On the Road to a Biodiversity Conscious EU Dairy Sector?

The Cases of the Netherlands and Sweden

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—Research Question

“How do the national policies in the dairy industry in Sweden and the Netherlands match the Key Commitments of the EU Biodiversity Strategy for 2030 ? ”

—SUB Research Question

“Does the EU need to revise their biodiversity standards?”

AGENDA

01 Literature Review & Methodology & Assessment Framework

02 Case Studies: The Dutch & Swedish Dairy sector

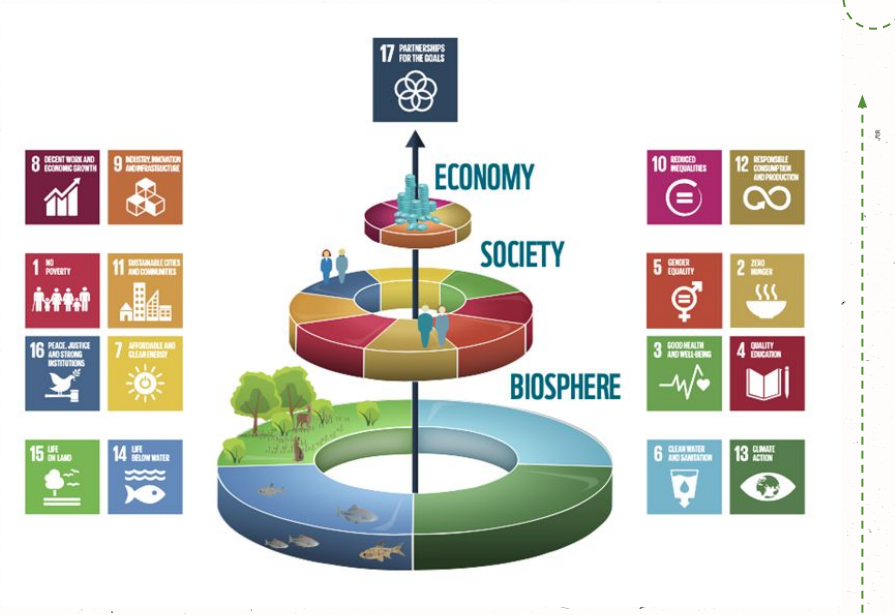
03 Conclusion: Dutch and Swedish Case Study

01

1. Literature Review
2. Methodology
3. Assessment Framework

Literature Review: The EU Dairy Sector and Biodiversity

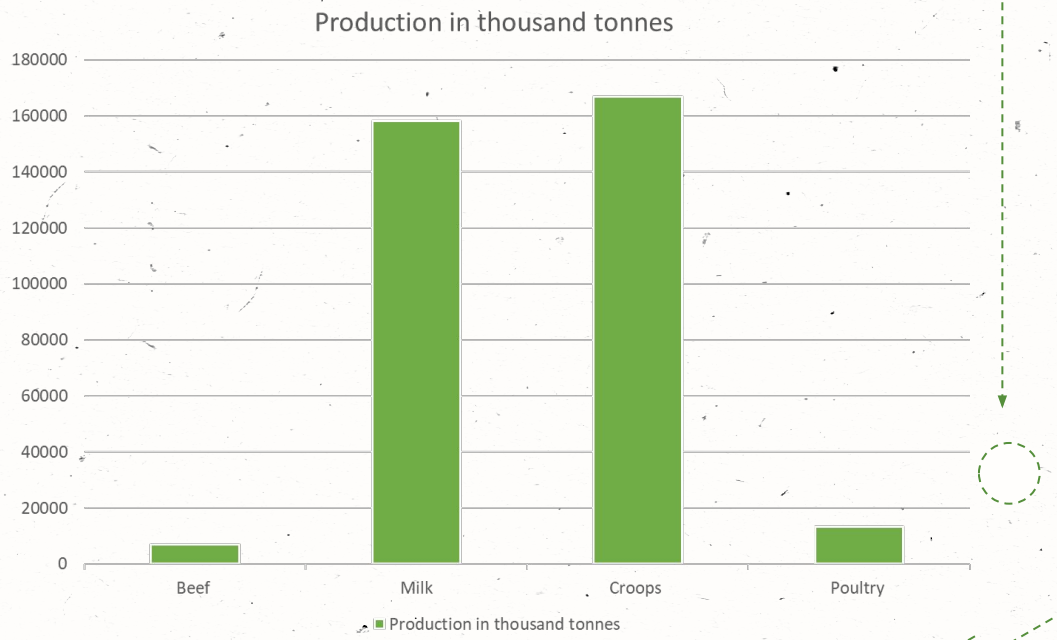
- Biodiversity provides the foundation for development, the economy, global security and human well-being (Bruil et al., 2021)
- The EU has since the 1970s developed several legislations on nature and animal protection



The Sustainable Development Goals fundamentally depend on biodiversity. Source: Azote Images for Stockholm Resilience Centre, Stockholm University (2016)

The EU Dairy Sector and Biodiversity

- **dairy sector is the 2nd biggest agricultural sector in the EU**, 12 % of total agricultural output (EPRS, 2018).
- The European **milk processing industry brings more than 10 Billion €** to the overall EU trade balance (EDA, 2019).



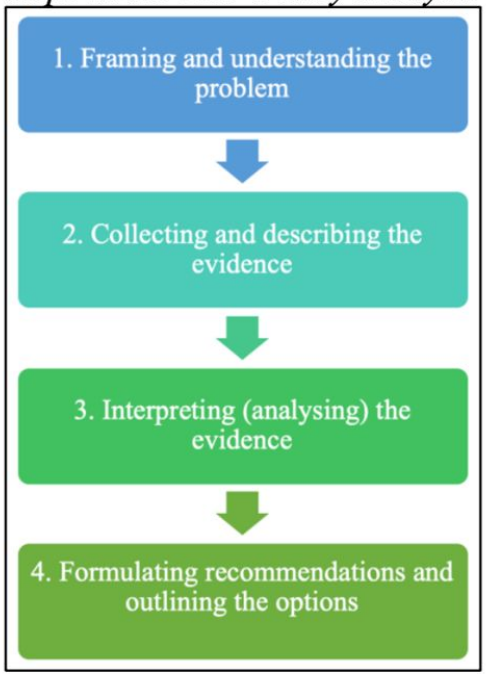
“the dairy farming industry's treatment of land has a **substantial impact on flora and fauna habitat** & many Dairy Farms have increased in size due to the three milk crisis Europe has experienced between 2007- 2016”

Van Laarhoven et al. (2018)

Methodology

- **ex-post policy analysis framework** proposed by the European Training Foundation (ETF).

Steps in the ETF Policy Analysis Process



Assessment Framework: Framing and understanding the problem

Pillar: Protecting nature in the EU	1) Create and integrate ecological corridors as part of a Trans-European Nature Network to prevent genetic isolation, allow for species migration and to maintain and enhance healthy ecosystems.
	2) Effectively manage all protected areas, defining clear conservation objectives and measures, and monitoring them appropriately
Pillar: Restoring nature in the EU	3) Reverse the decline of pollinators
	4)Reduce the use of chemical pesticides by 50% and reduce the use of more hazardous pesticides by 50%.
	5)Ensure that at least 10% of agricultural area is under high-biodiversity landscape features
	6)Place at least 25% of agricultural land under organic farming management, and significantly increase the uptake of agro-ecological practices
	7)Reduce the loss of nutrients from fertilisers by 50%, resulting in the reduction of fertilizer use by at least 20%.
	8)Make significant progress in remediating contaminated soil sites

Table: Relevant Key Commitments of the EU Biodiversity Strategy for 2030 for the Agricultural Sector

- How does the national policy framework of the Dutch and Swedish dairy industry matches the EU Biodiversity Strategy 2030 targets?

Interpreting (analysing) the evidence

- policies are compared to their relating Key commitments and categorized under Inferior, Equal, or Superior.

Evaluation Category	Definition
Inferior	A national policy is inferior to the EU Biodiversity Strategy for 2030 if less ambitious targets are explicitly formulated. A national policy is also considered inferior if the country explicitly mentioned it will not try or be able to reach EU-wide targets.
Equal	A national policy is equal to the EU Biodiversity Strategy for 2030 if they refer to EU-wide policies or formulate the exact same targets.
Superior	A national policy is superior to the EU Biodiversity Strategy for 2030 if more detailed or higher targets are formulated. A national policy is also considered superior if more ambitious targets are legally binding.

Table: The Evaluation categories and their definitions

02

Case Studies

1. Dutch Dairy sector
2. Swedish Dairy sector

Why THE NETHERLANDS?

- Largest industry of the country
- Decrease biodiversity of 50%
- Industry will only grow

Dutch's Policy Framework

Implemented Policy Instruments by the Government	Industry Policies
Rural Development Programs (RDP)	BBM
Common Agriculture Policies (CAP)	Biodiversity monitor
Integrated Environmental and Planning Act (2019)	Meadow birds Preservation plan
Natura 2000	
Dutch manure policy	
GAEC	
ANLB	

→ Compensation focused on dairy

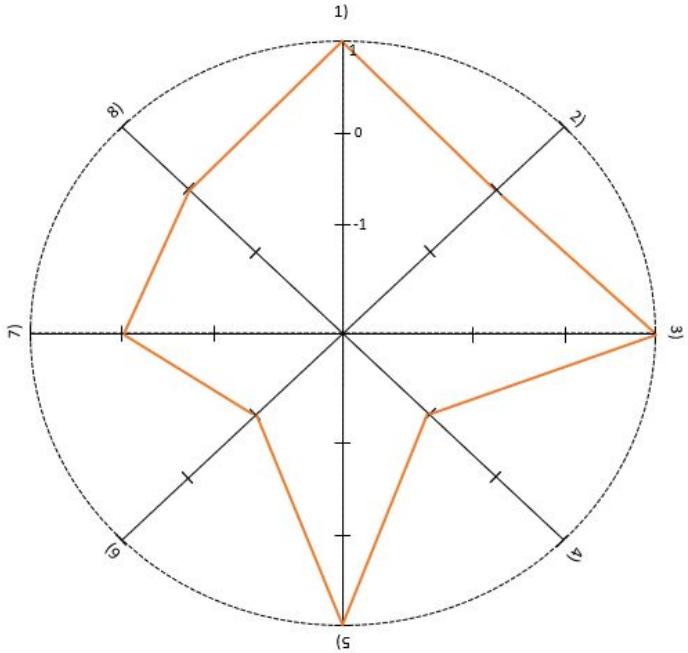
→ Compensation for agriculture

Compare Key commitments to National-level

EU Key Commitments	Dutch Policy Framework
1. Create & Integrate national corridors	• Dutch National Ecological Network aims to span 728 500 hectares by 2025 • 2011-2027 the provinces will convert at least 80,000 hectares to new nature to complete the network
2. Effective Management & clear conservation objectives	• Natura 2000
3. Reverse the decline of pollinators	NL Pollinator Strategy
4. Reduce of chemical & Hazardous pesticides by 50%	• Natura 2000 sites protected in accordance with Directives 79/409/EEC and 92/43/EEC; • Phosphate rights dairy cattle Act
5. At 10% of agriculture under biodiversity landscape features	• 2018, 11% of Dutch Agricultural Land was covered by the Natura 2000 Network.
6. At least 25% under organic farming management	• Dutch organic sector should develop into a robust and independent sector, with a market share that increases by 10 % annually
7. Reduce loss of nutrients from fertilizers by 50%	• June 20, **regular Administrative Consultation** was established between my ministry and various agricultural parties.
8. Significant Progress in remediating contaminated Soil sites	• Soil Protection Act

NATURA 2000

Compare Key commitments to National Level



1	Superior
0	Equal
-1	Inferior

WHY SWEDEN?

- Averaging at 9,500 kg of milk per cow, Swedish dairy farmers have **highest milk yields in Europe**
- **Geographical region** of Sweden's Milk belt
- Sweden ranked second in the UN Sustainable Development Report and the Global Innovation Index, and topped the Global Sustainable Competitiveness Index

European Commission (2020)

Sweden's Policy Framework

Implemented Policy Instruments by the Government	Industry Policies
Rural Development Programs (RDP)	KRAV
Common Agriculture Policies (CAP)	Greppa Näringen – Focus on Nutrients
Swedish Environmental Code (Chapter 7, 11)	The Climaker
Swedish Climate Policy Framework	
Swedish Rural Network	
Advice on plant nutrients – "Greppa näringen"	
Aid for manure gas	
Natura 2000	
Swedish EPA	
GAEC	

KRAV

NATUR VÅRDS VERKET

SWEDISH ENVIRONMENTAL PROTECTION AGENCY

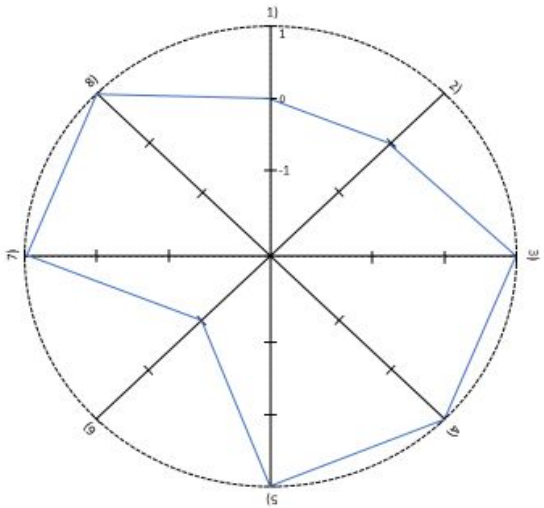
Compare Key Commitments to National- Level

EU Key Commitments	Swedish Policy Framework
1. Create & Integrate national corridors	• GAEC 7
2. Effective Management & clear conservation objectives	• Natura 2000
3. Reverse the decline of pollinators	Willing on Pollinators
4. Reduce of chemical & Hazardous pesticides by 50%	• Sweden's Targets for 2030: NO3 49Gt (still 10% away) & NOx 49Gt (still 49% away) • Climate action Plan & RDP: Emissions of nitrous oxide from agricultural land can be reduced if fertilizer inputs are adapted to the expected nutrient needs, harvest levels of the crops and the expected nitrogen delivery of the land • Increased resource-efficiency and higher productivity reduce emissions of methane per produced unit.
5. At 10% of agriculture under biodiversity landscape features	• Environmental Code, Ch. 7 • RDP: 19% of farmland shall be under biodiversity protection

6. At least 25% under organic farming management	• RDP & Climate Action Plan: 18% Organic farm land • KRAV (*Contribution to national policies*)
7. Reduce loss of nutrients from fertilizers by 50%	• Swedish Board of agriculture; *Federation of Swedish farmers; Environmental support schemes*: reduce nutrient loss
8. Significant Progress in remediating contaminated Soil sites	• Water management (leakage of polluted water included): 13.41 % of agricultural land under contracts • Soil erosion and management: 16.27 % of agricultural land under contracts

Evaluation

1	Superior
0	Equal
-1	Inferior



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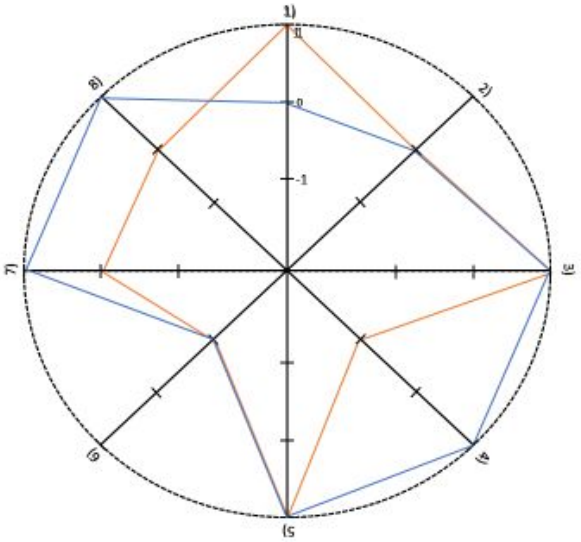
Conclusion


1)
2)
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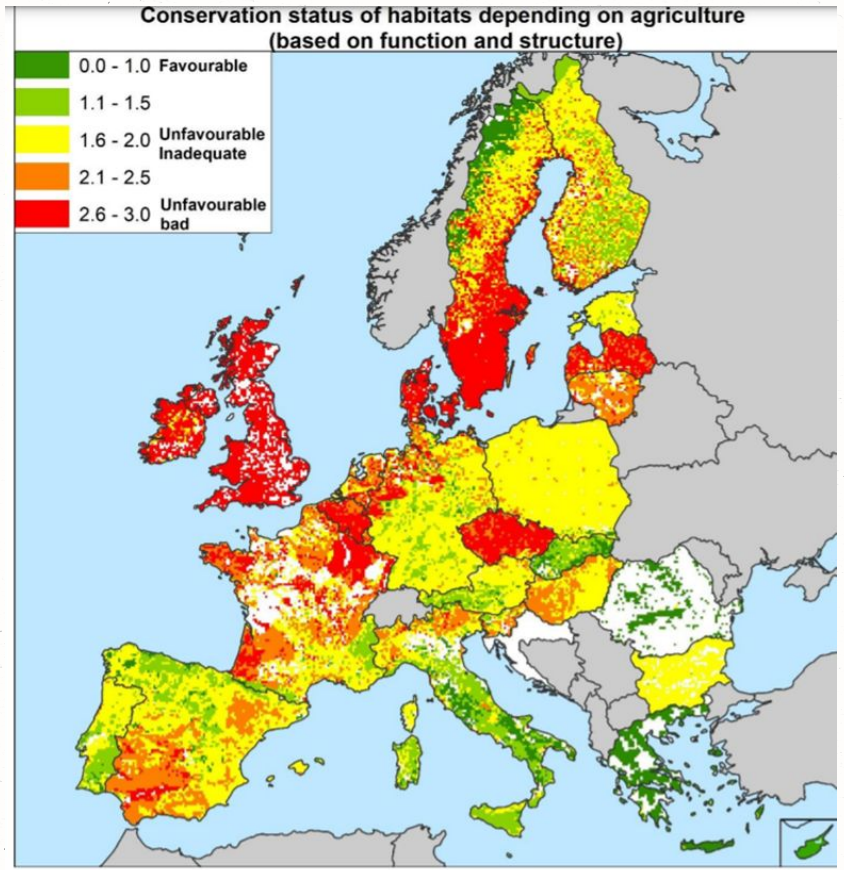
1
0
-1


Conservation status of habitats depending on agriculture
(based on function and structure)
0.0 - 1.0 Favourable
1.1 - 1.5
1.6 - 2.0 Unfavourable Inadequate
2.1 - 2.5
2.6 - 3.0 Unfavourable bad

Thank You for your attention!
Any Questions?

Resources

•*EU Biodiversity strategy*. (2022). EU Biodiversity Strategy. https://biodiversity.europa.eu/countries/sweden/eu-biodiversity-strategy

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