



An Integration of Mitigation and Adaptation Options for Sustainable Livestock Production under Climate Change

The problem, the vision, the outputs, the impact and the beneficiaries.

The Problem

The demand for livestock products is growing and is expected to increase by 70% by 2050. Much of this is predicted to be in the form of pig and poultry meat and most growth will be in developing countries where livestock production is a key contributor to rural livelihoods. Climate change will threaten both food security and rural livelihoods through changing patterns of rainfall, increasing incidence of extreme weather and changing distribution of diseases and their vectors. But it will also present opportunities.

The global animal food chain and associated land use change is estimated to generate 18 % of global greenhouse gas (GHG) emissions. However, there are huge uncertainties and we cannot adequately characterize trade-offs in terms of emission reduction and food production and economic development. **Thus policies that are currently in place to curb GHG emissions may prove insufficient and ill advised.** AnimalChange aims to improve the estimates of these emissions and provide opportunities in livestock systems to reduce emissions not only in Europe, but also Africa and Latin America.

The Vision

It is within this context that **ANIMALCHANGE will for the first time provide a vision of the future of the global livestock sector under climate change** to provide a sound basis for the development of strategies and policies to reduce climate change impacts on, and emissions from, livestock systems at farm, sector and regional scales.

The Outputs

To achieve this vision, **ANIMALCHANGE will provide a consistent suite of scenarios, models, assessments and policy support tools to:**

- **reduce uncertainties** concerning GHG emissions from livestock systems
- **include climate variability** as part of climate impact assessment
- **provide cutting-edge technologies** for mitigation and adaptation to climate change
- **assess economic and societal costs** and opportunities of business as usual and of adaptation and mitigation scenarios
- **assess the vulnerability of livestock** to climate change and feedbacks on GHG emissions
- **provide direct support to establish policies** for mitigation and adaptation to climate change for the livestock sector
- **reach out to stakeholders** by organizing symposia, training of scientists, technicians and policy makers and forming a network to alert stakeholders of project outputs and events and establishing a stakeholder advisory process so as to guide the research and its dissemination.

The results will be applicable to wide range of systems and various end-users including farmers not only in Europe but also in Africa and Latin America



The Impact

By providing alternatives to 'business as usual' scenarios **ANIMALCHANGE** will, through novel technologies and models, impact on:

The sustainability and competitiveness of livestock systems by

- **Securing the future economic and environmental resilience** of the European livestock sector to climate change
- **Reducing greenhouse gas emissions** from European livestock systems using cost effective methods
- **Reinforcing economic and environmental competitiveness** of animal production systems under climate change
- **Providing knowledge, models and tools** for promoting sustainable livestock production systems with both reduced climate change vulnerability and reduced greenhouse gas emissions.

EU and International policy objectives by providing

- **Guidance concerning the CAP objectives** that target a sustainable development of agriculture and territories
- **Support to international policies** such as the United Nations Framework Convention on Climate Change (UNFCCC)
- **Support to the European Climate Change Program** and to its policy on adaptation to climate change, as well as the European Commission's new energy and climate strategy
- **Guidance to development cooperation** concerning developing countries that are most affected and that have the least capacity to deal with climate change.

The beneficiaries

To ensure impact, we will collaborate with stakeholders to ensure that **the outputs are relevant** to the needs of livestock farmers, animal production support industry, consumers, NGOs, scientists and policy makers in Europe, Latin America, Mediterranean Africa and Sub-Saharan Africa.

AnimalChange will, for example, provide:

- **Tested mitigation and adaptation options** for the benefit of livestock farmers and their advisors.
- **Planning tools** to incorporate cost effective mitigation and adaptation strategies at the farm level for the benefit of livestock farmers and their advisors.
- **Improved models** to predict the consequences of climate change for a wide range of scenarios for the benefit of policy makers.
- Models for improved **greenhouse gas inventory methods** for the benefit of policy makers.
- **Web based training courses** to improve the understanding of climate change impacts and strategies for the benefit of scientists and technicians

Further information

Go to the website www.animalchange.eu