

How can science help improve the CAP's performance for **environment and sustainability**

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Agricultural sustainability is a challenge



Intensification 

 **Abandonment**



**Multi-functionality:
pressures for the
provision of**
Food
Feed
Fuel
...And public goods

Science around the CAP

- Science includes many disciplines: ecology, agronomy, climate, social, political sciences, etc.
- Funded partly by EU → Thousands of publications, across disciplines, indicating that the CAP is
- **failing in steering EU agriculture toward sustainability.**
- **ineffective and inefficient**

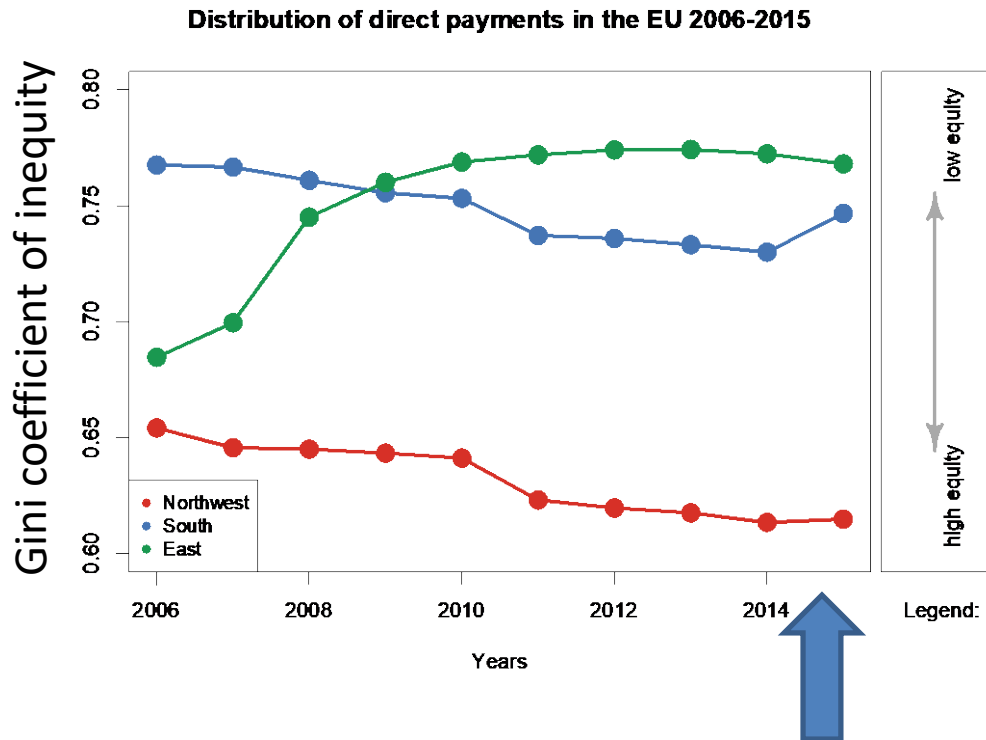
CAP inefficiency: example for biodiversity

Policy measure	Area (Mio. ha)	Public funds (Mio. EUR)	Funds to area (EUR/ha)
Greening: Ecological Focus Area (EFA)	8.00	12,638	790
Agri-Environmental Measures (AECM) (Including co-funding, areas and payments for organic farming, but without payment for areas with natural constraints)	13.15	3,251	247
Natura 2000 (Grassland area in SCI reported as by the EU commission)	11.65	290	25

Effectiveness

Budget

Inefficiency of Direct Payments



- **Distribution of DP unequal:**
Inefficient to address income support objective(s)
- **Leakage of DP to land-markets**
Higher land rents (30-50%)
De facto support for **land owners**
- **No clear objective**
- **Missing indicators:**
focus on farm income instead of farm households; failing to consider assets and other incomes.

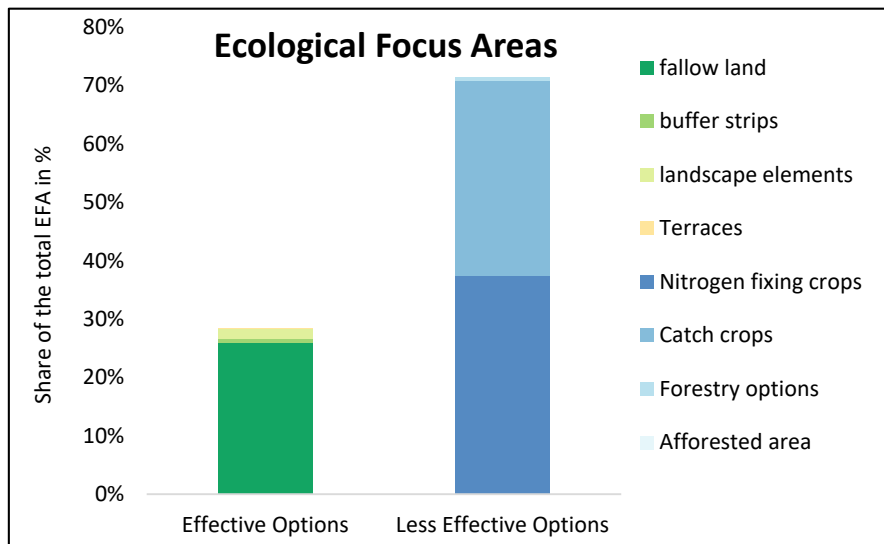
„Capping and redistribution“ did not work

Article 15 of the proposed CAP reiterates the same mechanism

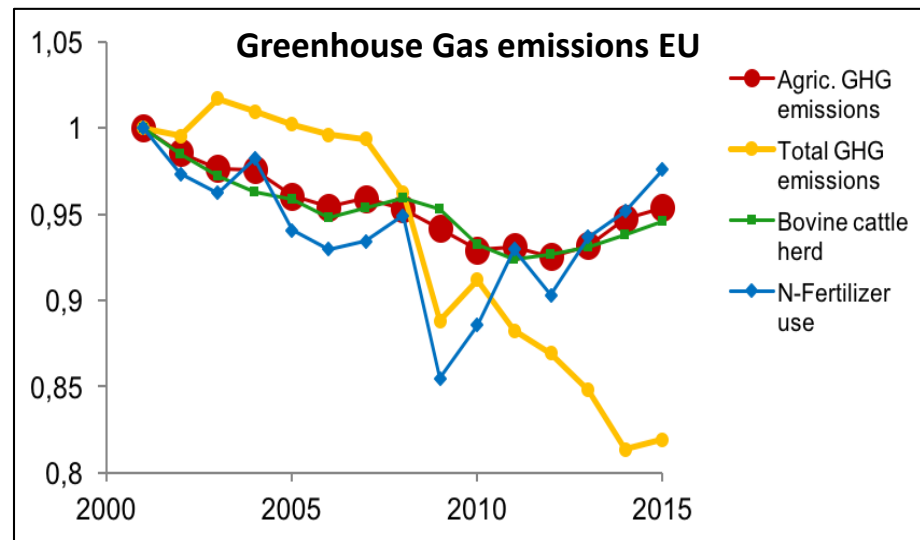
The failure of Greening

Several independent assessments show Greening is ineffective.

- Greening design shaped by exemptions, low requirements, **Vagueness**
 - DP & Coupled Payments expanded, AECM declined (-8.4%)
- ➔ **Will the shift to Eco-Schemes address the problems?**



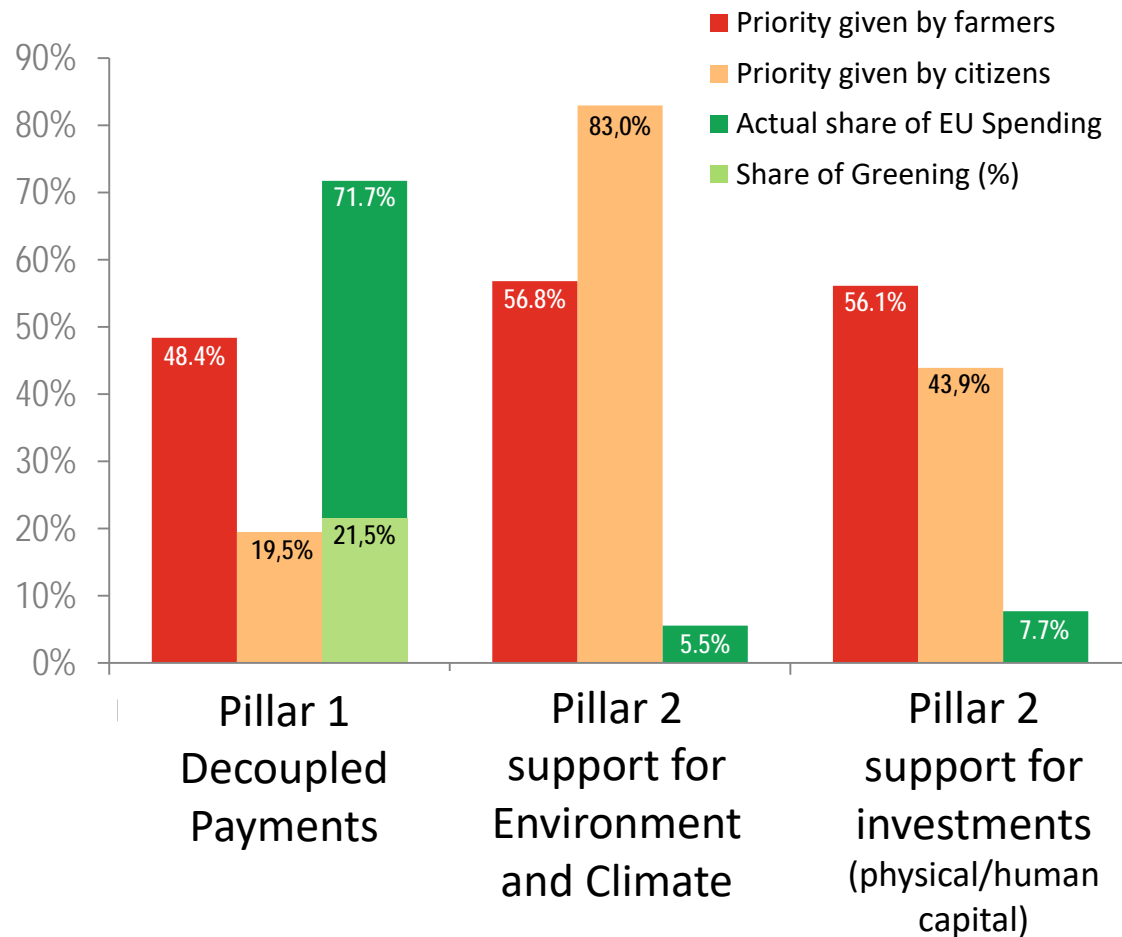
Sources: Hart 2015, EC 2016, Pe'er et al. 2017, Eklipse 2019, EC 2020



Source: Pe'er et al. 2017

CAP versus public opinion

An observation on the Public Consultation (2017)



Source: Own compilation; Data from EU Commission 2017; Database on EU spending in RDP; CAP Consultation (EC 2017)

Analyses of the proposed CAP (post-2020)

Some improvements (objectives, eco-schemes, strategic plans,...)

More risks (cuts on Pillar 2, vagueness, climate, ...)

CAP proposal conflicts intended orientation

Science and evidence were largely ignored

+ Current **pressures** to water down the initial proposal



Source: European Commission's Communication „Future of food and farming“ (12.2017)

Analyses of the proposed CAP (post-2020)

Some improvements (objectives, eco-schemes, strategic plans,...)

More risks (cuts on Pillar 2, vagueness, climate, ...)

Justified concern by farmers and the public

A risk to the EU Green Deal

and the European Union as a project

>3640 scientists have signed a call for action

We cannot afford 7 more years

PERSPECTIVE  

Action needed for the EU Common Agricultural Policy to address sustainability challenges

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Implications for the Biodiversity Strategy

10% landscapes:

- Ensure minimum 10% biodiversity-supporting features in all agricultural landscapes
- Ensure sufficient budget and instruments to support this aim (CC, AECM, Eco-Schemes, investments, ...)
- Provide guidelines and guardrails for MSs and strategic plans

25% organic farming:

- Ensure organic is also biodiversity friendly (e.g. extensive grazing)
- Ensure complementary increase of demand
- Reduce transaction costs for small farms

50% pesticide reduction:

- Ensure compliance in all MSs through effective methods of coordination (e.g. reporting, monitoring, country-specific recommendations)
- Address **herbicides** given impacts on habitats, species and humans (Glyphosate!)

Add a target for High Nature Value farming systems.

What are we calling for? Ten proposed actions

Overarching: Align all CAP elements with the principles of sustainability, multi-functionality and public payments for public goods

1. **Transform Direct Payments into payments for public goods**
2. Provide sufficient support for effective **climate change** mitigation
3. Provide sufficient support for effective instruments to maintain **biodiversity and ecosystems**
4. Promote innovative approaches to design and implement measures addressing the environmental challenges
5. **Enhance spatial planning** and implementation of landscape-level measures
6. Require MSs to set S.M.A.R.T. targets in their Strategic Plans
7. **Revise the set of indicators**
8. Strengthen environmental monitoring and enforcement
9. Identify and address global impacts of the CAP especially in the global South
10. **Improve governance of the CAP and its reform**

Align CAP with the relevant SDGs

The new objectives align with SDGs

a) income, food security

b) market orientation, competitiveness

c) farmers in value chain

d) contribute to climate change mitigation and adaptation, sustainable energy

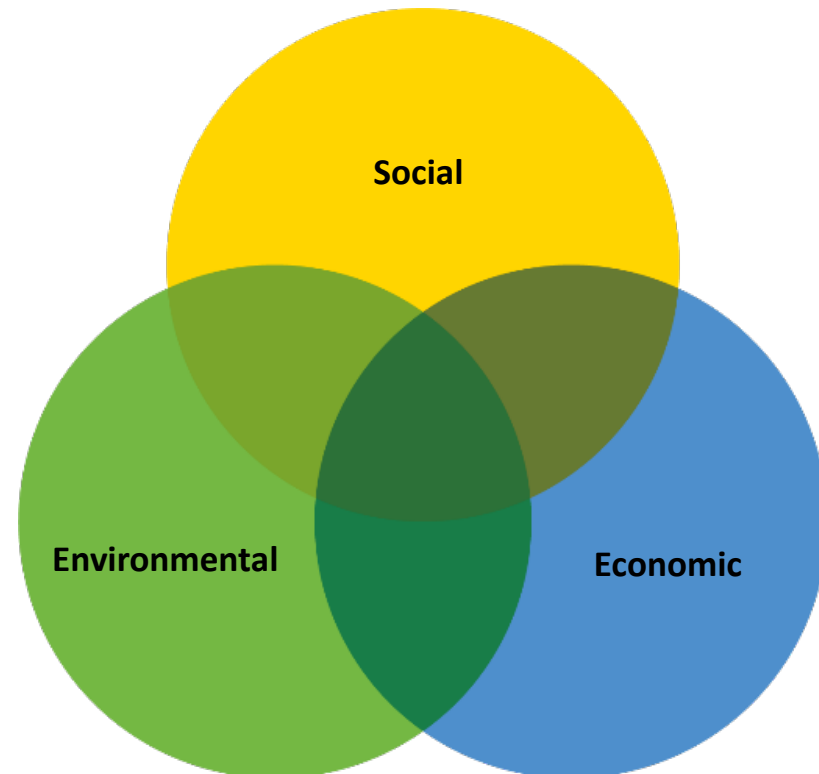
e) sustainable development, efficient management of natural resources

f) biodiversity, ecosystem services, habitats, landscapes

g) young farmers

h) rural employment, growth, inclusion, development, bio-economy, sustainable forestry

i) societal demands on food and health, waste, animal welfare



Align CAP with the relevant SDGs

The new objectives align with SDGs – but not contents (budgets, targets, indicators, instruments)

a) income, food security

b) market orientation, competitiveness

c) farmers in value chain

d) contribute to climate change mitigation and adaptation, sustainable energy

e) sustainable development, efficient management of natural resources

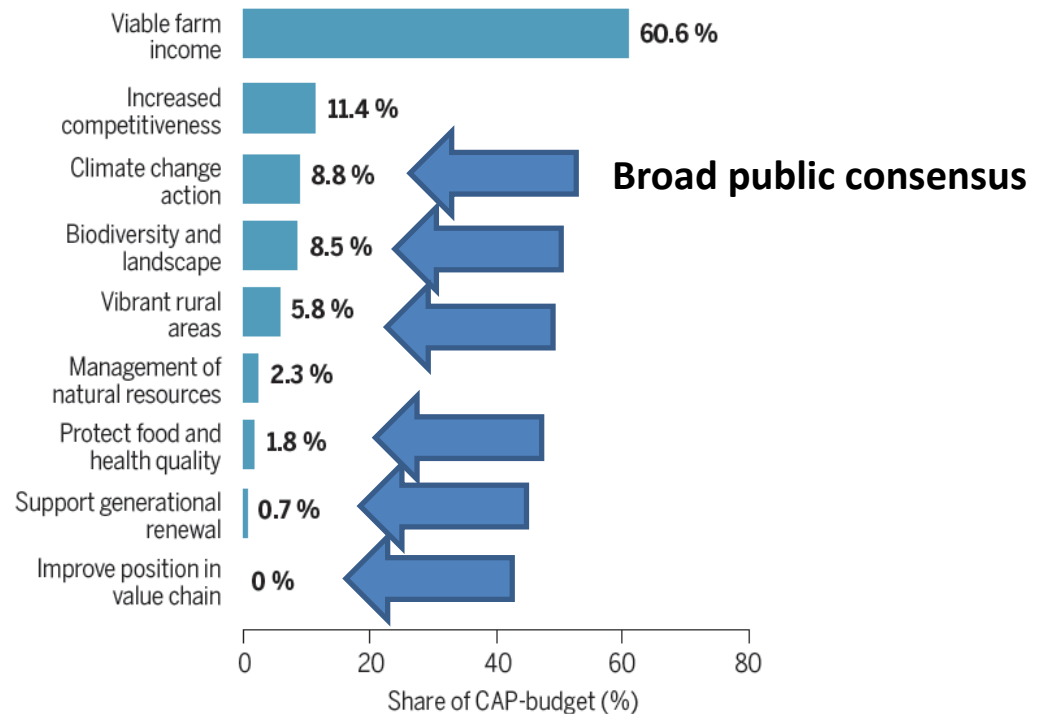
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Budgets per objective*



Pe'er et al. 2019 Science

*Data based on current CAP

Transform Direct Payments into payments for public goods

- Align payments with both environmental and socio-ecological dimensions of sustainability
 - **Support farmers needing it, especially when providing public goods (farmers must benefit from it)**
- Abolish Coupled Payments without environmental benefits
- Ring-fence Environmental funds in RDP + Eco-Schemes, clarify ANC



Enhance support for effective instruments to address the climate and biodiversity crises

AECM & Non-productive areas: expand, improve remuneration, reduce co-funding

Eco-Schemes: remove vagueness, list concrete options

Climate: Claims that 40% is climate-friendly are unjustified without...

- Supporting **reductions in GHG emissions**
- Reducing support for intensive meat/dairy production
- Rewetting peatlands
- Revising supports for **bioenergy**



Enhance support for effective instruments to address the climate and biodiversity crises

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Biodiversity: Largest bulk of knowledge

- Support High Nature Value farming
- Support zero habitat loss & restoration to 10% UAA under effective, non/low-production
- Clarify definitions and priorities for **high quality habitats** (e.g. Grassland)
- Prioritise and remunerate effective, **dark green measures**



Enhance spatial planning and landscape-level measures

Support the **EU's Green Infrastructure**

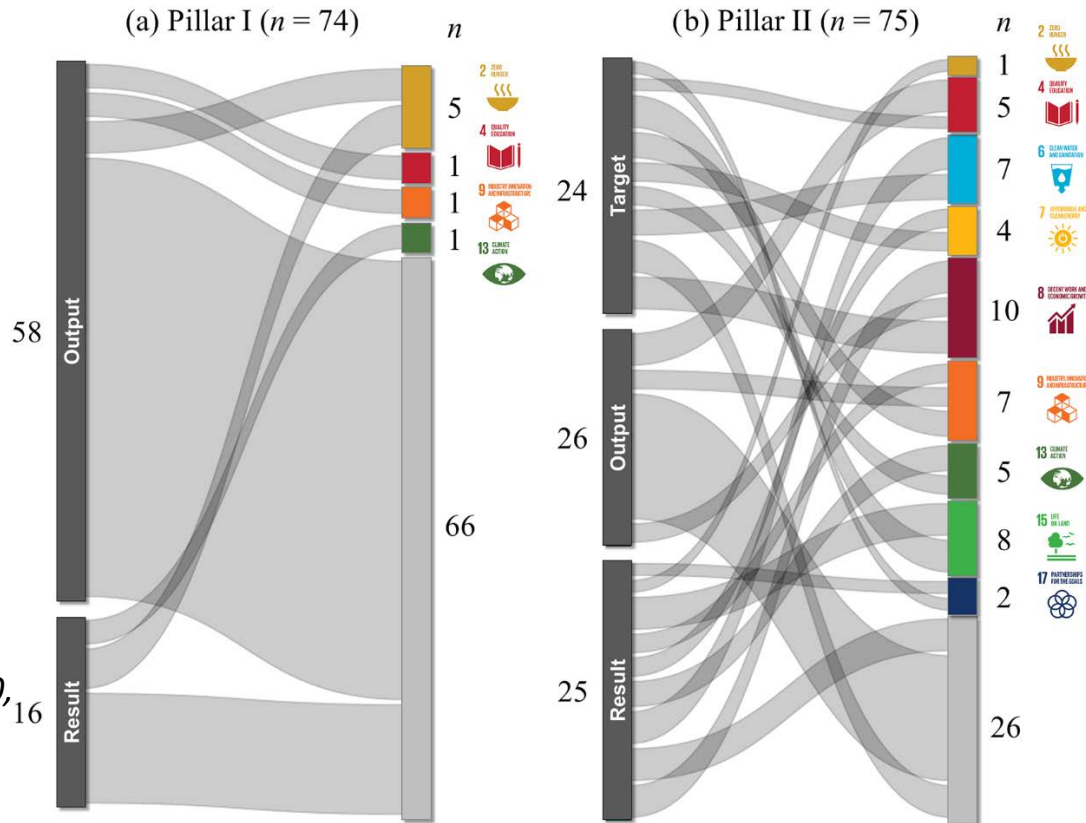
It's complex, but it's where science and scientists can help through...

- Consultancy
- Proposing best measures to local needs
- Models and planning tools
- Supporting bottom-up and local initiatives



Revise the set of indicators

➔ key to effective steering!



Source:

Scown & Nicholas 2020,¹⁶
Global Sustainability

- Disentangle financial controlling from target orientation
- Implement an indicator system supporting ambitious implementation
- Expand impact indicators and their monitoring

A better result indicator system:

	EC proposal	Alternative proposal
Indicator-logic	$I_{o,(t)} = \frac{\sum_t \sum_m \sum_u x_{t,m,u}}{r_{o,(t)}}$	$I_o = \sum_t \sum_m \sum_u x_{t,m,u} * I_{o,t,m,u}$
Implication	<ul style="list-style-type: none"> • Reference depends on type of intervention(s) <i>t</i> • Several indicator <i>I</i> per objective <i>o</i> • Effectivity not considered • No double counting is tech. challenge <p>Problems of this proposal:</p> <ol style="list-style-type: none"> 1. Punishes multifunctional measures and differentiated Strategic Plans 2. Promotes shallow but widely implemented measures 3. Unclear information content of the indicator 	<ul style="list-style-type: none"> • One Indicator per objective • Indicator reflects gross impact • For most environmental Indicators Information $I_{o,t,m,u}$ exist (=> in case of lacking hard data expert panel could help) <p>Problem solving aspect:</p> <ul style="list-style-type: none"> • More reliable information on policy impacts • Reference unit can be added ex-post • Multifunctional or effective measures are evaluated better

Legend:

o = objective 1,2,...,n.

r_o = reference – unit (area, heads)

x = relevant indicator

t = type of intervention ; u = u: unit value (support intensity)

I = Gross impact (estimate)

m: measure

Result indicator system (our Proposal)

And for the Budget allocation, just calculate

$$B_o = \sum_t \sum_m \sum_u x_{t,m,u} * u * S_{o,t,m}$$

With:

B_o: Budget dedicated to objective O

t: type of intervention

S_{o,t,m}: share of the measure dedicated to objective O, if the measure contributes to more than 1 objective

This allows direct comparison about priority setting among MS

This gives you B_o / I_o an indicator on the budget efficiency

Improve governance of the CAP and its reform

Enhance participation of scientists and scientific organizations

- Establish a science-policy interface/dialogue
- Make data available (long term)
- Discuss scenarios more openly and on a longer time frame
- Make strategic plans and other documents accessible to the public

Enhance transparency and participation across the entire policy cycle

Employ Article 55 of the Rules of the EU Parliament (co-decision)



Closing statements

Aligning CAP with sustainability is (still) possible

but requires **political will, courage and actions.**

Some improvements can be achieved without drastic changes.

Not all changes are equally urgent, but clear signals are needed.

Best time is now: COVID-19 implications include

- Re-appreciation of the value of nature for health & wellbeing
- Centrality of science and evidence
- Opportunity to support farmers needing it
- But also, risks (lobby pressures, coming back to B.A.U.)

Science can build bridges

Scientists are happy to help improving the CAP

How can we help each other?

Thank you for your attention

