

Background document

Break-out group discussions - part 2 (7 June): Climate change and agriculture in Europe

Recent policy and knowledge developments

[The Common Agricultural Policy \(CAP\) after 2013 \(or new CAP 2014-2020\)](#) addresses climate change and adaptation through mandatory greening (Pillar 1) and voluntary measures under the rural development programmes (Pillar 2). Pillar 2 offers a number of measures to implement adequate solutions to the challenges of climate change and to enable a more sustainable EU agriculture. Given the pressure on natural resources, agriculture has to improve its environmental performance through more sustainable production methods. The contribution of cross compliance and greening under Pillar I is limited with respect to adaptation to climate change. On the other hand, under Pillar II, the rural development programmes offer support to farmers, who also have to adapt to climate change by developing greater resilience to disasters and a changing climate in a sustainable way. Sustainable management of natural resources and climate action therefore represents one of the three main objectives of the CAP. Around 20% of the total CAP budget in 2014—2020 is dedicated to climate change adaptation and risk prevention actions in agriculture. How effective the CAP is in leading to more sustainable agriculture production including the climate change adaptation is to be still explored.

[The EU Strategy on Adaptation to climate change](#) (published as communication in 2013 and being reviewed in 2018) focuses on three objectives and eight actions. Action 6 links climate change to CAP with the focus on climate-proofing of the CAP. Various Commission staff working documents (SWDs) and Green papers (GPs) focus on different aspects of adapting agriculture to climate change, for example SWDs on [“Adaptation to climate change impacts on human, animal and plant health”](#), [“Principles and recommendations for integrating climate change adaptation considerations under the 2014-2020 rural development programmes”](#) and to a lesser extent [“Green paper on the insurance of natural and man-made disasters”](#) and on [“Insurance of weather and climate-related disaster risk”](#).

The EU knowledge base

An extensive overview of the knowledge base has been prepared in [an EEA/ETC scoping paper in 2017](#). The paper includes an overview of the relevant work and activities within the EEA such as the [EEA report on Climate change, impacts, and vulnerability](#), overview of the [agriculture indicators](#) and [briefings](#). The paper also presents an overview of the scientific literature and the main outcomes of projects and programmes like the [JRC PESETA III](#), the [Copernicus Climate Change Service’s Sectoral information](#) on [water](#) and on [agriculture](#), and the [FACCE MACSUR](#).

Background information EEA and ETC/CCA activities

In 2016 EEA prepared a report entitled [Climate change impacts, and vulnerability with a section on climate change impacts on agriculture](#) which includes agrophenology, crop water demand, crop yield, growing season, soil moisture droughts and a subsection on livestock systems. In 2017, EEA supported by the ETC/CCA, prepared [a scoping paper on climate change impacts and adaptation in the agriculture sector](#), addressing the policy framework, overview of climate change impacts, economic implication of climate change on agriculture, and descriptions of adaptation measures in Europe with emphasis on co-benefits between adaptation and mitigation.

As a follow up of the scoping paper, in 2018, EEA has started preparing a report with a working title [“Climate change and agriculture in Europe - Adapting agriculture to climate change to maximise co-benefits”](#). The annotated outline has been developed in early 2018 and includes the following chapters and section:

Chapter 1: Setting the scene

- *Overview of the agriculture sector in Europe*
- *Overview of climate change adaptation in Europe*
- *Cascading effects – from climate change to food security*
- *Scope and outline of the report*
- *Concept and definitions*
- *Links to EEA activities*

Chapter 2: Policy Framework

- *Description of relevant international/global policies (Paris Agreement, Sendai indicators, SDGs, Trading agreements, etc)*
- *Agriculture: Common Agriculture Policy*
- *Mitigation: Description of EU climate change mitigation and agriculture policies*
- *Adaptation: the EU Adaptation Strategy*
- *Links to national Adaptation Strategies*
- *Selected national policies (description of 4 to 5 examples of national policies about linking adaptation and agriculture)*

Chapter 3: Contribution to climate change and impacts of climate change on agriculture

Section 3.1: Contributions to climate change

- *Trends and projection in emission from livestock production,*
- *Trends and projection in emissions from crop and yield production,*
- *Impacts of agriculture on water quality and air pollution (including combining effect of climate extremes and emission from agriculture on environment and human health). For example: heat waves increase air pollution effects from agriculture on environment and human health and droughts decrease water pollution effects from agriculture,*
- *Geographical differences in emissions (based on data in data viewer)*
- *Scenarios for agriculture emissions for 2030 and 2050 (including key indicators and assumptions).*

Section 3.2: Climate change impacts

- *Physical impacts (addressing past trends and projections)*
- *Impacts of changes in average climate variables*
- *Benefits of climate change for agriculture in Europe*
- *Impacts of weather and climate extremes (droughts, floods, heat waves, hail, ...)*
- *Case studies on impacts (based on project like C3S's AgriCLASS, LIFE AgriAdapt, FACCE MacSUR...)*

Chapter 4: Socio economic impacts

- *Trade inside the EU and EU to globe (further development needed)*
- *Regionalisation – which regions will mainly benefit and which mainly loose*
- *Impacts outside Europe on Europe (examples of HW in Russia in 2010 and Syrian droughts 2006-2010, etc, presented as text in boxes)*
- *Socio economic effects on farm level*
- *Use of the land outside Europe*
- *Links to consumer behaviour*

Chapter 5: Measures to adapt to climate change and case studies (20 pages)

Section 5.1: Global, EU, regional, national level

- *Introduction, describe types of measures - technical, soft/support*
- *Long term (land use change in areas where agriculture not possible any more) vs. short term measures (technical measures – irrigation, hail protection, ...)*
- *Focus on good adaptation measures*
- *Geographical approaches in adaptation (global, European, regional)*
 - *Global: e.g. trade, agreements, compensation of losses*
 - *Europe: e.g. Risk management and insurance, education*
 - *Regional: e.g. measures for efficient water use agreed at basin levels*
 - *National: e.g. national insurance schemes*

Section 5.2: Description of measures at the farm level (approx.. 15 measures)

Chapter 6: Opportunities for climate change adaptation in agriculture

- *actions on linking climate change mitigation, adaptation and agriculture*
- *knowledge gaps and how to fill them in*
- *beyond the adaptation (green adaptation and benefits for mitigation)*
- *identifying the most effective measures*

An advisory group was established consisting of representatives from the European Commission (DG CLIMA, DG AGRI, DG JRC) and the EEA scientific committee. The first draft will be available in June 2018, for the advisory group and other experts to give initial comments. The Eionet consultation will take place in Q4/2018, and the publication is planned in Q1/2019.

Questions for the discussion

- 1) How useful and relevant is the report on climate change and agriculture for your (assessment) activities at country level?
- 2) Do you have specific sectoral adaptation plans for the agriculture (or sections in your National Action Plans)?
- 3) How do you find the review (EIONET consultations) beneficial for you? Have you experienced any technical problems with using the talkback consultations?