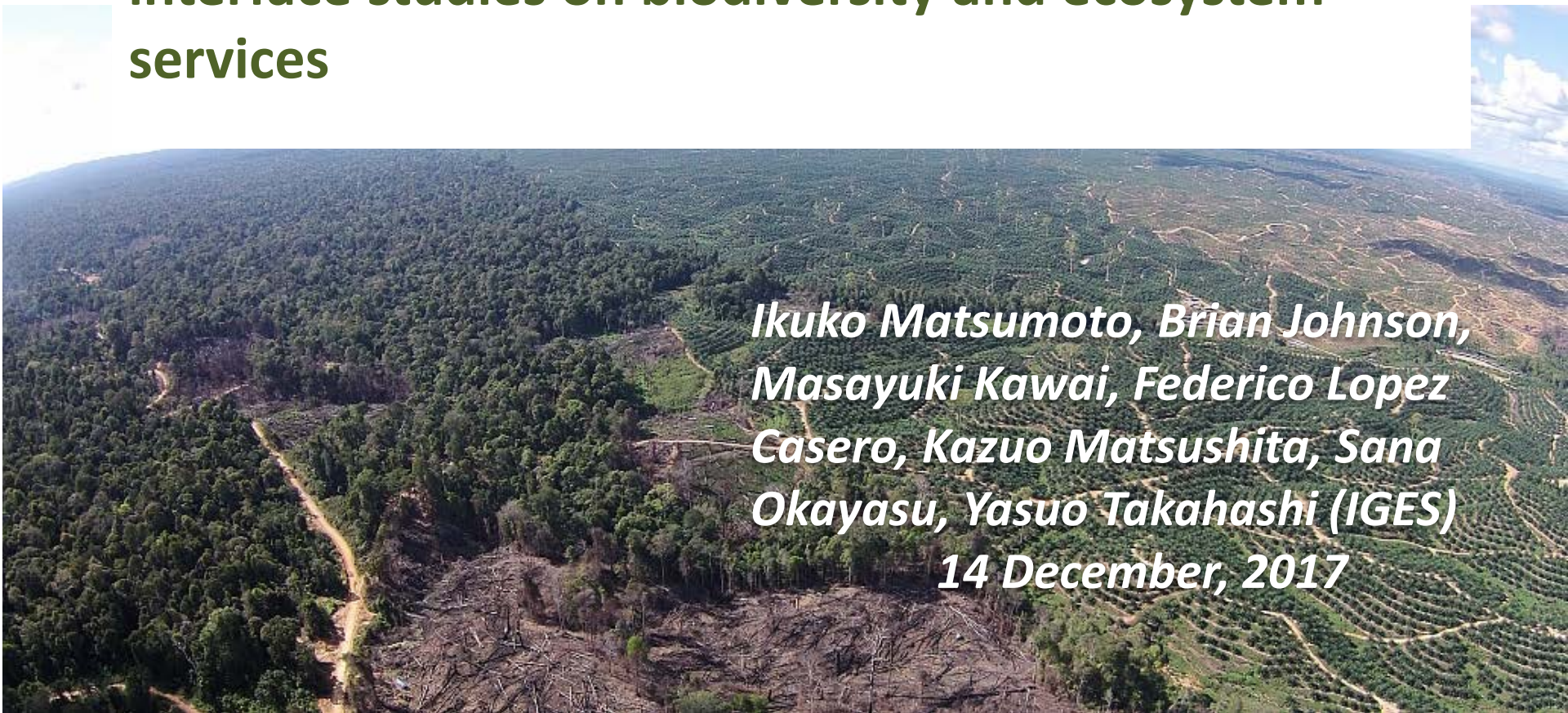
ECOSYSTEM SERVICES PARTNERSHIP 9
World Conference

PREDICTING & ASSESSING NATURAL CAPITAL & ECOSYSTEM SERVICES

IGES
Institute for Global Environmental Strategies

Mapping the current landscape of science-policy interface studies on biodiversity and ecosystem services



Ikuko Matsumoto, Brian Johnson, Masayuki Kawai, Federico Lopez Casero, Kazuo Matsushita, Sana Okayasu, Yasuo Takahashi (IGES)

14 December, 2017

PREDICTING & ASSESSING NATURAL CAPITAL & ECOSYSTEM SERVICES

Purpose/Methodology

IGES Institute for Global Environmental Strategies

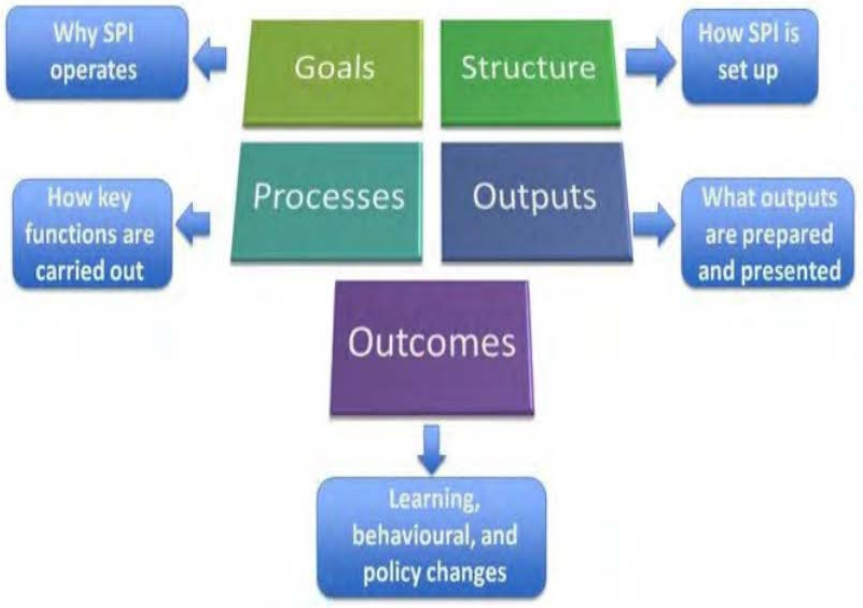
Purpose:

To identify the latest findings and critical gaps in SPI studies with a view to strengthening SPIs for mainstreaming biodiversity and ecosystem services into policies.

Methodology:

- Literature review on biodiversity-relevant SPIs
- Keyword search on ('science-policy' OR 'policy-science') AND 'biodiversity' in the Scopus database (6 April, 2017): 181 articles
- Total number of articles relevant for review: 96
- Number of articles relevant for analysis on effectiveness of SPIs: 77
- Review of key features of SPIs based on the SPIRAL project frameworks

The key features of SPIs are goals, structure, processes, outputs and outcomes



(Young, Watt, van den Hove, & the SPIRAL project team, 2013: 10)

PREDICTING & ASSESSING NATURAL CAPITAL & ECOSYSTEM SERVICES

Results (1)

IGES Institute for Global Environmental Strategies

- Most of studies targeted global level SPIs (38%, 17% were about IPBES), followed by national (20%) and regional (19%) level SPIs.
- Most of the regional and national level SPI studies focused on Europe (60%) and North America (14%).
- Despite emerging needs, there is not much SPI research in Asia, Latin America and Africa

FIGURE 1: GEOGRAPHICAL SCALE OF SPI STUDIES

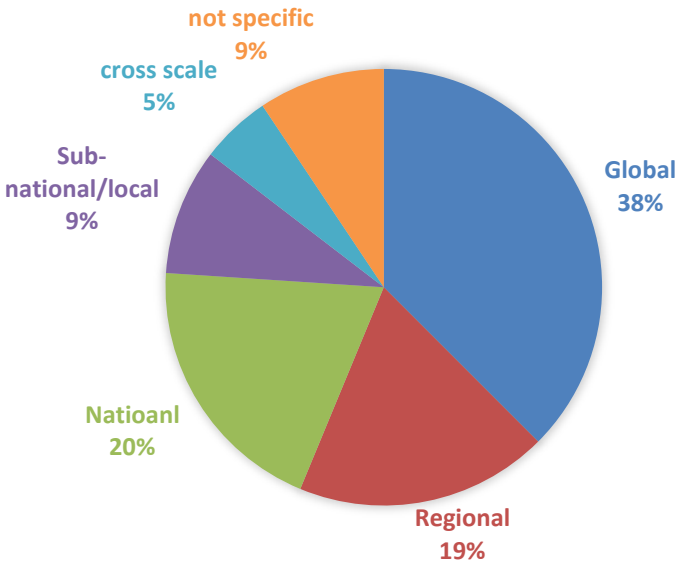
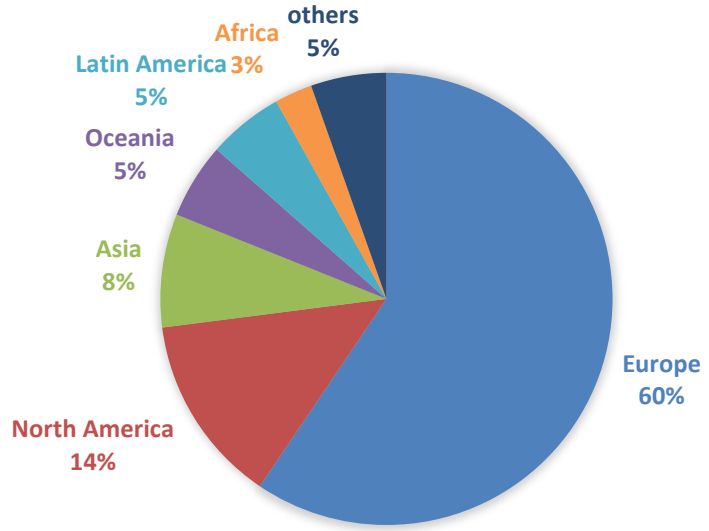


FIGURE 2: REGIONAL BALANCE OF SPI STUDIES



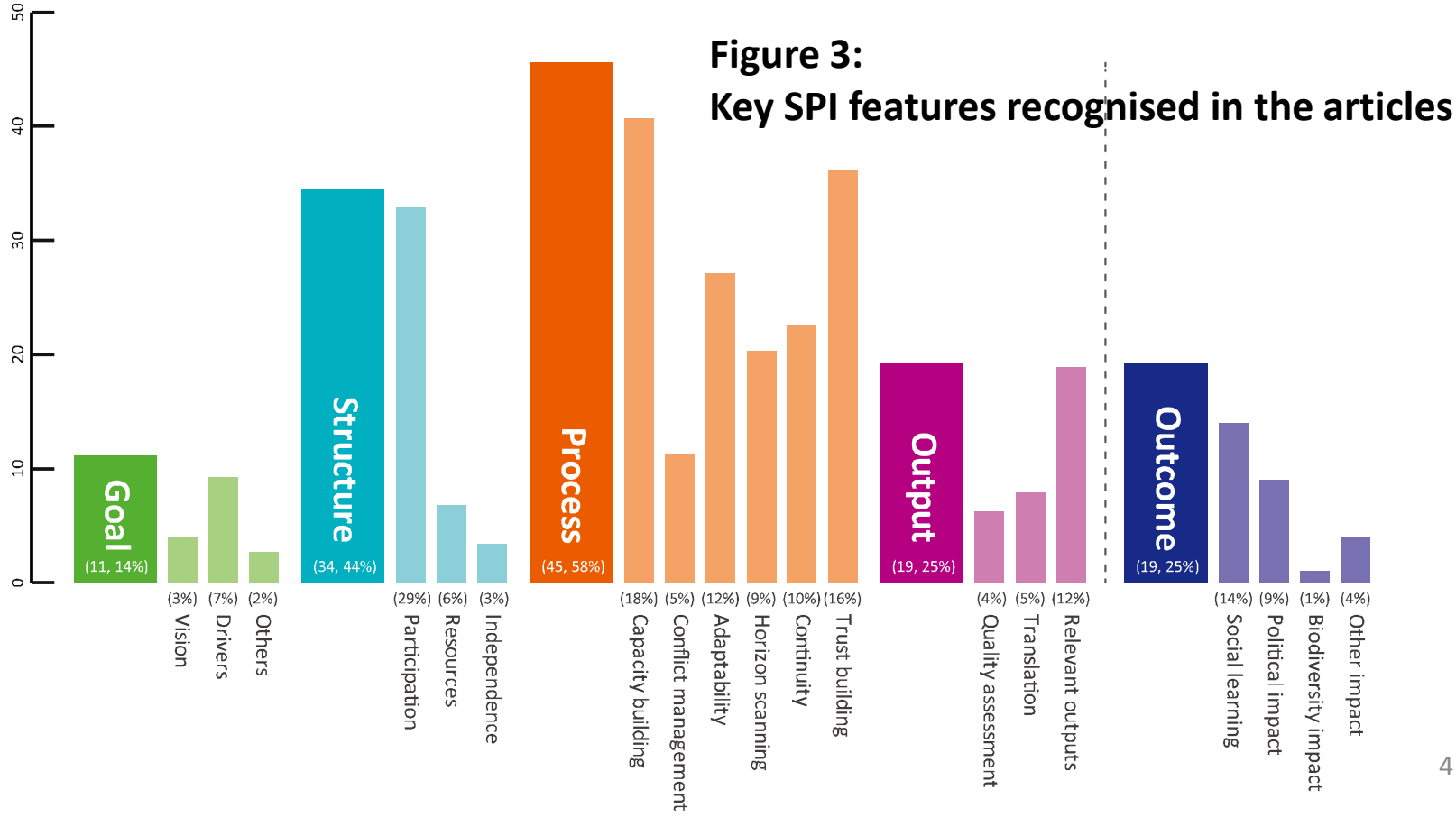
PREDICTING & ASSESSING NATURAL CAPITAL & ECOSYSTEM SERVICES

Result (2)

IGES Institute for Global Environmental Strategies

- Total number of articles which analyse SPI's effectiveness: 77 out of 96
- Some articles identified more than one key features of SPI
- Reviewed key features of SPIs based on in the SPIRAL project frameworks

Figure 3:
Key SPI features recognised in the articles



PREDICTING & ASSESSING NATURAL CAPITAL & ECOSYSTEM SERVICES

Key challenges and success factors of SPIs (1)

IGES Institute for Global Environmental Strategies

	Challenges	Success factors
Goal	✓ Identification of key research topic ✓ *Timely provision of comprehensive knowledge into policies	✓ Joint formulation of research and policy between researchers and policymakers
Structural	✓ *Handling the socio-ecological complexity and political dimensions ✓ Knowledge gap between scientists and policymakers ✓ Need to strengthen scientific basis ✓ Complexity of decision-making process ✓ Fragmentation of group of interest involved in SPI ✓ Limited incentives for scientists and policymakers to participate in SPI	✓ Involvement of various fields/sectors scientist and policymakers including social scientists and practitioners ✓ Promotion of inter-/trans-disciplinary research to apply integrated approach ✓ Establishment of discussion platform among different stakeholders ✓ Putting in place structures and incentive schemes that support long-term interactive dialogue
Process	✓ Overcoming silo mentalities and integrating research into policy ✓ *Handling the socio-ecological complexity and political dimensions ✓ *Timely provision of consolidated views	✓ Creation of iterative and collaborative interface team including local stakeholders and citizens ✓ Collaboration with different stakeholders and knowledge holders ✓ More engagement with social sciences

PREDICTING & ASSESSING NATURAL CAPITAL & ECOSYSTEM SERVICES

Key challenges and success factors of SPIs (2)

IGES Institute for Global Environmental Strategies

	Challenges	Success factors
Process (con.)	✓ Lack of common language/philosophies between scientists and policymakers ✓ Need to improve data collection and use ✓ Addressing and communicating uncertainty of science	✓ Ensuring transparency in designing governance structures of SPI ✓ Engaging policymakers in research project ✓ Enhancing national level of capacity including data collection and technical skill ✓ Applying precautionary principle and ecological risk management strategies ✓ Establishing conflict management mechanism
Outputs	✓ Making finding more policy relevant ✓ Transforming knowledge between different communities ✓ Need to strengthen scientific basis	✓ Focusing on knowledge for implementation and evaluation ✓ Producing concerted views from the knowledge community ✓ Improving quality assessment process of knowledge products ✓ Translating knowledge to be understandable ✓ Recognising the role of knowledge brokers

PREDICTING & ASSESSING NATURAL CAPITAL & ECOSYSTEM SERVICES

Conclusion

IGES Institute for Global Environmental Strategies

Towards effective interdisciplinary SPIs

- More **dynamic, iterative and collaborative interactions** with practitioners, knowledge holders (including ILK) and policymakers
- Consolidating interdisciplinary study that **recognises the interconnectedness of social and ecological system**
- **Joint formation** of research and policy
- **Building capacity and long-term trust** of organization

Research gaps

- Not much research on SPIs in Asia, Latin American and African region
- Not much empirical research assessing effectiveness of SPIs based on outcomes of SPIs.

This research was supported by the Environment Research and Technology Development Fund (S-15-1(4) Science-Policy interface on Natural Capital and Ecosystem Services in International, Asian and Japanese Contexts; Predicting and Assessing Natural Capital and Ecosystem Services (PANCES)) of the Ministry of the Environment, Japan.