

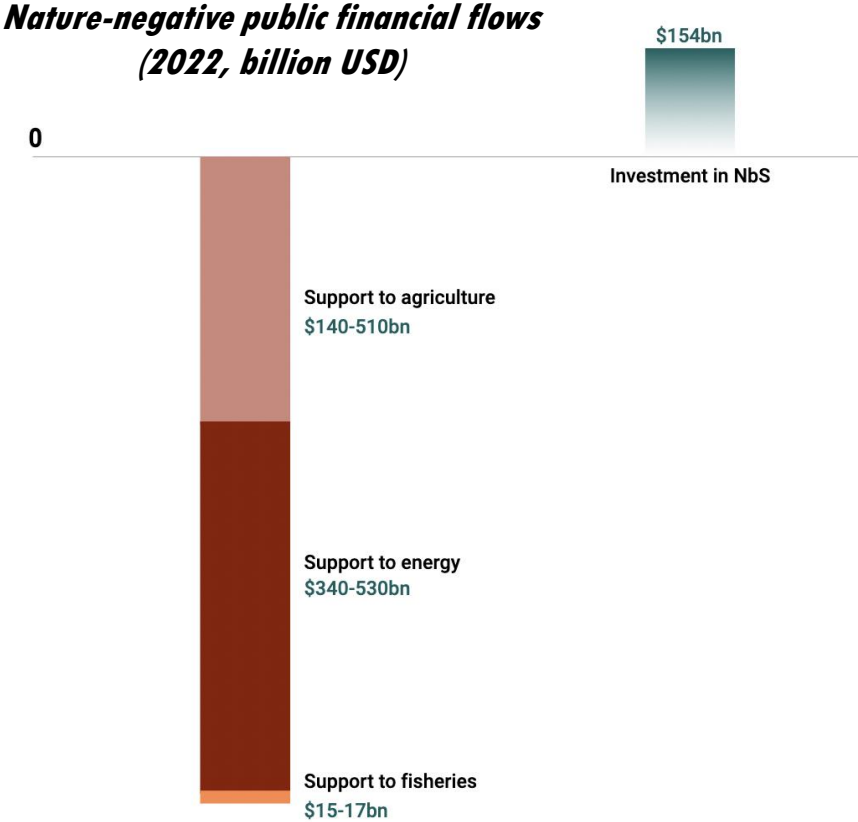
Aligning public finance for climate and nature goals: repurposing agricultural subsidies

21 June 2024

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Public finance currently does not align with finance for nature needs

Negative public finance flows still largely overtake nature-positive finance flows.



State of Finance for Nature (UNEP, 2022)

Impacts of food systems on environment, economy and health

- The **hidden costs** of the global food and land use system are estimated at around **US\$12 trillion per year** and are expected to grow to US\$16 trillion by 2050 (FOLU, 2019).
 - Over half (US\$6.6 trillion) arise from the impacts of obesity, undernutrition and pollution on human health.
 - US\$3.3 trillion result from the negative impacts on the climate and natural capital.
 - US\$2.1 trillion result from economic costs of food loss/waste, fertilizer leakage and rural welfare



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A MULTI-BILLION-DOLLAR OPPORTUNITY

Repurposing agricultural support to transform food systems



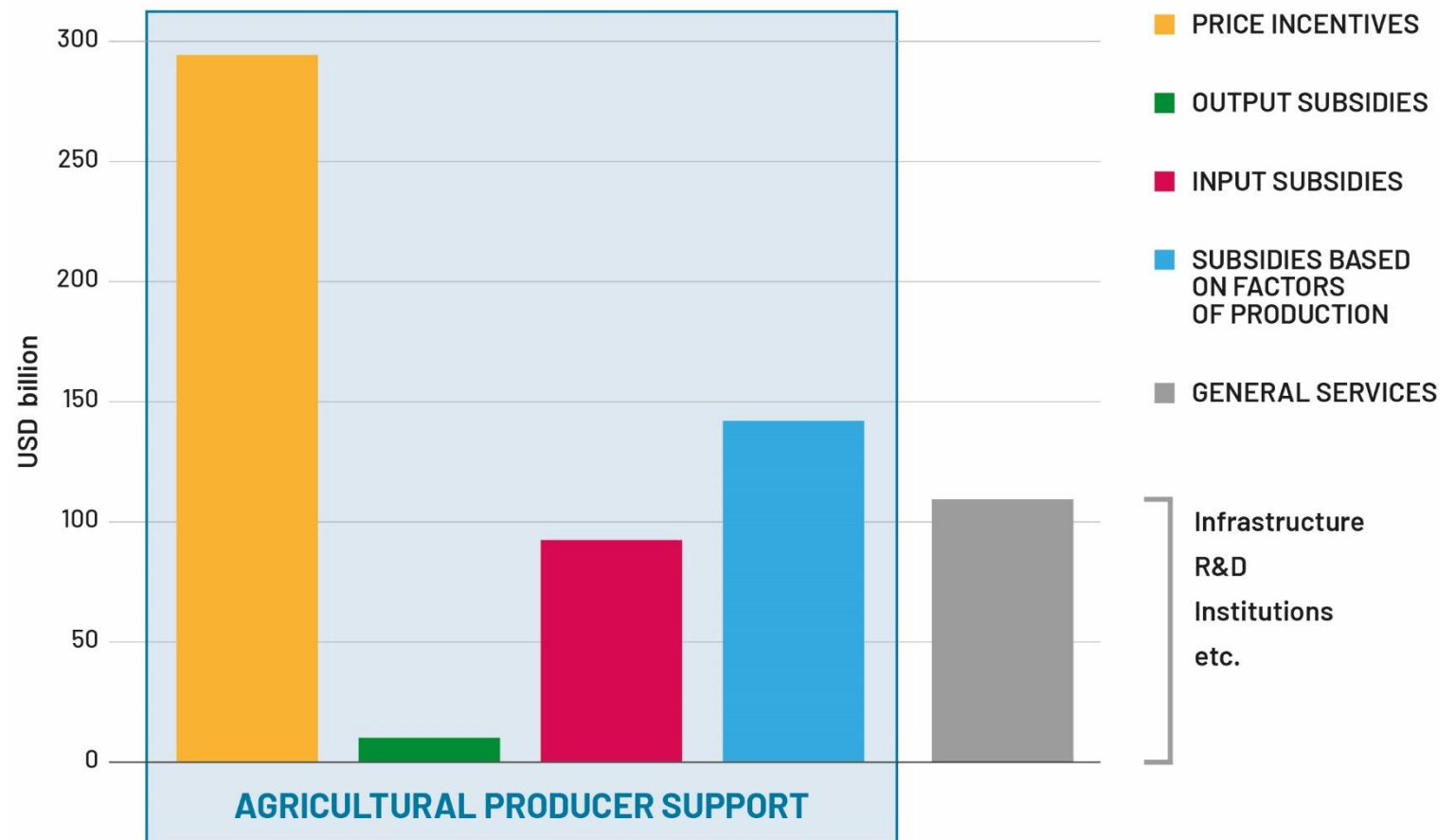
A MULTI-BILLION-DOLLAR OPPORTUNITY

Repurposing agricultural support to transform food systems

Supporting farmers yet hindering food system transformation

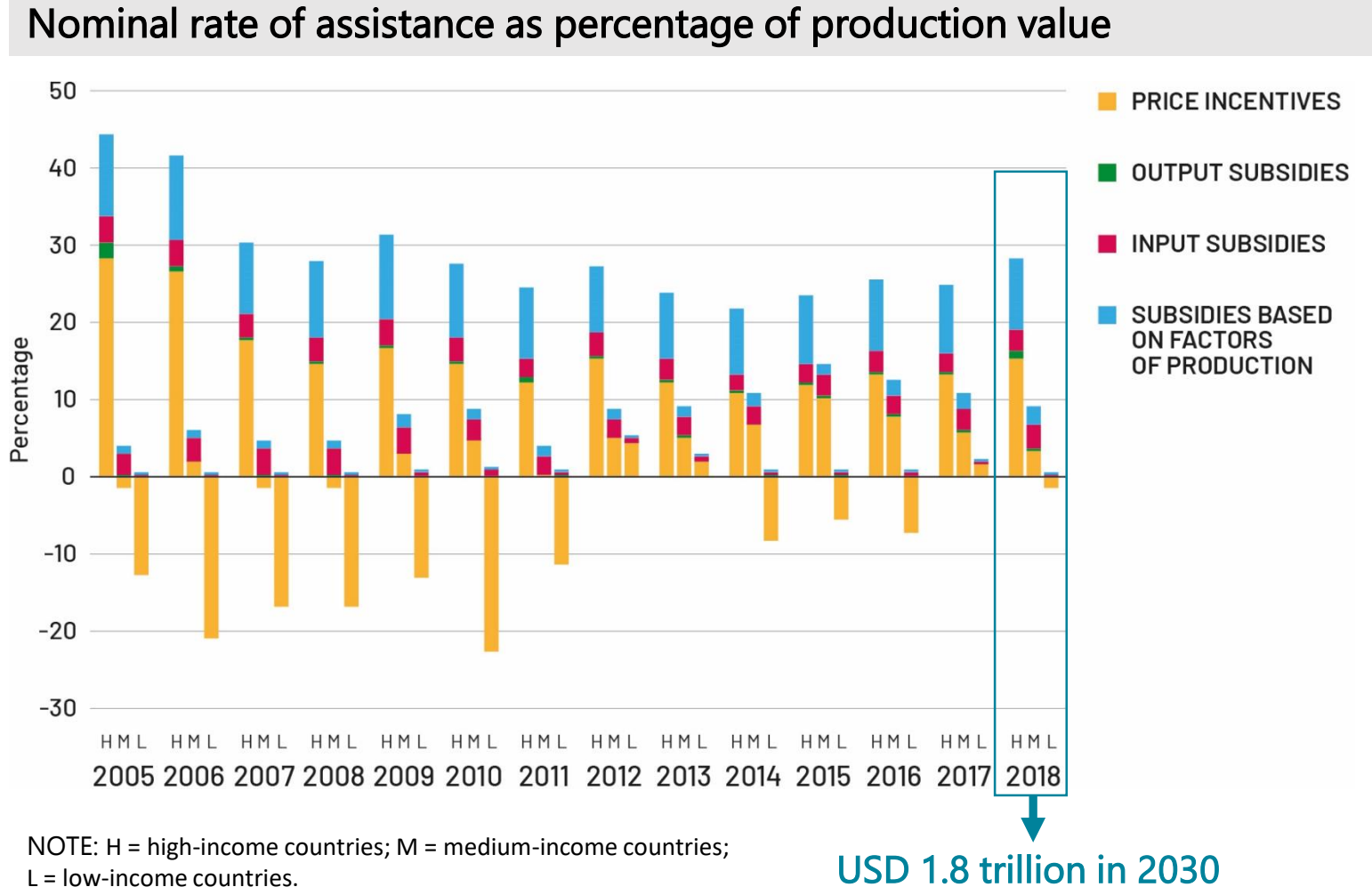
- Farmers individually receive USD 540 billion yearly on average (or 15% of total agricultural production value).
- 87% is environmentally harmful in the form of price distortions or subsidies with negative impact on health, equity and efficiency

Level and breakdown of global agricultural sector support (average 2013–2018)



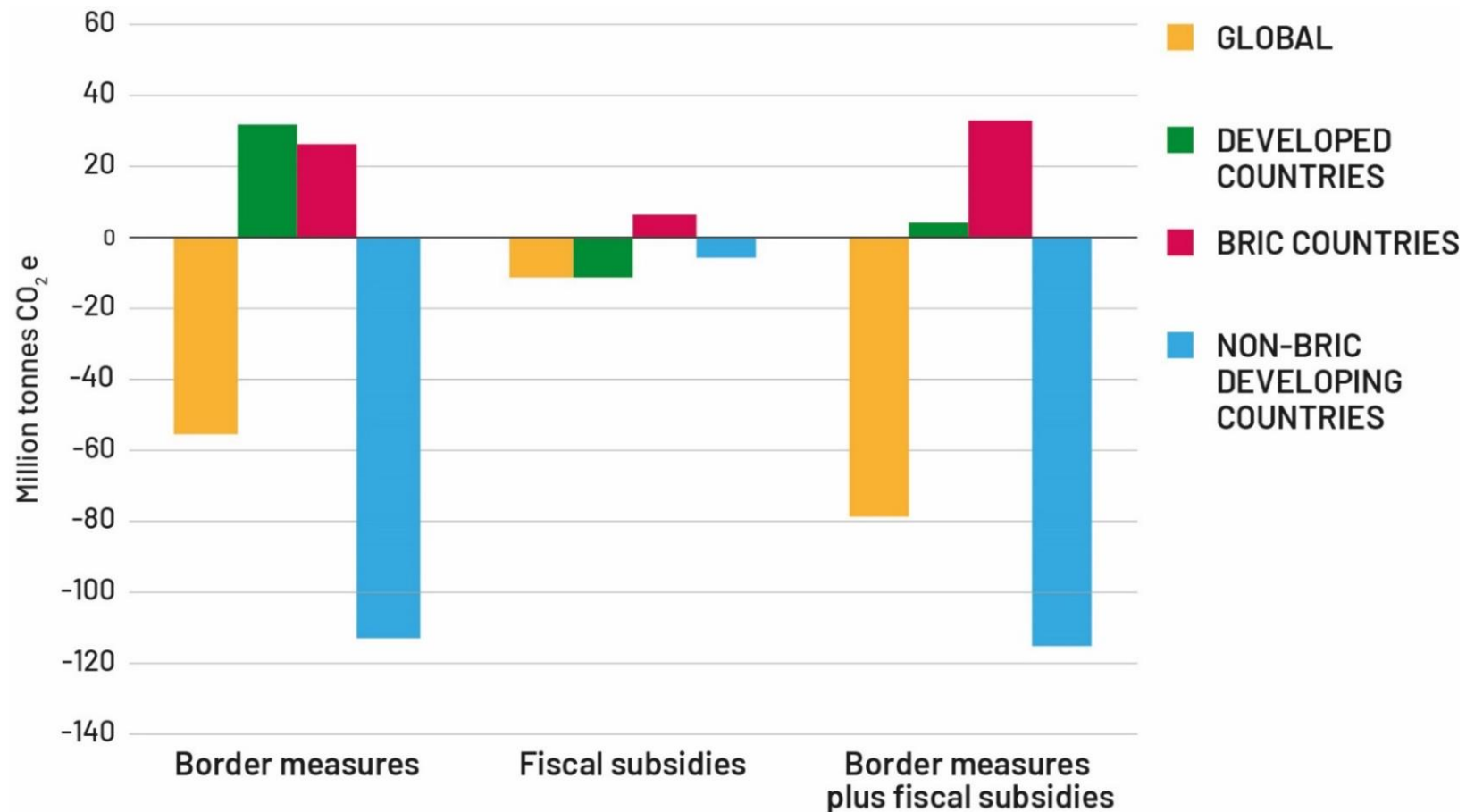
How does support look around the world?

- Distorting support measures still common in high- and middle-income countries.
- Low-income countries have penalized producers.
- Emission-intensive commodities (i.e. beef, milk and rice) receive



Removing agricultural support would contribute to mitigation by 2030, but...

Estimated changes in GHG emissions in 2030 due to removal of agricultural producer support



... there is trade-offs in the farm sector

Impacts of removing agricultural producer support on the farm sector						
ITEM	BORDER MEASURES	FISCAL SUBSIDIES			ALL SUPPORT	
		TOTAL	OUTPUT SUBSIDIES	INPUT SUBSIDIES		FACTORS OF PRODUCTION
PERCENT CHANGE FROM 2030 LEVELS						
Crop production	0.22	-1.60	-0.39	-0.80	-0.43	-1.30
Livestock production	0.21	-0.46	0.01	-0.13	-0.35	-0.19
Crop yields	1.82	-1.09	-0.13	-0.50	-0.47	-1.34
World prices	0.84	1.35	0.61	-0.18	0.93	1.94
Farm income	0.19	-5.70	-0.81	-1.46	-3.58	-6.29

2. Impact of agricultural subsidy removal on nature

- **Impact of agricultural policies on nature is complex, but past analyses show that in general: policies incentivizing conversion, expansion and intensification of land largely contribute to negative impacts on land and marine biodiversity**
- **Modelling shows that removal of all subsidies would cause reduction in agricultural land and an increase in forest and other types of habitat**
- **Impact of removal depends a lot on local biodiversity and socioeconomic context.**

Kunming-Montreal Agreement

Target 18 - Identify by 2025, and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity, in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least \$500 billion per year by 2030, starting with the most harmful incentives, and scale up positive incentives for the conservation and sustainable use of biodiversity.

UNEP's Global Campaign on Repurposing Agricultural subsidies (2024-2025)

- Filling in knowledge gaps (e.g. Nature Positive/biodiversity indicators, assessing the impact of public expenditure on nature capitals/biodiversity, economic impact assessment of repurposing agricultural subsidies at the country level)
- Working with several countries (Brazil, Columbia, Nigeria, Indonesia, Costa Rica...)
- Engagement and communication with various stakeholder groups (investors, business, farmers' association)
- Communication with various forums (trade community, biodiversity/nature community, climate community, green economy transition community)

- Inviting partners to join (UNDP, UNDP/Biofin, FAO, WB, Just Rural Transition....)
- Inviting interested countries to join
- Campaign strategy and launch (Q3-Q4 2024)

Thank you

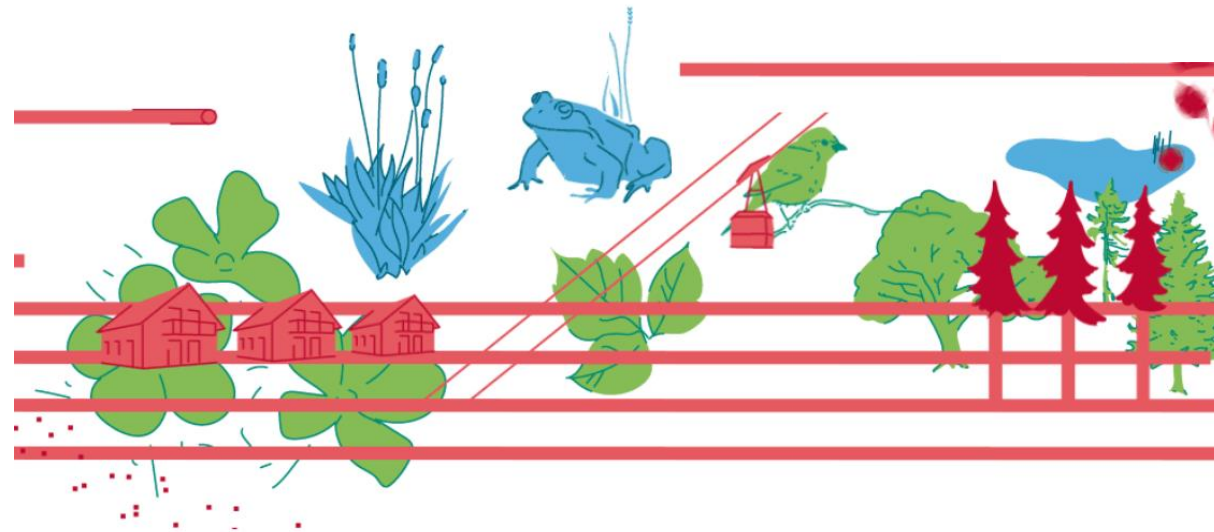


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Agricultural Subsidies harmful to Biodiversity



21.6.2024



Lena Gubler: Swiss Federal Research Institute WSL

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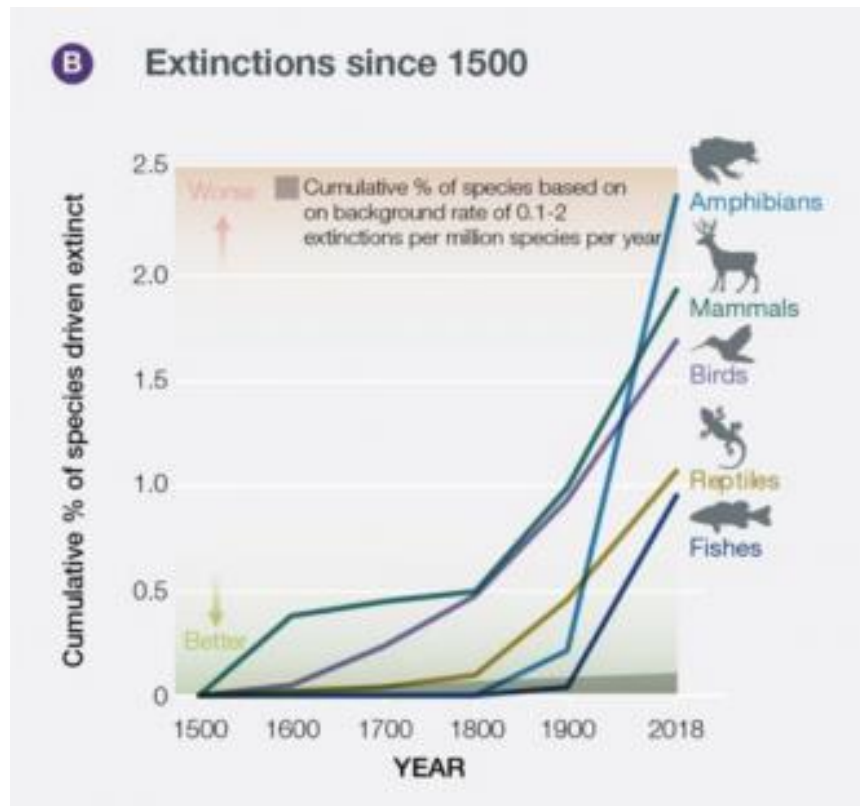
<https://subventionen.wsl.ch>

Based on the Study:

Gubler, L., Ismail, S., Seidl, I. (2020), Biodiversitätsschädigende Subventionen in der Schweiz, WSL

State of Biodiversity

Accelerated decline of biodiversity



Nature's contributions to people	DIRECTIONAL TREND			Across regions
	50-year global trend			
	Decrease ←	No change →	Increase →	
1 Habitat creation & maintenance	↓			Consistent
2 Pollination & dispersal of seeds	↓			Consistent
3 Regulation of air quality		↘		Variable
4 Regulation of climate		↘		Variable
5 Regulation of ocean acidification		→		Variable
6 Regulation of freshwater quantity		↘		Variable
7 Regulation of freshwater quality		↘		Consistent
8 Regulation of soils		↘		Variable
9 Regulation of hazards & extreme events		↘		Variable
10 Regulation of organisms	↓	↘		Consistent
11 Energy		↘	↗	Variable
12 Food & feed	↓	↘	↗	Variable
13 Materials & assistance		↘	↗	Variable
14 Medicinal, biochemical, & genetic resources	↓	↘		Consistent
15 Learning & inspiration	↓	↘		Consistent
16 Physical & psychological experiences		↘		Consistent
17 Supporting identities		↘		Consistent
18 Maintenance of options	↓	↘		Consistent

TREND ACROSS REGIONS

↑ Increase Consistent

↓ Decrease

→ Variable

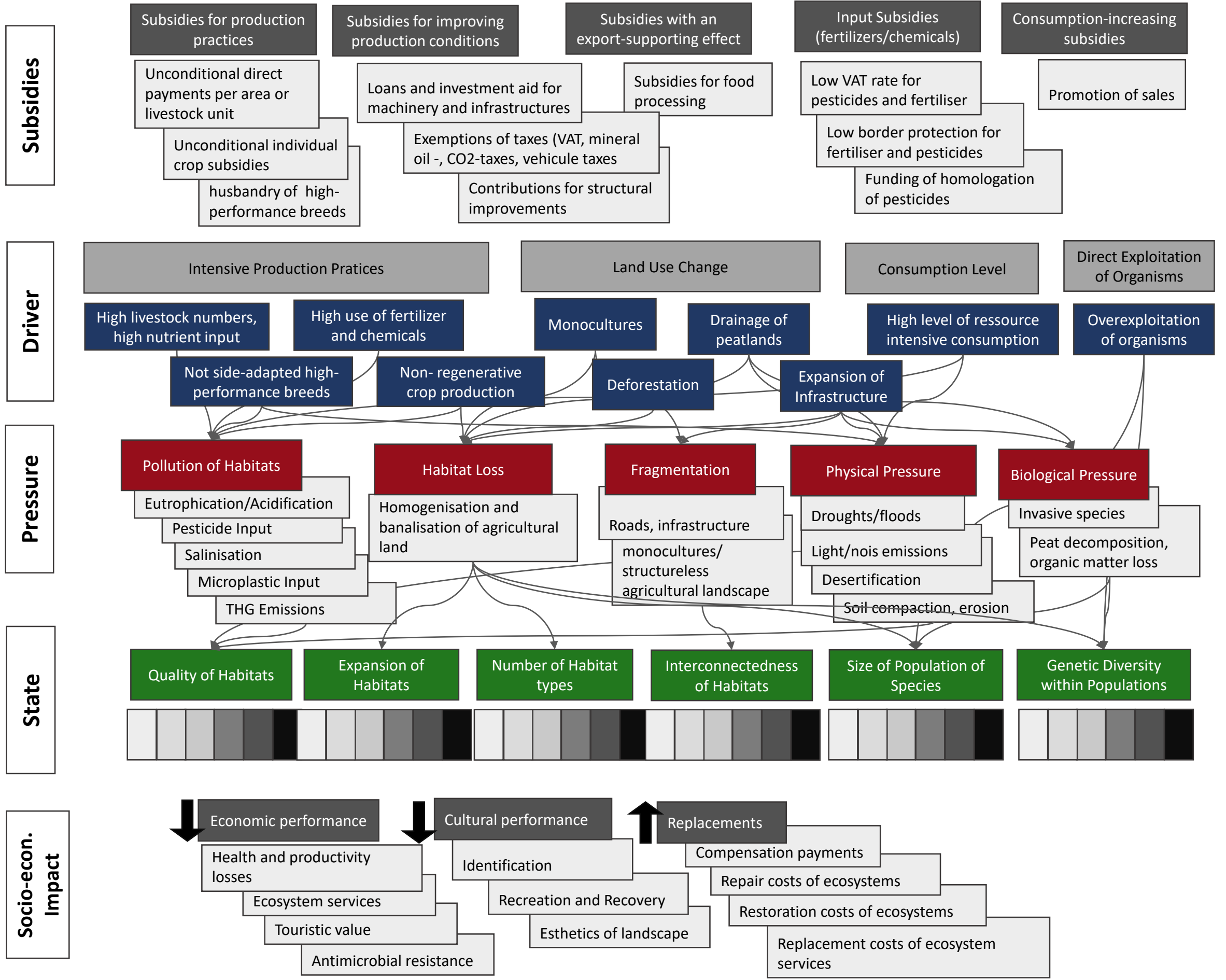
Almost all ecosystem services are declining

Aichi Target 3 and Kunming Target 18

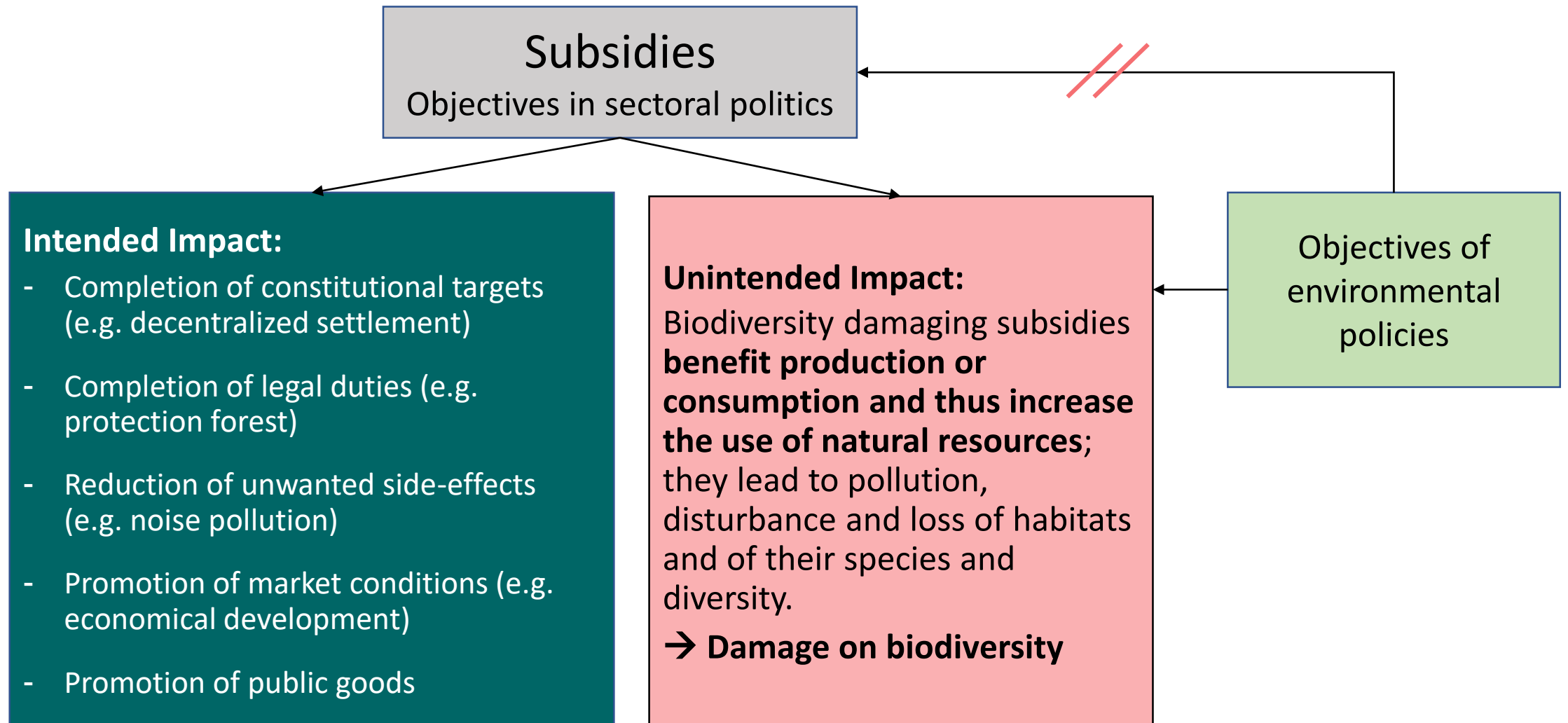
Identify by 2025, and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity (...)

Ecologically harmful and economically inefficient

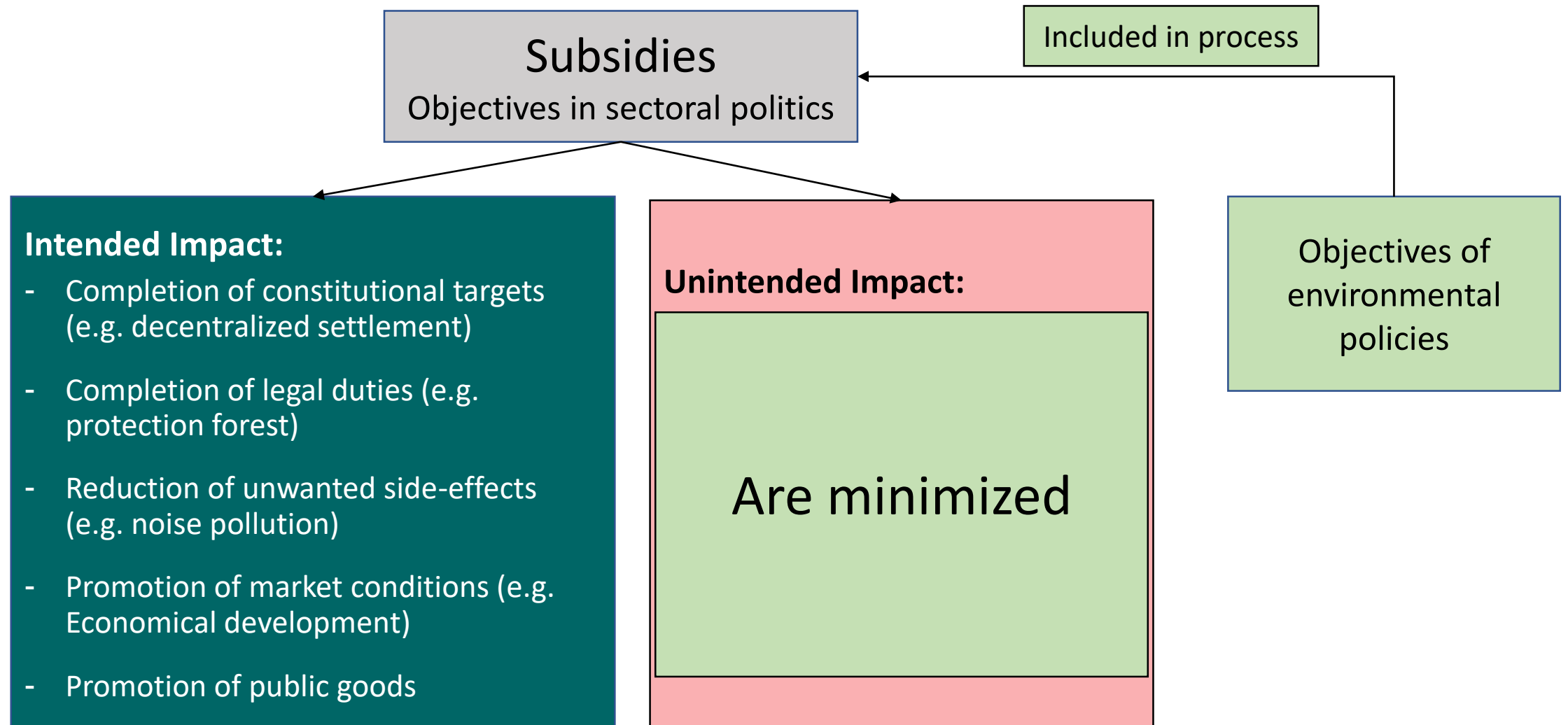
- Budgets are charged in several ways:
 - Subsidies damaging biodiversity
 - Funding for biodiversity promotion
 - Repair costs of damages
- Administrative expenses through restrictions, control measurements, monitorings, etc.
- Reputational damages for recipients of subsidies that are damaging biodiversity



Subsidies: an important fiscal instrument



Minimize environmentally damaging impact



Possible political approaches

a) Process of subsidies allocation and evaluation	b) Reform individual subsidies	c) Align sectoral policy goals with environmental goals
Adaptation of legal basis and evaluation tools	By prioritization of impact or by opportunity	Mainstreaming Biodiversity considerations in planning basis, strategies, policy-measures

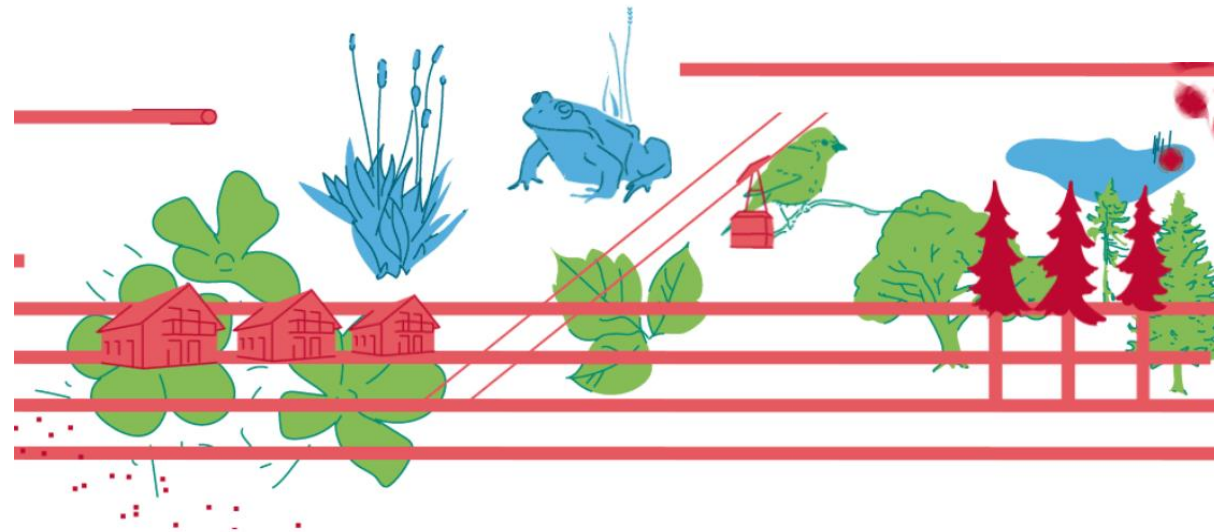
Reform of individual subsidies

(1) Elimination: weighing of interests between sectoral objectives and environmental objectives or assuring intended objective of the subsidy by other instruments, i.e. relementation

(2) Reform: The intended objective of the subsidy (e.g. food security) must be maintained while the negative effect on biodiversity are minimised. This can be achieved in the following way:

- a) ...subsidies are **redirected to less biodiversity-damaging practices** that contribute to the same objectives (i.e.: subsidation of plant based food, instead of livestock).
- b) ...subsidies are **subject to conditions** (i.e. condition of a regenerative cultivation method).
- c) ...**the incentive is changed** (i.e. instead of the livestock unit, the labour required for a regenerative production method is subsidised).
- d) ...subsidies are **subject to compensation measures** (for example, only farms that carry out a defined ecological compensation could benefit from the subsidy).

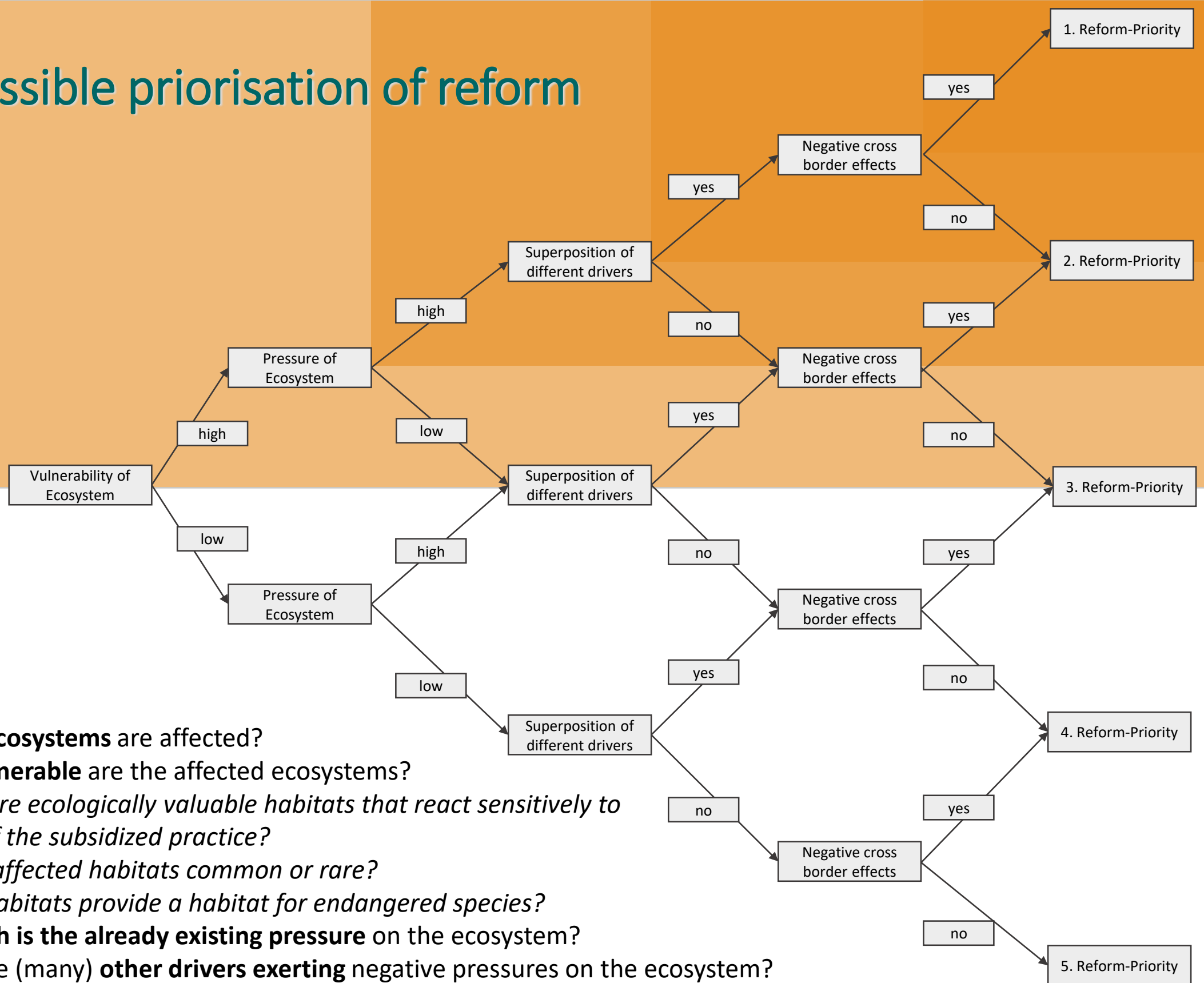
Thank you for your attention



Contact:

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Possible prioritisation of reform



1. Which **ecosystems** are affected?
2. How **vulnerable** are the affected ecosystems?
 - a. *Are there ecologically valuable habitats that react sensitively to pressure of the subsidized practice?*
 - b. *Are the affected habitats common or rare?*
 - c. *Do the habitats provide a habitat for endangered species?*
3. How **high** is the **already existing pressure** on the ecosystem?
4. Are there (many) **other drivers exerting** negative pressures on the ecosystem?
5. Does the subsidised practice also have negative effects **beyond the national territory**?



Identifying and Tackling Environmentally Harmful Agricultural Subsidies in the WTO

The Case of Greenhouse Gas Emissions

Anthony Cox

Senior Policy Advisor

Fostering International Cooperation on Environmentally Harmful Agricultural Subsidies: A Deep Dive Roundtable, 21 June 2024

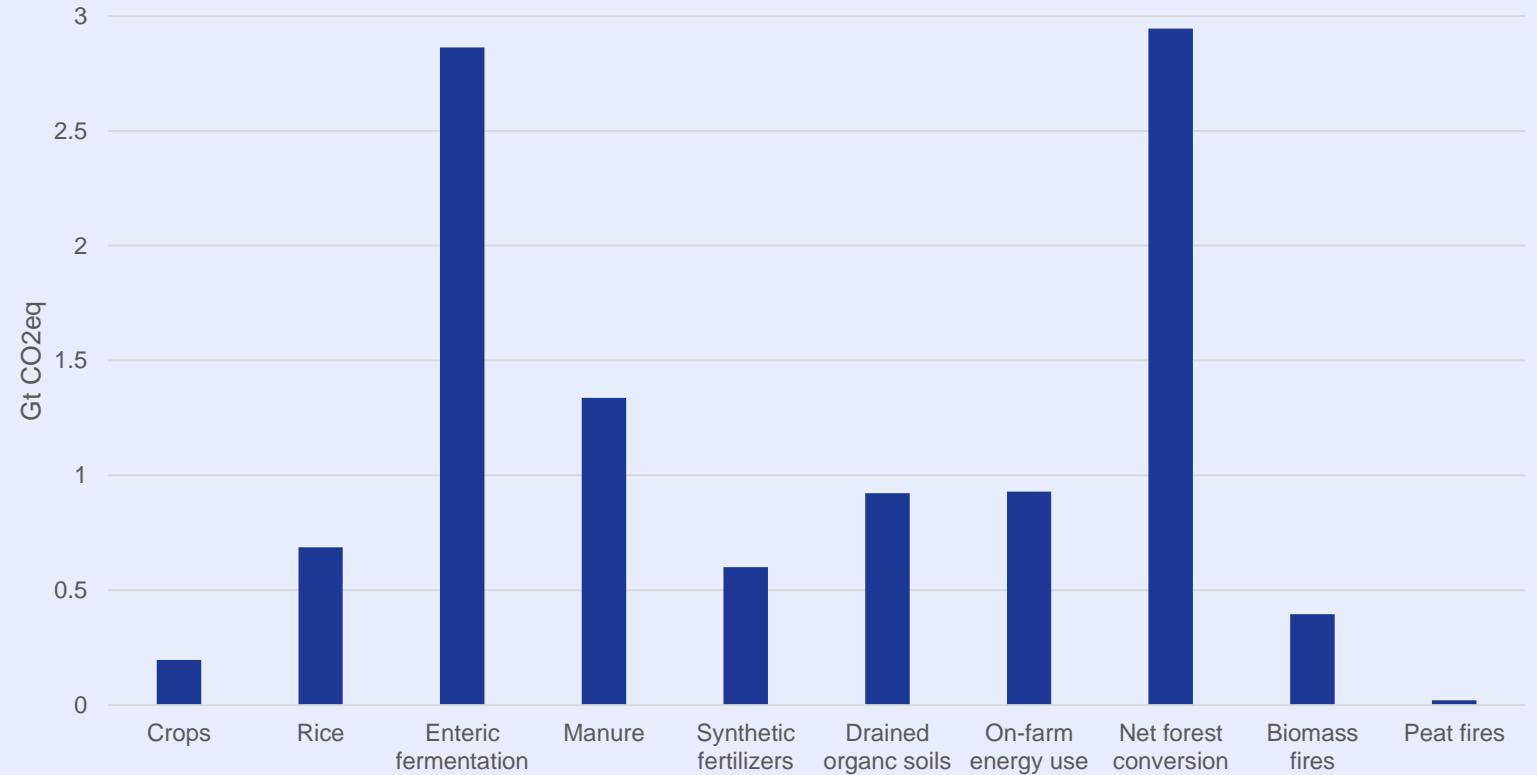


Agriculture continues to be a major source of global GHG emissions

- **Accounting for around 20% of global emissions at 10.9 Gt CO₂eq in 2021**
- **While overall emissions from agriculture have declined since 2000 ...**
 - On-farm emissions have increased by 14% ...
 - ... and emissions from land use change have declined by around 30% (but fluctuate considerably)

Livestock and land use change remain the major contributors to agricultural GHG emissions

Composition of agricultural GHG emissions, 2021



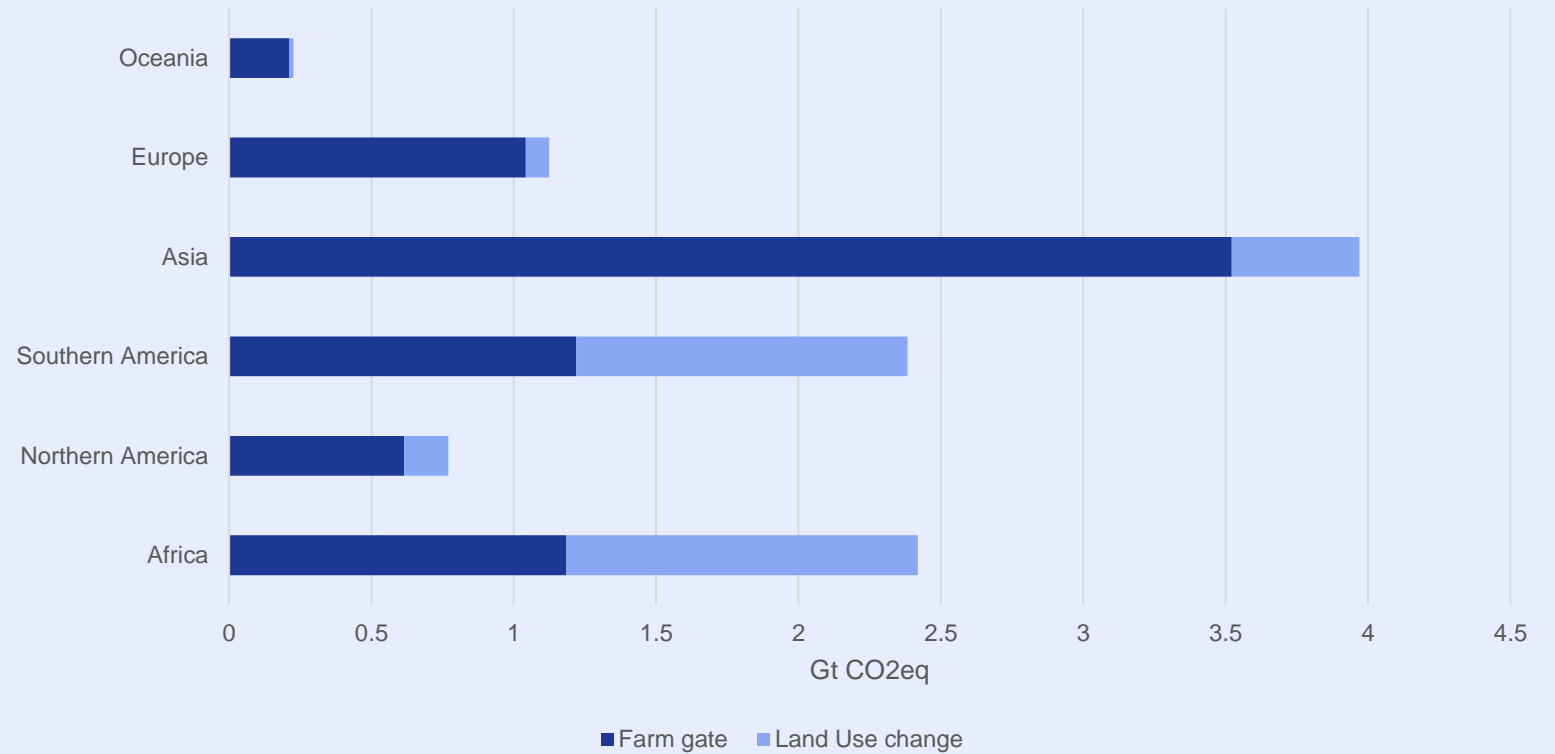
Source: FAO

Emission intensities have been declining in general, but some remain very high

- **Result of steady increases in production efficiencies, research and new technologies**
- **But emission intensity of livestock production remains very high**
 - 28 and 24 kg CO₂eq/kg for beef and sheep meat, respectively
 - Compared to, for example, 1.6 and 5 kg CO₂eq/kg for pig meat and chicken meat, respectively

Significant regional differences in emissions and emission profiles

Regional GHG emissions, 2021



Source: FAO



Tradeoffs with other objectives are particularly challenging

- **Need to recognise multiple objectives of agricultural support**
 - Food security and nutrition, livelihoods and incomes, environmental sustainability
 - Climate, water, biodiversity challenges also intricately linked
- **Complexity of food systems and high degree of heterogeneity**
 - Ruminant livestock, intensification of cropland and livestock production and land use change are key issues for GHG emissions



Implications for reducing the climate impacts of agricultural subsidies

- **Environmental pathways matter**
- **Need to focus reform efforts on subsidies that drive increases in GHG-intensive products, inputs and practices**
- **“Eliminate/reduce/re-purpose/re-direct” debate is critically important**
 - Focus support on sustainable management practices, productivity growth, uncoupled payments, and payments for environmental public goods
- **But improving awareness and understanding of available information and analysis while filling strategically important knowledge gaps is essential**



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Thank you for your attention!

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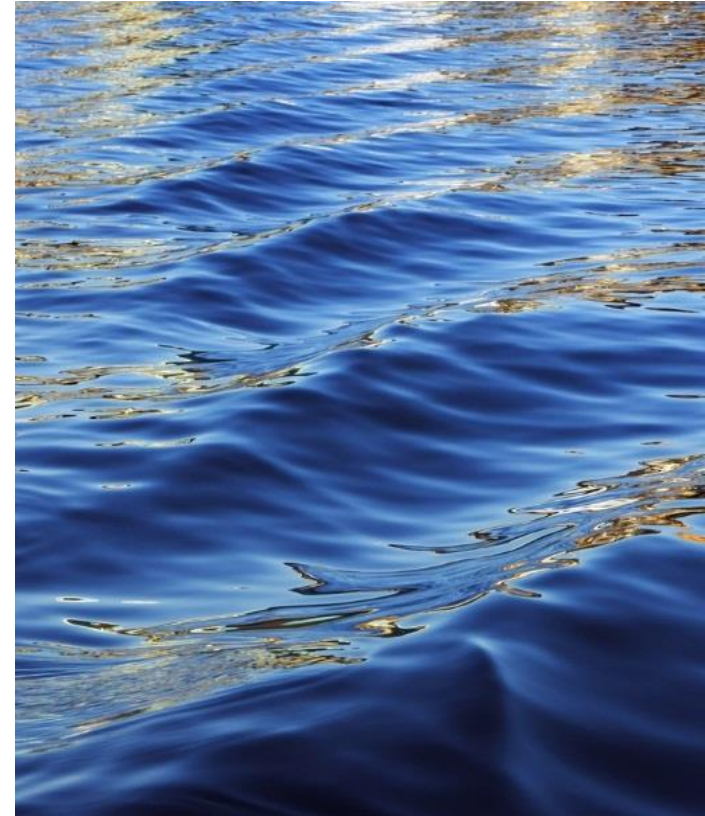
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Agricultural subsidies and water

*Environmentally Harmful
Agriculture Subsidies: Fostering
International Trade Cooperation:
A Deep Dive Roundtable*

Silvia Secchi
University of Iowa, USA



Basic taxonomy of practices

		Impact of the practice			Rationale for the practice	
		Water quality	Water quantity	Input saving	Production/ productivity enhancing	Environmentally beneficial
Crops	Land retirement/ set asides	X	X			X
	Terraces	X			X	X
	Changes in crop rotations	X	X		X	X
	Artificial fertilizer use	X			X	
	Pesticide use	X			X	
	Conservation tillage	X				X
	Cover crops	X		X		X
	Conservation irrigation		X	X		X
Livestock	Confinement of animals (including aquaculture)	X	X	X	X	
	Pesticide (antibiotic) and hormone use	X		X	X	
	Pasturing of animals	X				X

Agri-chemical subsidies

Agri-chemical subsidies are often inefficient and exacerbate income disparities in the farm sector.

- Subsidy programs should focus on soil enhancing practices, incorporate careful consideration of distributional impacts in program design, and include clear exit strategies and robust monitoring and environmental compliance systems.
- In already intensive systems, policies move fertilizer and other agri-chemical prices to be close to their shadow prices, and other approaches should be used to reduce the environmental impact of agri-chemicals, from application bans in certain periods to applicator training and consistent large-scale monitoring.

Irrigation subsidies

Subsidies for efficient irrigation have proven to be prone to rebound effects.

- Rather than subsidizing the technology, in water scarce environments, programs should be set up for R&D to reduce water needs of crops, and to promote crop rotations and practices that reduce water demands. Care should be taken to consider unintended environmental and socioeconomic consequences of such programs.

Environmental subsidies

Policies focused on one specific environmental issue (eg GHG emissions) can have unintended consequences on other environmental indicators.

Similarly, policies that impact land use can have unintended consequences through spillage and rebound effects.

- *Ex ante* policy assessment should identify unintended consequences and funding should be concentrated on practices that limit them or are synergistic with other environmental goals. For example, first generation biofuel subsidies can have both negative impacts on water quality and cause rebound effects - thus negating GHG benefits.

Environmental subsidies

Policies allegedly implemented for environmental purposes are often structured to primarily provide income support, directly or indirectly.

- Program design should focus on targeting based on environmental goals to avoid inefficiencies and unintended consequences. For example, land set aside programs have often been devised to retire whole fields for short periods of time to bring prices up. More targeted permanent easements may be more effective in achieving environmental goals.

Livestock subsidies (including aquaculture)

Intensification of livestock production results in negative impacts on water quality and often indirectly on water quantity.

- Measures supporting livestock intensification should be accompanied by robust monitoring and environmental compliance policies, and should consider impacts on water quantity directly or via effects on animal feed.
- For countries which already have intensified agricultural systems, confined livestock production should not be subsidized and should be subject to point-source environmental monitoring and compliance efforts.

General conclusions

- For countries with existing subsidy systems that cause water quality and water quantity problems, and which already have intensive agricultural systems, there is abundant evidence that policies promoting dietary changes have to be implemented concurrently with subsidy reform.
- For all yield enhancing policies, there should be a conscious and continued effort to reduce the peak of the EKC and to decrease the pollution intensity of agriculture as soon as possible.
- It should be standard operating procedure to devote a portion of farm subsidy programs to monitoring efforts, including air + water quality and GHG emissions. These programs should be administered by science-based institutions and insulated from political pressures.