

### CLIMASTER: climatic change, farming systems, natural resources and regional development

Philippe Mérot, Chantal Gascuel, Samuel S. Corgne, Daniel Delahaye, Alexandre Joannon, O. Planchon, J.P. Arrondeau, P. Desnos

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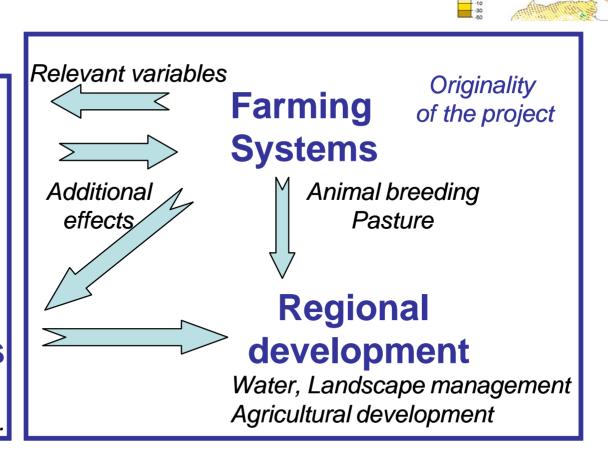
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CLIMASTER: "Climatic change, farming systems, natural resources and regional development"

P. Merot, C. Gascuel-Odoux, S. Corgne, D. Delahaye, A. Joannon, O. Planchon, J.P. Arrondeau, P. Desnos



# Climate change

Most of the papers



Erosion, nutrient fluxes,...

## CLIMASTER: "Climatic change, farming systems, natural resources and regional development"

### **Hypothesis**:

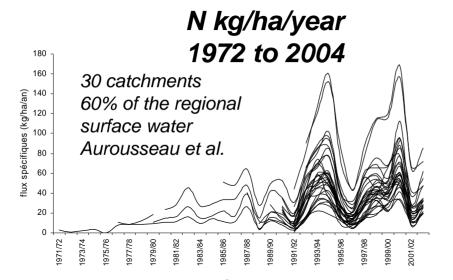
 Farmers and water managers have already taken account of some impacts of climatic changes, especially those linked to extreme conditions. Analysing them allows to better anticipate the adaptations and their impacts.

#### **Objectives:**

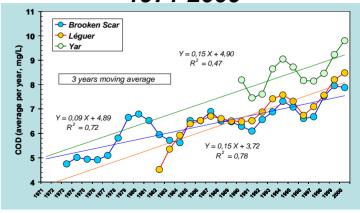
- To address the interactions between the climatic change, the farming systems, the natural resources and the regional development.
- To develop a shared perspective on climate changes between scientists, stakeholders and citizens: 10 research teams and 15 structures devoted to territorial development and farmer advising.

## CLIMASTER: "Climatic change, farming systems, natural resources and regional development"

- WP 1. To assess the regional climatic changes: trends, variability and extreme events and effects
- WP 2. To analyse the way farmers account for climatic changes in their practices. Survey & Remote sensing
- WP 3. To analyse the impact of climatic changes on the natural resources, mainly soil and water quality. C & erosion. N, DOC and SS.
- WP 4. To analyse the position of farmers in a sociological and psycho-sociological perspective



DOC, mg/l average per year 1971-2000



Starting point Cycles Trends

1976: Climate Climate (NAO) Farming System

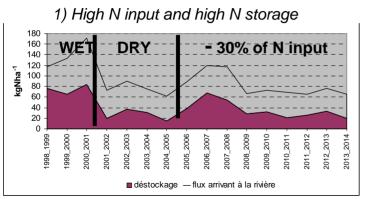
A dry summer Cycles of rainy years N Fertilisation increasing

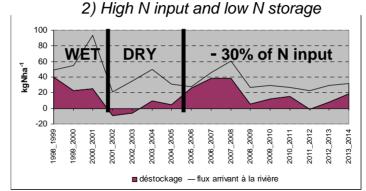
Similar analysis
Farming system (manure)
Organic matter in soil
Wetland Management

Before 76: supply limited process, controlled by annual mineralisation, Temp After 76: transport limited process, controlled by Rainfall and N storage in shallow GW

#### The future depends on the past...1999-2014

Ratio of N stored in GW / total N fluxes (Durand et al.)





Climate and resilience