- Total land area of the country is 17 million ha
- About 85% is suitable for agricultural production and 77% is pasture and grassland suitable for livestock.
• Family farmers are 63% of the country’s total producers
• The main threat is the increase in **variability of rainfall**, including extreme events.
There is evidence that the already high variability of uruguayan rainfall pattern has increased in the last years, resulting in more uncertainty.
Increased rainfall in Uruguay? Climate change?

Treinta y Tres: Rainfall accumulated in Dec-Jan-Feb (DJF)  

W. Baethgen, 2014
If we add the agricultural, agro-industrial activities, and services demanded the agricultural sector generates 25% of GDP

Agricultural multiplier effect: 6.22
Increase in Uruguayan exports (in Million Dollars)

Source: OPYPA-MGAP based in BCU data
Exports in 2005
Food for 9 million people

Exports in 2013
Food for 28 million people
• How to produce food for 50 million people from sustainable intensification and care of the environment?
Promotion of the competitiveness and international integration

Sustainable intensification

Adaptation of production systems to climate change

Rural Development: competitive inclusion of the family agriculture in value chains

Strengthening and institutional integration
Water for development
Natural grassland is 65%
Soil protection plans in 95% of the area
Native forest area

Increase
Construction of an information platform as a public good

Adaptation of production systems to climate change
Facilitating the integration of dispersed agriculture, natural resource management and new climate-related information...
... in an online state-of-the-art platform tailored to the needs of different users
Construction of an information platform as a public good

This system would include:

- improving and integrating existing climate and natural resources databases
- developing improved seasonal forecasts
- establishing Early Warning Systems
- improving real time monitoring of climate and vegetation
- developing simulation models to assess the impact of adopting different adaptation technologies.
Eartages and chips placed in each animal allows to identified:

- number
- owner
- birth season/year
- sex, breed and cross.

Construction of an information platform as a public good

Tracking system
Databases that includes
Analysis of land use and soil conditions
Models that simulate soil erosion
CONEAT scale simulation model
Construction of an information platform as a public good

Agroclimatic information

Soil Water Balance model, Meteorological forecasts, Quarterly outlooks, Present weather condition, Satellite’s information. Weather statistical values, Meteorological frosts, Information and Remote Systems
Decision support platform for farmers and policies

Animal stocks (SNIG)

Soil aptitud

Soil water balance monitoring and prospects

 ACTIONS

✓ Emergency declarations
✓ Planification and development
✓ Better insurances
✓ Early warnings
NOW: We need to promote the intensification with environmental sustainability
Challenges

**BESIDES:** We need to adapt ourselves to the climate change, manage risks
Challenges

**BESIDES:** We need to manage information in real time
Challenges

BESIDES: We must bet for quality and safety products

Carnes del Uruguay. De la naturaleza a su mesa
Challenges

**BESIDES:** We must take the opportunity that gives us the world
Challenges

BESIDES: We must promote de construction of useful climate services
Making different **interoperable** databases
Generating **knowledge** through gathering, processing and analyzing data
Developing products translated in agricultural information useful for all the society
Recommended future data uses/products:

- Vulnerability Mapping and Policy Evaluation
- Early warning system for livestock
- Agrochemical Monitoring
- Effluent Monitoring and Control
- Risk Assessment for Grain and Livestock
- Producer Registries
- Crop Trial Data Analysis
- Watershed analysis for irrigation development

Source: FAO, 2013
The 5 elements of our smart integrated approach in agriculture

- Knowledge (R+D+i) and Information
- Infrastructure (public and private)
- Ecosystem services
- Institutions
- International cooperation under the UNFCCC principles (means of implementation).
Thank you!