



Nexus Assessment: Enabling biodiversity – food synergies

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The Intergovernmental Science-Policy Platform
on Biodiversity & Ecosystem Services




Food and Agriculture
Organization of the
United Nations



Many response options benefit multiple nexus elements

 **Blue dots = positive impacts**
 **Red dots = negative impacts**
 = no impact
 IC = inconclusive
 NE = no evidence

Conserve ecosystems
 Restore ecosystems
 Manage ecosystems
 Consume sustainably
 Reduce pollution

Response option						
Conserve ecosystems	B01 Area-based conservation	•	•	•	•	•
	F01 Halt conversion of ecosystems of high ecological integrity	•	•	•	•	•
	H10 Forest conservation for health	•	•	•	•	•
	B05 Forest landscape restoration	•	•	•	•	•
	B06 Restoration of coastal and marine systems	•	•	•	•	•
	B07 Restoration of inland water systems	•	•	•	•	•
	B08 Rewilding	•	•	•	•	•
	F02 Restore soil health	•	•	•	•	•
	H08 Mangrove conservation and restoration for health	•	•	•	•	•
	C04 Wetland conservation and restoration	•	•	•	•	•
Restore ecosystems	C13 Restoration of coastal and marine ecosystems for carbon sequestration	•	•	•	•	•
	B03 Agroecology*	•	•	•	•	•
	C11 Sustainable inland fisheries	•	•	•	•	•
	W05 Manage alien species	•	•	•	•	•
	W11 Ecological intensification - croplands	•	•	•	•	•
	F04 Ecological intensification - rangelands	•	•	•	•	•
	F05 Ecological intensification - aquatic foods	•	•	•	•	•
	F06 Increase soil organic carbon	•	•	•	•	•
	C01 Integrated multi-trophic aquaculture	•	•	•	•	•
	C03 Forest-based practices to address climate change	•	•	•	•	•
Manage ecosystems	C12 Efficient water use in agriculture	•	•	•	•	•
	W04 Reduce food loss and waste	•	•	•	•	•
	F10 Sustainable healthy diets*	•	•	•	•	•
	F11 Sustainable use of medicinal plants	•	•	•	•	•
	H04 Reduce meat overconsumption	•	•	•	•	•
	H06 Offshore wind power	•	•	•	•	•
	C06 Solar photovoltaics on land	•	•	•	•	•
	C07 Sustainable bioeconomy	•	•	•	•	•
	W12 Manage wastewater	•	•	•	•	•
	F07 Reduce nutrient pollution	•	•	•	•	•
Consume sustainably	F08 Reduce pesticide pollution	•	•	•	•	•
	F09 Reduce plastic pollution	•	•	•	•	•
	H07 Pollution prevention	•	•	•	•	•
	C02 Sustainable intensification*	•	•	•	•	•
	F03 Reduce short-lived climate pollutants	•	•	•	•	•
	C08	•	•	•	•	•
	W06 Inclusive water management	•	•	•	•	•
	W07 Rights of nature	•	•	•	•	•
	W14 Address gendered burdens of water collection	•	•	•	•	•
	F14 Foster gender transformative approaches	•	•	•	•	•
Reduce pollution	F15 Indigenous food systems	•	•	•	•	•
	F16 Access to natural resources and land	•	•	•	•	•
	H01 Universal health coverage	•	•	•	•	•
	H02 Intercultural health services	•	•	•	•	•
	B13 Natural capital accounting	•	•	•	•	•
	W10 Finance for water infrastructure	•	•	•	•	•
	F13 Reform public spending	•	•	•	•	•
	C10 Global cooperation for finance and technology	•	•	•	•	•
	B11 Multilateral environmental agreements	•	•	•	•	•
	B14 Reconnecting people with nature	•	•	•	•	•
Average impact score		Positive impact	Negative impact			

Nexus elements

-  **Biodiversity**
-  **Water**
-  **Food**
-  **Health**
-  **Climate change**

Integrate planning and governance
 Manage risk
 Ensure rights and equity
 Align financing
 Others

Figure SPM.8






Biodiversity response options positively impact the nexus elements

- Based on available evidence, **nearly all impacts** of biodiversity response options on the nexus elements are **positive**
- Multiple nexus element benefits** for a given option
- Minimal to no trade-offs** between elements for a given option

● Blue dots = positive impacts

● Red dots = negative impacts


— = no impact
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B01	Area-based conservation	●	●	●	●	●
B02	Urban nature-based solutions*	●	●	●	●	●
C14						
B03	Agroecology*	●	●	●	●	●
C11						
B04	Ecosystem-based adaptation in rural landscapes	●	●	●	●	●
B05	Forest landscape restoration	●	●	●	●	●
B06	Restoration of coastal and marine systems	●	●	●	IC/NE	●
B07	Restoration of inland water systems	●	●	●	●	●
B08	Rewilding	●	●	●	●	●
B09	Integrated landscape and seascape approaches	●	●	●	●	●
B10	Rights-based approaches	●	●	●	●	●
B11	Multilateral environmental agreements	●	●	●	●	●
B12	Land and sea planning	●	●	●	●	●
B13	Natural capital accounting	●	●	—	●	●
B14	Reconnecting people with nature	●	●	●	●	●

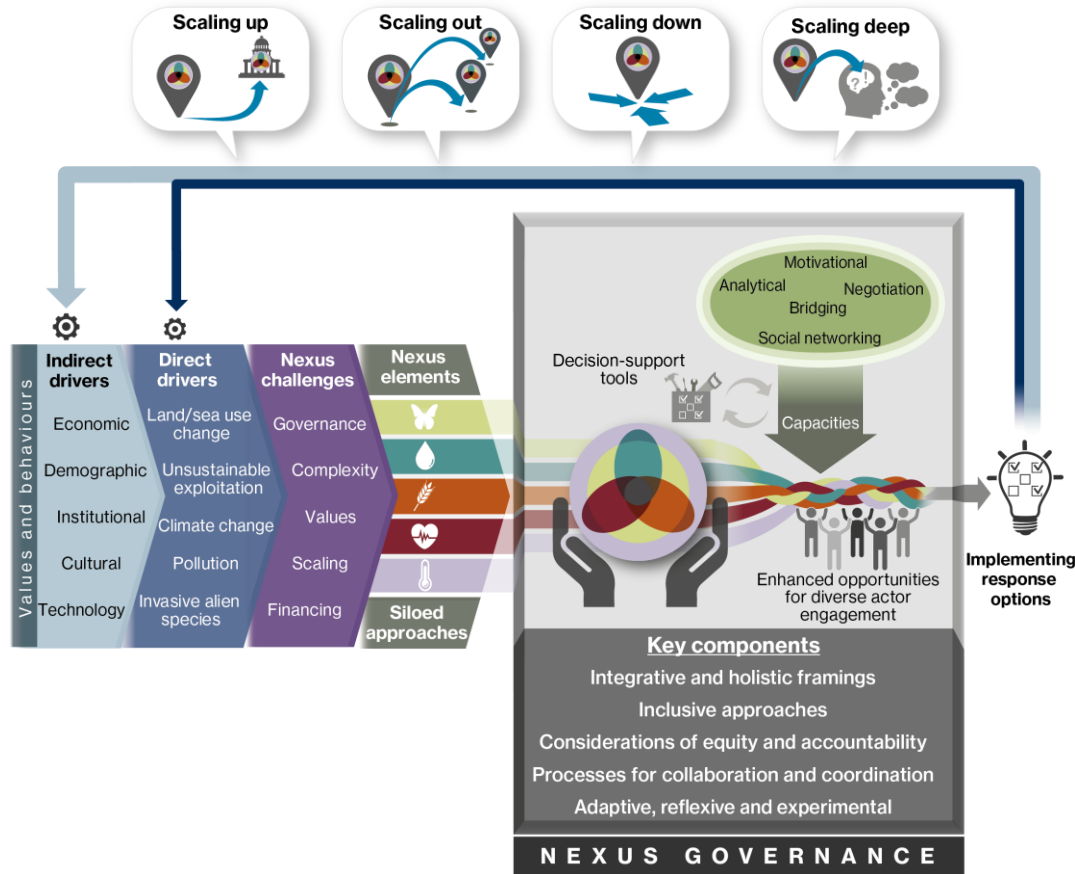
Case study: Herenboeren community-supported farms, The Netherlands

- **Agroecological practices (e.g., agroforestry) support:**
 - Better income, food and nutrition security
 - Improved soil health and soil organic carbon
 - Conservation of biodiversity and ecosystem services
 - Climate change adaptation and mitigation
- **Herenboeren community-supported farms:**
 - Builds stronger consumer-farmer partnerships
 - Produces healthy, sustainable, nature-based food
 - Uses agroforestry, short value chains and circular agriculture
 - Enhances soil quality and biodiversity
 - Aims to scale form 8 farms -> 80+ across Europe



					
B03 Agroecology*	●	●	●	●	●
F02 Restore soil health	●	●	●	●	●
F11 Sustainable healthy diets*	●	—	●	●	●

Scaling helps accelerate the adoption, implementation and amplification of response options



Nexus governance approaches support the implementation of response options by enabling integrated, inclusive, equitable and adaptive policies and actions



Figure SPM.11

Transformation of economic and financial systems support implementation of response options

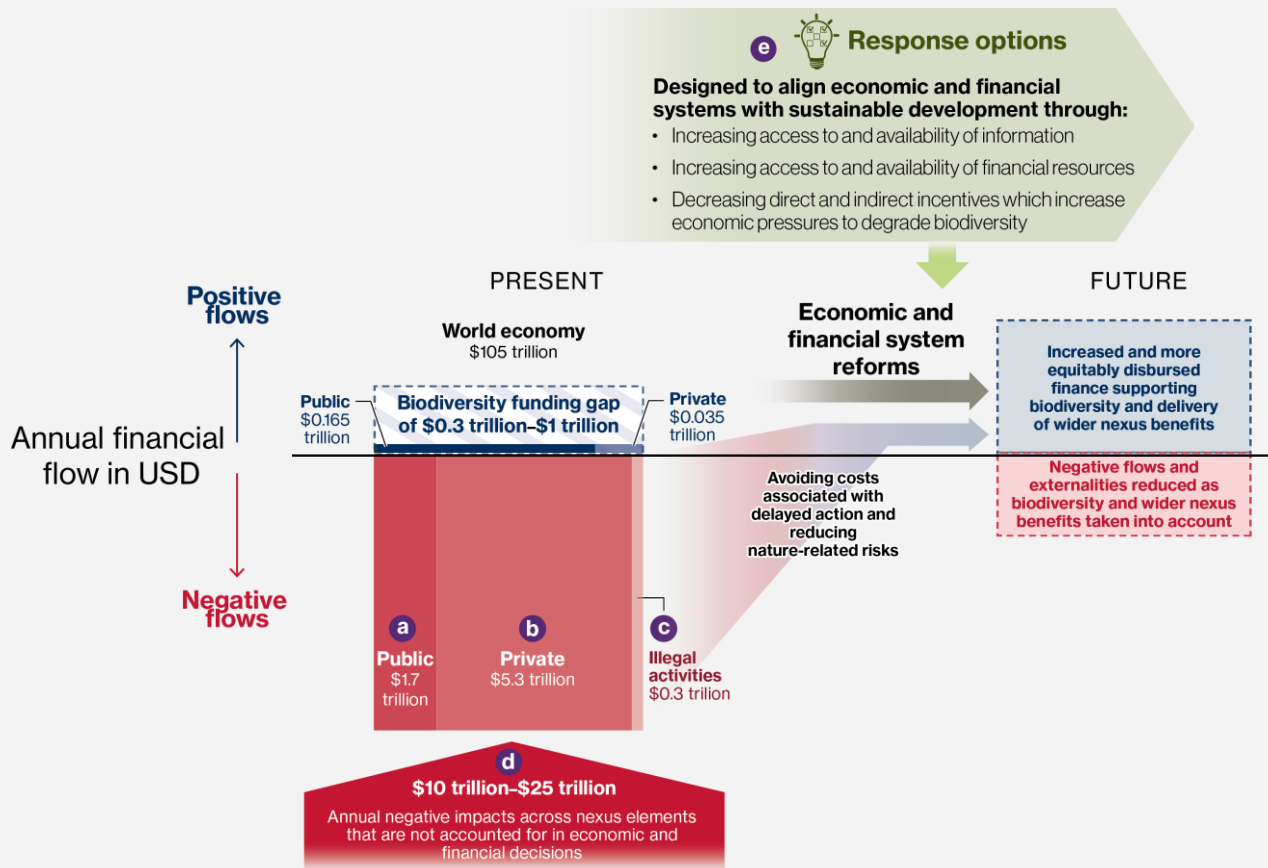


Figure SPM.12

Conclusions

- **Biodiversity** is essential for our water and food supplies, our health and wellbeing, the stability of our climate and our economy
- A wide range of **response options are available now** for tackling our crises together
- Many response options that have **high benefits for biodiversity** are mainly managed or designed by other sectors, highlighting importance of **mainstreaming biodiversity considerations**
- **Evidence and tools are available** to support decision-makers in developing integrated decisions and actions
- **Economic, financing and governance systems need to evolve towards holistic and integrated approaches** to help resources flow towards supporting and restoring biodiversity and related co-benefits across nexus elements





#NexusAssessment

Thank you!
¡Gracias!
Merci!

**Find the Summary for
Policymakers here:**



For further information:
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