Biodiversity and Ecosystem services – Thinking globally, acting locally

Anne-Gaelle Ausseil - Manaaki Whenua – Landcare Research
Geoff Hicks – National Commission for UNESCO

Outline

1. What is IPBES? An introduction from Geoff Hicks

2. How does it operate?

3. The Process for producing assessments

4.Why does IPBES matter to New Zealand? Links to NZ initiatives

What is IPBES? An introduction from Geoff Hicks

- Genesis and history
- NZ involvement
- Operating principles
- Core functions
- Where to next?

The science-policy niche of IPBES

International, national research projects & programmes (Future Earth)

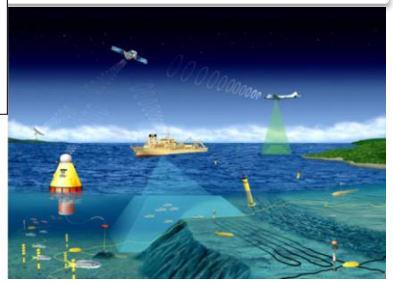
Research

Assessments

IPCC

IPBES

Observation



Policy

Observing Systems:

GEOSS

GEO BON

UNFCCC
The Climate Change Convention

CBD
The Convention on Biological Diversity

The work programme is entirely based on requests from governments and stakeholders

Requests	22 requests received from 10 governments (Australia, Belarus, China, Mexico, New Zealand, Norway, France, Italy, Japan, UK)
	10 requests received from 4 Conventions (CBD, CITES, CMS, UNCCD)
Inputs and suggestions	20 inputs and suggestions from other stakeholders (BirdLife International, GBIF, ICSU, IUCN, Pan European Biodiversity Platform, UNEP, and national organizations based in France, Germany and Japan)

The 4 functions of IPBES

IPBES was established with four agreed functions:

• **Assessment**	Deliver global, regional, methodological and thematic assessments on biodiversity and ecosystem services
• **Policy support tools**	- Identify policy relevant tools/methodologies, - facilitate their use, and catalyse their further development
• **Capacity building**	Identify and meeting priority capacity needs of IPBES members, experts, stakeholders
• **Knowledge generation**	Identify and communicate gaps in knowledge

A bit of terminology

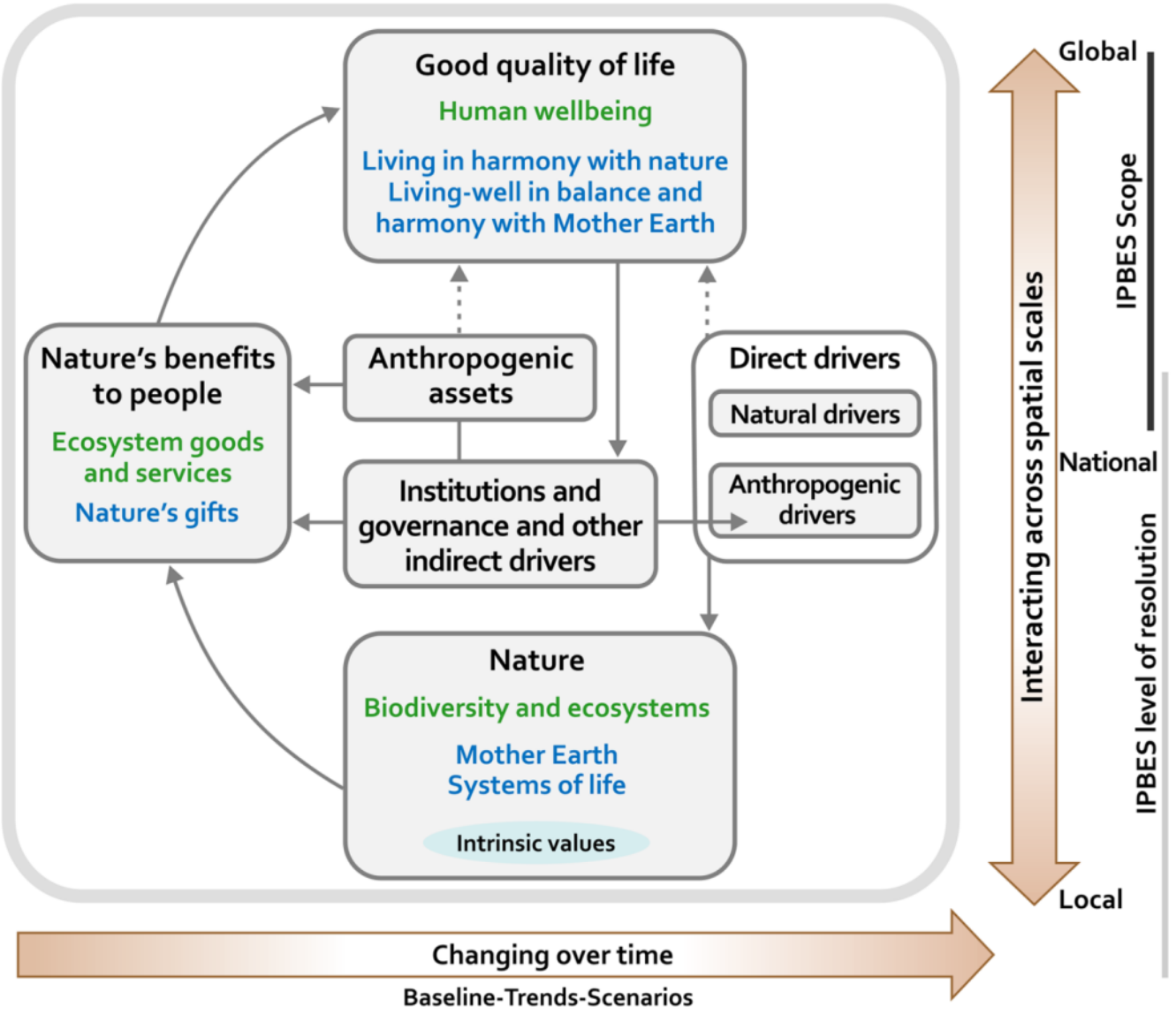
- Assessment is a critical evaluation of knowledge for a specific theme or region (e.g. peer-reviewed literature or grey literature).
- It involves analysing, synthesising and critically judging available information.
- Confidence terms are assigned to key messages (Executive summaries and summary for policy makers)

Assigning Confidence terms

- Qualitative information: the 4-box model (similar to IPCC)

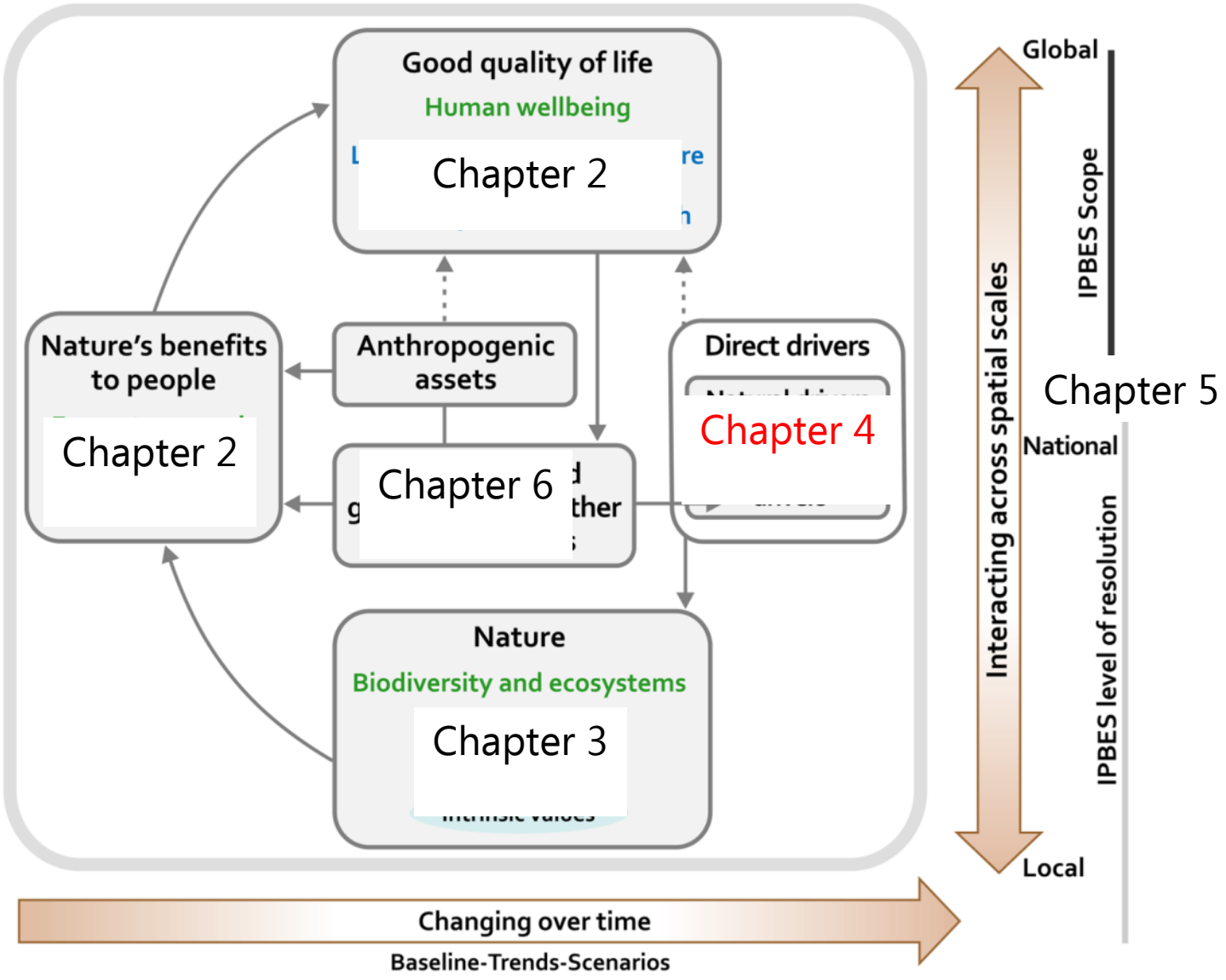
Process for production of an assessment

Conceptual framework



Díaz, S., et al.., 2015. The IPBES Conceptual Framework — connecting nature and people. Curr. Opin. Environ. Sustain. 14, 1–16.

Regional assessment for Asia-Pacific



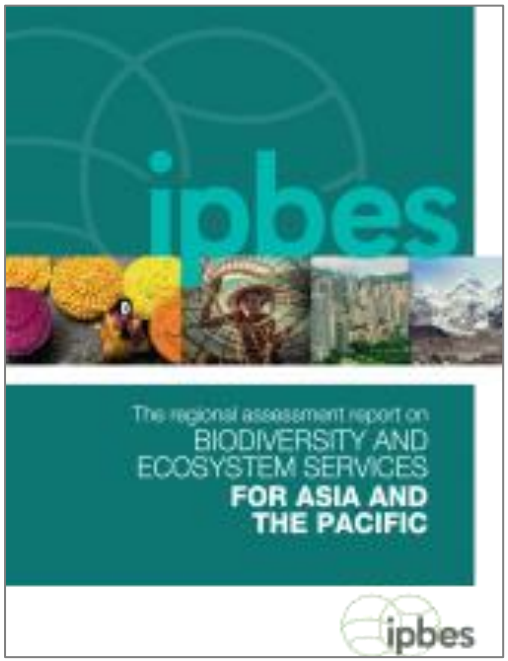
Chapter 1: Setting the scene

Information at hand for the assessment

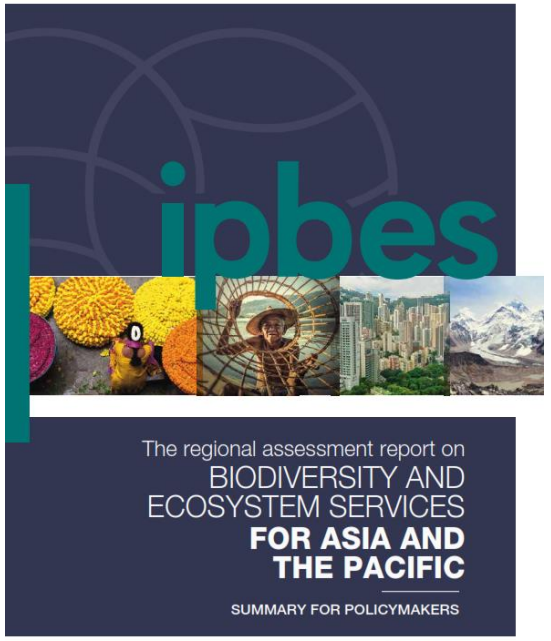
- Agreed classification of ecosystems
- Agreed list of direct and indirect drivers
- IPBES Core indicators (~ NZ environmental indicators)
- Peer-reviewed publications and grey literature (~ case study, body of evidence)

Contribution to IPBES: Insight into the Regional assessment for Asia-Pacific

Full assessment: 700 pages

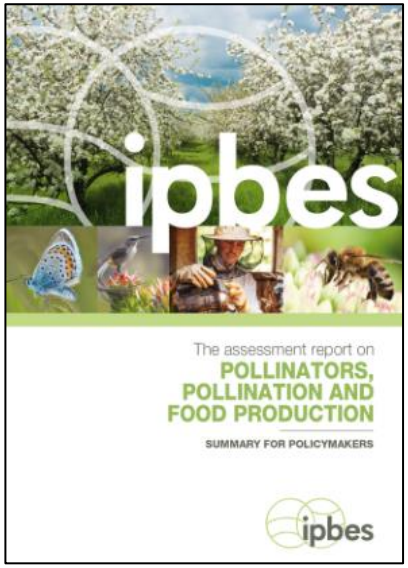


Summary for policy makers: 40 pages
Key messages + background

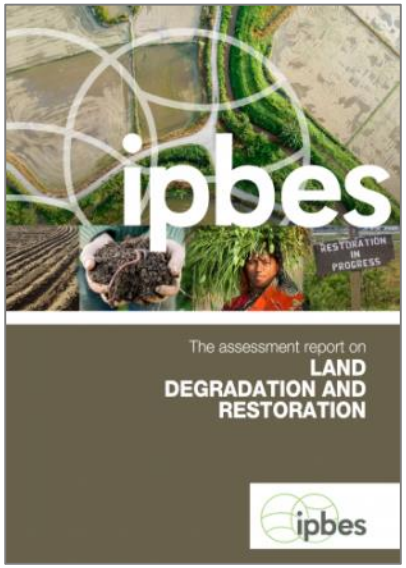


6 **The population of large wild mammals and birds has declined across the region.** Habitat degradation and fragmentation, especially in forests and grasslands, has largely resulted in a decline in wild mammals and birds. Widespread loss of large vertebrates has had a measurable impact on several forest functions and services, including seed dispersal. Illegal trade in wildlife and wildlife products is causing species decline in some countries.

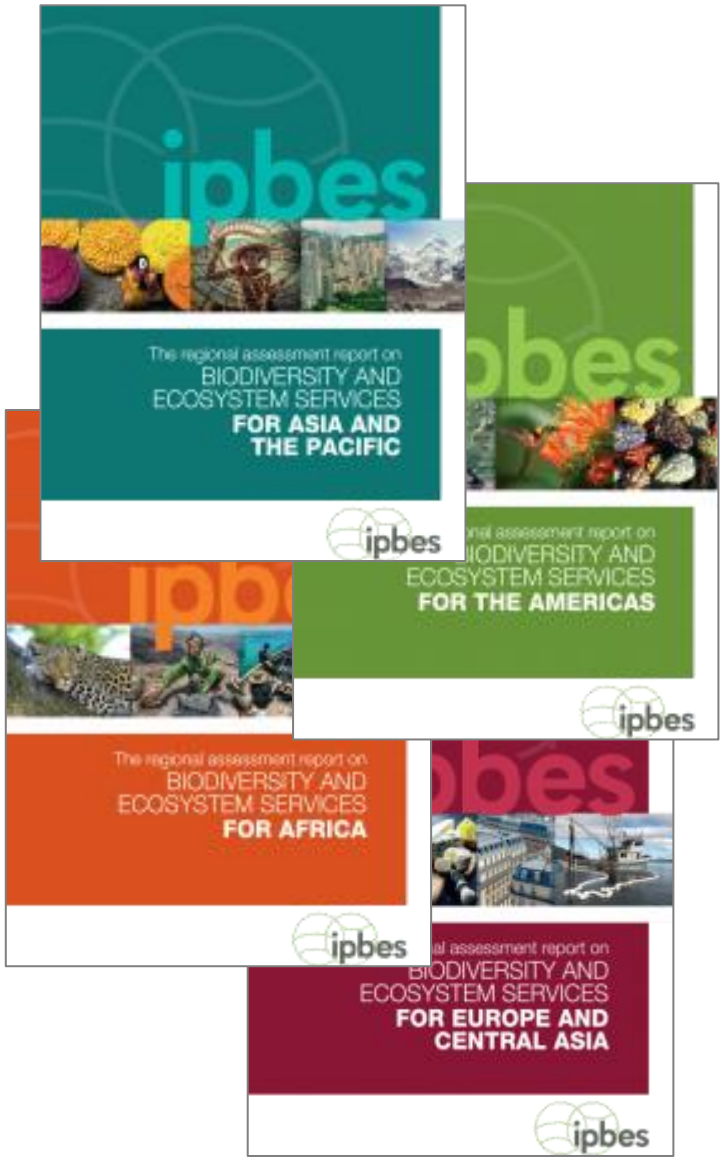
Thematic and regional assessments



IPBES-4 (feb 2016)



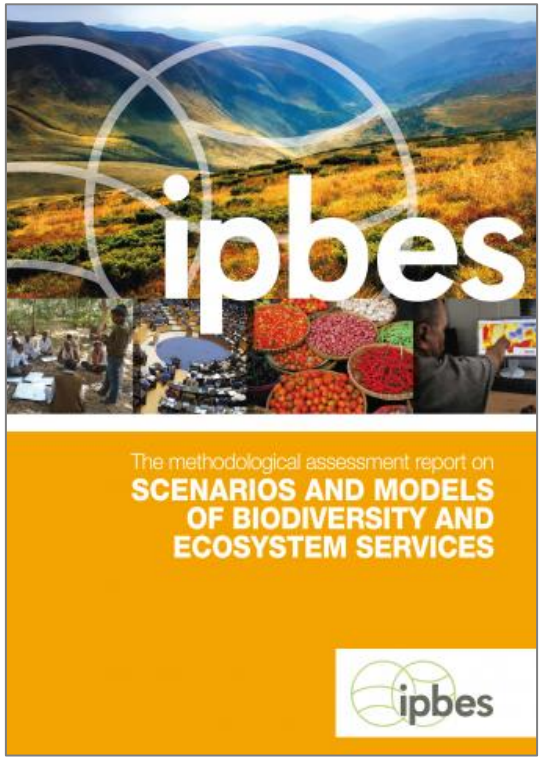
IPBES-6 (march 2018)



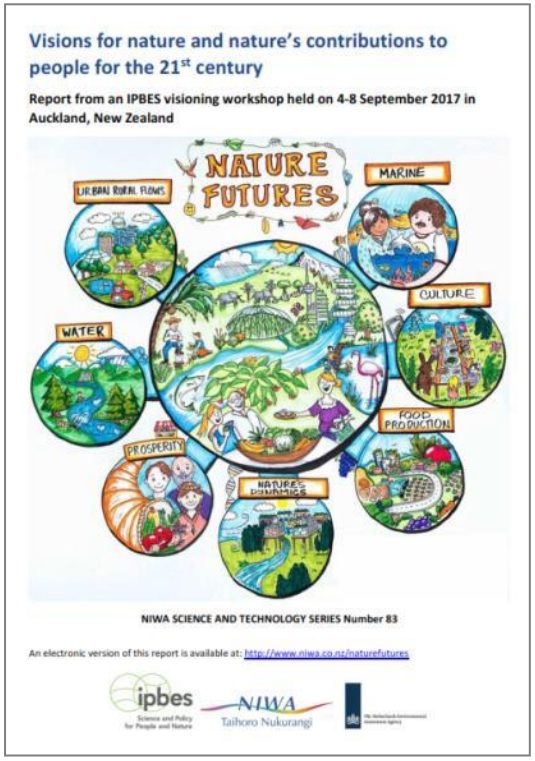
In the pipeline:

- Sustainable use of wild species (IPBES-9)
- Global assessment (IPBES-7)
- Invasive alien species (call for nominations)

Methodological assessments



IPBES-5 (march 2017)

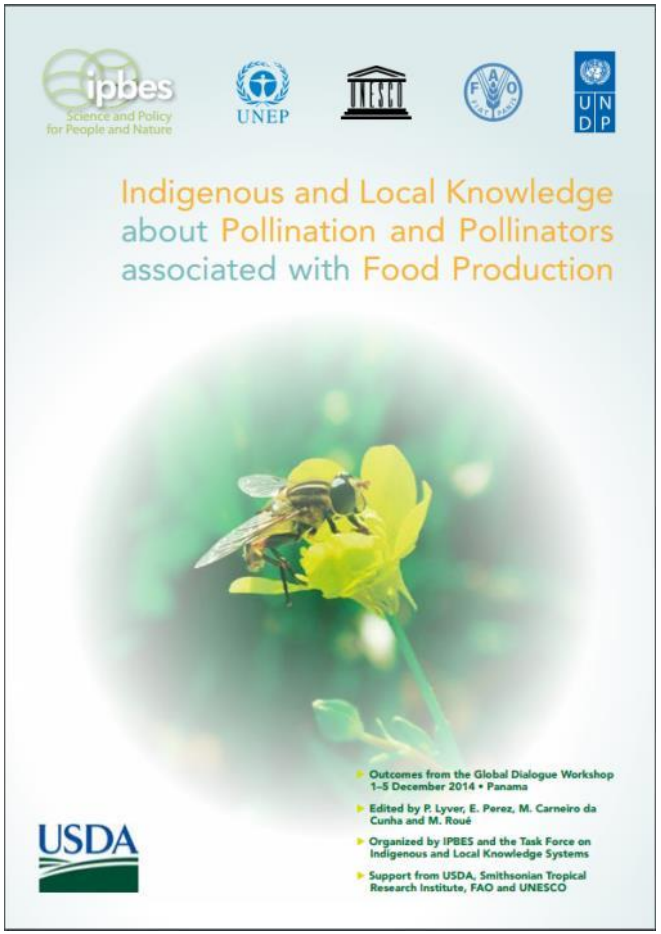


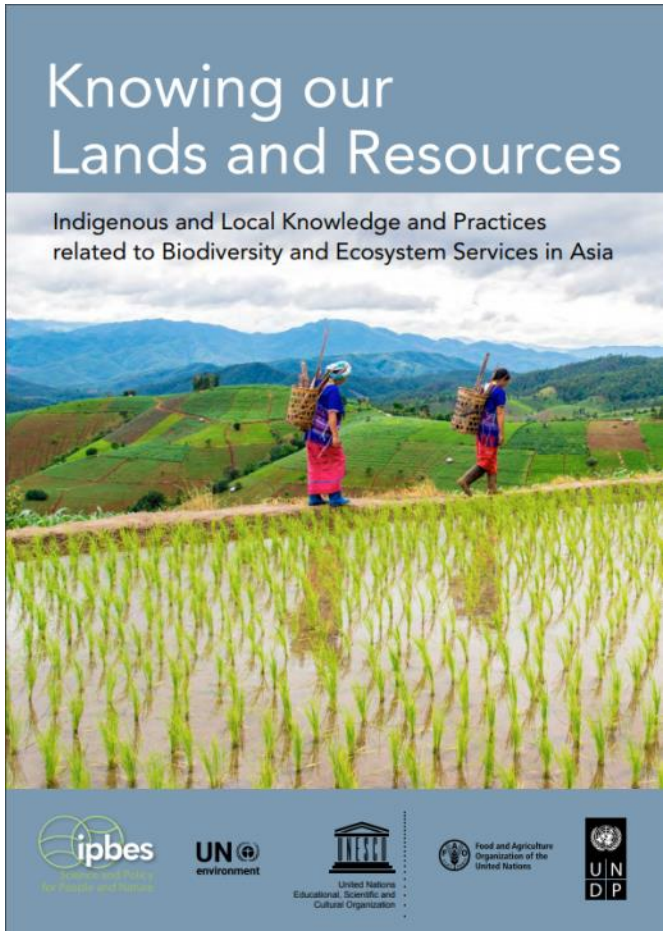
Phase 2: create multi-scale "Nature Futures"

In the pipeline:

- Conceptualization of values (preliminary guide, methodological assessment to come at IPBES-9)

Indigenous and Local Knowledge





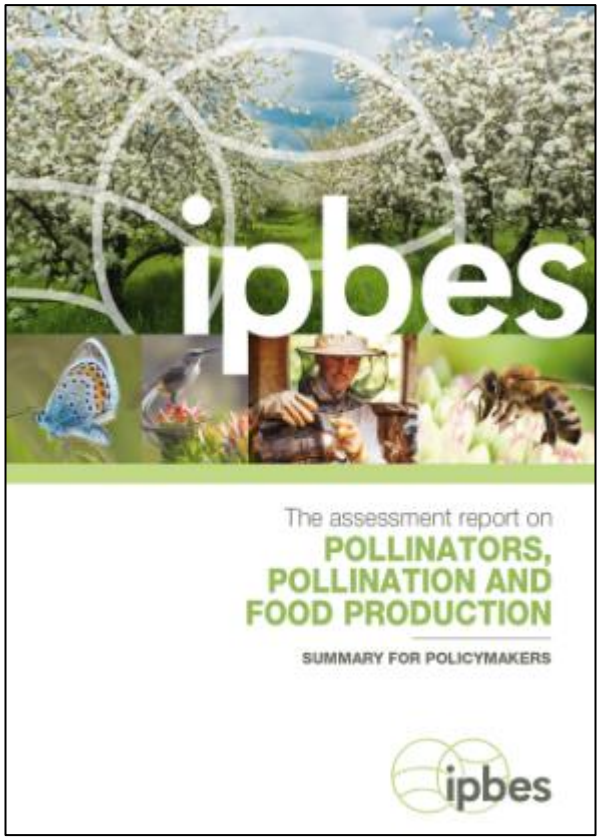
Contact: Phil Lyver, Manaaki Whenua

What is the impact? International policy

- **Formal endorsement of key messages** by the Parties to the CBD COP13 in Mexico.

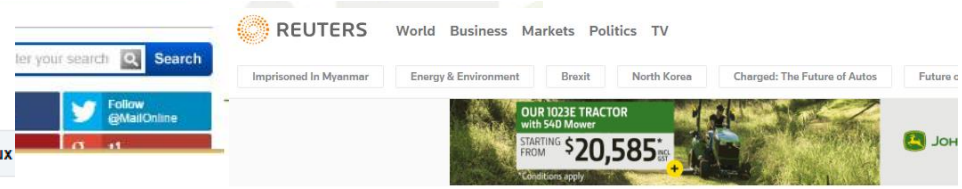
- The formation of a "**Coalition of the Willing**" by a growing number of Governments around the world, to protect pollinators and to promote pollination.

- An ever-expanding list of **national strategies and action plans on pollination** (France, the Netherlands, Brazil, South Africa and the Republic of Korea).



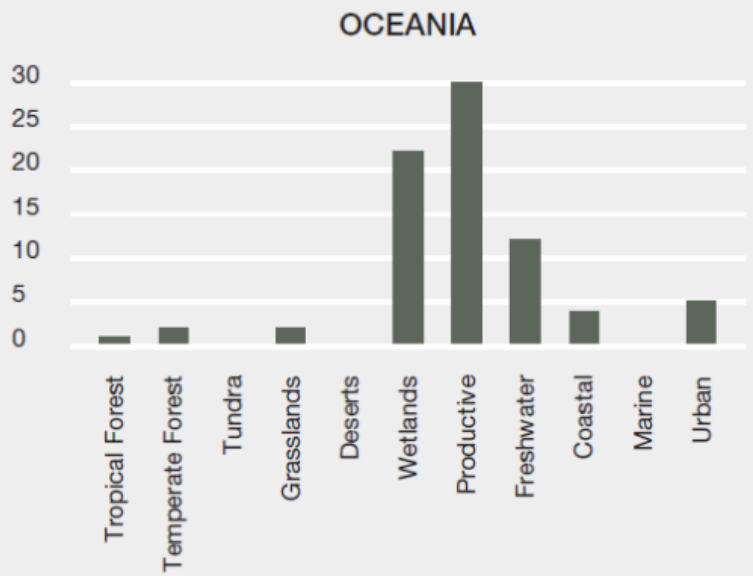
Media coverage

As of 2017:
1,300 articles in 28 languages in 81 countries

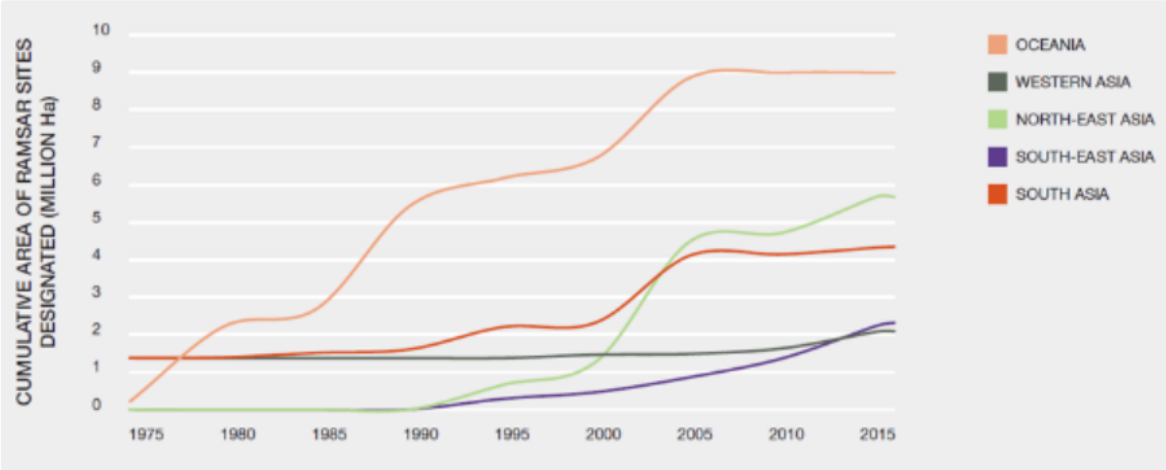


Why does IPBES matter to New Zealand? Links to NZ initiatives

Information on state of the environment, values



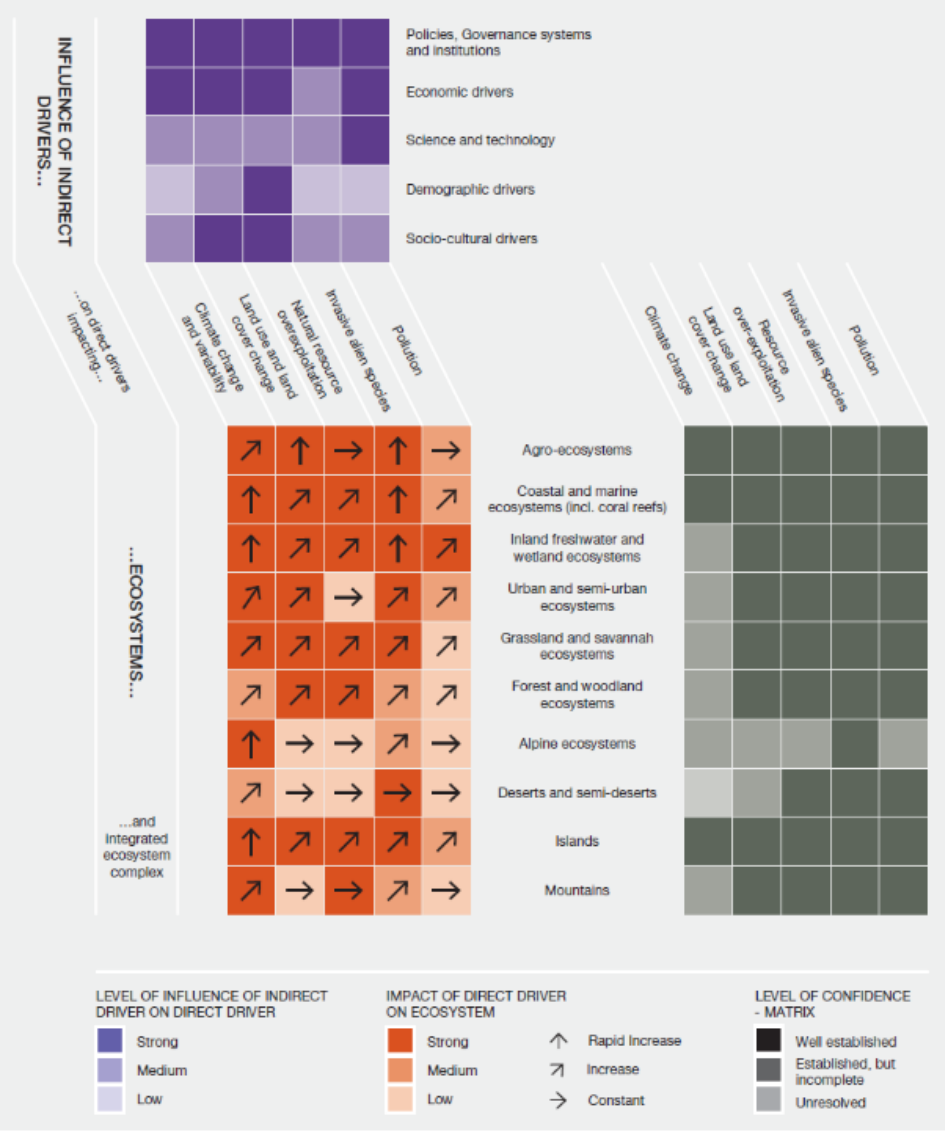
Example from chapter 2: Number of valuation studies in Oceania



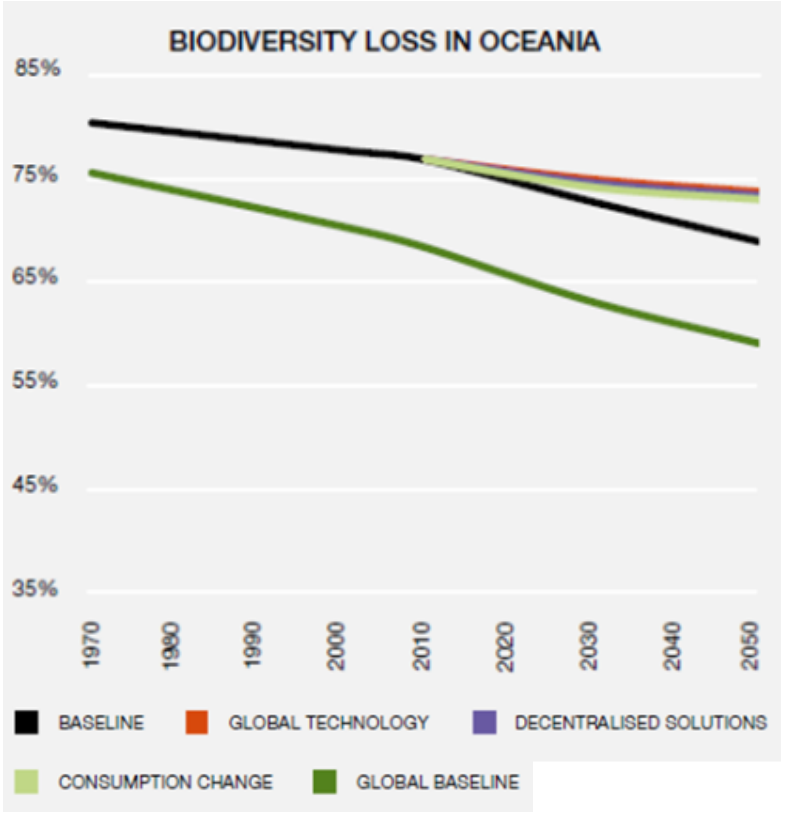
Example from Chapter 3: Trends in area of Ramsar sites

Information on drivers of change, future scenarios

Example from Chapter 4: Level of influence of drivers of change in Oceania



Example from Chapter 5: Mean species abundance projections to 2050



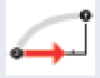
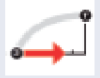
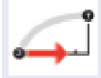
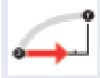
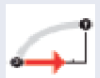
Information on: Progress towards targets (chapter 6)

Contribution of ecosystem services to the Sustainable Development Goals

SDG	Synergies and trade-offs between Biodiversity-related SDGs (14, 15) and other SDGs, and possible policy options to integrate BES aspects into other SDGs
1 NO POVERTY **End poverty in all its forms everywhere**	• Globally and in the Asia-Pacific region, people's income levels tend to be low in biodiversity-rich areas, and where people depend more on BES for income and risk insurance. **NCP**[1] ❾ ⓬ ⓭ ⓮ ⓯ *(well established)* • Without simultaneously conserving BES and ensuring resource access by those dependent on BES, trade-offs occur between BES conservation and poverty eradication. **Drivers**[2]**: LU EC ST** *(well established)* • Poverty eradication and BES conservation can be compatible through various intervention options, such as community-based natural resource management (CBNRM), Indigenous Protected Areas (IPA) and community-based ecotourism.

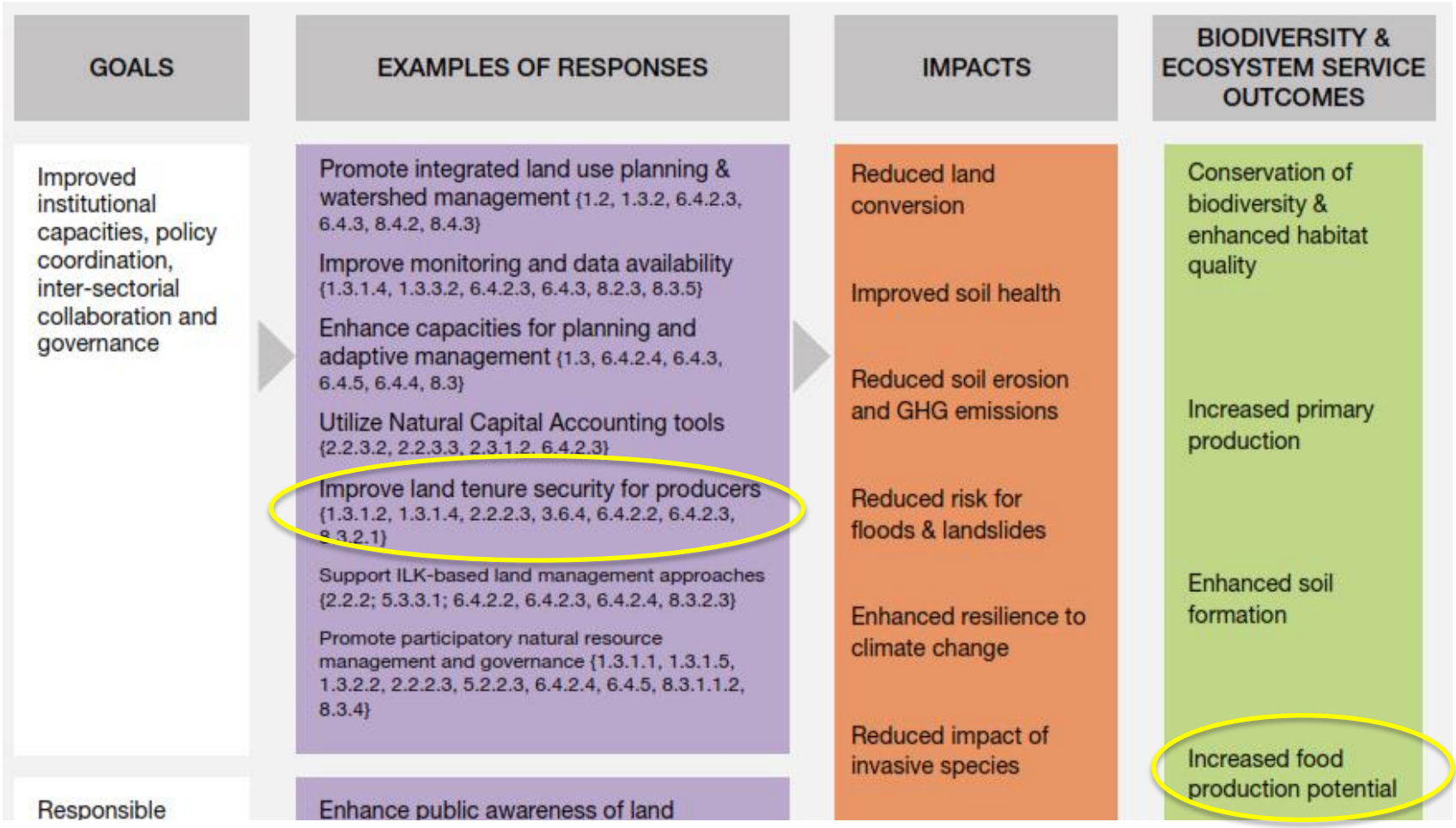
Table SPM.2

Progress and policy options towards achieving the Aichi Biodiversity Targets in the five subregions

AICHI BIODIVERSITY TARGETS		PROGRESS					WAY FORWARD
Strategic Goal	Target	West Asia	South Asia	North East Asia	South East Asia	Oceania	
A. Address the underlying causes of biodiversity loss by main-streaming biodiversity across government and society	1. Awareness of biodiversity increased						• Realign incentives by various means, e.g. through integrating agroforestry in REDD+ to achieve carbon and rural livelihood benefits; • Clarify NCP for justifying PES schemes; • Integrate urban ecosystems and NCP into urban planning; • Integrate policies covering positive and negative incentives that engage all relevant stakeholders; and • Strengthen multi-stakeholder partnerships among companies, industry associations, civil society, and governments, to promote sustainable practices.
	2. Biodiversity values integrated						
	3. Incentives reformed						
	4. Sustainable production and consumption						

Land degradation and restoration: Policy options

- Relevant to NPS versatile soils

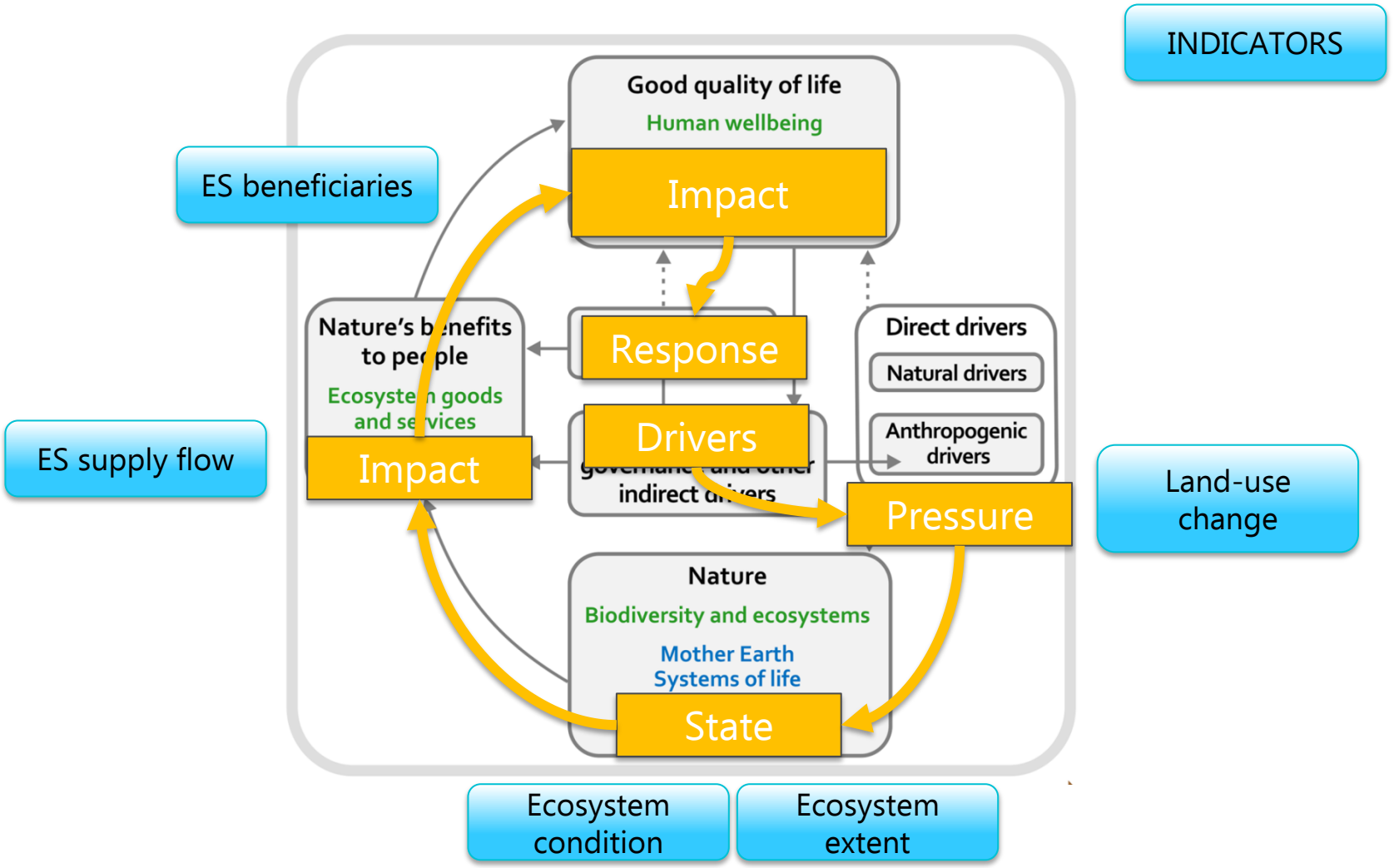


GOALS	EXAMPLES OF RESPONSES	IMPACTS	BIODIVERSITY & ECOSYSTEM SERVICE OUTCOMES
Improved institutional capacities, policy coordination, inter-sectorial collaboration and governance	Promote integrated land use planning & watershed management {1.2, 1.3.2, 6.4.2.3, 6.4.3, 8.4.2, 8.4.3} Improve monitoring and data availability {1.3.1.4, 1.3.3.2, 6.4.2.3, 6.4.3, 8.2.3, 8.3.5} Enhance capacities for planning and adaptive management {1.3, 6.4.2.4, 6.4.3, 6.4.5, 6.4.4, 8.3} Utilize Natural Capital Accounting tools {2.2.3.2, 2.2.3.3, 2.3.1.2, 6.4.2.3} Improve land tenure security for producers {1.3.1.2, 1.3.1.4, 2.2.2.3, 3.6.4, 6.4.2.2, 6.4.2.3, 8.3.2.1} Support ILK-based land management approaches {2.2.2; 5.3.3.1; 6.4.2.2, 6.4.2.3, 6.4.2.4, 8.3.2.3} Promote participatory natural resource management and governance {1.3.1.1, 1.3.1.5, 1.3.2.2, 2.2.2.3, 5.2.2.3, 6.4.2.4, 6.4.5, 8.3.1.1.2, 8.3.4}	Reduced land conversion Improved soil health Reduced soil erosion and GHG emissions Reduced risk for floods & landslides Enhanced resilience to climate change Reduced impact of invasive species	Conservation of biodiversity & enhanced habitat quality Increased primary production Enhanced soil formation Increased food production potential
Responsible	Enhance public awareness of land		

Land degradation and restoration: research gaps

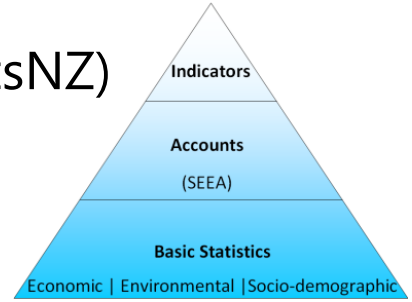
THE EVIDENCE BASE REQUIRED TO ADDRESS LAND DEGRADATION	PRIORITY GAPS IN EACH AREA OF KNOWLEDGE
What are the consequences of land degradation for biodiversity, ecosystem functioning, nature's contributions to people, and human well-being?	Methods to effectively monitor and map changes in different forms of degradation over time and at relevant spatial scales and resolutions
	Spatial and temporal patterns of, and changes in, soil health
	Consequences of land degradation on freshwater and coastal ecosystems, including mangroves and seagrass systems
	Consequences of land degradation for physical and mental health and spiritual well-being
	Consequences of land degradation for infectious disease prevalence and transmission
	The potential for land degradation to exacerbate climate change

Opportunities for NZ: IPBES framework for environmental reporting

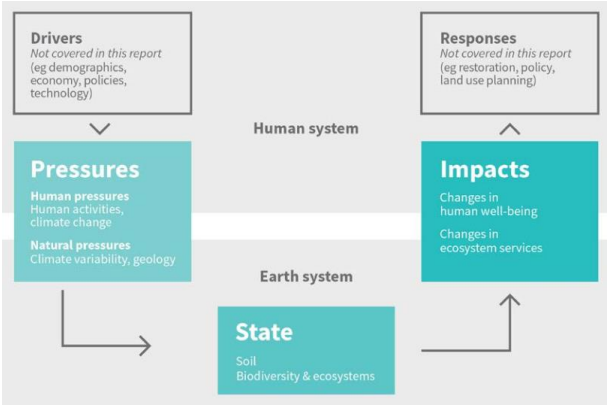


Opportunities for NZ

- System of Environmental Economics Accounting (StatsNZ)
  - Use of ES indicators and maps



- Environmental reporting
  - Cross-domain framework and system view



- Living Standards Framework (Treasury)
  - Framework for indicators

Upcoming events

- IPBES 7th plenary session, Paris, may 2019
  - Review of first work programme 2014-2018
  - Approval of the Global Assessment by governments
  - Next work programme of the platform

- Future programme up to 2030 likely to focus on:
  - the post-2020 biodiversity framework;
  - The 2030 Agenda for Sustainable Development, including the SDGs
  - The Paris Agreement on Climate Change

Thank you!

Anne-Gaelle Ausseil – AusseilA@landcareresearch.co.nz