ISAP 2025
International Forum for Sustainable Asia and the Pacific

How do Socio-Ecological Production Landscapes and Seascapes (SEPLS) promote the Nexus Approach? - Integrating theory and practice

IGES Institute for Global Environmental Strategies

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環境省 Ministry of the Environment Government of Japan

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Opening Remarks

IGES Institute for Global Environmental Strategies

Kazuhiko Takeuchi, Dr., President, IGES

SATOYAMA INITIATIVE

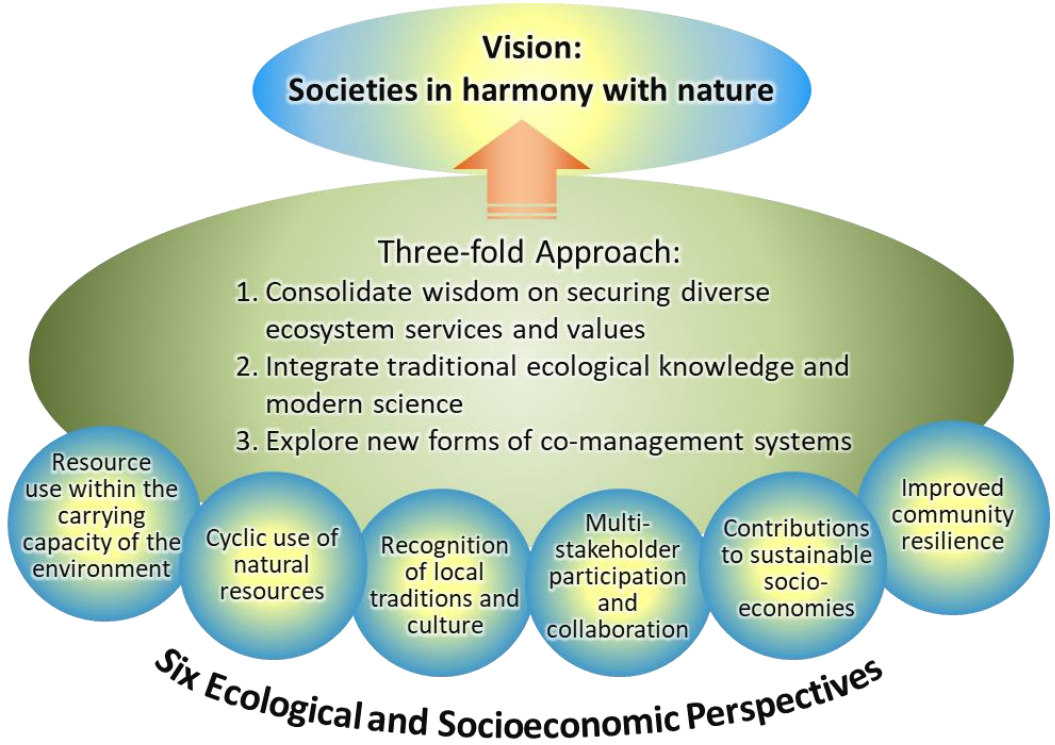

Figure 1. Conceptual Diagram of the Satoyama Initiative.
IPSI. Retrieved from
https://satoyamainitiative.org/concept/satoyama-initiative/

- The Initiative was proposed at CBD COP10
- The Proponents of the Initiative

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- A global effort to realise societies in harmony with nature based on a model of Satoyama.

International Partnership for the Satoyama Initiative (IPSI)

- Promote the work of the Initiative and knowledge sharing
- Members from around the world, including public, private and grass-roots organisations
  - 51 organisations joined as founding members
  - 343 organisations (as of August 2025)
- IPSI Collaborative activities
  - A mechanism for strengthening collaboration and synergies among member organizations under IPSI

The Secretariat is hosted by

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Satoyama Development Mechanism (SDM)

- A financing mechanism to facilitate the implementation of activities under IPSI.

- Established in 2013 jointly by

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- 69 projects in 29 countries have been funded until now

Figure 2. Vision and mission of SDM

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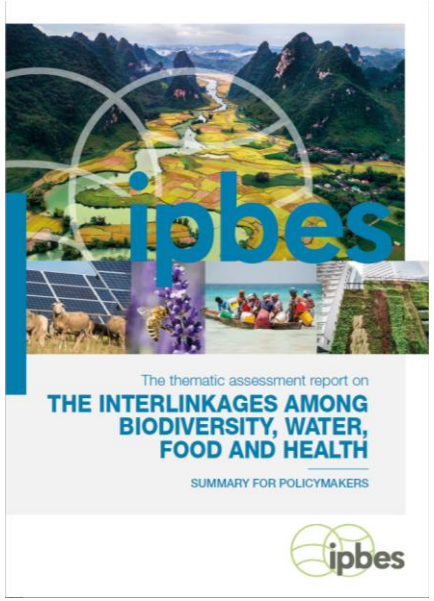
Framing of the session

Koji Miwa, Research Manager,
Biodiversity and Ecosystem Services Unit

IGES Institute for Global Environmental Strategies

Background of the session

- We are facing the environmental crises, climate change, biodiversity loss and pollution.
- Nature is the basis of our life, thus halting the trend of declining of nature is an urgent task (transformative change).
- At IPBES-11 in December 2024, the Nexus and Transformative Change assessments were adopted.
- The nexus approach is considered a way of transformation to tackle the complicated interconnection between human and nature.
- This session will discuss how landscape approaches, especially Satoyama and Satoumi, or Socio-ecological Production Landscapes and Seascapes (SEPLS) embody the nexus approach.



IPBES “Nexus” Assessment adopted at IPBES-11 in Dec. 2024

Landscape approach and SEPLS

- It takes an integrated view of the relationship between society, culture and ecosystems, and emphasizes elements such as the involvement of diverse stakeholders and regional autonomy.
- Secondary natural areas that Japanese people regard as satoyama or satoumi
  - Places where people and nature coexist in harmony, contributing to the maintenance of biodiversity while sustainably supporting people's lives and prosperity.

Socio-Ecological Production Landscapes and Seascapes (SEPLS)

- Satoyama or Satoumi are places that were traditionally formed through the practice of sustainable agriculture, forestry and fisheries in Japan, resulting in people living in harmony with nature.
- Human production activities are part of ecosystems providing ecosystem services
- Similar forms are also found in other parts of the world
- The term, “Socio-ecological Production Landscapes and Seascapes (SEPLS)” was produced from a scientific point-of-view.


Photo by Yasuo Takahashi

Definition of SEPLS

- Defined as
  - "Dynamic mosaics of managed socio-ecological systems producing a bundle of ecosystem services for human well-being."
  - The landscapes are managed with a mix of traditional knowledge and modern science
  - Biodiversity is a key element for the resilience and function of the landscapes and seascapes

- Interaction between people and the landscape maintains or enhances biodiversity while providing humans with the goods and services needed for their well-being.

Figure 3. Conceptual diagram of Satoyama(JSSA, 2010)

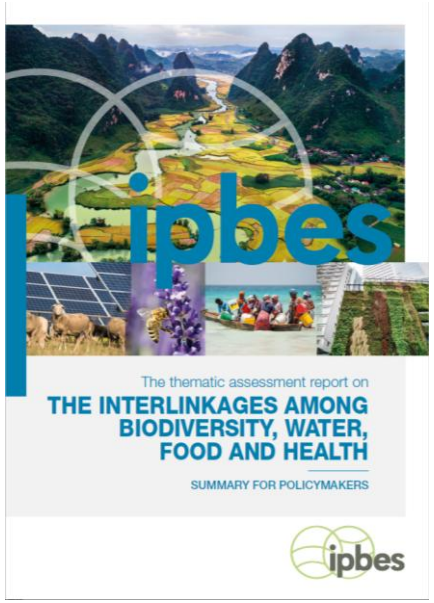
Figure 4. Conceptual diagram of Satoumi (JSSA, 2010)

Why “Nexus”?

- There is a need to understand and address “the complex and interconnected character of the crises and challenges of biodiversity loss, water availability and quality, food insecurity, health risks and climate change”.

- “decisions to address them are often taken in isolation, resulting in potential misalignment, unplanned trade-offs and/or unintended consequences.

- Nexus approaches recognize that challenges within each element are interconnected with other elements across multiple spatial and temporal scales”.



IPBES (2024). Summary for Policymakers of the Thematic Assessment Report on the Interlinkages among Biodiversity, Water, Food and Health of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. McElwee, P. D., Harrison, P. A., van Huysen, T. L., Alonso Roldán, V., Barrios, E., Dasgupta, P., DeClerck, F., Harmáčková, Z. V., Hayman, D. T. S., Herrero, M., Kumar, R., Ley, D., Mangalagiu, D., McFarlane, R. A., Paukert, C., Pengue, W. A., Prist, P. R., Ricketts, T. H., Rounsevell, M. D. A., Saito, O., Selomane, O., Seppelt, R., Singh, P. K., Sitas, N., Smith, P., Vause, J., Molua, E. L., Zambrana-Torrelio, C., and Obura, D. (eds.). IPBES secretariat, Bonn, Germany. DOI: 10.5281/zenodo.13850289.

What is the Nexus Approach?

Nexus: The interlinkages among two or more elements, sectors or systems.

Nexus approaches: Understanding the interlinkages and interdependencies between sectors and systems in a holistic manner to develop integrated and adaptive decisions that aim to maximize synergies and minimize trade-offs.

⇔Siloed approaches: Address issues in isolation and without regard to interlinkages

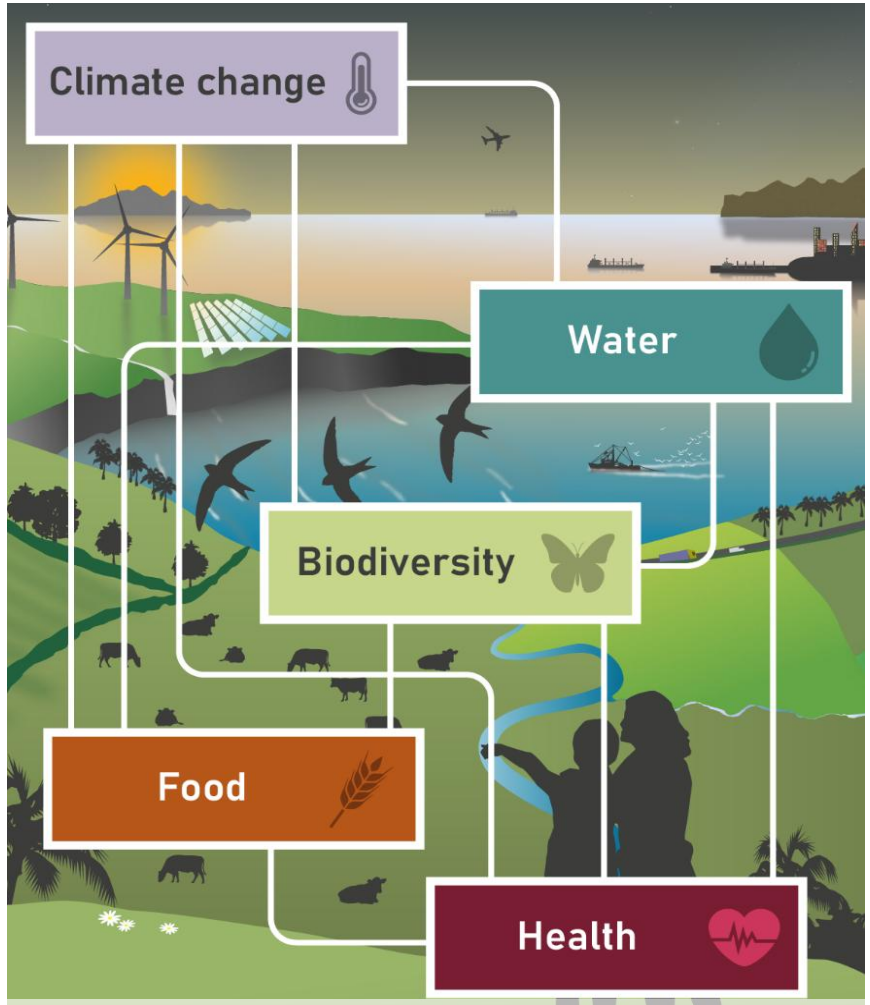


Figure 5. Nexus elements. From Figure SPM.1. Key concepts and definitions, used in the nexus assessment by IPBES, 2024, "IPBES Nexus Assessment Report SPM". DOI: 10.5281/zenodo.13850289.

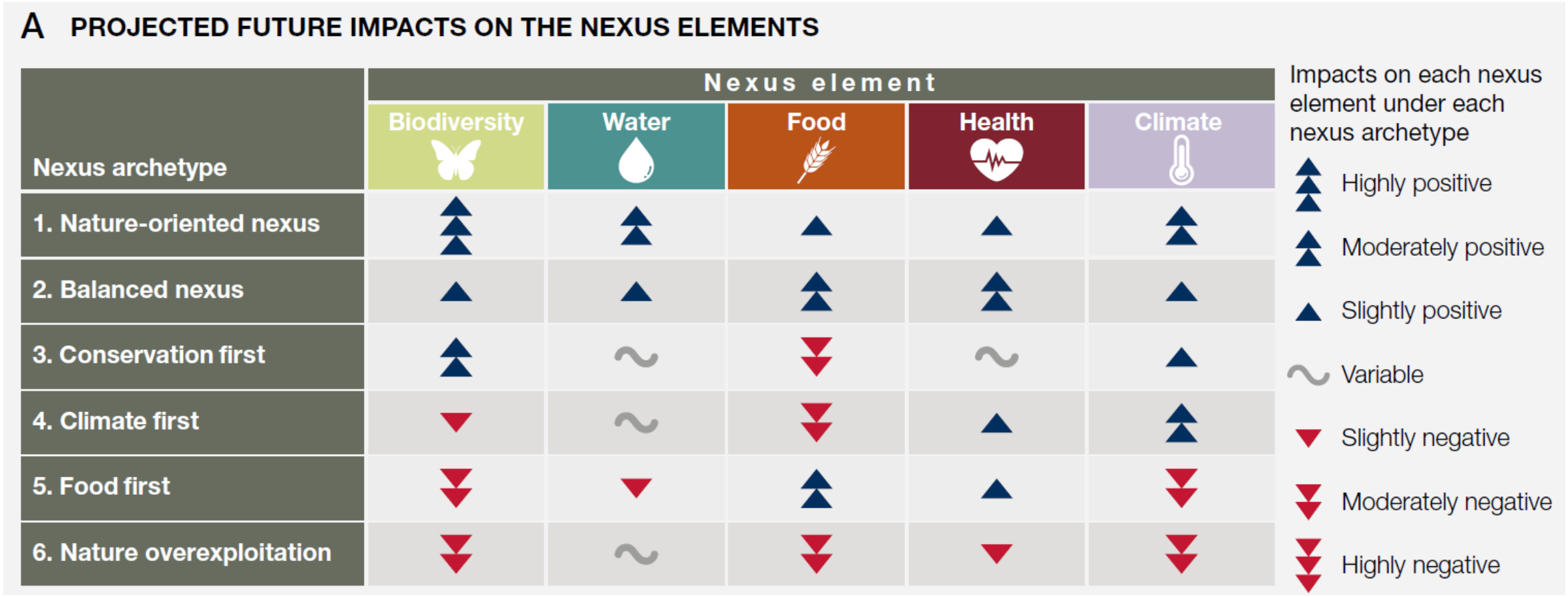


Figure 6. Interactions among nexus elements for each nexus archetype. From Figure SPM 5. Projected future impacts of nexus scenario archetypes on the nexus elements and their interactions, used in the nexus assessment by IPBES, 2024, "IPBES Nexus Assessment Report SPM". DOI: 10.5281/zenodo.13850289.

Nexus Governance

- **Challenges** for governing the nexus include:
  - Navigating socioecological complexity to address fragmented and sectoral decision-making;
  - Multiple and diverse values;
  - Insufficient, inaccessible and unpredictable finance; and
  - Inadequate and inappropriate scaling of actions.

- Policies, institutions and actions that provide an alternative to current siloed approaches and address indirect drivers through:
  - **integrative, holistic and transdisciplinary framings** of problems and solutions;
  - **inclusive approaches** that bring about enhanced opportunities for **diverse actor engagement**;
  - considerations of **equity and justice, alongside accountability**;
  - enhanced mechanisms and processes for **collaboration and coordination across scales and sectors**; and
  - **adaptive, reflexive and experimental approaches** to learn from successes and to scale these solutions

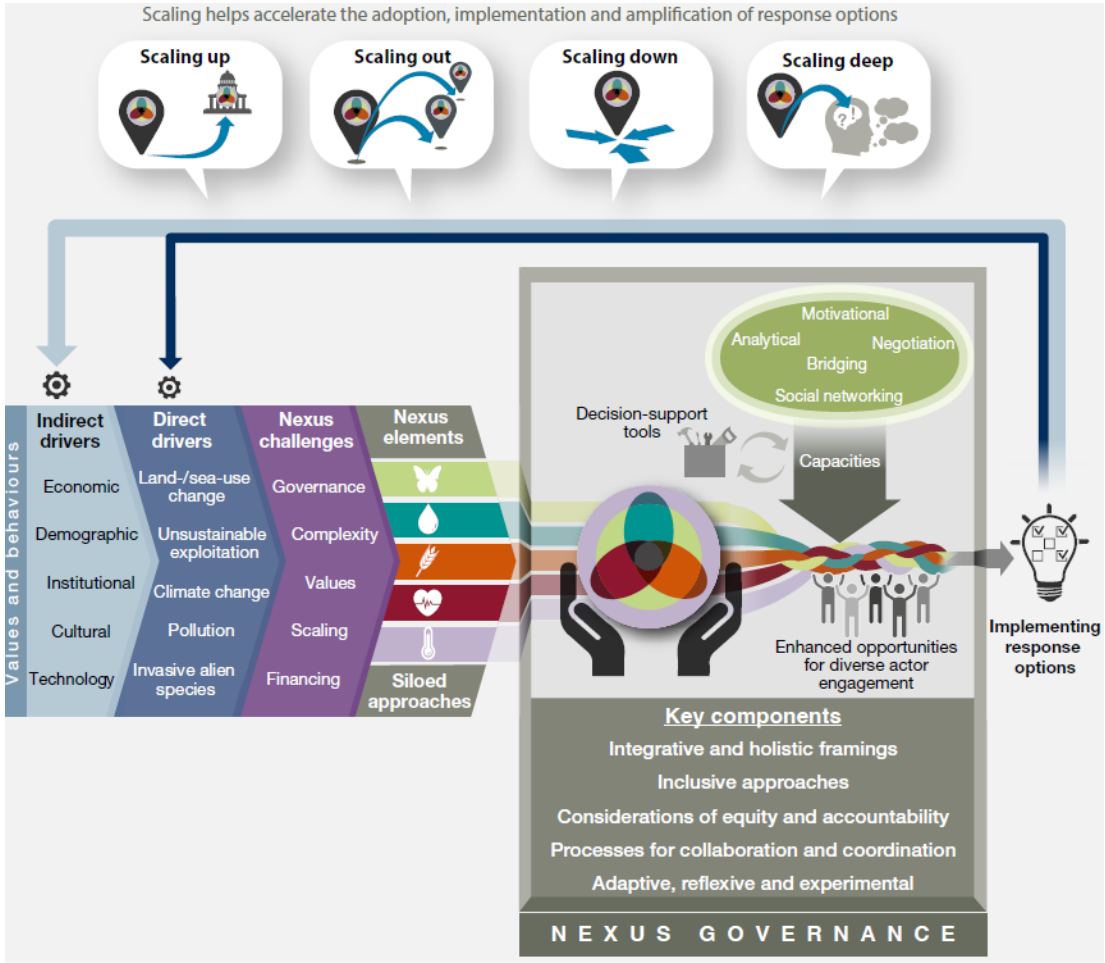
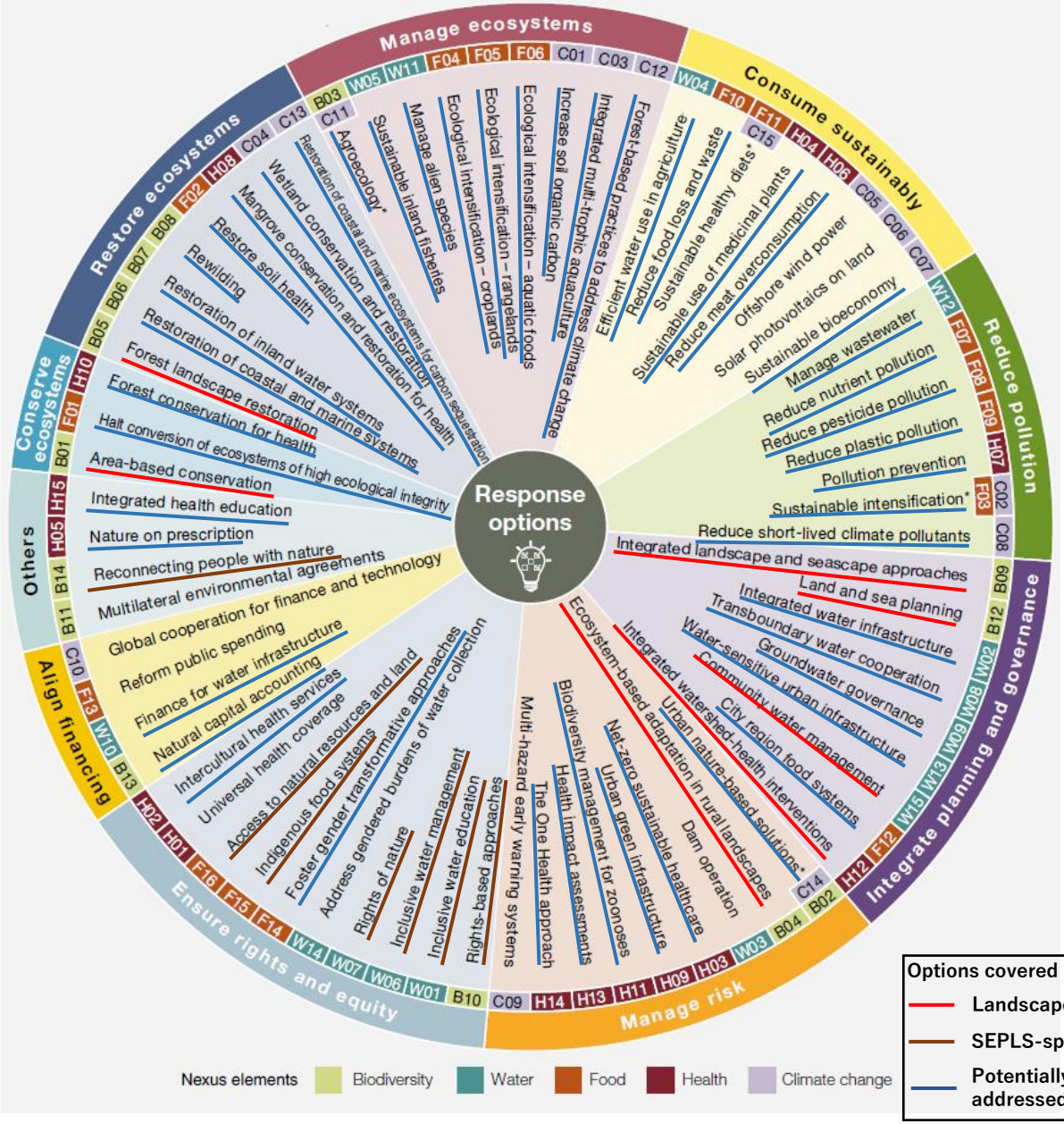


Figure 7. Nexus governance. From Figure SPM 11. Nexus governance addresses the challenges associated with governing interactions across multiple elements, including implementing response options to influence the impact of direct and indirect drivers, used in the nexus assessment by IPBES, 2024, "IPBES Nexus Assessment Report SPM". DOI: 10.5281/zenodo.13850289.



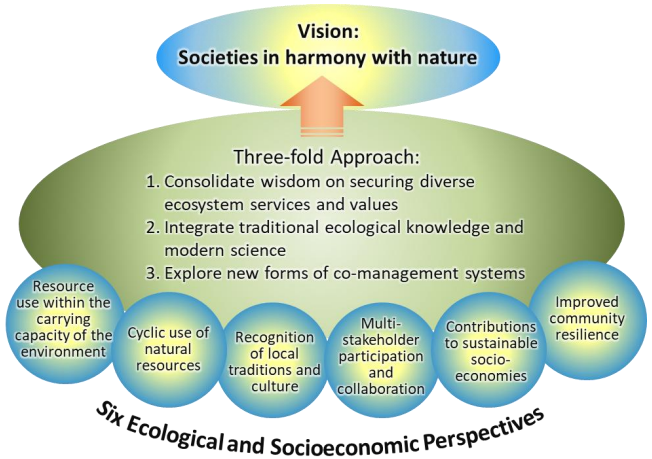
Nexus 'Response Options' and SEPLS

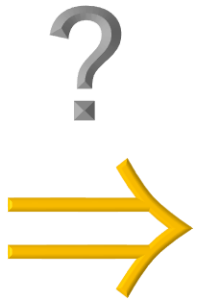
- Address specific objectives, challenges or opportunities in the governance and management of these interactions among nexus elements.
- 71 response options were identified
- Landscape approach in a broad sense:
  - Integrated landscape and seascape approaches
  - Land and sea planning
  - Community water management
  - Integrated watershed-health interventions
  - Forest landscape restoration
  - Area-based conservation
  - Ecosystem-based adaptation in rural landscapes
- SEPLS will contain:
  - Reconnecting people with nature
  - Access to natural resources and land
  - Indigenous food systems
  - Rights of nature
  - Inclusive water management
  - Inclusive water education
  - Rights-based approaches
- And more options SEPLS can potentially cover depending on the context

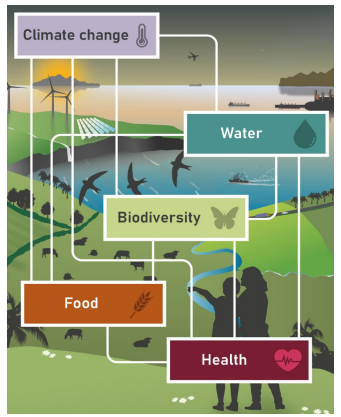
Figure 8. SEPLS and Nexus response options. Adapted from Figure SPM 7. Many response options already exist that a range of actors can implement, used in the nexus assessment by IPBES, 2024, "IPBES Nexus Assessment Report SPM". DOI: 10.5281/zenodo.13850289.

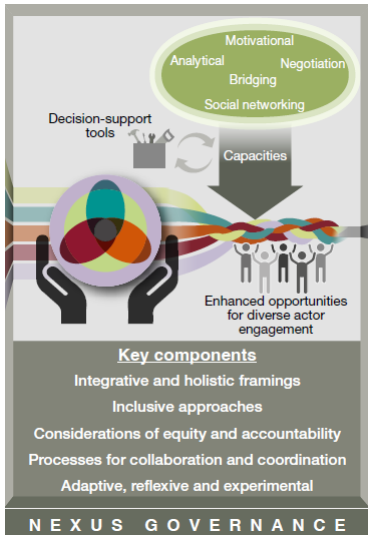
Case Study Presentations

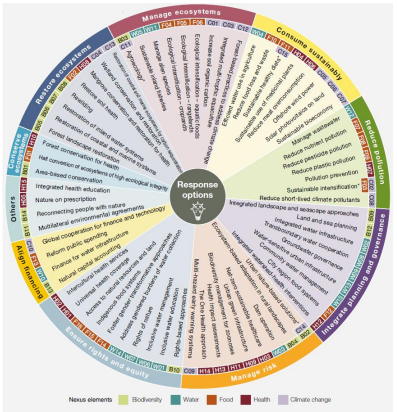
- Project cases from IPSI members:
  - Cases from those recently completed the SDM projects
  - Presentations include:
    - SEPLS of the project site and issues including the nexus elements addressed by the project;
    - Response options corresponding to the activities of this project;
    - If and how the nexus governance approach was promoted;
    - Outcome of the project; and
    - Others including ways-forward and success stories, etc.











Case Study Presentations

1. "*Safeguard the Ecological Integrity of the Atewa Forest Reserve through the Adoption of Best Conservation and Agricultural Practices*"
   - **Conservation Alliance International (CAI), Ghana**

Mr. Yaw Osei-Owusu,
Executive Director,
Conservation Alliance International (CAI), Ghana

Ms. Pamela Owusuwaa,
National Project Coordinator,
Conservation Alliance International (CAI), Ghana

2. "*Developing a sustainable socio economy through the restoration of Sacred groves of Malaiyali community in Kalrayan hills of South India*"
   - **Vellore Institute of Technology (VIT), India**

Dr. Siva Ramamoorthy,
Professor,
Vellore Institute of Technology (VIT), India

Panel Discussion

1. Panelists

Dr. Diana Mangalagiu, Professor, the University of Oxford, UK

Dr. Osamu Saito, Programme Director, Biodiversity and Ecosystem Services Unit, IGES, Japan

Mr. Yaw Osei-Owusu, Executive Director, Conservation Alliance International (CAI), Ghana

Ms. Pamela Owusuwaa, National Project Coordinator, Conservation Alliance International (CAI), Ghana

Dr. Siva Ramamoorthy, Professor, Vellore Institute of Technology (VIT), India

2. Discussion/Questions

- Impressions and thoughts from the Nexus CLAs (Osamu and Diana)
- Questions for the case presenters (from the panelists and viewers)
- What are the main challenges to applying landscape approaches (e.g. involvement of multiple stakeholders, support from the governments at all levels, short-term economic prioritization, political instability)?
- What are the important enablers to trigger the changes when using the SEPLS approach?


ご清聴ありがとうございました。
Thank you very much for your attention.
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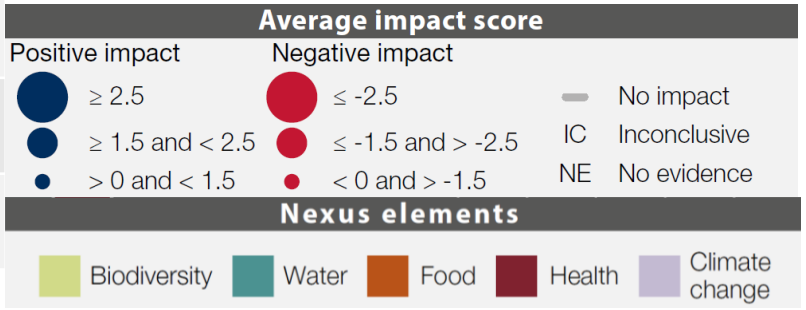
Annex I. Conceptual compatibility between Nexus ‘Response Options’ and SEPLS

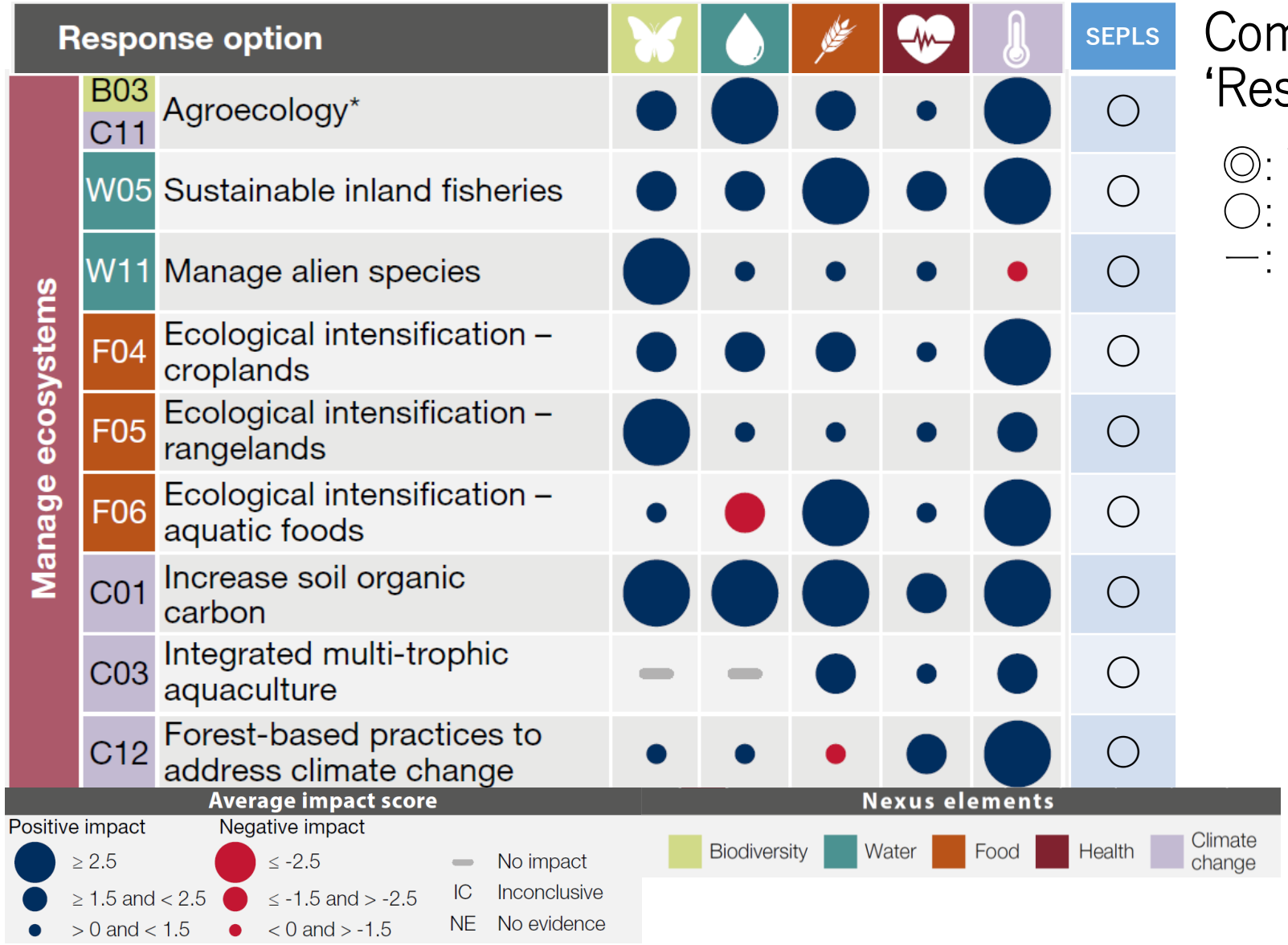
- Conducted by expert judgement

		Response option	SEPLS
Conserve ecosystems	B01	Area-based conservation	◎
	F01	Halt conversion of ecosystems of high ecological integrity	○
	H10	Forest conservation for health	○
Restore ecosystems	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	○
	C13	Restoration of coastal and marine ecosystems for carbon sequestration	○



Compatibility between Nexus 'Response Options' and SEPLS

◎: Yes
○: Potentially yes
—: No



Compatibility between Nexus 'Response Options' and SEPLS

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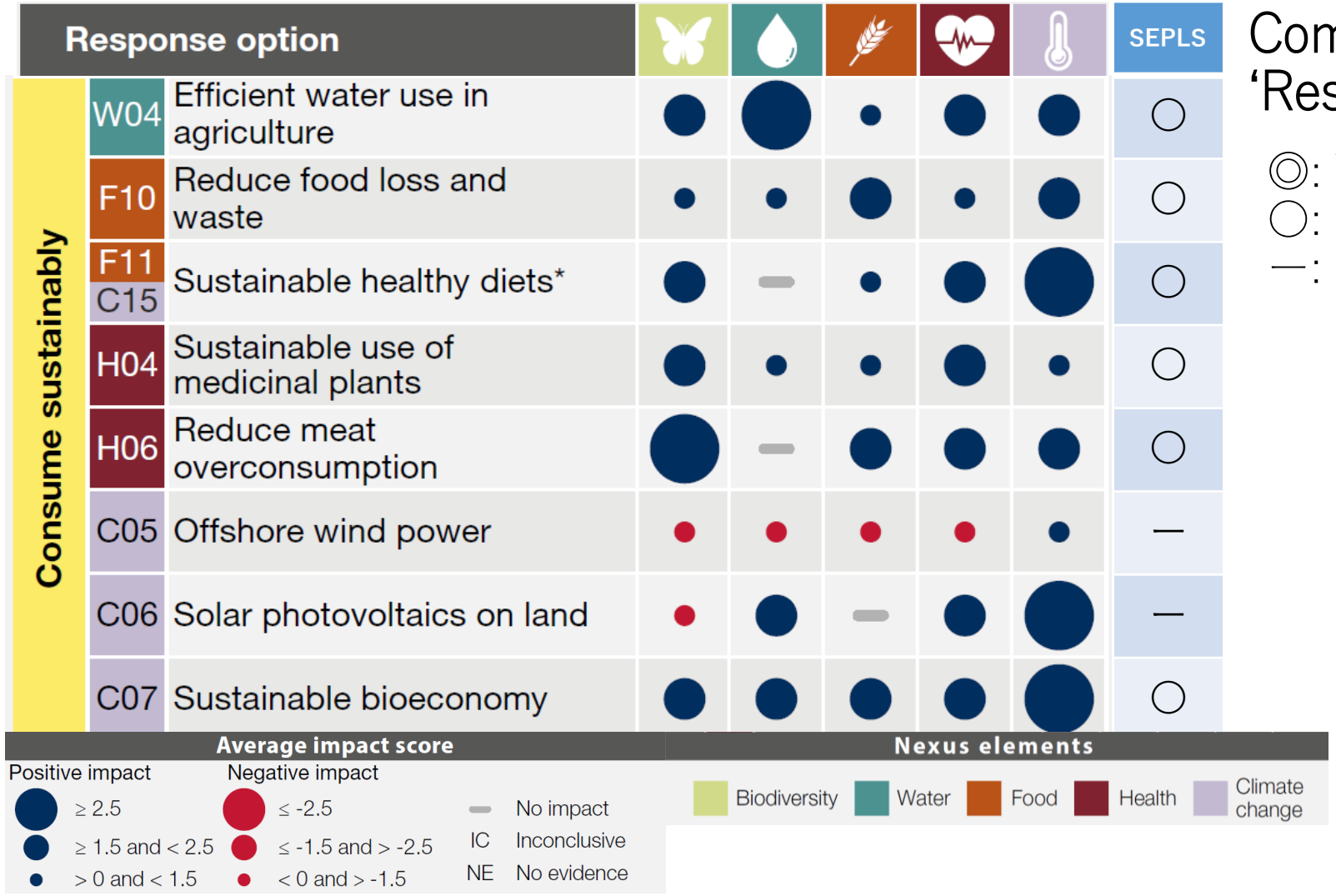
—: No



Compatibility between Nexus 'Response Options' and SEPLS

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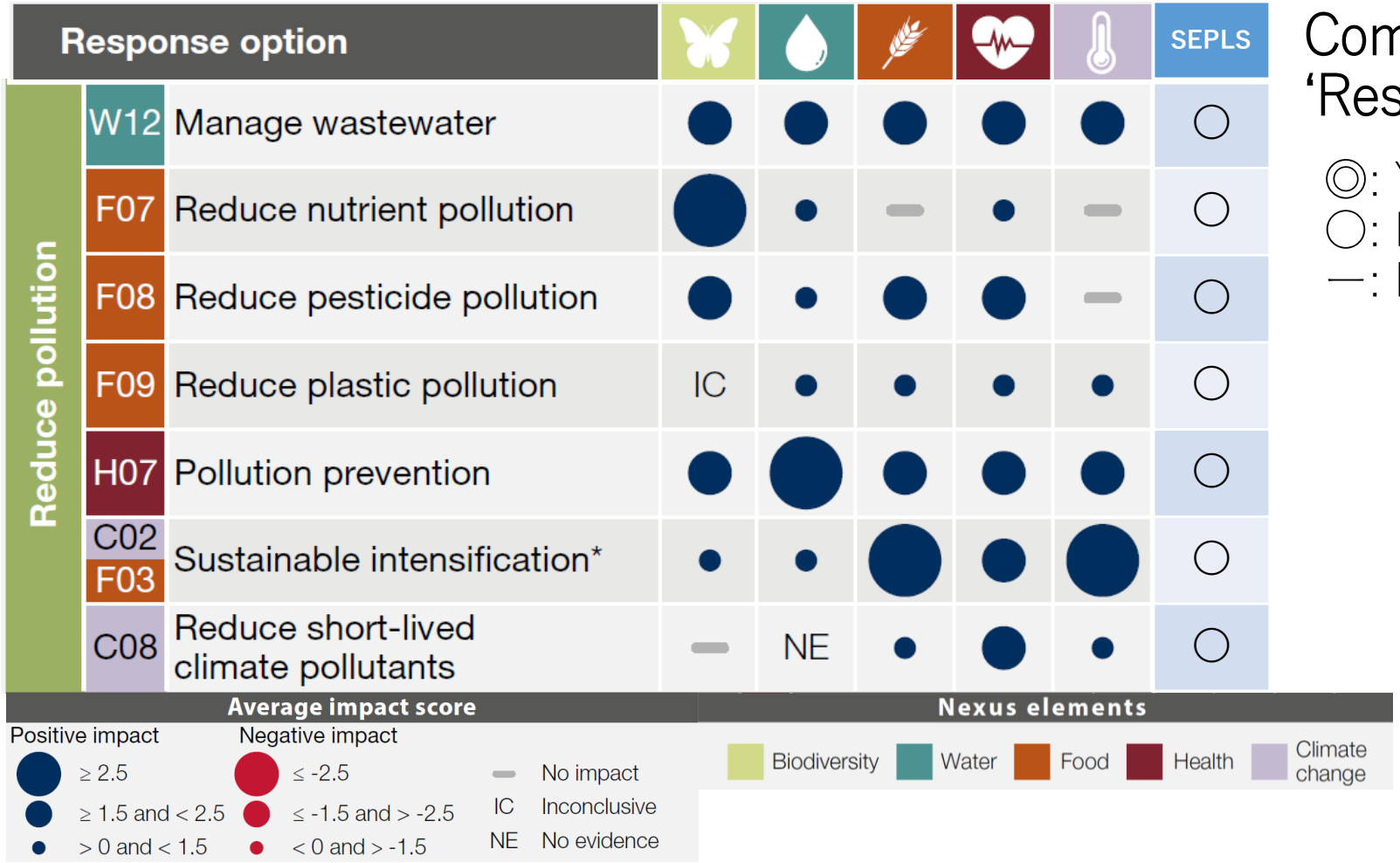
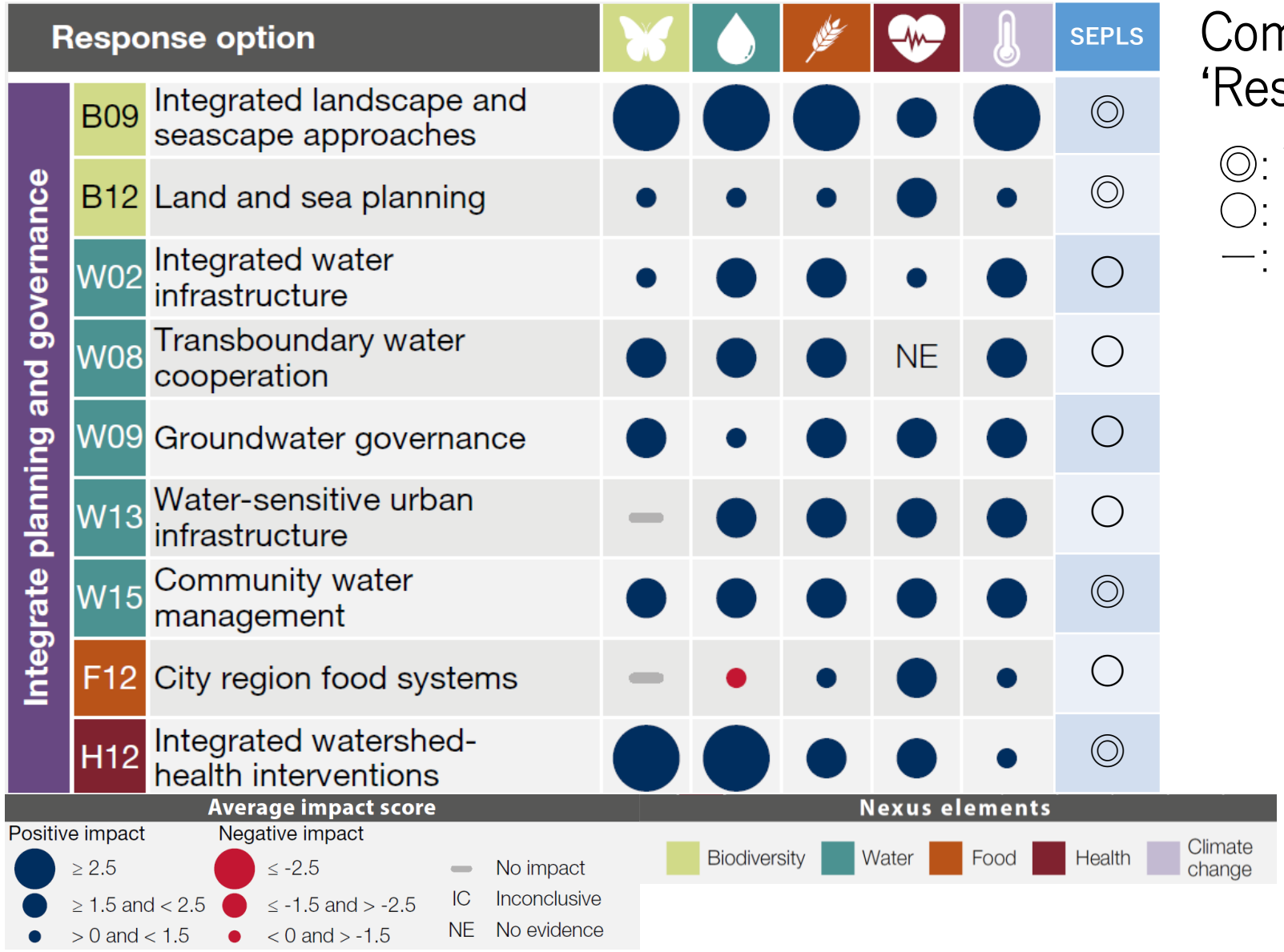
—: No



Compatibility between Nexus 'Response Options' and SEPLS

◎: Yes
○: Potentially yes
—: No



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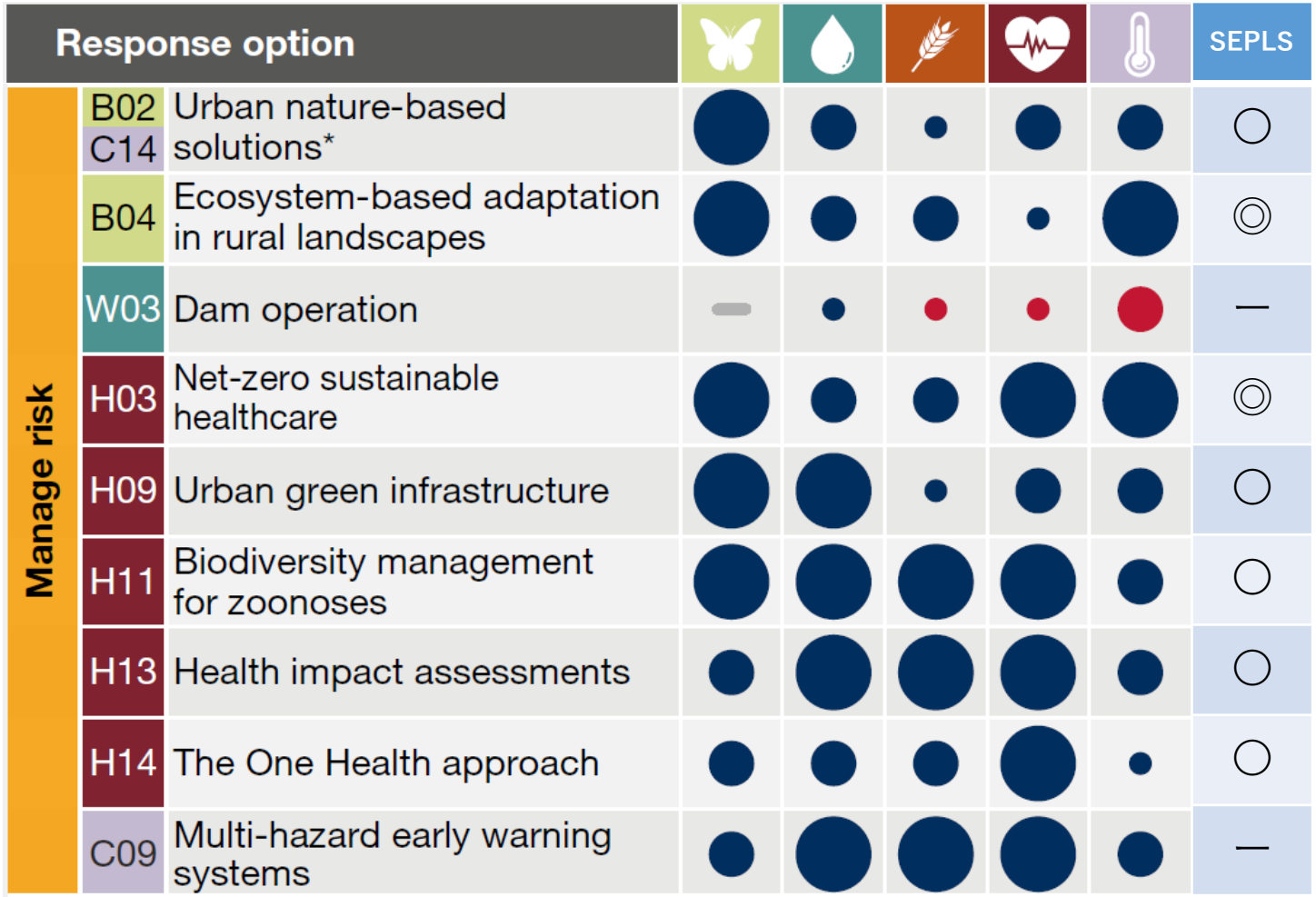
○: Potentially yes
—: No



Compatibility between Nexus 'Response Options' and SEPLS

◎: Yes
○: Potentially yes
—: No

	Response option						SEPLS
Ensure rights and equity	B10	Rights-based approaches	●	●	●	●	●	◎
	W01	Inclusive water education	IC	IC	●	●	IC	◎
	W06	Inclusive water management	●	●	NE	NE	NE	◎
	W07	Rights of nature	IC	●	IC	●	IC	◎
	W14	Address gendered burdens of water collection	NE	●	●	●	●	—
	F14	Foster gender transformative approaches	●	●	●	●	●	○
	F15	Indigenous food systems	●	●	●	●	●	◎
	F16	Access to natural resources and land	●	●	●	●	●	◎
	H01	Universal health coverage	IC/NE	●	●	●	●	—
	H02	Intercultural health services	IC/NE	NE	●	●	NE	○

Compatibility between Nexus 'Response Options' and SEPLS

◎: Yes
○: Potentially yes
—: No

		Response option	SEPLS
Align financing	B13	Natural capital accounting	○
	W10	Finance for water infrastructure	○
	F13	Reform public spending	—
	C10	Global cooperation for finance and technology	—
Others	B11	Multilateral environmental agreements	—
	B14	Reconnecting people with nature	◎
	H05	Nature on prescription	○
	H15	Integrated health education	○

Compatibility between Nexus 'Response Options' and SEPLS

◎: Yes
○: Potentially yes
—: No

Out of 71 response options, SEPLS may cover them as follows:

◎: 12
○: 50
—: 9