

CASE STUDY – FOOD SECURITY

SOUTH AFRICA

CONTEXT

Climate variability in South Africa can cause multi-year droughts resulting in severe losses for farmers and investors.



Hot conditions and sporadic rain in 3 of the past 5 years have significantly impacted crop production.



The region is projected to experience large impacts in the 21st century under both high and low mitigation efforts.



The Land Bank finances commercial farmers and agribusiness, and also helps new entrants fund their operations.



Anticipating climate variability and extremes is key to the long-term success of agricultural investments.



Obtaining climate risk information is essential to adjusting credit models to compensate for potential climate change impacts.



There is a special interest in the North West Province's western maize production, which is important for food security.



EXPECTED RESULTS

- 1 Improved climate information for future crop and livestock production assessments.
- 2 Assessment of impact of climate change on crop and livestock production.
- 3 Identification of adaptation measures and opportunities potentially shaping policy.
- 4 Agricultural credit model adjusted to reflect climate change risks.
- 5 More informed financial and lending decisions and advice given to farmers.

THE TEAM



RESEARCH	SERVICE PROVIDER	END USER



FOCUS-AFRICA

The FOCUS-AFRICA project received funding from the Horizon 2020 Programme under grant agreement No 869575.

TOOLS & APPROACH

These tools and data will first be applied for a historical period to evaluate their representation of climate and crop yields in the region.



OBSERVED WEATHER DATA



DOWNSCALED CLIMATE SIMULATIONS



STOCHASTIC WEATHER SIMULATIONS



CROP SIMULATION MODEL

Based on the evaluation, appropriate methods will be selected to represent future climate and simulate crop yields, calculate livestock stress indices and identify adaptation measures and opportunities. In collaboration with the Land Bank, credit models will be adjusted to take into account potential climate change impacts. Farmers will be consulted to take into account their needs and considerations.

CLIMATE SERVICES

