



Ministry of  
Environment  
and Water

# Bulgarian policies and measures in Agriculture sector and future plans

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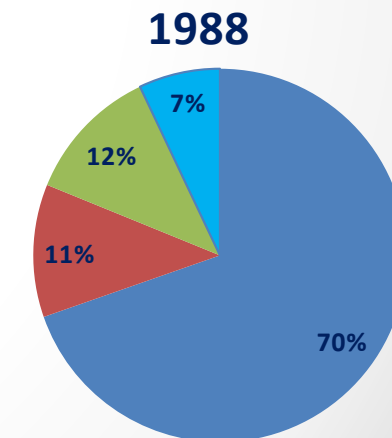
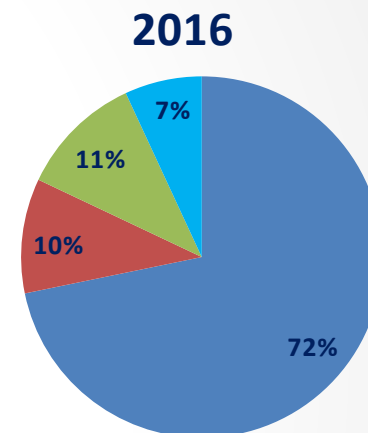
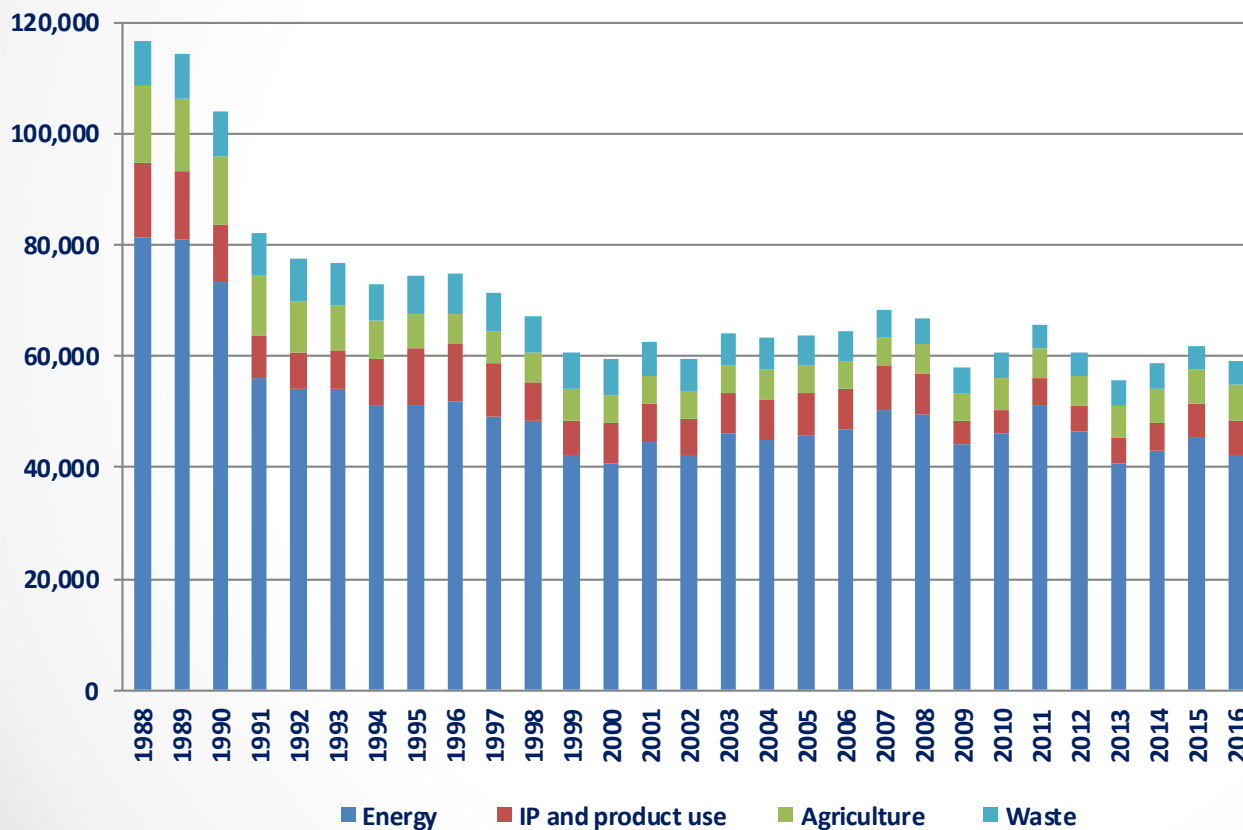
# Content:

1. Starting point – National GHG Inventory
2. Agriculture sector – activity data for emission estimations
3. PaMs in Agriculture: objectives and priorities
4. Expected effect and impact evaluation
5. Key learning points and future plans



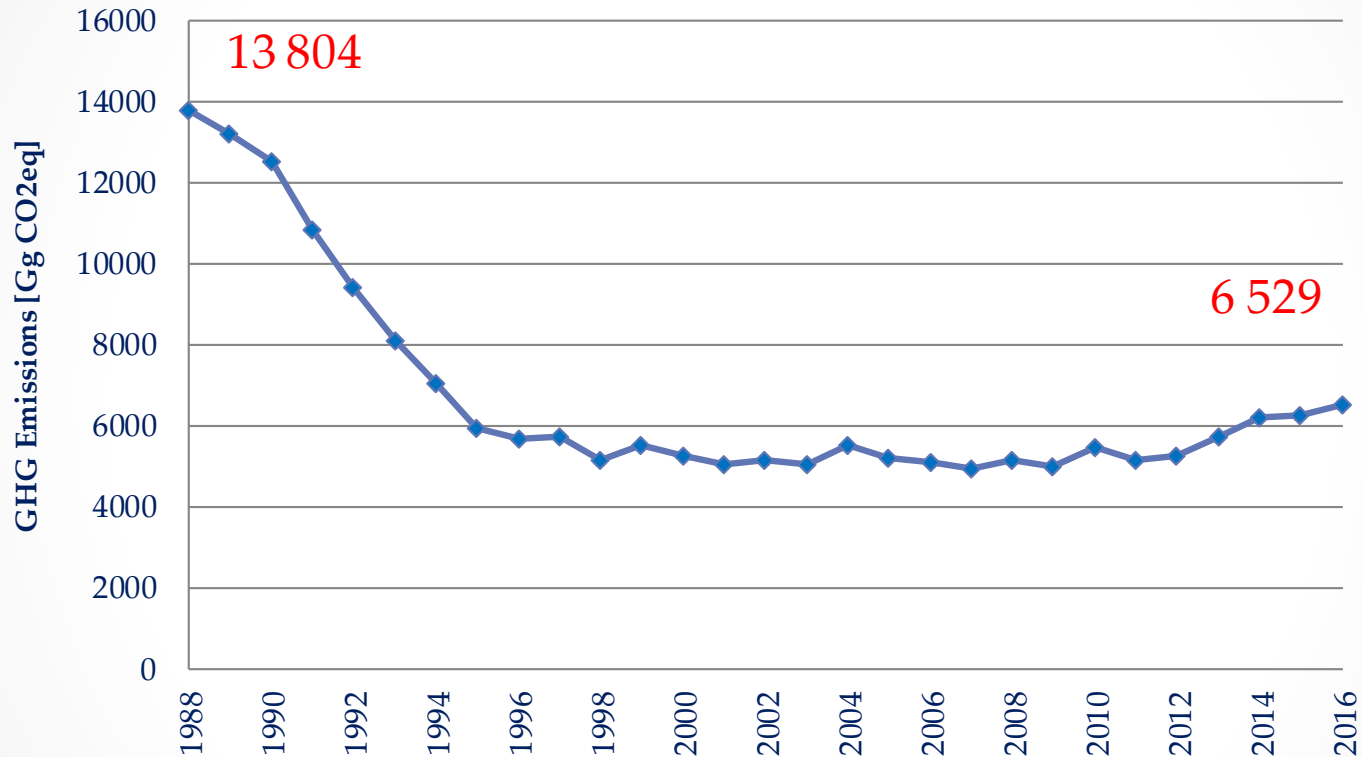
# National GHG Inventory

Total greenhouse gas emissions in CO<sub>2</sub> eq.





# Agriculture



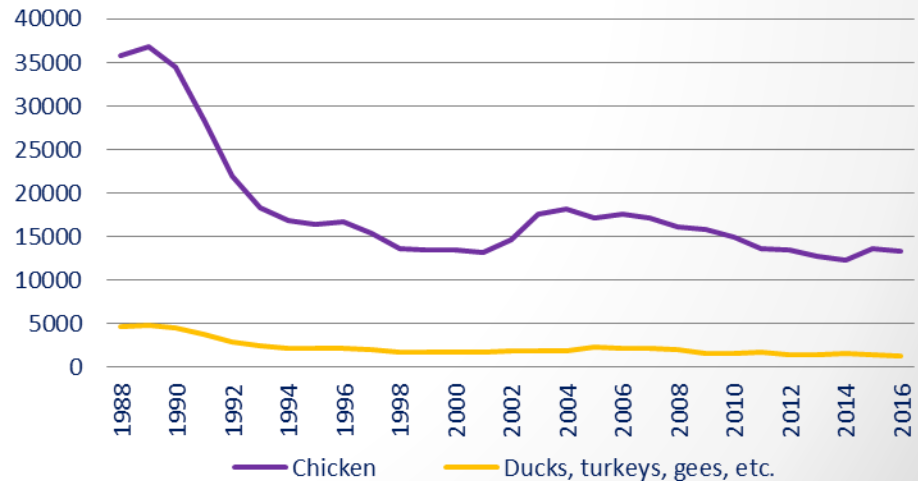
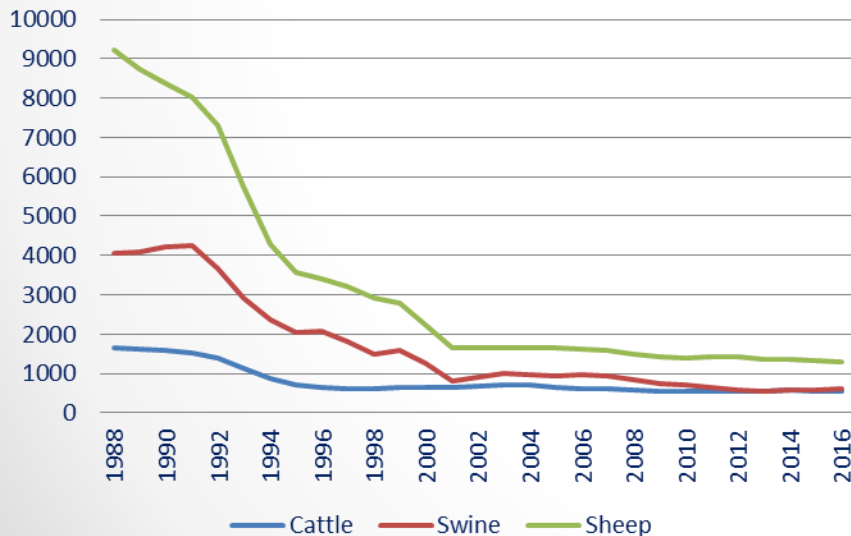
**Decrease: 53% (BY)**

**Increase: 5% (PY)**



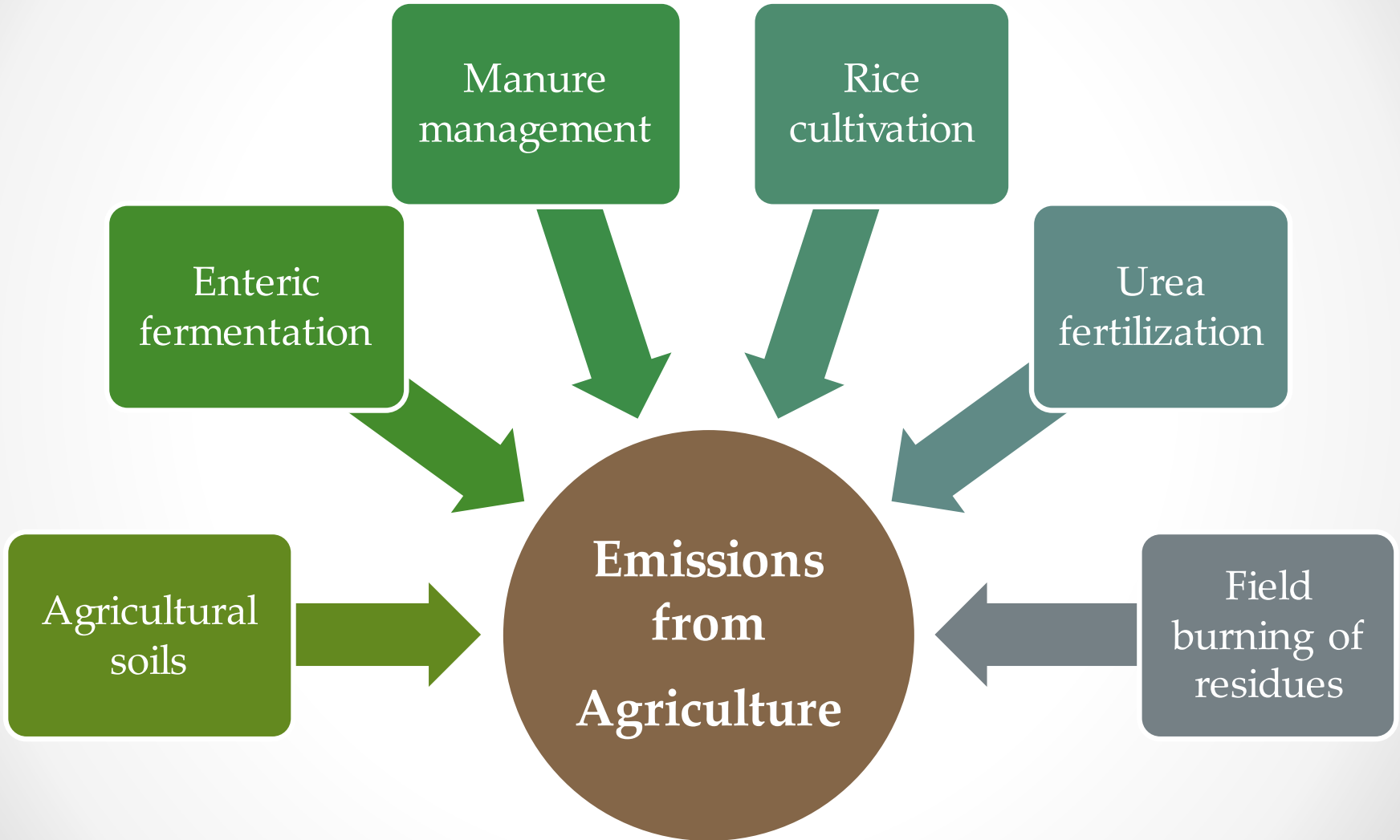
# Agriculture

- The main reasons for the declining GHG emission trend in Bulgaria are the structural economic changes due to the radical transition process from a centrally-planned economy to a market-based economy.
- The rapid decline in cattle, swine and sheep numbers in the period 1992-1994 is due to reforms in agricultural holdings.





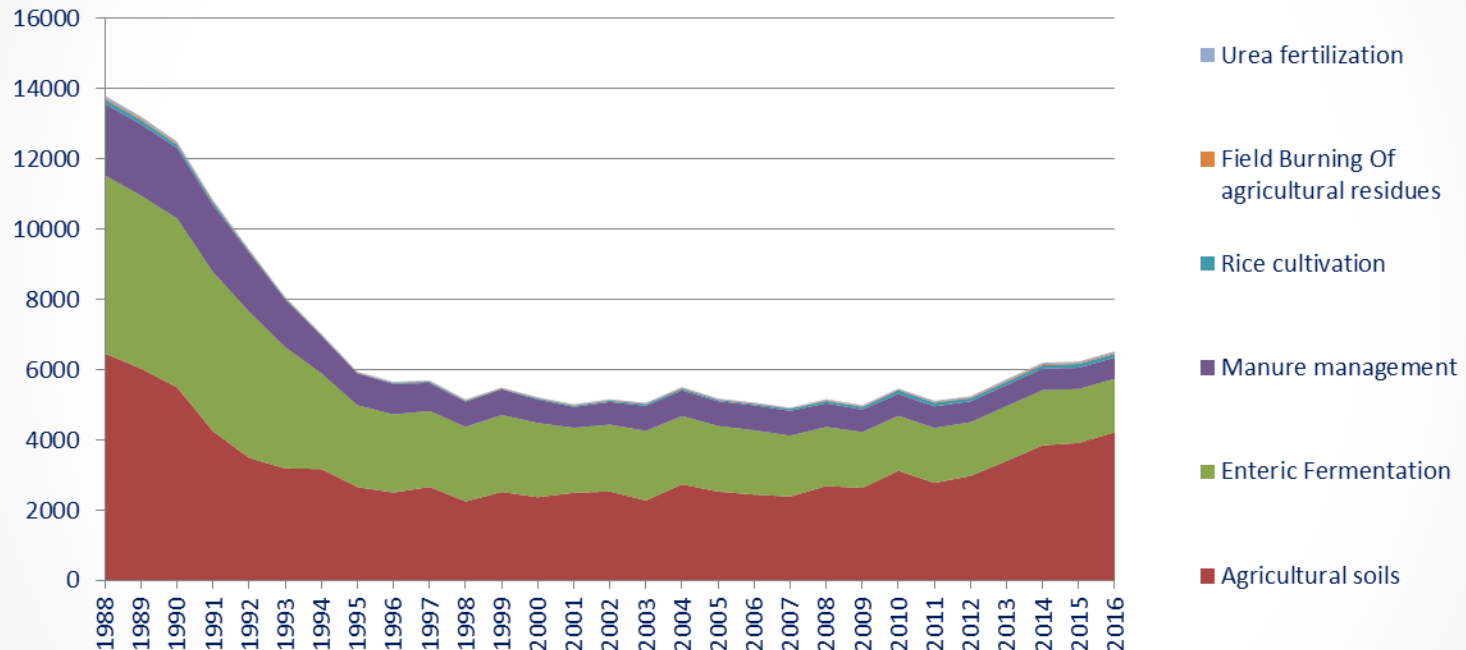
# Agriculture





# Agriculture

Total GHG emissions from Agriculture by subcategories, Gg CO<sub>2</sub> eq

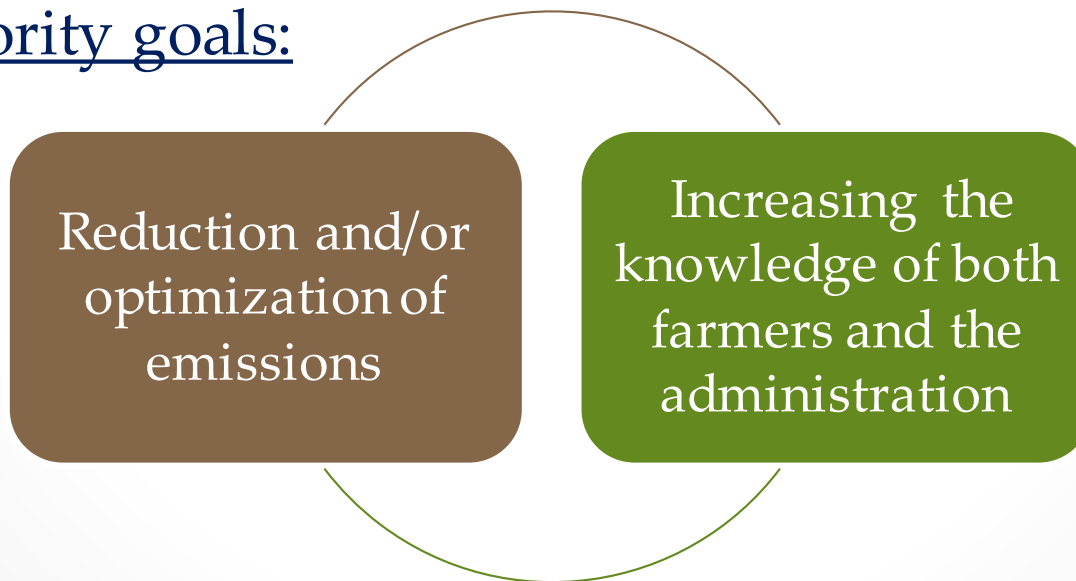


Within the sector in 2016, 65 % of the total emissions were from agricultural soils, followed by 23 % from enteric fermentation, and 9 % from manure management.



## PaMs in Agriculture: objectives and priorities

- The Third National Action Plan on Climate Change 2013-2020
- Common Agricultural Policy 2014-2020
- Rural Development Programme (RDP) for 2014 – 2020
- Two priority goals:

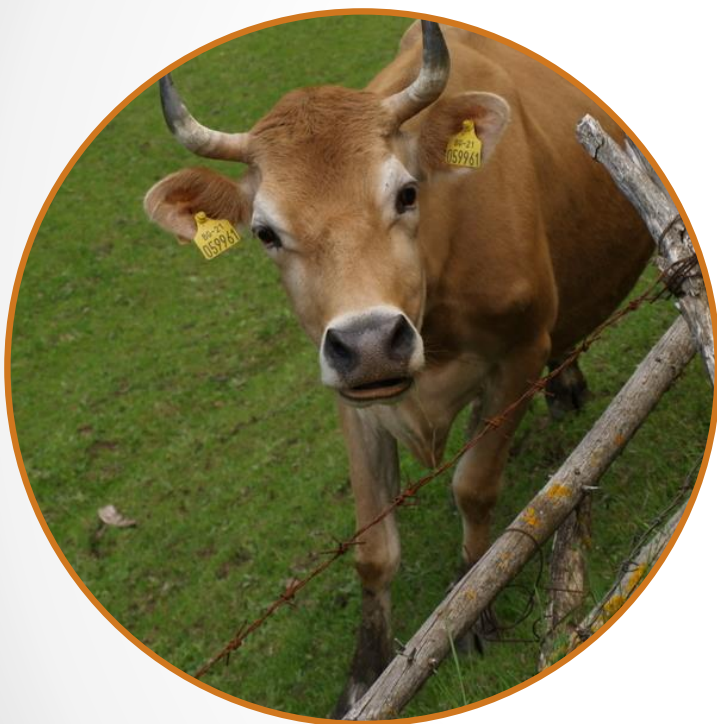






# PaMs in Agriculture: objectives and priorities

## SIX PRIORITY AXIS :



Reduction of emissions from agricultural land;

Reduction of methane emissions from the biological fermentation in animal husbandry;

Improving the management of manure;

Optimization of the use of plant residues in agriculture;

Improving the management of rice fields and technology for rice production;

Improving the knowledge of farmers and the administration regarding reduction of emissions from the Agriculture sector.



# Expected effect and impact evaluation

Measures	Expected effect	Impact evaluation
Encouraging the use of appropriate crop rotation, especially with nitrogen-fixing crops	Reduction of 6 356 t CO <sub>2</sub> eq 20 000 ha	1 028 124 t CO <sub>2</sub> eq. 643 597 ha.

Management of degraded agricultural land through:

1. biological reclamation with typical for the region grass species
2. implementation of erosion control measures and soil treatment methods

Reduction of 20 000 t CO<sub>2</sub> eq    214 320 t CO<sub>2</sub> eq.



# Expected effect and impact evaluation

## Measures

## Expected effect

## Impact evaluation

Improvement of the management and use of manure

Reduction of 1 171 t CO<sub>2</sub> eq

1 503 t CO<sub>2</sub> eq.

Introduction of low-carbon practices for processing manure, e.g. composting, transformation of manure into biogas under anaerobic conditions

487 trained farmers

410 agricultural holdings consulted

Since 2016 year several cattle farms have been transformed the manure into biogas, including the largest dairy farm in the country.

# Expected effect and impact evaluation

Measures	Impact evaluation
Improvement of farmers' knowledge of humus conservation activities (fertilization - precise fertilization, green manure, liming, soil treatment, prevention of stubble burning, anti-erosion, etc.)	792 farmers trained and 3 290 agricultural holdings consulted
Encouragement of the extensive grassland husbandry	759 farmers were trained and 631 agricultural holdings were consulted
Raising awareness and knowledge of farmers regarding the options of using plant residues and the threats posed by stubble burning	113 information meetings were held with the participation of 1 007 farmers, 3 information materials were prepared, 672 were trained 2 359 farmers were consulted

## Key learning points and future plans

- Better activity data;
- Better projections of the emissions, based on more specific parameters;
- More close relations with other ministries and stakeholders;
- Improvement of the GHG inventory;
- More close collaboration with the air pollutions experts, concerning the N fertilizers usage;
- Connection between the upcoming different documents and strategic plans on climate change commitments



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# Thank you!