



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 8149



Soluzioni Contrattuali innovative per una efficace e duratura produzione dei servizi agro-ambientali-climatici. Alcune esperienze rilevanti dal progetto H2020 Console

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VERSO UNA NUOVA GOVERNANCE DEI
SERVIZI AGRO-AMBIENTALI-CLIMATICI

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The Project in short

- CONSOLE - CONtract SOLutions for Effective and lasting delivery of agri-environmental-climate public goods by EU agriculture and forestry
- H2020, (GA 817949), 1/5/2019-30/4/2022
- 24 partners in 13 countries
- Budget: 5 Meuro
- Main objective: to boost innovation in the lasting delivery of Agri-Environmental-Climatic Public Goods by EU agriculture and forestry



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Partners

The CONSOLE project is based on the mobilization of 24 institutions, covering a broad range of actors (farmers, organizations, researchers, public administration, consultant companies, ...).





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Background: Policy & AECPGs

- Lunga storia
- Aumento importanza ma cambiamento di focus (ecosystem services, climate change, circularity, ...)
- Cambiamento dei contesto: scenari di domanda, orientamento al mercato, sostenibilità, bioeconomia
- Lenta (?) transizione
- Risultati passati insoddisfacenti
- Green Deal, FtF & riforma PAC
- RUR03 topic: focus sugli aspetti contrattuali
- **->devil in the detail**



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Tipi di contratti

- 1) specific **environmental-related tenure contracts**
- 2) **result-based approaches**, i.e. payments based on performance or output, in contrast to practice-based or input-based approaches
- 3) **collective implementation** of practices where different farmers, or farmers and other actors, collaborate in producing one or more AECPGs
- 4) **value chain and private-public solutions** for valorisation of AECPGs through the market.



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Project Objectives

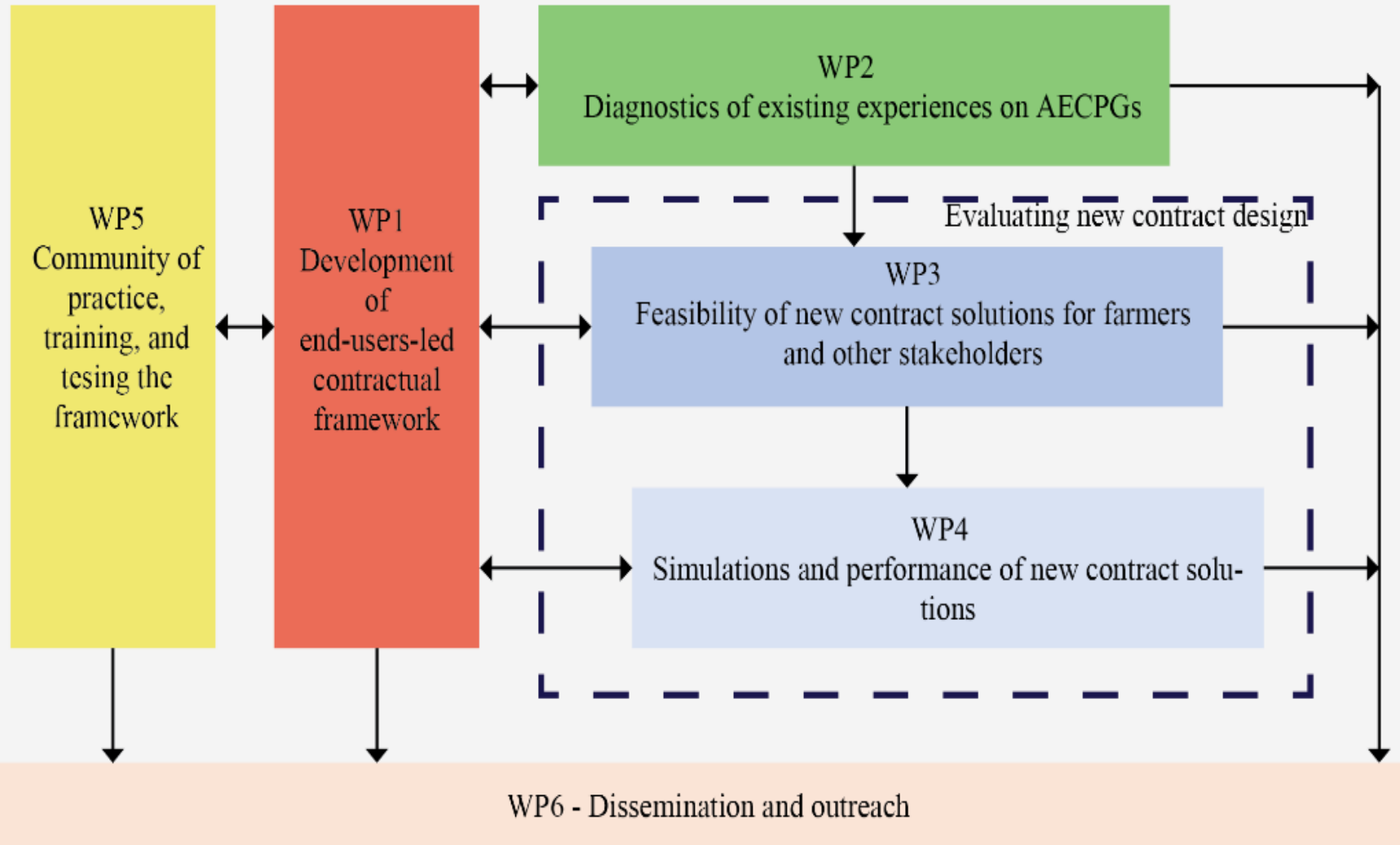
1. Develop **an operational contractual framework** which would serve the development of improved and new contracts (WP1)
2. Distil **lessons learned from past and ongoing experiences** through the structured qualitative assessment of successful innovative and effective contract (WP2)
3. Develop understanding of **the acceptability and ease of implementation** of innovative contract solutions (WP3)
4. **Assess the economic, social and environmental performance of new and innovative contract design options** by in-depth empirical exploration and model simulation (WP4)
5. **Build a CoP** with practitioners and actors involved and interested in AECPG provision to **facilitate co-constructing, testing and implementation** of new solutions (WP5)
6. **Making CONSOLE results operative and easily accessible** for a wide target audience of interested actors and stakeholders (farmers, farm advisors, administration, business along value chains, NGOs, etc.) (WP6)



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WP7 - Coordination and management





The framework

- a) a catalogue showcasing **existing successful experiences and good practices in AECPGs contracting** based on the case studies developed in WP2 and presented in a usable form as examples for practitioners including hints for replication;
- b) **improved AECPGs contracts solutions suitable to be used as models for future design**, including their assessment and the role of different levels of governance (from local to EU) and implementation;
- c) a “**design guide**” intended as a systematic comprehensive process for the design of AECPG contracts, including the conceptual framework, design variables, determinants, legal and technological aspects and roles of different governance levels in implementation;
- d) **documentation, glossary, training and supporting materials.**



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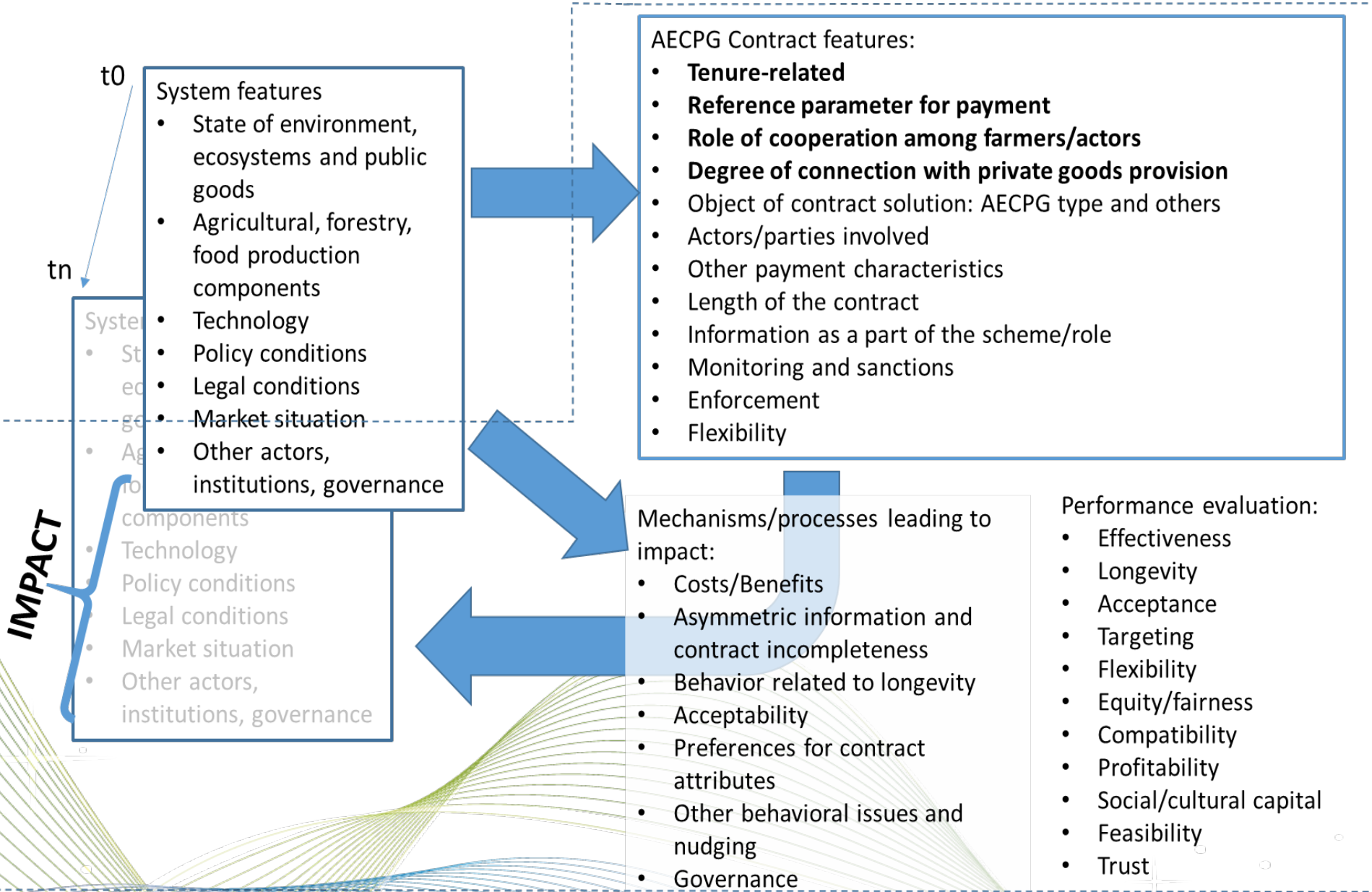


Risultati finora

- Framework teorico->review organizzata della letteratura
- Raccolta di casi di studio->60 in tutta Europa con diagnostica
- (v. sito web)



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- t_0
- System features
- State of environment, ecosystems and public goods
 - Agricultural, forestry, food production components
- t_n
- Technology
 - Policy conditions
 - Legal conditions
 - Market situation
 - Other actors, institutions, governance

- AECPG Contract features:
- **Tenure-related**
 - **Reference parameter for payment**
 - **Role of cooperation among farmers/actors**
 - **Degree of connection with private goods provision**
 - Object of contract solution: AECPG type and others
 - Actors/parties involved
 - Other payment characteristics
 - Length of the contract
 - Information as a part of the scheme/role
 - Monitoring and sanctions
 - Enforcement
 - Flexibility

- System features
- State of environment, ecosystems and public goods
 - Agricultural, forestry, food production components
 - Technology
 - Policy conditions
 - Legal conditions
 - Market situation
 - Other actors, institutions, governance

- Mechanisms/processes leading to impact:
- Costs/Benefits
 - Asymmetric information and contract incompleteness
 - Behavior related to longevity
 - Acceptability
 - Preferences for contract attributes
 - Other behavioral issues and nudging
 - Governance

- Performance evaluation:
- Effectiveness
 - Longevity
 - Acceptance
 - Targeting
 - Flexibility
 - Equity/fairness
 - Compatibility
 - Profitability
 - Social/cultural capital
 - Feasibility
 - Trust



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Casi di studio

NOT VALIDATED BY THE INITIATIVE

Kromme Rijn Collective management

In the Netherlands, the implementation of agri-environmental measures and nature conservation measures in farmland is partly arranged collectively, where local cooperatives arrange and execute measures. The Kromme Rijn is a region in the Dutch province of Utrecht, where such a cooperative is active. It executes agri-environmental management and there are a few volunteer groups e.g. involved in pollarding willows.

Summary

Collective implementation of agri-environmental management has been started up throughout the Netherlands since 2016. After individual management had proven to fail to deliver the desired agri-environmental-climate public goods (AECPGs), a larger-scale implementation of agri-environmental management was considered a more feasible and promising solution. In the central Dutch province of Utrecht, a wide variety of AECPGs is required by society and farmers. This includes improvement of water quality, enhancing and emphasizing the landscape diversity that supports recreation, and providing a habitat for species including bats and owls. In the eastern half of the province, the Kromme Rijn region, the "Agrarisch Natuur Collectief Utrecht Oost" (agricultural nature collective Utrecht East) organizes the large-scale nature management. Land owners are members of the collective, which organizes payment for specific nature management actions performed by farmers, monitors, and brokers between land owners and organizations / companies that implement some specific nature management actions, based on a common regional management plan. The collective is certified by the national certification institute for agri-environmental management and has its own quality assurance controllers.

Objectives

Objectives are set by the provinces. In the case of Kromme Rijn, the province of Utrecht defines targets in its annual nature management plan. Defined are targets for nature, landscape, agricultural nature and landscape management. Landscape management targets at fostering landscape diversity. The ANLM aims at maintaining landscape elements: characteristic on the levees are tree lines, small patches of forests, wooded banks, ponds, and small traditional orchards. The lower and wetter part of the region. Langbroekerwetering, contains small patches of wet species-rich grasslands that are extensively managed through mowing, combined with tree lines and small fields. Creating habitat for amphibians, including the great crested newt, for several owls, and several bat species. Creating habitats for threatened species of extensive traditional arable lands.



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Problem description

Agri-environmental management has been introduced in the Netherlands in 1975. 1000 km2 were assigned as agriculture-nature area and managed by nature organizations, another 1000 km2 included "normal" farmland, on which farmers planned their farmland and management practices in a nature-friendly way. Since the year 2000, it became increasingly apparent that farm-level agri-environmental management was not effective, because target species required a larger mosaic of land use and land cover than can be provided on a single farm. In 2016, agri-environmental management by nature collectives has been introduced by the Dutch government.



COLLECTIVE



PUBLIC GOODS



Landscape and scenery



(Farmland) biodiversity



Soil quality (and health)



Water quantity



Water quality



Cultural heritage



Recreational access / improvements to physical and mental health

The Humus-Program of the Ökoregion Kaindorf

Result-based contract solution - farmers follow recommended measures to build up humus (=soil organic matter) in soil, sequester CO₂ and receive a fee per ton of stored CO₂. Companies finance humus build-up and soil carbon storage by buying CO₂ certificates.

Summary

The Humus-Program of the "Ökoregion Kaindorf" is a contract solution developed for voluntary trading of CO₂ certificates: Based on an initial soil sampling at the start of the contract (by a certified civil engineer and accredited national laboratory), farmers set own measures to increase the humus content in their soils. After a period of three to seven years (according to the farmers needs), humus content is determined again by a second soil sampling. An increase in humus content is converted into additional tons of CO₂ stored in soil. Farmers receive a success fee of 30€ per additional ton of CO₂ stored, which is financed by companies who voluntarily compensate their unavoidable CO₂ emissions. The amount of CO₂ purchased by the companies cannot be traded. After the payment, farmers must guarantee that the increased humus content remains in place for at least five years. This requirement is verified by a third soil sampling taken five years after the payment. Decreases in humus levels lead to partial or complete refunding of the success fee. Contracts and the carbon verification is organized and managed by the association "Verein Ökoregion Kaindorf" while emission trading is managed by an own Ltd.

Objectives

- Main objective: humus (soil organic matter) accumulation and soil carbon sequestration
- Higher soil fertility – soil organic matter supports life in the soil, which is the basis for vital crops and reduces the need for mineral fertilizers and pesticides
- More reliable harvests through resilient crops – living soil supports resistant plants in the face of global climate change
- Keeping the soil in place – humus-rich soils rich are more resistant against erosion by heavy rainfalls, flooding or wind
- Humus-rich soils store lots of water, which helps to maintain stable yields during droughts
- Keeping the groundwater clean – soils rich in humus can fix more nitrate and prevent groundwater pollution
- Climate change mitigation through CO₂ fixation – soil organic matter contains about 60% carbon, hence building up soil humus removes CO₂ from the atmosphere and helps to mitigate global overheating



(A) Humus-farmers receive their success fees in a public ceremony each January. (B) On-site know-how transfer during a field day. (C) Year-round education for humus-farmers through the "Humusakademie" workshops.

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RESULT-BASED



The payment depends on a defined result (stored CO₂ as humus per hectare, measured)

PUBLIC GOODS



Climate regulation-carbon storage



Soil quality (and health)

LOCATION

AUSTRIA



Participation in the contract solution is open to all farmers across Austria.

ECO-METHANE – Rewarding dairy farmers for low GHG emissions in France

With the ECO-METHANE program, farmers commit to provide a monthly analysis of the fatty acid profile of their milk and to feed their cattle with rich-omega 3 feed intake (mainly through grass feed) and by doing so to decrease the methane emissions of their cattle. In 2019, 617 farmers were engaged in this result-based method.

Summary

The Eco-Methane program is a private-private result-based contractual solution. Methane emissions of dairy cows are estimated by frequent and regular infra-red analysis of their milk. Indeed, there is a correlation between an equilibrated feed ration, the composition of milk fatty acid and the emission of enteric gas (methane) by dairy cows. Farmers' payments depend on the difference in their methane emissions to a regional reference. They also depend on the donations by private companies to support their effort. Funds are collected by the Bleu-Blanc-Coeur fund for health-oriented agriculture and payments granted by the private association "Bleu-Blanc-Coeur" that also governs a food brand based on better animal nutrition for healthier human food. The Eco-Methane method has been recognized by the French Ministry of Ecology in 2011 and by the United Nations in 2012, as a specific methodology for projects of methane emissions reductions of digestive origin through the feed of dairy ruminants.

Objectives

1. Reduce GHG emissions
2. Increase zootechnical performances of the dairy cattle



Problem description

Animal breeding contributes for 14,5% of global GHG emissions (FAO) and on a dairy farm, the methane emitted by cows represents more than 50% of the total GHG emissions of the farm. This contract solution was implemented in France with the initiative of a feed company and the association Bleu-Blanc-Coeur. Bleu-Blanc-Coeur is a label that focuses on the nutritional benefits of consuming products from animals fed with omega-3 rich feed ration. Furthermore, there is a correlation between an equilibrated feed ration, the composition of milk fatty acid and the emission of enteric gas (methane) by dairy cows. They have used the program Eco-Methane to encourage dairy farmers that could not be involved in their label (due to a lack of local adapted structures) to adopt practices that would reduce their methane emissions. The Eco-Methane method has been recognized by the French Ministry of Ecology in 2011 and by the United Nations in 2012, as a specific methodology for projects of methane emissions reductions of digestive origin through the feed of dairy ruminants.

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RESULT-BASED



Each farmer commits individually to provide each month its milk analysis to the association Bleu-Blanc-Coeur. The milk analysis provides the composition in fatty acid that can be directly linked to methane emissions.

The commitment to the Eco-Methane program forbids the use of synthetic chemical adjuvants such as synthetic fatty acids, formalin, caustic soda and of all sources of palm (oil and meal) or copra in the cows feed. It also encourages farmers to include in the dairy cows' feed ration a fraction of omega-3 throughout the year, mainly given from grass.

PUBLIC GOODS



Climate regulation - greenhouse gas emissions



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Alcune lessons learned e direzioni per la PAC

- No ricette standard
- Importante chiarezza su incentivi
- Ogni strumento implica dei trade-off
- Costi (incl. Costi di transazione)
- Upscaling e replicabilità
- Processo di apprendimento
- Importanza del contesto legale (locale e internazionale)
- Importanza degli aspetti tecnologici per monitoraggio e misura
- Occasioni di implementazione nella nuova PAC



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Due direzioni

- Orizzontale: coordinamento tra attori, coordinamento tra policy e misure
- Verticale: coinvolgimento filiera fino al consumatore; consumatore/cittadino



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Attenzione a combinazioni e forme ibride (e soluzioni creative)

- Pagamenti a risultato in contratti tra privati
- Ruolo filiera, cittadini e consumatori in contratti collettivi
- Intermediari: banche, ONG, industria, distribuzione, etc.
- Sfida per gli strumenti collettivi: integrare enti diversi (agricoltori, enti territoriali, filiera,...)



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Next steps & how to get involved

- Development of lessons learned into the design framework (WP1)
- Survey on acceptability of new policy instruments (WP3)
- Modeling performances (WP4)
- **Testing of the framework with the Community of Practice (WP5)->get in touch if you wish to be involved**
- Policy recommendations, training, dissemination and communication (WP6, all)



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Siete agricoltori e volete dire la vostra?

- Trovate un questionario on-line qui:
- <https://agricoltura.regione.emilia-romagna.it/psr-2014-2020/notizie/notizie-2021/questionario-agricoltori-emilia-romagna>
- Se non siete agricoltori trovate un questionario simile qui:
https://unibodipsa.eu.qualtrics.com/jfe/form/SV_do3nbZFcDaZXxBk





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Thank you

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<https://www.youtube.com/channel/UCEqajFjQBnUmYTifo3unZk>



POLITÉCNICA

