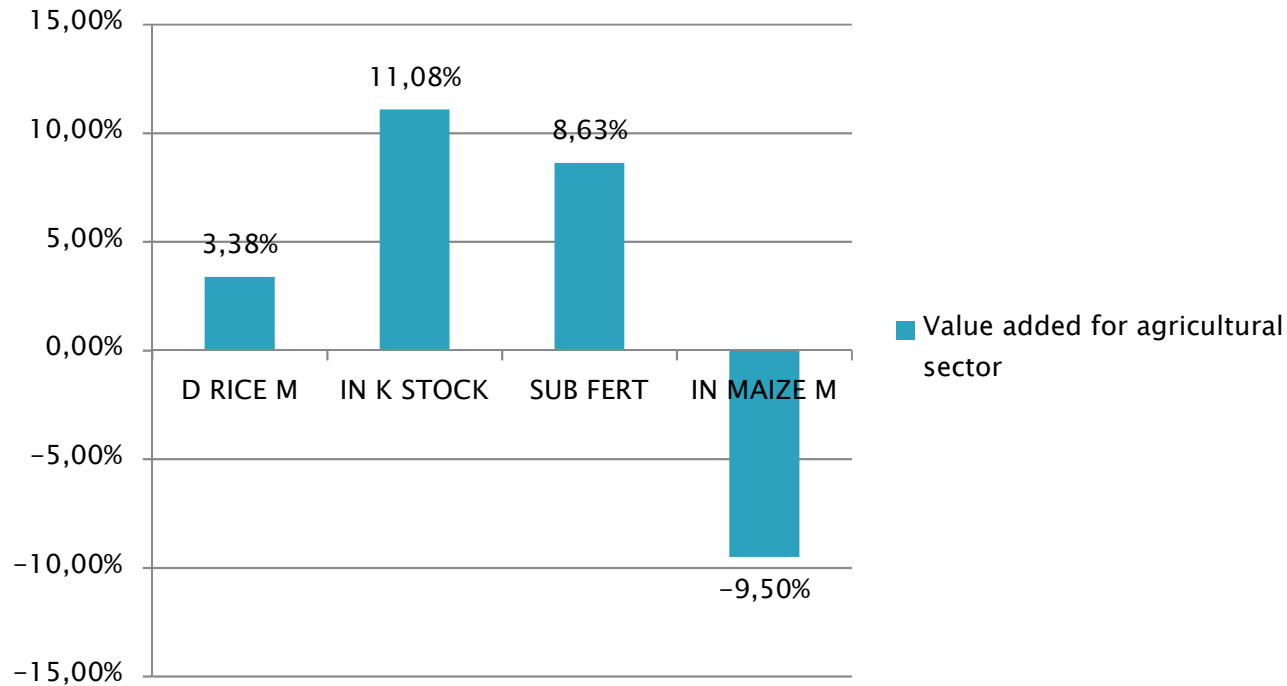
medium resolution GCM



RESULTS FOR VALUE ADDED

Graph: Increasing of agricultural value added

Value added for agricultural sector



POLICY RECOMMENDATIONS

- For Senegal it is to develop and implement adaptation plans to climate change for the agricultural sector, and take advantage of the opportunities offered by the UNFCCC through support mechanisms for adaptation and mitigation.
- Investing in sustainable use of the land following a climate smart agriculture can increase the income of small producers and reduce their vulnerability, while lowering greenhouse gas emissions.