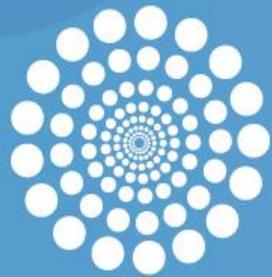


*This project is funded by
the European Union*



ClimaEast

Support to Climate Change Mitigation and
Adaptation in Russia and ENP East countries

Support to development of a national strategy for adaptation of agriculture to climate change in the Republic of Belarus

Introduction: progress and perspectives from the EU

Zsolt Lengyel, Team Leader & Key Expert

21 April 2017, Minsk

Climate change adaptation under the Paris Agreement

Global goal on adaptation

- Enhancing adaptive capacity
- Strengthening resilience
- Reducing vulnerability to climate change
- Sustainable development
- Global average temperature to well below 2°C

Recognition of adaptation efforts of developing country Parties

- To also be considered under the global stocktake

Adaptation communications

To include

- Priorities
- Implementation and support needs
- Plans and actions

Link to disaster risk reduction

- Parties recognize that pursuing efforts towards 1.5°C would significantly reduce the risks and impacts of climate change

Global stocktake

- To recognize adaptation efforts
- Enhance implementation of adaptation
- Review adequacy and effectiveness of adaptation and support
- Review progress in achieving the global goal on adaptation



Climate change from the agriculture perspective within the EU – adaptation*

- Adaptation will be a **critical priority** for the sector.
- Agriculture is the economic sector most **uniquely susceptible to changes in climate patterns** with the impacts highly place- and crop- specific.
- The main climate related pressures on agriculture are **water availability, overall temperature variations, presence and persistence of pests and diseases, as well as fire risks.**
- In the EU, climate related **impacts on agriculture have largely been negative**, with positive impacts limited to temperature increases in northern latitudes.

**Source : RESEARCH FOR AGRI COMMITTEE - THE CONSEQUENCES OF CLIMATE CHANGE FOR EU AGRICULTURE. FOLLOW-UP TO THE COP21 - UN PARIS CLIMATE CHANGE CONFERENCE; 2017; DIRECTORATE-GENERAL FOR INTERNAL POLICIES, POLICY DEPARTMENT B: STRUCTURAL AND COHESION POLICIES*



VARIABLE	CLIMATE IMPACT	SOUTH	NORTH	WEST	EAST
Temperature	Heat stress for plant production (high regional variation)	--		-	
	Increased temperatures and reduced frost period leading to increased crop range and suitability		+		
	Increase in temperature and humidity leading to livestock stress and mortality	--	-	-	-
Water availability	Reduced summer rain fall, overall decrease in water availability + droughts. Aquifer and ground water recharge rate is reduced	--	-	-	-
	Increased flood events + frequency. Crop damage and limits to soil workability. Impact exacerbated by hard flood defences in urban areas*.		-	--	--
Water quality	Salinisation and increased pest and disease problems in water courses	--	-	-	-
Pests and disease	Spread of pests and diseases from increased range varying by pathogen**. Impacts on both crops and livestock	-	--	--	-
Fire risk	Increased fire risk frequency with high inter-annual variation. Primarily on forests but risks also to cropland	---			
Wind damage	Increased risk of wind damage to crops and forests	-	-	-	-

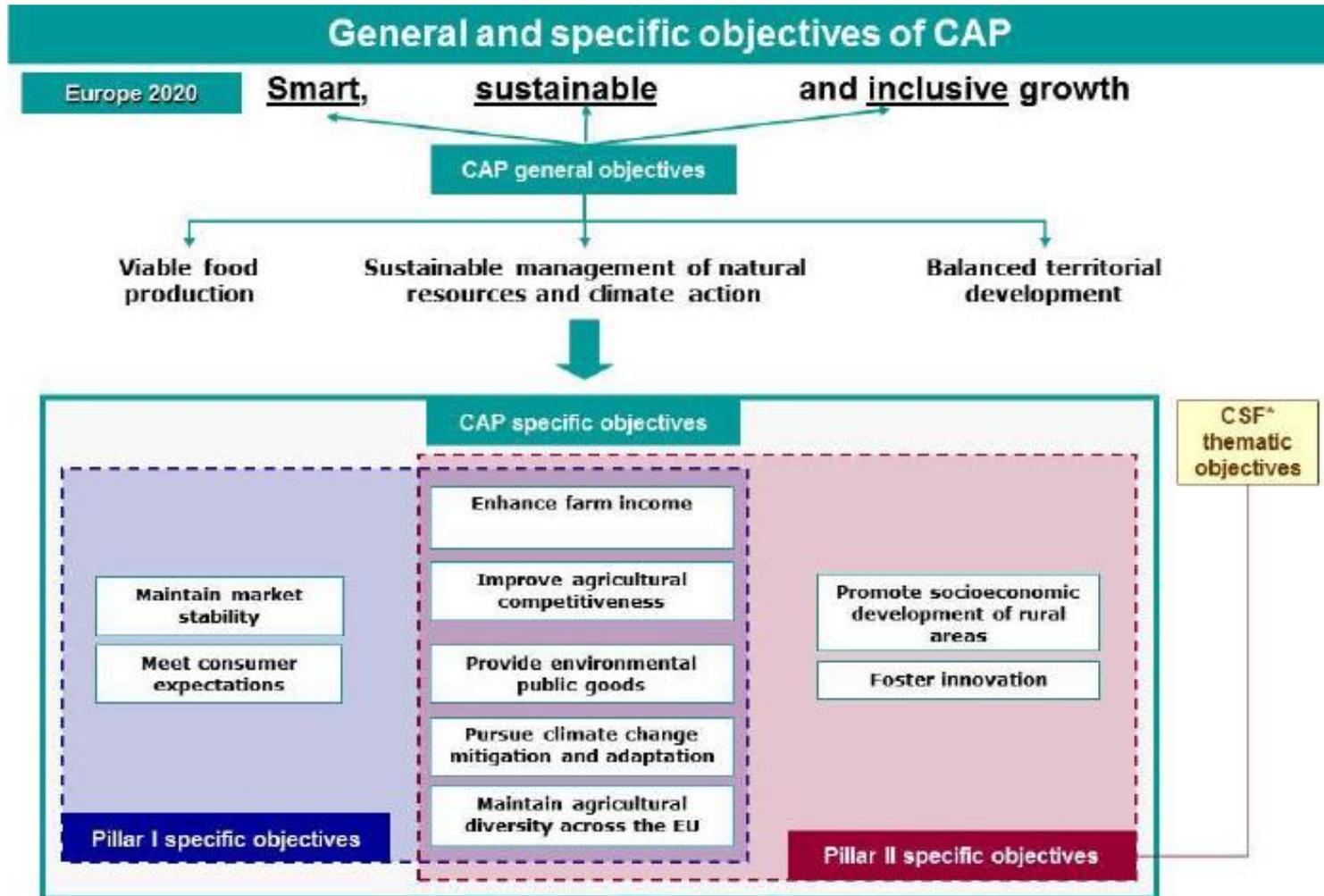


Climate change from the agriculture perspective within the EU – mitigation*

- In the EU, agriculture is the **fifth largest contributor to GHG emissions** (11.3%;514.1MtCO₂e), after the energy, transport, industry, residential and commercial sectors with emissions primarily taking the form of nitrous oxide (N₂O) and methane (CH₄), with only minor contributions from CO₂.
- Agriculture contributes **10% of the total EU non-CO₂ emissions** with a high degree of variation between Member States.
- As the share of agriculture emissions grows, as a result of greater reductions in other sectors, **the sector will become increasingly important** in the broader context of the EU's emission reduction goals.
- Agriculture can **aid in the mitigation of climate change** through reducing GHG emissions from sectoral activities (e.g. increased efficiency), increasing removals through the absorption of carbon in soils and biomass, and increasing the contribution the sector makes towards renewable energy production



Climate change from the agriculture perspective – CAP (1)



*CSF: Common Strategic Framework including the EFRD, ESF, CF, EAFRD and EMFF

Climate change from the agriculture perspective – CAP (3)

- The Common Agricultural Policy (CAP) is a key instrument to provide **funding and support to help enable agriculture transition to a resilient and sustainable future** through adaptation and mitigation actions.
- **Climate objectives have become gradually more prominent within the CAP over time.** From 2014 onwards, climate action features in one of the three overarching objectives for the CAP as a whole (both Pillar 1 and Pillar 2) and is a key priority for action within rural development policy under Pillar 2.
- As Member States have a lot of flexibility about how to implement the CAP, achieving climate benefits on the ground depends on the choices made by Member States in programming the CAP for 2014-20, and on the choices made by farmers within the options available to them.



Climate change from the agriculture perspective – CAP (3)

The main CAP instruments and measures that have the potential to deliver climate mitigation and adaptation benefits are:

- requirements set under cross-compliance standards of Good Agricultural and Environmental Condition;
- the Farm Advisory System;
- Pillar 1 green direct payments; and
- Pillar 2 rural development measures (for land management, investments and advice and capacity building).



Climate change from the agriculture perspective – adaptation research

- The Joint Research Centre (JRC) models the economic impact of climate change on the agricultural sector, as well as the evaluation of adaptation and mitigation policies (PESETA - *Projection of Economic impacts of climate change in Sectors of the European Union*) and AVEMAC - *Assessing Agriculture Vulnerabilities for the design of Effective Measures for Adaptation to Climate Change*).
- The Commission's Research and Innovation funding water management and increasing *water use efficiency* (MOSES, BINGO, REC, etc.) and implementing of *precision farming techniques* (e.g. Flourish, EO-FARM, FATIMA, etc.) livestock sector, the AnimalChange project on mitigation and adaptation options for *sustainable livestock production*, ECONADAPT on adaptation planning through building the knowledge base on the *economics of adaptation to climate change* and concerting this into practical information for decision makers.
- Joint Programming Initiative on Agriculture, Food Security and Climate Change (FACCE-JPI) to identify and promote measures providing the *co-benefits of reducing emissions and increasing the resilience* of farming, forestry and biodiversity to climate change.





How to contact ClimaEast

The project team can be contacted at personal e-mail addresses [zsolt.lengyel@climaeast.eu] and:

info@climaeast.eu

Clima East Office, c/o Milieu Ltd
Chaussée de Charleroi No. 112, First Floor
1060 Brussels (Belgium)
Tel: +32 2506 1000

Website:

[English: www.climaeast.eu](http://www.climaeast.eu) - [Russian: http://russian.climaeast.eu/](http://russian.climaeast.eu/)



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