Tracking New Zealand's contribution to the Global Biodiversity Goals

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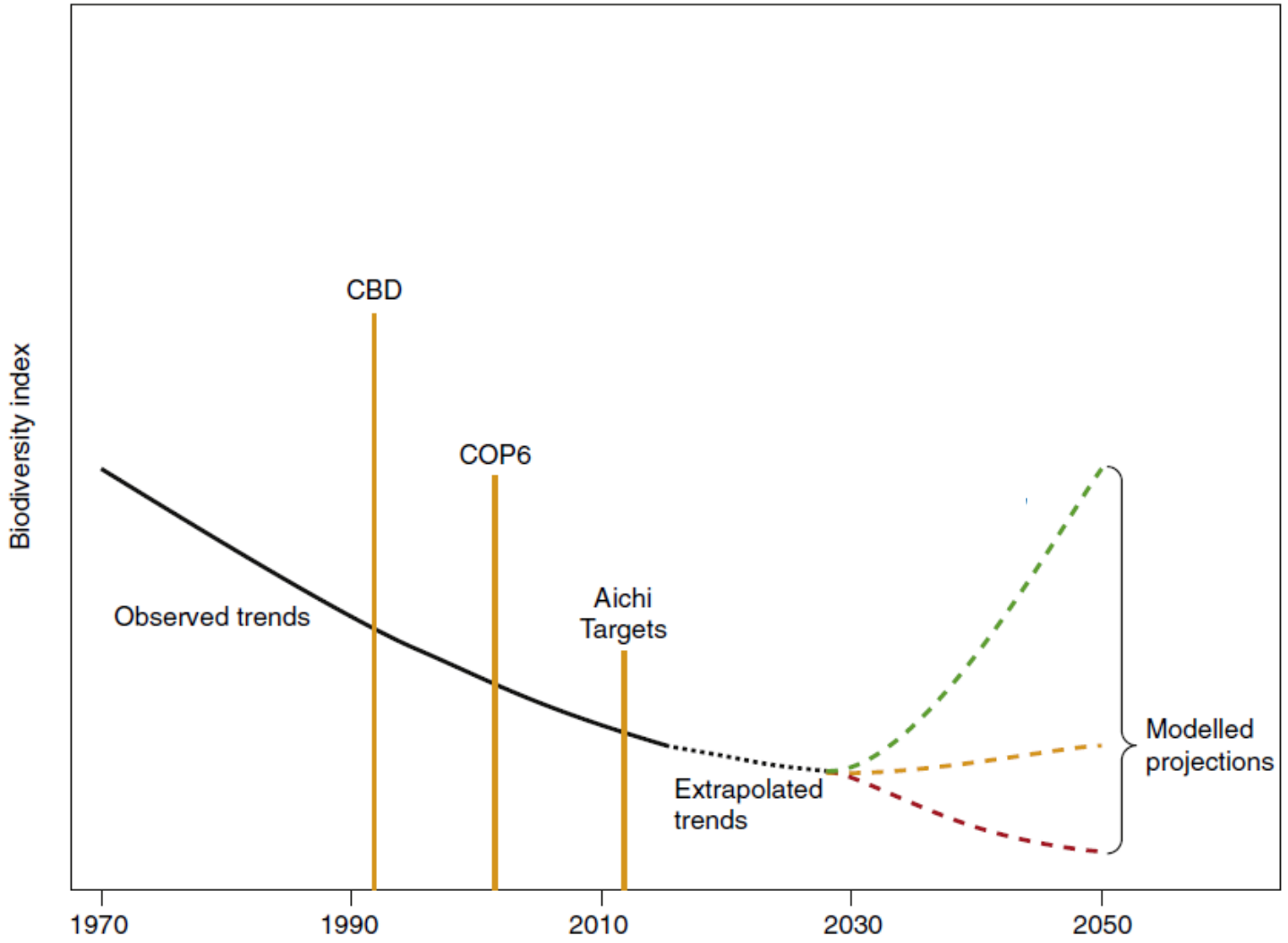
Contents

- New Zealand's obligations under the UN Convention on Biological Diversity (CBD): 2050 goals and 2030 targets under the Kunming – Montréal Global Biodiversity Framework (GBF) agreed late 2022.
- New Zealand's national biodiversity and environmental goals, objectives, legislation.
- Development of an interagency Outcome Monitoring Framework to determine progress to meeting international and national outcomes.
- Building consensus across government agencies.
- How international best practices can help us.
- Investment gaps, opportunities.

"Without a substantial change in approach, these successive failures will almost certainly be repeated."

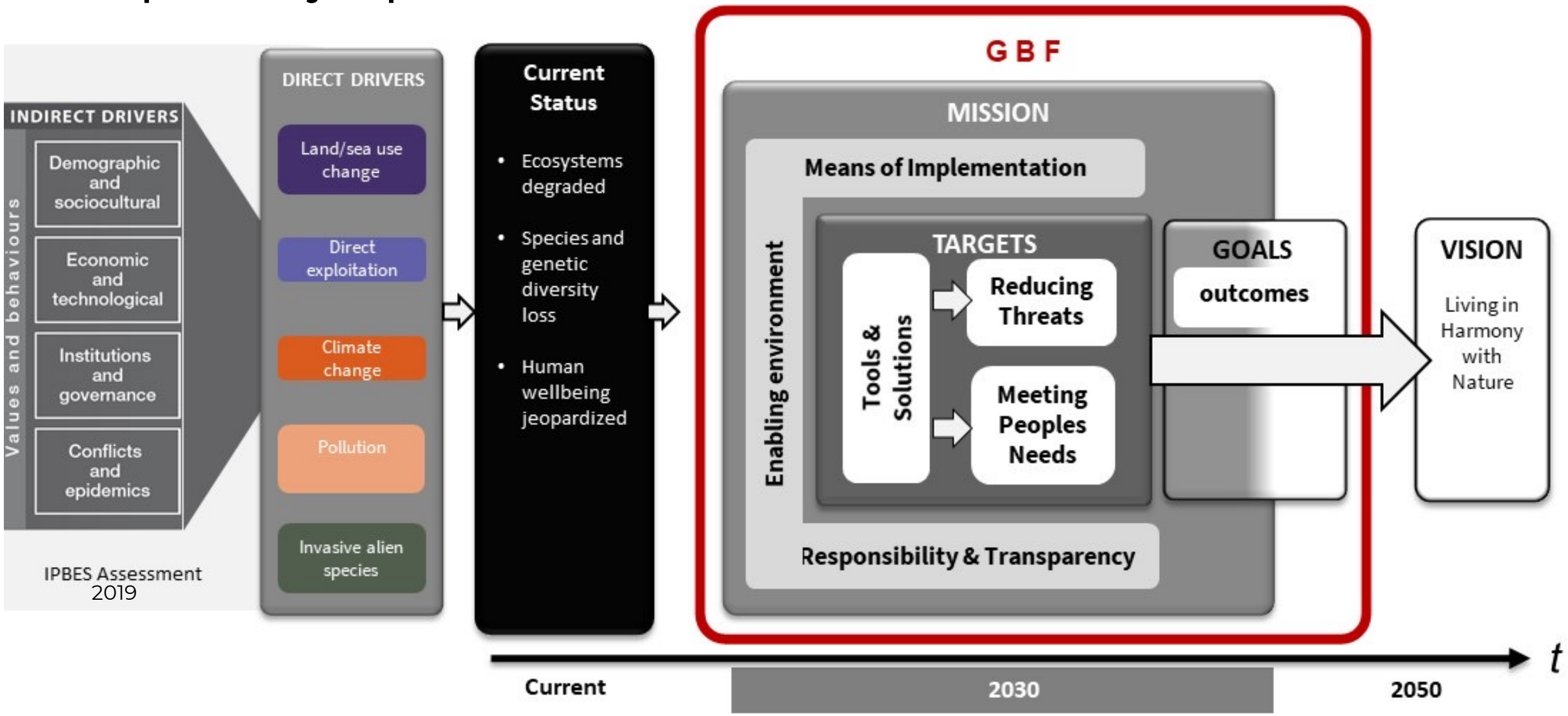
Georgina Mace et al., *Nature Sustainability*, 2018



Aotearoa's global contribution:
We are a global biodiversity hotspot. More than 80% of most groups of native species are found nowhere else. Many are either naturally rare or drastically reduced in range and abundance.

The Global Biodiversity Framework (GBF)

underpinned by implementation mechanisms



IPBES = Intergovernmental Platform for Biodiversity and Ecosystem Services

National biodiversity and environmental goals, objectives, legislative reforms

- Te Mana o te Taiao (Aotearoa NZ Biodiversity strategy)
- Natural and Built Environment Act
- National Policy Statements: Indigenous biodiversity (NPS-IB), Freshwater management (NPS-FM), Highly productive land (NPS-HPL)
- Environmental Reporting Act
- Treaty settlement legislation
- Wai262 response
- Wildlife Act reform
- Biosecurity Act reform

Stats NZ
Tatauranga Aoteroa

Te Uru Kahika
Regional and Unitary Councils Aotearoa

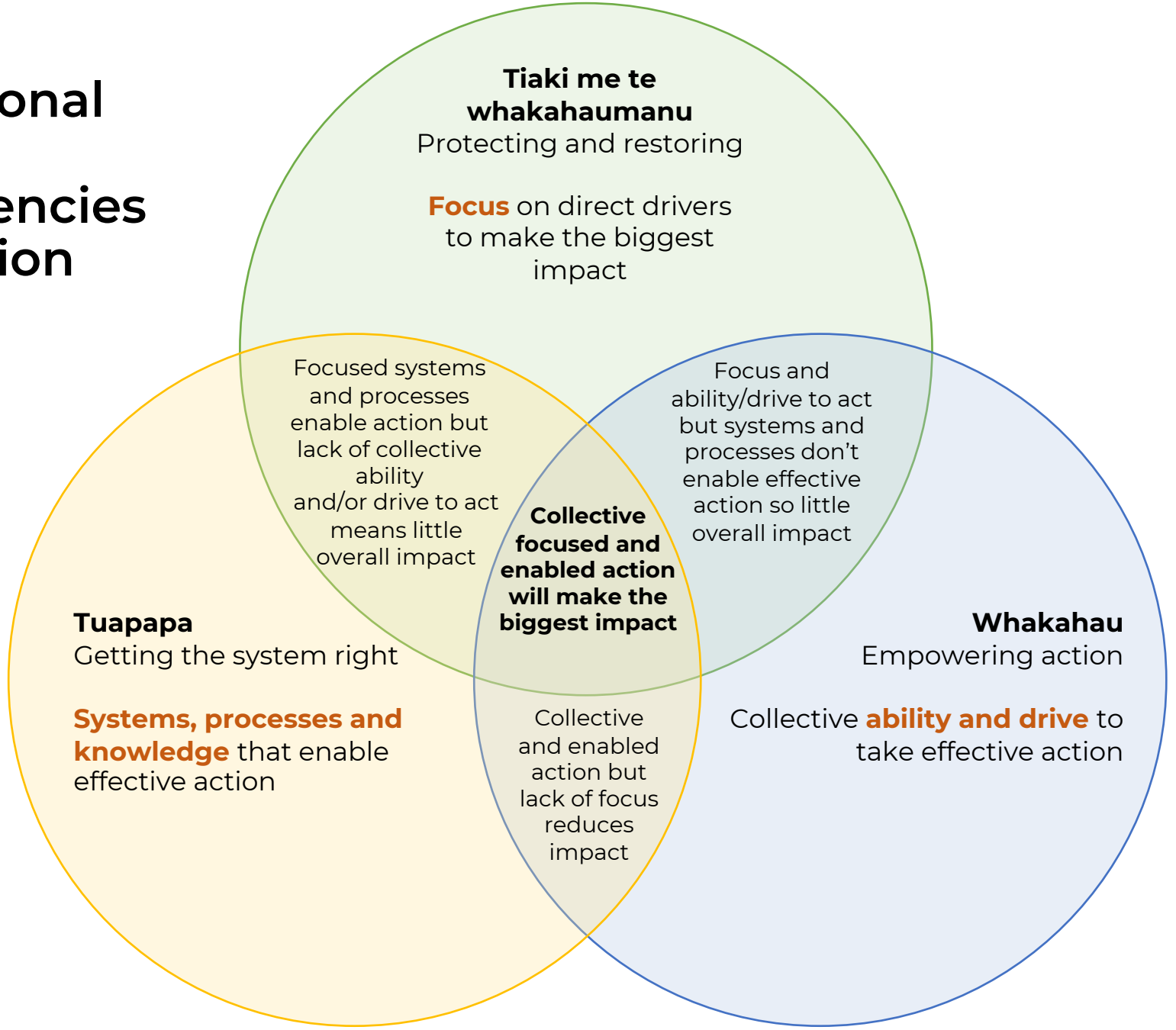
Te Mana o Te Taiao within a global context

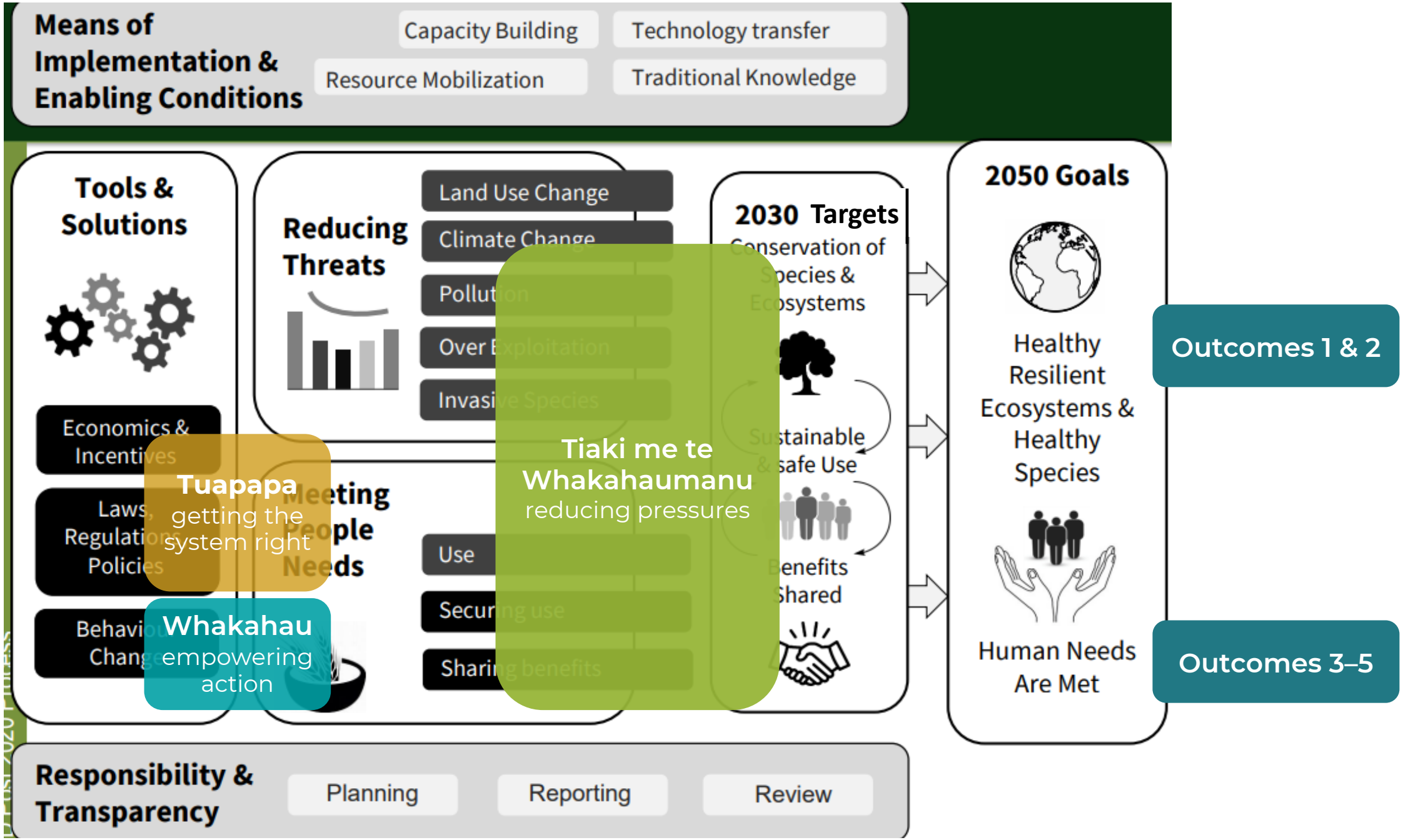
CBD and GBF

International Agreement: Convention on Biological Diversity (CBD)		New Zealand's response
Global Framework	Global Biodiversity Framework (GBF): • 2050 Vision • 2030 Mission • 4 goals (2050) • 23 Global Targets (2030)	**New Zealand's NBSAP** **Te Mana o Te Taiao 2020–2050 (completed 2020)** **Implementation Plan to 2030**
International Obligations	**National Biodiversity Strategy & Action Plan (NBSAP)**	**National Targets for 2030**
	NBSAP Finance Plan	**National Biodiversity Finance Plan**
	Global Monitoring Framework	**Interagency Outcome Monitoring Framework (OMF)**
	NBSAP Reporting	**National Report (due 2026)**

Transformational change: interdependencies underpin action

- The 20-year New Zealand Biodiversity Strategy of 2000 focused nearly entirely on the “Tiaki” circle.
- A critique of it in 2005 said it wasn’t making much difference.
- By 2010, it was barely mentioned.
- Te Mana o te Taiao, completed 2020, is structured around 3 pou/pillars.




Means of Implementation & Enabling Conditions
Capacity Building
Technology transfer
Resource Mobilization
Traditional Knowledge
Tools & Solutions
Economics & Incentives
Laws, Regulations Policies
Behaviour Change
Reducing Threats
Land Use Change
Climate Change
Pollution
Over Exploitation
Invasive Species
Meeting People Needs
Use
Securing use
Sharing benefits
2030 Targets
Conservation of Species & Ecosystems
Sustainable & safe Use
Benefits Shared
2050 Goals
Healthy Resilient Ecosystems & Healthy Species
Human Needs Are Met
Outcomes 1 & 2
Outcomes 3–5
Tuapapa
getting the system right
Whakahau
empowering action
Tiaki me te Whakahaumanu
reducing pressures
Responsibility & Transparency
Planning
Reporting
Review

Global Biodiversity Framework 2030 targets

1. Reducing threats to biodiversity

Target 1 – **Land/Sea-Use Change** / Habitat Loss / Spatial Planning

Target 2 – **Ecosystem Restoration**

Target 3 – **Protected Areas**

Target 4 – **Species Conservation**

Target 5 – **Species Overexploitation**

Target 6 – **Invasive Alien Species**

Target 7 – **Pollution**

Target 8 – **Climate change**

2. Meeting people's needs through sustainable use and benefit-sharing

Target 9 – **Sustainable Species Use**

Target 10 – **Sustainable Agriculture** / Productive Ecosystems

Target 11 – **Ecosystems Services,** including **NBSs**

Target 12 - **Urban Green Spaces**

Target 13 – Fair and Equitable Benefit Sharing from **Genetic Resources**

3. Tools and solutions for implementation and mainstreaming

Target 14 – **Biodiversity Mainstreaming**

Target 15 – **Sustainable Production** by Business

Target 16 – **Sustainable Consumption**

Target 17 – **Biosafety**

Target 18 – **Environmentally Harmful Subsidies** / **Incentives**

Target 19 – **Finance**

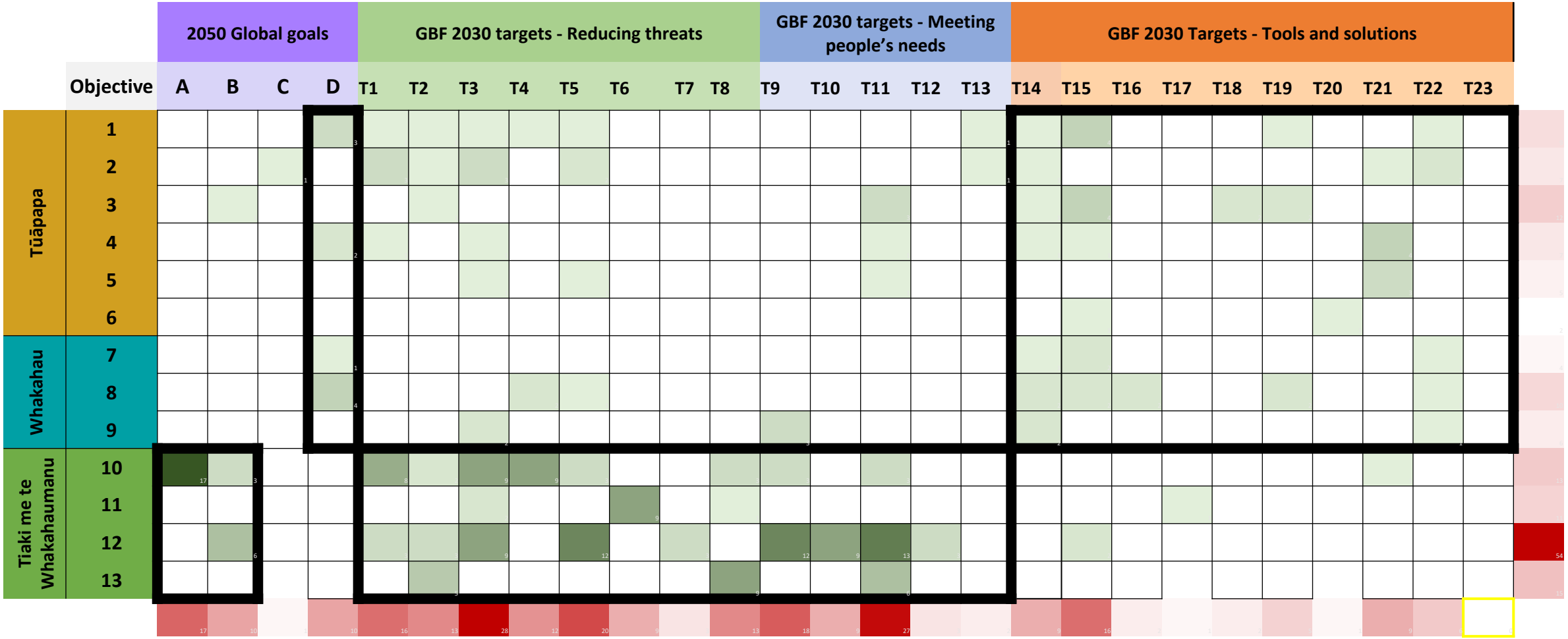
Target 20 – **Capacity Building**, Technology Transfer and Scientific Cooperation

Target 21 – **Knowledge for Biodiversity Management**, including **Traditional Knowledge**

Target 22 – **Equitable Participation** in Biodiversity Decision-Making, especially by **Indigenous Peoples**

Target 23 – **Gender Equality** in Biodiversity Action

Linking the Global Biodiversity Framework to Te Mana o te Taiao



Darker colours = more contributing actions

Target 23: gender equality not covered by Te Mana o te Taiao

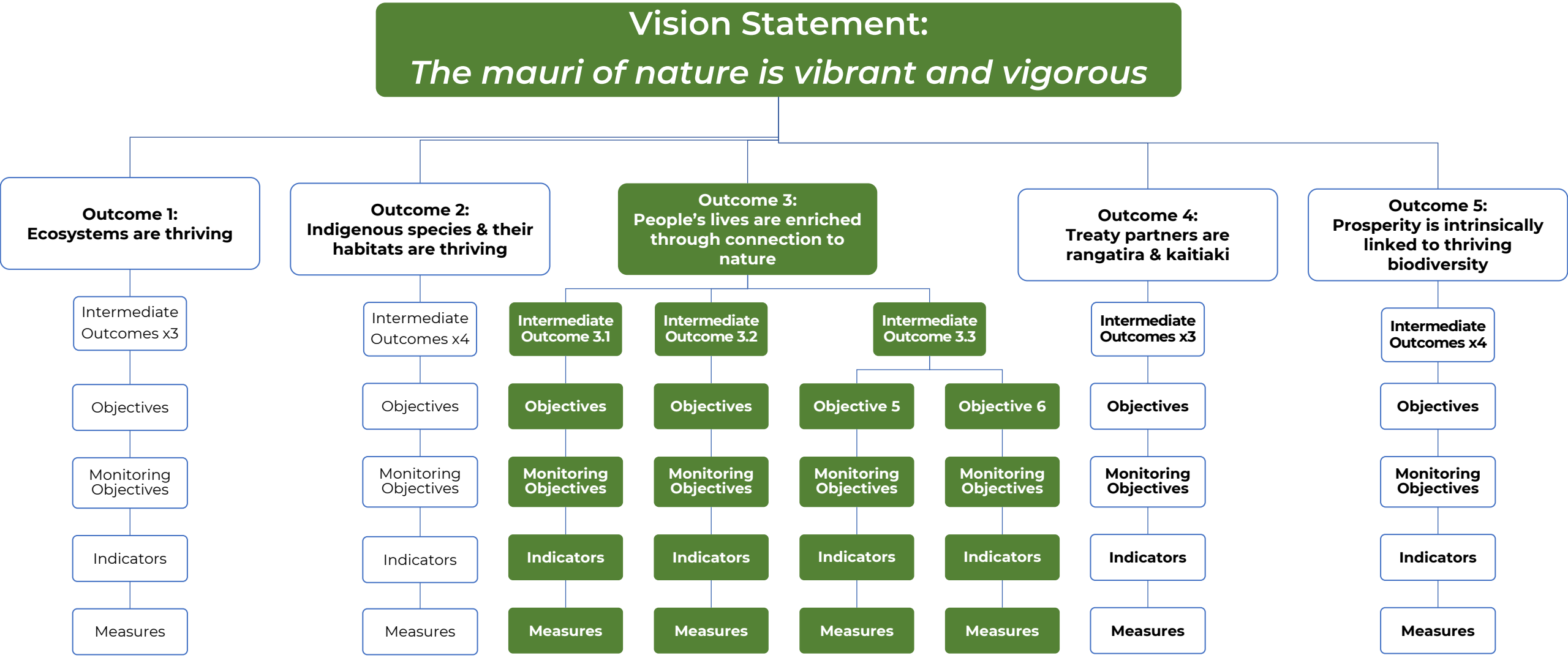
He Awa Whiria

An explicitly bicultural approach to protecting, restoring, and enhancing biodiversity

- Te Mana o te Taiao Outcome 4: *Treaty partners, whānau, hapū and iwi are exercising their full role as rangatira and kaitiaki.*
- Requires kaupapa Māori monitoring and reporting, elevating mātauranga.
- Requires parallel work by kāwanatanga *and* by whānau, hapū, and Iwi/Māori
- This work represents the government framework; kaupapa Māori work is underway to evaluate outcomes underpinned by mātauranga-a-iwi.

MBIE-funded programmes:
Te Weu o te Kaitiaki (MBIE Endeavour)
He Mātai i te Taiao (BioHeritage National Science Challenge)
Some DOC investment

Te Mana o te Taiao
Outcome Monitoring Framework hierarchy



Te Mana o te Taiao
Outcome Monitoring Framework hierarchy

Vision Statement:

The mauri of nature is vibrant and vigorous

Outcome 3:
People's lives are enriched through connection to nature

Intermediate Outcome 3.1

Everyone in Aotearoa New Zealand is connected to nature, and supports and actively contributes to its protection and restoration

Objective 8:

Resourcing and support are enabling connected, active, guardians of nature

Monitoring Objectives 4.4

Investment in conservation is essential to Aotearoa/New Zealand's prosperity

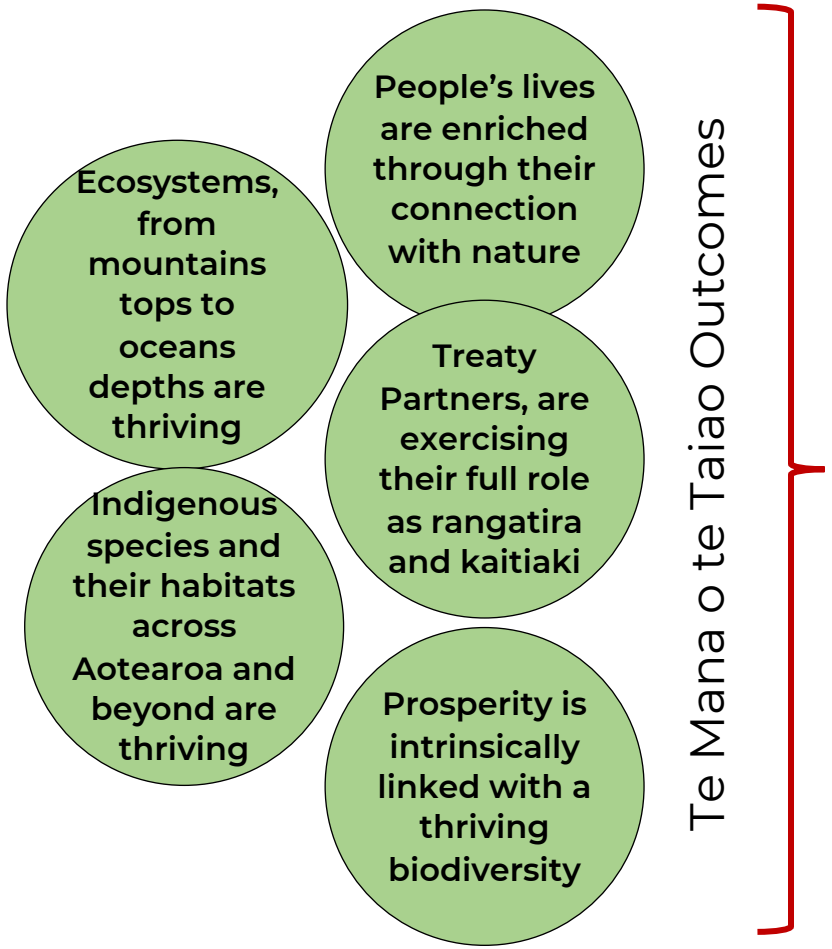
Indicator 4.4.1

New Zealanders' support for investment in biodiversity and biosecurity

Measure 4.4.1.1

New Zealanders and New Zealand organisations regard investment in biodiversity and biosecurity as essential to New Zealand's prosperity and brand

Establishing an interagency Outcome Monitoring Framework (OMF)



Establishing an interagency Outcome Monitoring Framework (OMF)

People's lives are enriched through their connection with nature

Ecosystems, from mountains tops to oceans depths are thriving

Treaty Partners, are exercising their full role as rangatira and kaitiaki

Indigenous species and their habitats across Aotearoa and beyond are thriving

Prosperity is intrinsically linked with a thriving biodiversity

Te Mana o te Taiao Outcomes

2021-2023 Co-development process and outputs

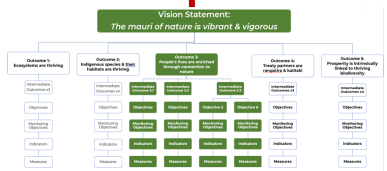
Collaborative engagement process (workshops)

MPI, StatsNZ, RC, MfE, LINZ

DOC Teams

DOC OMF Starting Point

Draft Interagency OMF co-developed



Interagency and Regional Council Reference Group in place

Outputs:

- Interagency OMF
- Priorities for investment
- SQL database for interrelationships
- Implementation pathway
- Alignment to the Global Monitoring Framework

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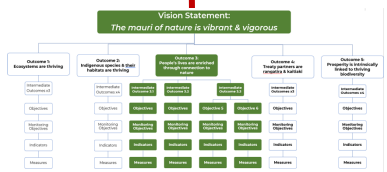

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- Agency alignment of legislation, strategy, policy, programme to relevant indicators and measures
  - By outcomes, intermediate outcomes, objectives
- Gaps identified
- OMF provides a shared vision for collaborative and coordinated action

The state of our evidence base to inform environmental outcomes

Parliamentary Commissioner for the Environment:

- "Huge gaps in data and knowledge undermine our stewardship of the environment and, along with inconsistent data collection and analysis, make it hard to construct a clear national picture of the state of our environment – and whether it is getting better or worse."
- "Rather than simply passively gathering data, the system needs to become more proactive – both in gathering data and its interpretation."

Series of PCE reports (2019, 2020, 2022) emphasize links to outcomes

Focusing Aotearoa New Zealand's environmental reporting system | Parliamentary Commissioner of Environment (pce.parliament.nz)

report-environmental-research-funding-review-pdf-32mb.pdf (pce.parliament.nz)

Environmental reporting, research and investment | Parliamentary Commissioner of Environment (pce.parliament.nz)

A consensus approach to monitoring outcomes

Lessons learned from the consensus approach:

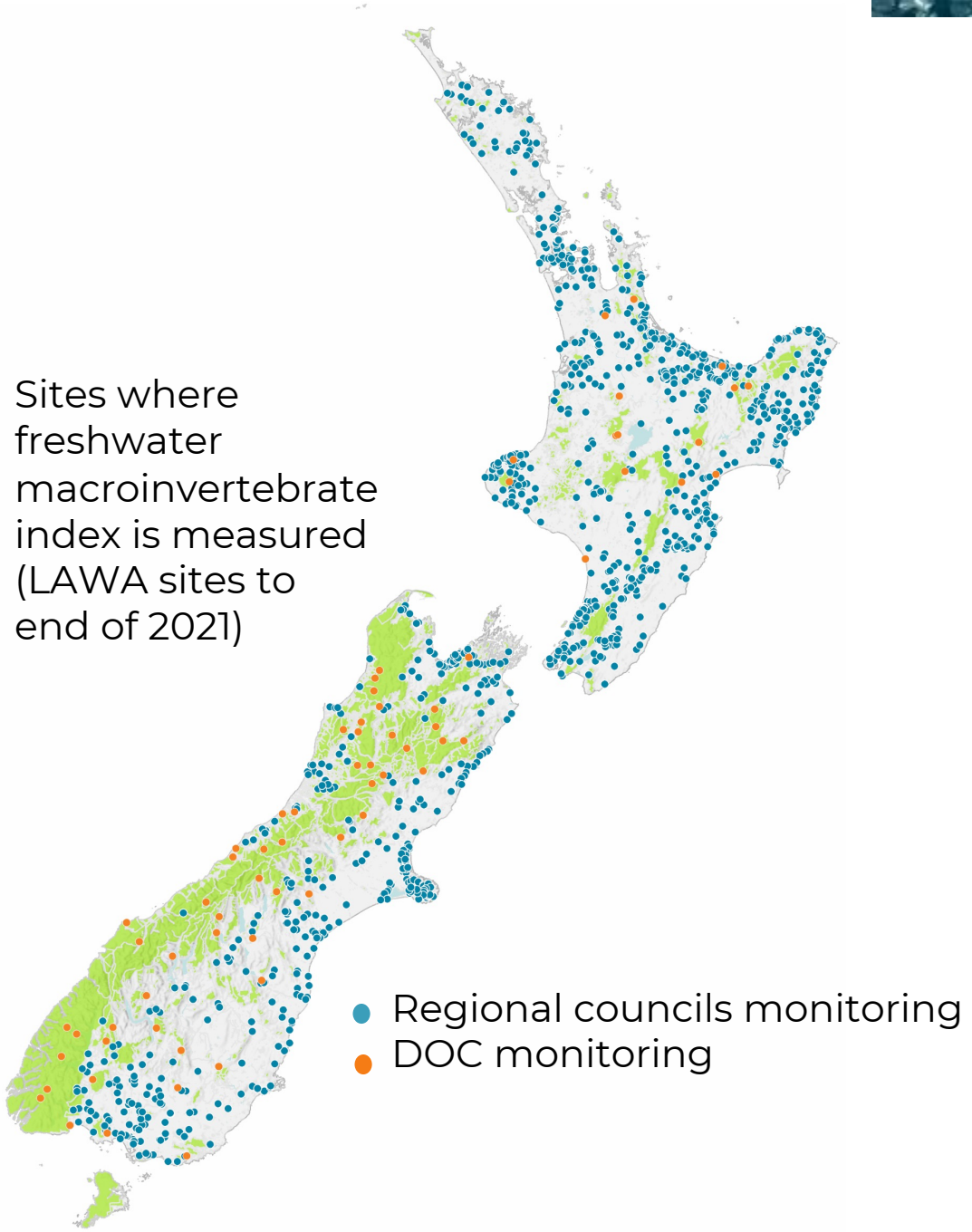
- Who is (or are) responsible to provide oversight and leadership of environmental monitoring? (an issue identified in the 2022 PCE report)
- Passive harvesting of data vs. active monitoring :
  - Who's doing what beyond the opportunistic, who's mandated and who's required to report outcomes, who's accountable for evidence? (issues identified in the PCE's 2019 report)
- The Interagency Outcome Monitoring Framework needs to be adapted as required (e.g., as it did to incorporate biosecurity after consultation with MPI)
- Underpinning needs remain:
  - Optimal design
  - Adequate investment in collecting essential data – whose responsibility? The role of MBIE?
  - Standard methods (transparency) especially for social indicators and measures.
  - Lack of a National Environmental Monitoring Standards (NEMS) for many indicators and measures related to biodiversity or social outcomes.
  - Data management and curation (Environmental Monitoring and Reporting System)

	Actions NZ will take	Changes NZ will make	Benefits NZ will achieve	Global Monitoring Framework
4 Objectives — **Tiaki me te whakahaumanu** Protecting and restoring in partnership with Māori, incorporating Mātauranga	Funding and output indicators	Invasive species indicators	Ecological integrity/ Nature's Contributions to People indicators	Red list ecosystem index → Ecosystems thrive
Invasive species		Land use change indicators		Red list species index → Indigenous species thrive
Land and sea change		Harvesting indicators		
Direct exploitation		Climate change indicators	Adaptation indicators	Nature's contributions to people indicators
Climate change		Pollution indicators		
Pollution				
6 Objectives — **Tūāpapa** getting the system right		Accessibility and investment indicators	Nature-based Solutions implementation indicators	People's lives enriched; Mauri indicators; Treaty partners exercising role as rangatira and kaitiaki
3 Objectives — **Whakahau** Empowering action	Resourcing indicators		Activities indicators	Nature's contributions to people indicators → Prosperity linked to biodiversity

Te Mana o te Taiao Vision

Te mauri hikahika o te Taiao

The mauri of nature is vibrant and vigorous



Progress: building consensus for freshwater indicators

High priority because of legislation and policy

Moving away from biased approach in network towards a coordinated approach

But…

- Risks reinforcing a business-as-usual approach
- We are not shifting to measuring system change and enabling action
- Te Ao Māori approach might look quite different

Towards consensus on terrestrial biodiversity indicators

Indicator	Developed	Implemented		Indicator	Developed	Implemented	
		DOC/MfE	RCs			DOC/MfE	RCs
Status and trend				**Effectiveness of policy and management**			
M1 Land cover				M12 Change in rare ecosystems		Partial	
M2 Vegetation			2 councils	M13 Threatened species habitat			
M3 Birds			2 councils	M14 Consents compliance		n/a	
M5 Rare ecosystems		Partial		M15 Pest-free ecosystems			
Threats and pressures				M16 Plants and birds at risk		Partial	2 councils (Partial)
M6 Weeds				M17 Catchment protection			
M7 Pest mammals			2 councils	**Community engagement**			
M8 Land cover change			R&D issues	M18 Protection			
M9 Loss to fire, herbicide			R&D issues	M19 Community restoration			R&D issues
M11 Climate		Related to other indicators		M20 Community pest control			R&D issues

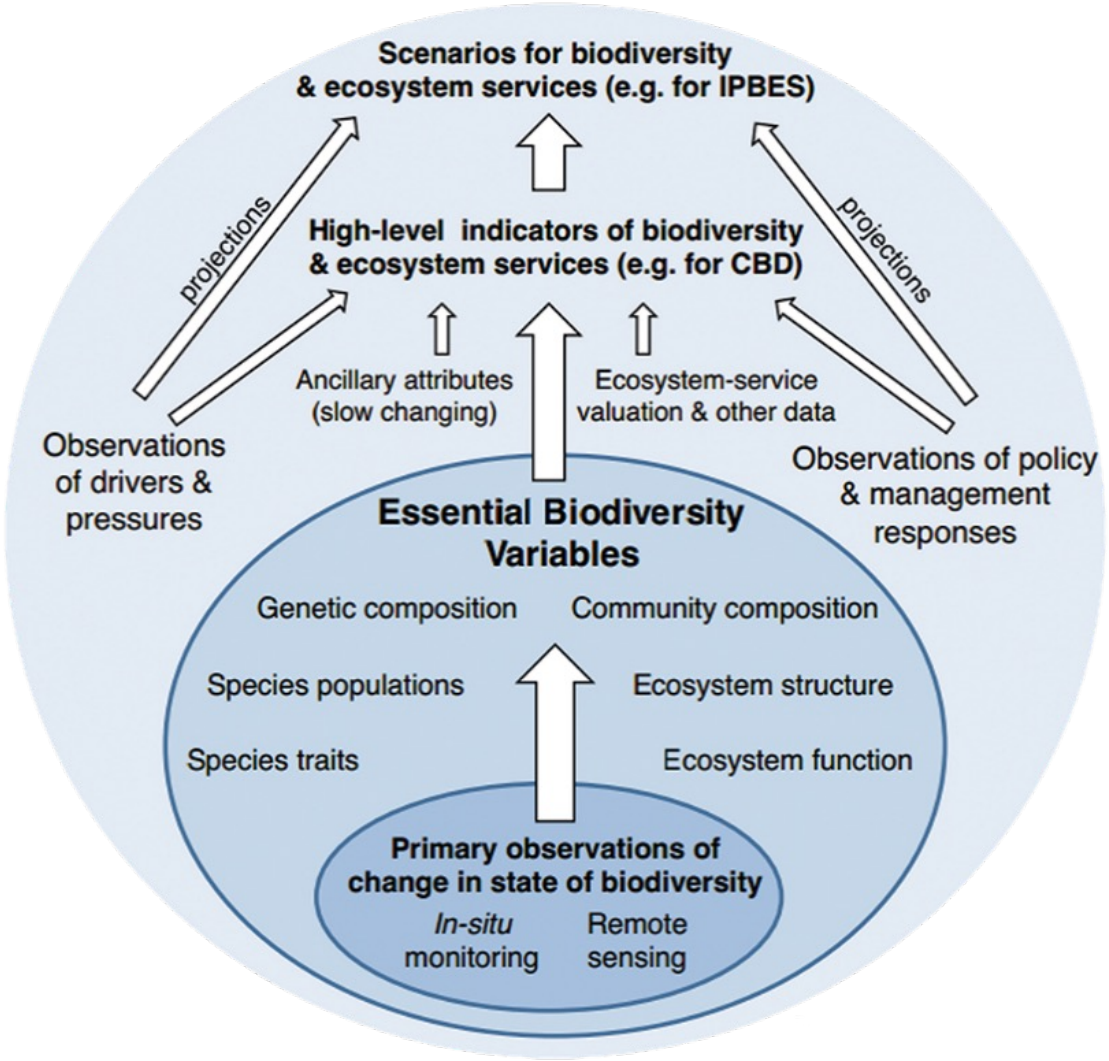
Global Monitoring Framework

Red list of ecosystems (an index)

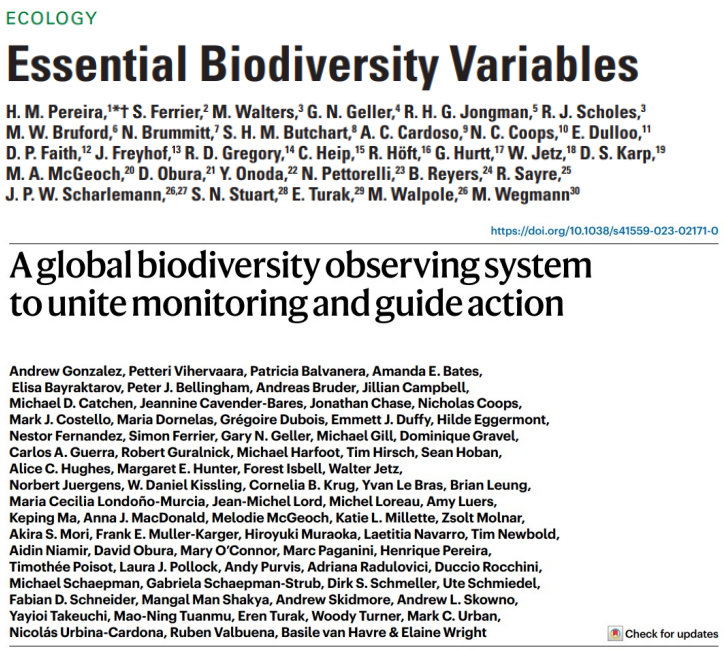
- Critical for reporting Global Biodiversity Framework targets and goals
- Nationally needed and relevant for outcomes of Te Mana o te Taiao, National Policy Statement for Indigenous Biodiversity, Environmental Reporting Act, Natural and Built Environment Act targets and limits, etc.
- Index with **multiple indicators and measures** (area, ecological integrity, risk of collapse) across ecosystem types
- Dependent on definitions of ecosystems (classification and mapping)
- Needs links to underpinning data and national reports

Guidelines for the application of IUCN Red List of Ecosystems categories and criteria - resource | IUCN
https://newzealandecology.org/nzje/3411.pdf

International best practices



https://geobon.org/ebvs/what-are-ebvs/



ECOLOGY

Essential Biodiversity Variables

A global system of harmonized observations is needed to inform scientists and policy-makers.

H. M. Pereira,[1*†] S. Ferrier,[2] M. Walters,[3] G. N. Geller,[4] R. H. G. Jongman,[5] R. J. Scholes,[3] M. W. Bruford,[6] N. Brummitt,[7] S. H. M. Butchart,[8] A. C. Cardoso,[9] N. C. Coops,[10] E. Dulloo,[11] D. P. Faith,[12] J. Freyhof,[13] R. D. Gregory,[14] C. Heip,[15] R. Höft,[16] G. Hurtt,[17] W. Jetz,[18] D. S. Karp,[19] M. A. McGeoch,[20] D. Obura,[21] Y. Onoda,[22] N. Pettorelli,[23] B. Reyers,[24] R. Sayre,[25] J. P. W. Scharlemann,[26,27] S. N. Stuart,[28] E. Turak,[29] M. Walpole,[26] M. Wegmann[30]

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A global biodiversity observing system to unite monitoring and guide action

Andrew Gonzalez, Petteri Vihervaara, Patricia Balvanera, Amanda E. Bates, Elisa Bayraktarov, Peter J. Bellingham, Andreas Bruder, Jillian Campbell, Michael D. Catchen, Jeannine Cavender-Bares, Jonathan Chase, Nicholas Coops, Mark J. Costello, Maria Dornelas, Grégoire Dubois, Emmett J. Duffy, Hilde Eggermont, Nestor Fernandez, Simon Ferrier, Gary N. Geller, Michael Gill, Dominique Gravel, Carlos A. Guerra, Robert Guralnick, Michael Harfoot, Tim Hirsch, Sean Hoban, Alice C. Hughes, Margaret E. Hunter, Forest Isbell, Walter Jetz, Norbert Juergens, W. Daniel Kissling, Cornelia B. Krug, Yvan Le Bras, Brian Leung, Maria Cecilia Londoño-Murcia, Jean-Michel Lord, Michel Loreau, Amy Luers, Keping Ma, Anna J. MacDonald, Melodie McGeoch, Katie L. Millette, Zsolt Molnar, Akira S. Mori, Frank E. Muller-Karger, Hiroyuki Muraoka, Laetitia Navarro, Tim Newbold, Aidin Niamir, David Obura, Mary O'Connor, Marc Paganini, Henrique Pereira, Timothée Poisot, Laura J. Pollock, Andy Purvis, Adriana Radulovici, Duccio Rocchini, Michael Schaepman, Gabriela Schaepman-Strub, Dirk S. Schmeller, Ute Schmiedel, Fabian D. Schneider, Mangal Man Shakya, Andrew Skidmore, Andrew L. Skowno, Yayioi Takeuchi, Mao-Ning Tuanmu, Eren Turak, Woody Turner, Mark C. Urban, Nicolás Urbina-Cardona, Ruben Valbuena, Basile van Havre & Elaine Wright

- International investments, collaboration and best practices.
- Available to us.
- Global Biodiversity Information Facility (GBIF).
- Encouraging network (BON (Biodiversity Observation Network) in a box) methods, tools.
- Our own work needed on best practice data ownership, ensuring Māori intellectual property (Wai262).

Where next?

- Investment priorities in essential environmental and social data and its mobilisation (platforms)
- Equitable process around:
  - resourcing needed to active collection of data
  - te Ao Māori
- Collaborative approach continues and expands
- National targets to meet the Global Biodiversity Framework
- Targets and limits under the Natural and Built Environment Act
- Role of MBIE is unclear (e.g., in long-term monitoring, inter-disciplinary research)
- Independent environmental governance is needed

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