



REPUBLIC OF ESTONIA
MINISTRY OF RURAL AFFAIRS

Inventories and action plans for reducing greenhouse gas emissions in Estonia

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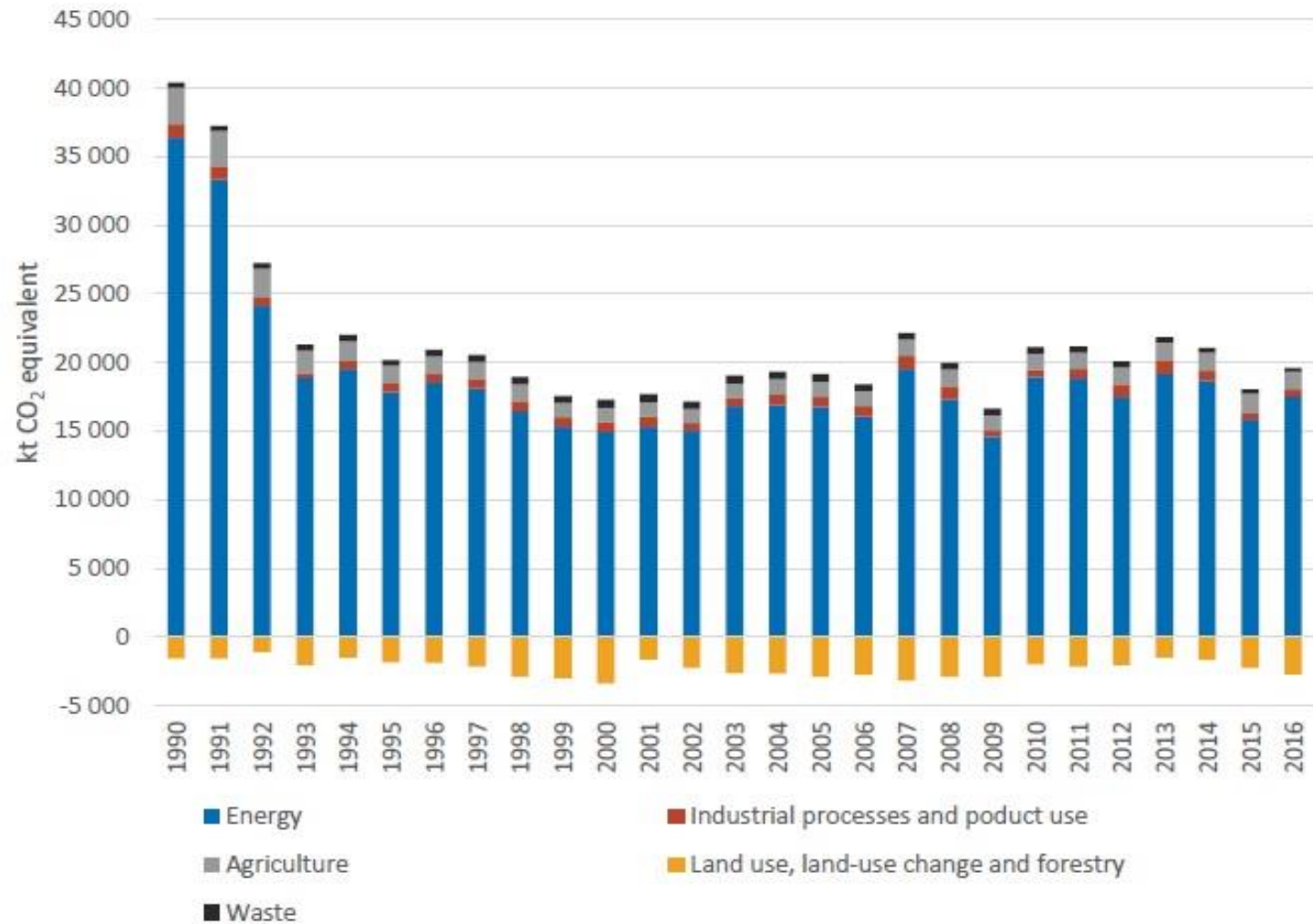
Content of the presentation

- GHG inventory
- GHG emissions from agriculture
- EU 2030 climate framework and targets
- Current measures under CAP
- Strategies and action plans
- Potential measures in the future

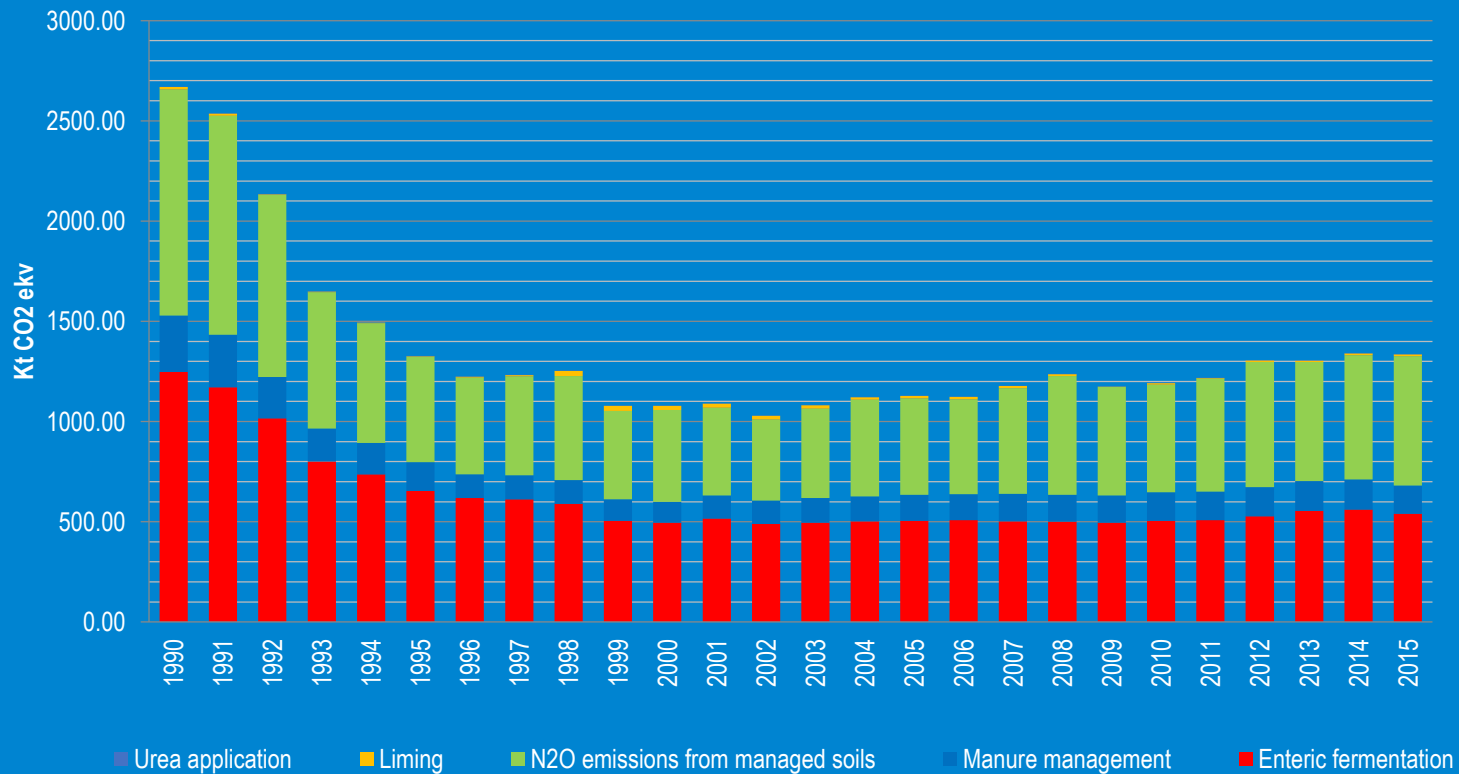
GHG inventory

- Countries submit their GHG inventory reports (NIR) annually to UNFCCC
- Report is based on 2006 IPCC guidelines
- NIR covers all GHG emissions and removals from all sectors
- Non-CO₂ GHG emissions are calculated to in CO₂ equivalent

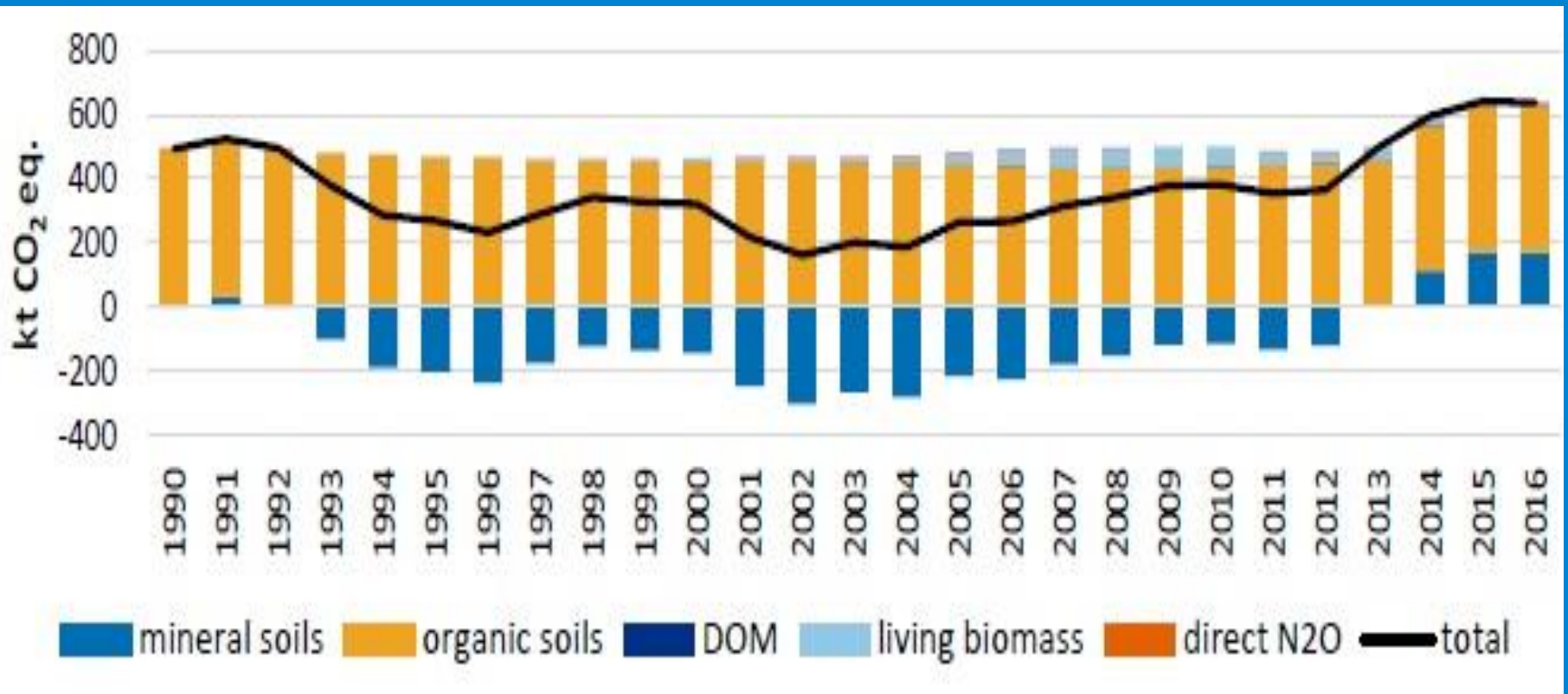
GHG emissions in Estonia



GHG emissions from agriculture



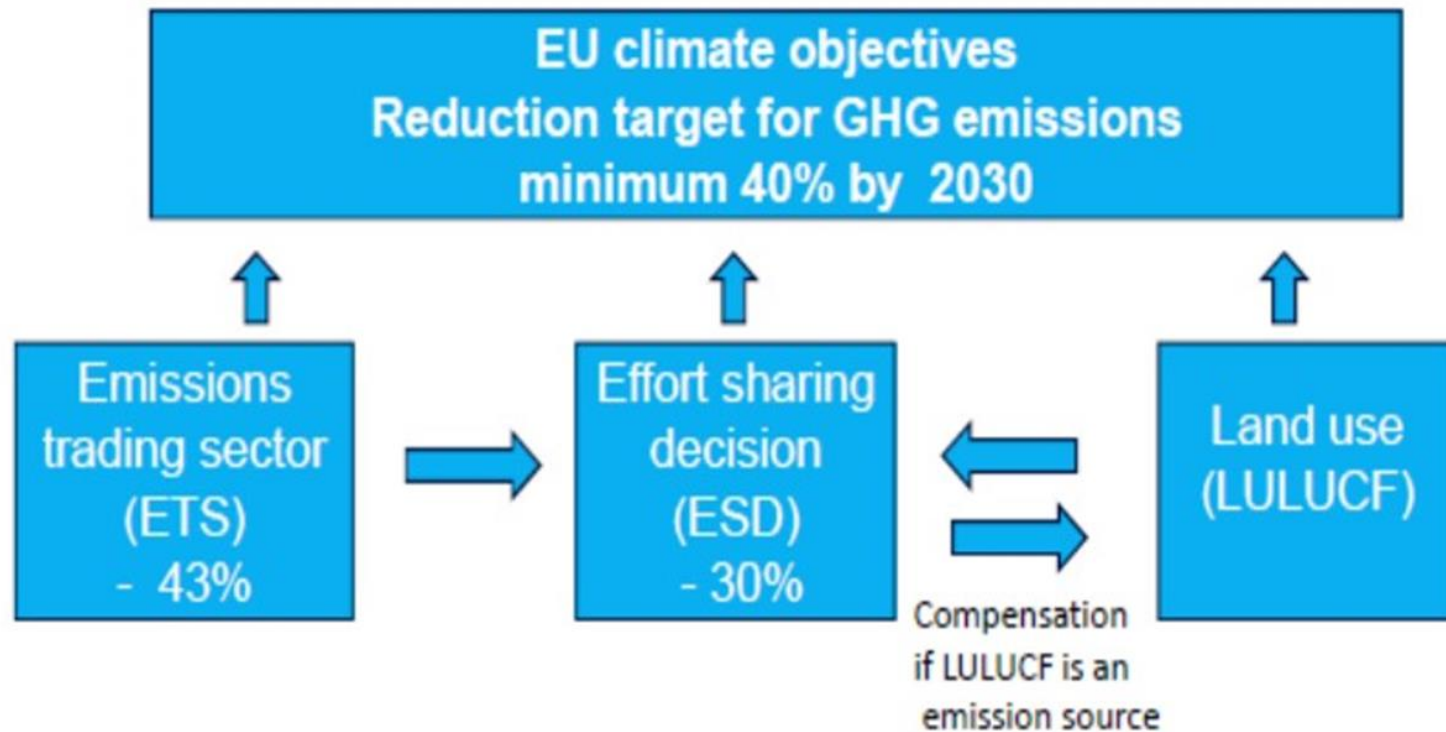
LULUCF (cropland)



Challenges of addressing CC mitigation in agriculture

- Data availability and quality
- Absence of sufficient and widely accepted guidelines and research
- Absence of technologies and practices
- Use of energy in agriculture is not accounted under agriculture GHG emissions
- Drastic measures could cause carbon leakage

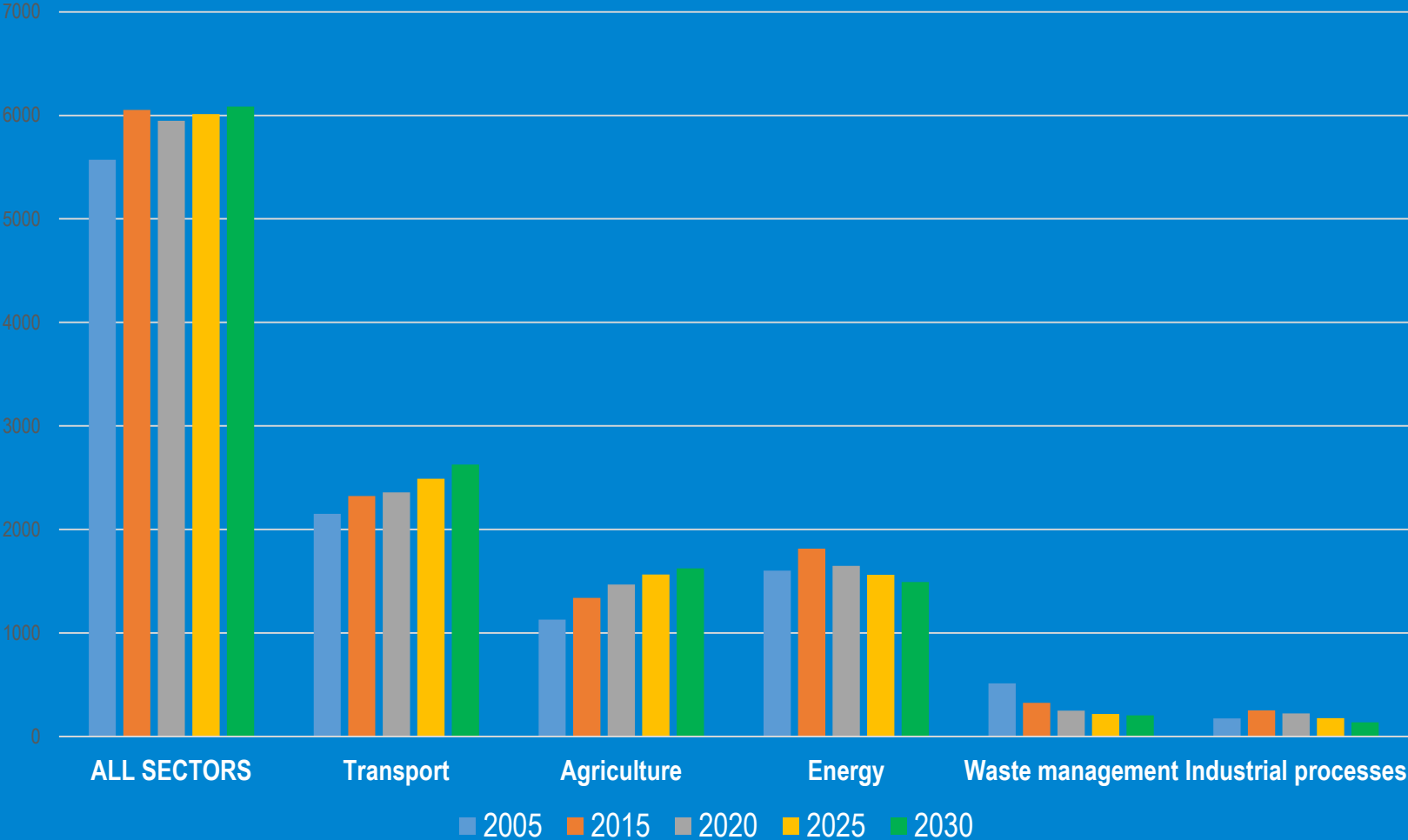
EU 2030 climate framework



GHG emissions reduction targets for Estonia

- Effort Sharing Regulation (EU) 2018/842
 - 13% by 2030 compared to 2005
 - In 2015 emissions exceeded 2005 level by 3%
 - Share of agriculture is 22% of the ESR
- LULUCF Regulation (EU) 2018/841
 - No debit rule

GHG emissions by ESR sectors (BAU scenario)



Existing measures with positive impact on CC mitigation

- Cross compliance rules / CAP greening
- RDP 2014-2020 measures:
 - Support for environment-friendly management
 - Support for regional soil protection
 - Support for maintaining semi-natural habitats
 - Organic production
 - Natura 2000 support for agricultural land
 - Natura 2000 support for private forests
 - Support for animal well-being
 - Investments into improved performance of agricultural holdings
 - Manure management storage facilities
 - Production of bioenergy

Support for regional soil protection

- Area support for converting eroded soils or peat soils from arable land to grasslands or orchards
- Total budget for 2014-2020 is 6 M€
- In 2017 the measure covered 11 500 ha

Sector projections

LIVESTOCK							
Thous. heads	2005	2010	2015	2016	2020	2025	2030
Cattle	250	236	256	248	264	274	285
... Incl dairy cow	113	97	91	86	90	94	99
Sheep	49.6	78.6	85.5	85.9	98	108	118
Goat	2.8	4.1	5	5.1	5.4	5.94	6.5
Horses	4.8	6.8	6.3	5.7	7.9	8.3	8.7
Pigs	346.5	371.7	304.5	265.9	317	337	357
Poultry	1878.7	2046.4	2161.8	2112	2200	2200	2200
MINERAL FERTILIZERS							
Thous. t	2005	2010	2015	2016	2020	2025	2030
	36.1	44.1	55.8	55.2	55.0	55.0	55.0

General Principles of Climate Policy until 2050

A strategy for moving towards long-term target to reduce the emission of GHG by 80% by 2050. Was adopted by Estonian Parliament in 2017.

Possible future directions regarding agriculture:

- Increasing soil carbon in arable soils and soil protection
- Environment-friendly land management
- Converting managed peat soils to grasslands
- More efficient use of fertilizers and other resources
- Manure management and biomethane production
- Utilization of compost and biogas digestate
- CC mitigation R&D and innovation

Study on cost efficient GHG abatement measures

	MEASURE	COST €/t CO _{2e}	IMPACT Thous. tons CO _{2e} 2030. y*	ANNUITY, thous. €/y	
				Public sector	Private sector
1.	Improved feed efficiency for dairy cattle	113	15	0	854
2.	Use of ionophores for beef cattle	-117	31	0	-1 858
3.	More grazing on grasslands	1213	5	0	3 322
4.	Converting managed peat soils to grasslands	14	36	0	464
5.	Direct sowing (no-till)	-400	14	0	-2 893
6.	Cover crops	43	45	0	1 007
7.	Precision fertilizing	-166	26	0	-2 286
8.	Biomethane from manure	428	17	4 604	0
9.	Cultivation of energy crops	37	15	0	286
10.	Replacing chemical fertilizers with organic fertilizers	-143	13	0	-1 765
	AGGREGATE		216	4 604	-2 869

Development Plan on Agriculture and Fishery until 2030

- We are preparing a wide strategy on agriculture and fishery, which also includes agri-environmental policy
- On climate change mitigation, we have proposed two indicators for the Plan:
 - GHG emissions per unit of agricultural production
 - Organic carbon storage in agricultural soils
- Exact measures will be determined in program document, which also includes CAP Strategic Plan

CAP 2020+ proposal

- The Commission has set a high ambition on environment and climate change
- Obligatory and voluntary interventions
- CC mitigation indicators

Conclusion

- CC mitigation is one of the main priorities of the EU
- All EU countries are looking for cost efficient ways to abate GHG emissions
- CC mitigation is already one of the priorities of CAP and in Estonian RDP we have a long list of measures, which reduce GHG emissions
- New CAP proposal stresses CC mitigation and environmental protection even more
- EU climate policy and CAP are not always well coordinated
- We are not able to report the impacts of several climate-friendly practices in agriculture, so we need additional data and research



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Thank you!

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