

Key policy questions for the impact assessment of European agricultural and rural policies

Silvia Coderoni

Università Cattolica del Sacro Cuore

11th AIEAA Conference "CAP, Farm to Fork and Green Deal: policy coherence, governance and future challenges", Viterbo, 15-17 July 2022

Outline of the presentation

- Our work on the key policy questions/objectives
- Have these policy objectives changed?
- Policy coherence, governance and future challenges

The Background

- **What do we mean by policy question?**
- The Project: H2020 Modelling INdividual Decisions to Support The European Policies related to agriculture - MIND STEP
- **Objective:** To **support public decision-making** in agricultural, rural, & environmental policies via impact assessment considering the behaviour of individual decision-making units.
- Ex-ante impact assessment
- Further aspects: Coderoni et al. 2021



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 817566

The Study

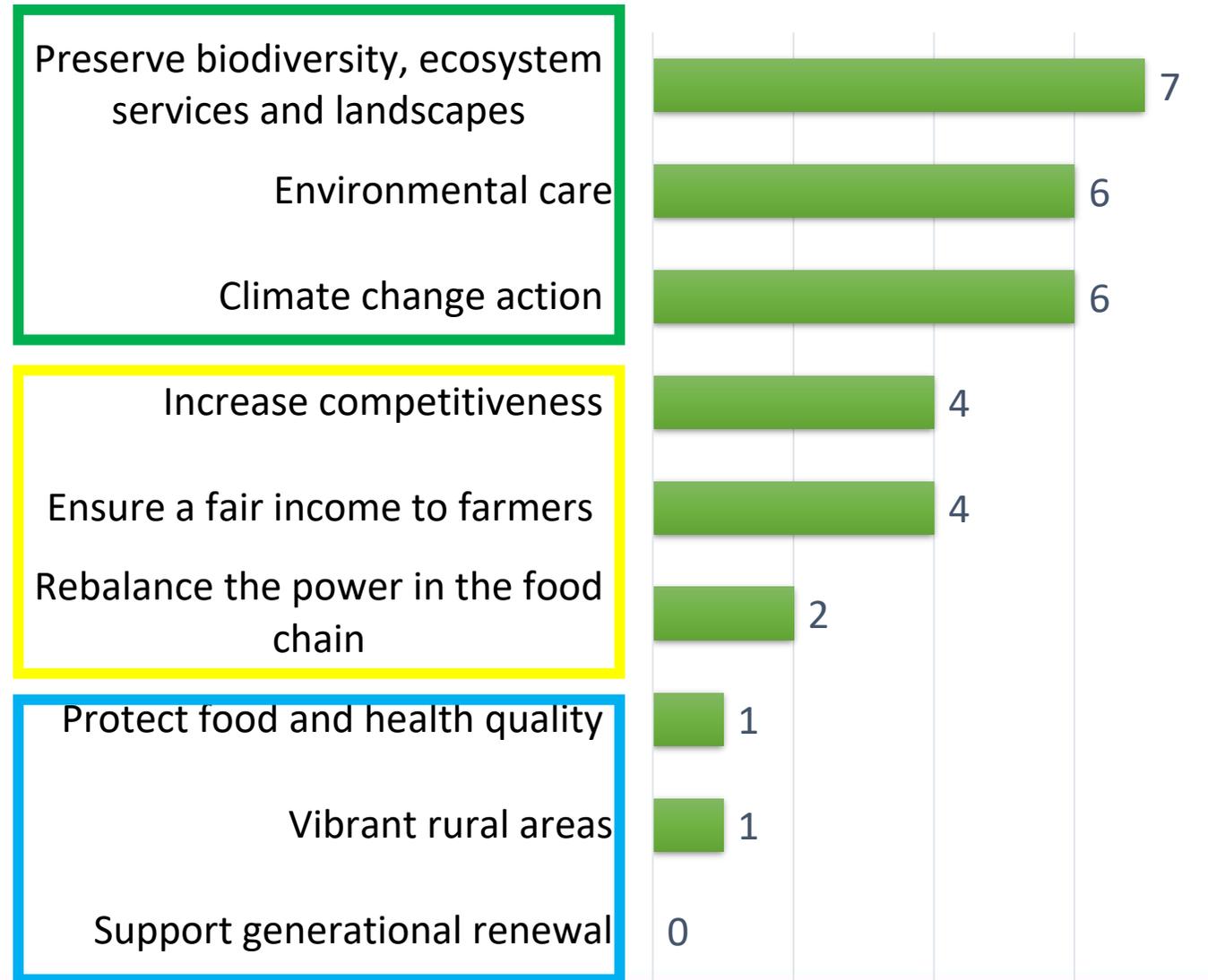
- Involved different research tools and key stakeholders
- **Expert sampling:** we selected who could provide the best information to achieve the study objectives
 - *People who champion, oversee or guide agricultural-policy processes in high-level institutions to foster the dialogue between science and politics*
- The final stakeholder group → **10** people:
 - 4 researchers, 2 EU policy-makers (from DG Agri and Climate), 1 regional authority, 1 farmers' association, 1 consulting company and 1 cooperative bank.

The stakeholders' contribution

- **Individual** semi-structured (online) **interviews** (May - June 2020).
 - *Among the proposed **post-2020 CAP objectives**, which one you consider to be most relevant?*
 - *What agricultural **policy objectives** do you consider relevant and worth of investigation today?*
- **Focus group** meeting on 24/06/2020, online.
 - 22 participants: 8/10 stakeholders, 5 researchers of the research group and 9 members of the policy team.

Results: post-2020 CAP objectives

- Each respondent could indicate more than one objective
- Clear focus on environmental objectives



The stakeholders' contribution

The stakeholders' engagement brought up two major indications:

1. Prioritising **environmental** and **climate** objectives
2. **Jointly** analysing economic and environmental performances

Definition of one key policy objective:

*"Provision of **enough healthy food** with minimal impact on the **environment** & reduced reliance on **subsidies**, increasing **efficiency**, climate change **adaptation**, and **resilience**."*

The Influence of the Policy Context

2015

Paris 2015

The SDGs

2019

The EU
Green
Deal

The EU
sustainable
investment
plan

2020

F2F

Biodiversity
Strategy

2021

The EU
climate law
Fit for 55

CAP reform

Sustainable
Carbon
Cycles

2022

Voting the
fit for 55
package

Regulatory
framework
certification
of C credits

Have these policy objectives changed?

- The war in Ukraine has raised global attention to **food security**
- ... But the situation was already changed with respect to past years
- The combined effects of conflicts, climate change, the COVID-19 pandemic, and economic shocks, **undermined decades of progress towards** improving food security globally

The coming food catastrophe



A coming (food) catastrophe?

In the **short-term**:

- Trade rerouting seems to be not enough
- Energy & fertilizers **prices** are climbing
- Food security, trade, **food prices, inflation**

In the **long-term**:

- Unknown/unpredictable longer-term impacts
- How long is going to last?

What is the “real” policy question?

- **Food security and systemic concerns** are “strongly” back into the policy agenda, also for developed countries
- In **Europe**,
 - The **availability** of **food**, feed and fertilizers is **not a primary concern** (this year and the next)
 - There are **concerns** regarding **affordability** due to high market prices and **inflationary** trends
 - The sanctions imposed on Belarus and Russia will impact **potash** flows to international markets in the short term (JRC, 2022)

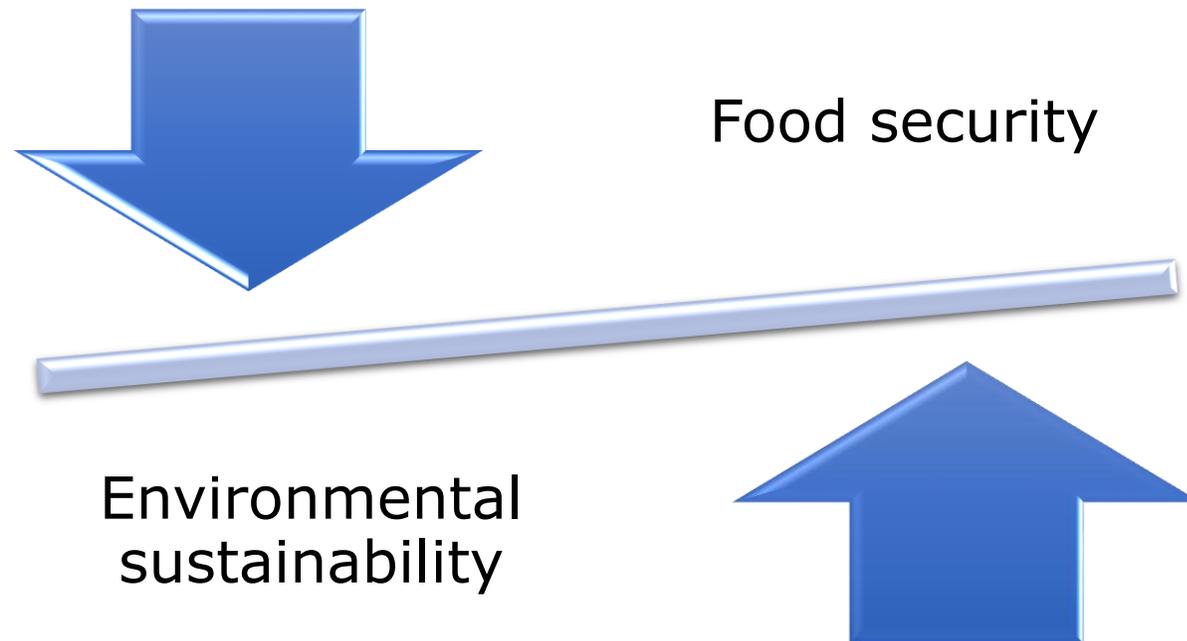
Source. “Short-term Outlook for EU agricultural markets in 2022” (EC, 2022a)

The short term replies

- **Some measures** taken to contrast the **short-term** effects seem to be at odds with climate change and environmental objectives:
 - Fuel subsidies (tax reduction)
 - Derogation to greening practices

The “eternal dilemma”

- Are environmental sustainability and food security (economic growth) at odds?



The Real Question

Can food security (FS) objectives be met without tackling environmental sustainability (ES) challenges?

NO

Why not?

1. There cannot be FS without higher ES

- **Climate change** and **biodiversity** loss are **major threats FS** (...)
- Less air pollution leads to **higher crop yields** (Lobell et al., 2022)

2. Food & energy security concerns should reinforce efforts towards ES of food systems

- **Renewable energy targets** under the Fit for 55 package could be increased due to the current situation.
- 08/06/2022: EU Parliament has **voted down** proposals for the “**Fit for 55 package**” rather than allowing a **weakened** version to pass + LULUCF directive with higher ambition has been approved

CAP Strategic Plans: EC's observations

“The **context** in which MS have designed their draft Plans has **changed** [...], bringing to the forefront the **integral link between climate action and food security.**”

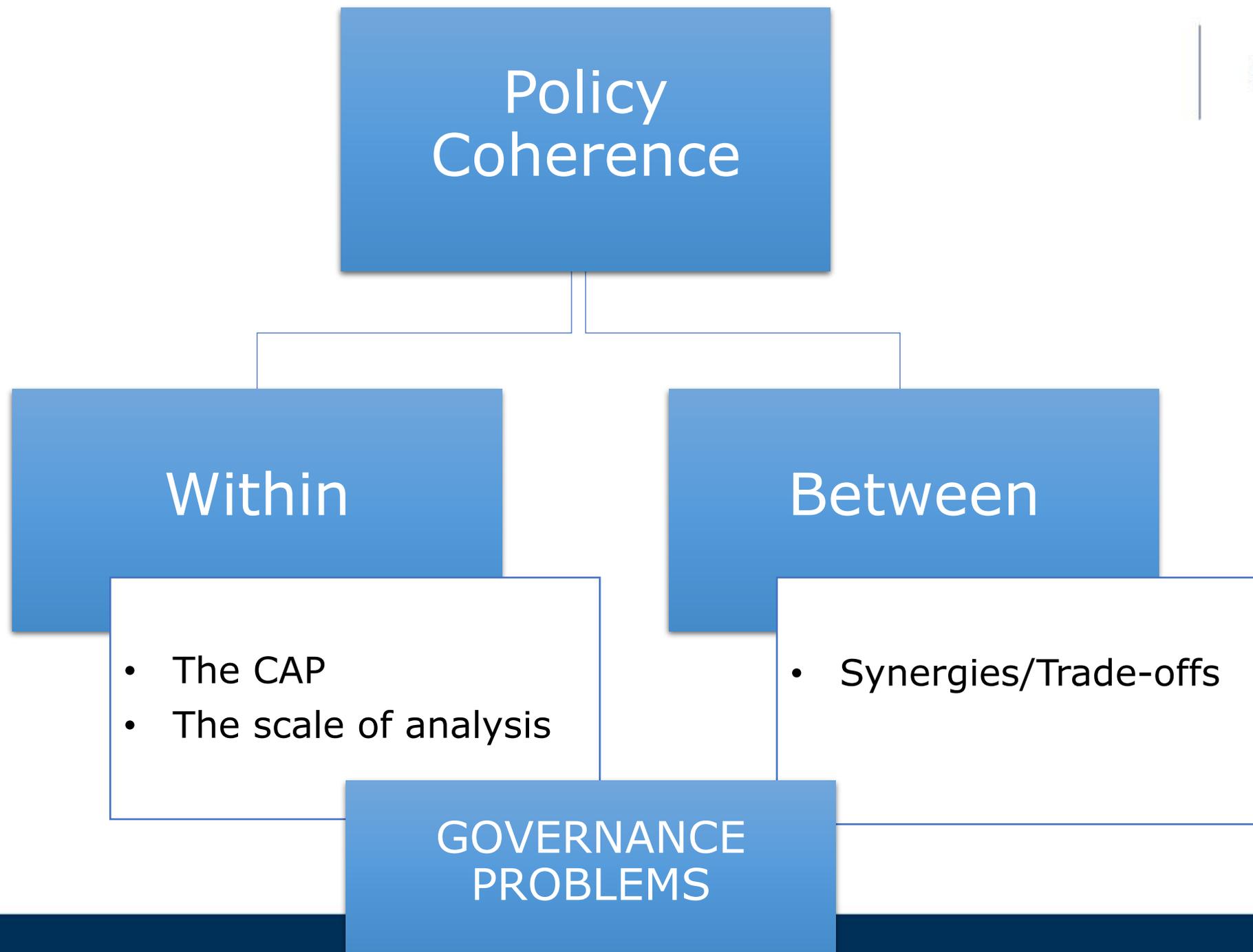
This new situation has been considered in the analysis and the Plans will require a further **review** to exploit all opportunities to:

- a) **reduce dependence** on **synthetic fertilizers** and scale up the production of **renewable energy** without undermining food production;
- b) **more sustainable production methods.**

Source: Summary overview for 19 Member States (EC, 2022b)

- EU policy objectives dealing with FS and ES belong to **different policy areas** sub-ordinate to different authorities with partially **contradictory** interests
 - Turn possible **contradictions** into **complementarities, being grounded on science** (Haniotis, 2020)
- **Evidence-informed policy-making EIP**
 - **Policy decisions** should be based on, or informed by, rigorously established **objective evidence** (Baron, 2018).
 - The EU Better regulation for better results COM(2015)215
 - Better regulation: Joining forces to make better laws COM(2021)219

- **Goal-based governance**
 - **Global** targets **aligned** with **local** contexts, and progressively **adjusting** the ambition of targets over time, can help strengthen governance
 - Better **tools** for **multi-sectoral** scenario planning and **modelling** can help map pathways to simultaneously achieve the multiple goals (Pascual, 2022)
 - **Impact assessment**



- The agricultural sector in the EU is key to reaching the GD targets, but the CAP is not an environmental policy!
- The CAP approach remains an **exception** in some fields to the EU Environmental policy:
 - **Polluter Pays Principle** (PPP): diffuse water pollution (ECA, 2021)
 - The CE, in reply, considers the application of the PPP in the agricultural policy → by the end of 2023, a study on **GHGs**
 - ...but

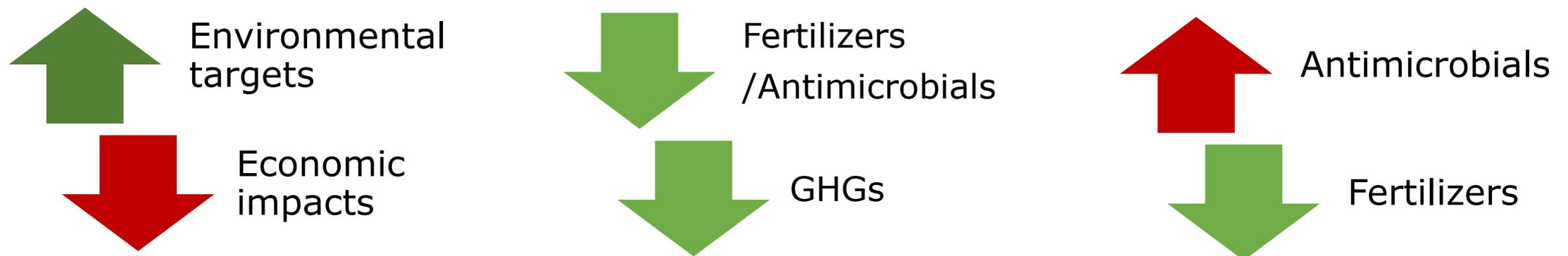
- Difficult to establish the **environmental baseline separating** 'polluter pays' from 'provider gets'
 - Responses from farmers to the same agro-environmental policy can be highly **heterogeneous** (Coderoni, Esposti & Varacca, 2021)
 - GHGs are biologically embedded in the agricultural processes, a **tailored** baseline?
 - Digitalisation: new instruments for sustainability monitoring (Ehlers et al., 2021)
 - Many data are already available, but not fully exploited (e.g., tractors, ...)

Within Policy Coherence

- The **scale** of analysis/policy implementation matters!
- The **productivity-environment nexus** in space: granularity bias, aggregation issues and spatial dependence with **farm-level** data (Baltoni et al., 2021)
 - The nexus is **scale-dependent**: may **disappear** passing from farm-level to aggregate data
 - The **direction** of the relationship can **change**
 - The scale at which these policies are designed and implemented becomes critical
- **Ecological fallacy?**

Between Policies Coherence – Synergies & Trade-offs

- PC is complex to apply in a context of synergies and trade-offs among different environmental targets
- Analysis of impacts of F2F targets on the Italian agricultural sector
- Synergies among environmental targets, but also trade-offs (Cortignani and Coderoni, 2022)



- **How can food security and environmental sustainability be tackled together?**
 - Short-term shocks can point the attention to one objective, but in the long term, they are interlinked
 - How to reconcile short-term (counterproductive?) replies with long-term goals?
- **How can policy coherence be addressed to reach this complex multi-objective?**
 - How to confront issues regarding the coherence of environmental action within the CAP?
 - What is the proper scale of analysis/policy formulation?
 - How to deal with trade-offs?

- **Is the European Multilevel Governance System adequate?**
 - How to implement goal-based governance in an efficient way?
 - The agricultural policy can be once more the field where “new EU governance settings” are tested

Main References

- Badie, B., Berg-Schlosser, D., Morlino, L., 2011. Metagovernance. In: Badie, B., Berg-Schlosser, D., Morlino, L. (Eds.), International Encyclopedia of Political Science. SAGE Publications, Inc, Thousand Oaks, pp. 1555–1558.
- Baldoni E., Coderoni S., Esposti R. (2021) The productivity-environment nexus in space: Granularity bias, aggregation issues and spatial dependence with farm-level data, paper presented at the 10th AIEAA Conference 'Agriculture, food and global value chains: Issues, methods and challenges', online, 10-11 June 2021.
- Baron J. (2018). "A Brief History of Evidence-Based Policy". The Annals of the American Academy of Political and Social Science. 678 (1): 40–50. doi:10.1177/0002716218763128.
- Coderoni S., Esposti R., Varacca A. (2021). Do heterogenous farms respond differently to different agro-environmental policies? A Machine-Learning approach. paper presented at the XVI EAAE Online Congress "Raising the Impact of Agricultural Economics: Multidisciplinarity, Stakeholder Engagement and Novel Approaches", 20-23 July 2021.
- Coderoni S., Helming J., Pérez-Soba M., Sckokai P., Varacca A. (2021). Key policy questions for ex-ante impact assessment of European agricultural and rural policies, Environmental Research Letters, 16 (2021) 094044, <https://doi.org/10.1088/1748-9326/ac1f45>

Main References

- Cortignani R., Coderoni S. 2022, The Impacts of Environmental and Climate Targets on the Italian Agricultural Sector, paper presented at the AIEAA, CREA-PB event “L’analisi delle Politiche Agricole Comunitarie in Italia” online, 11/03/22.
- ECA 2021. Special Report 12/2021: The Polluter Pays Principle: Inconsistent application across EU environmental policies and actions
- Ehlers M-H, Huber R, Finger R (2021). Agricultural policy in the era of digitalisation, *Food Policy*, 100, 102019
- European Commission 2022a. Short-term outlook for EU agricultural markets, Spring 2022. European Commission, DG Agriculture and Rural Development, Brussels.
- European Commission 2022b. CAP Strategic Plans and Commission observations. Summary overview for 19 Member States, available at: https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-strategic-plans_en
- Haniotis T (2020). Policy Event: European Green Deal -- Farm to Fork Strategy for Sustainable Food: European Green Deal -- Farm to Fork Strategy for Sustainable Food Co-Organized by IFPRI and the European Union, FEB 18, 2020. Video available here: <https://fb.watch/dyR9TQBNIU/>
- Jann, W. & Wegrich, K. 2007. Theories of the policy cycle. In: *Handbook of Public Policy Analysis: Theory, Politics, and Methods*, (eds Fischler et al.), pp. 43–61. Boca Raton, CRC Press, Taylor & Francis Group
- JRC 2022. Potash: Impact assessment for supply security, *Science for Policy Brief*, European Union, 2022.
- Pascual U. et al. (2022). Governing for transformative change across the biodiversity-climate-society nexus. *BioScience*. 72.
- Pörtner et al. 2021. IPBES-IPCC co-sponsored workshop report on biodiversity and climate change; IPBES and IPCC. DOI:10.5281/zenodo.4782538.