TE MANA O TE TAIAO

AOTEAROA NEW ZEALAND BIODIVERSITY STRATEGY 2020

Interagency feedback on monitoring and reporting indicators, May 2022



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Context

This document presents a synthesis of the feedback received from central and local government with regards to developing a shared agency agnostic framework for monitoring and reporting on progress towards the outcomes of Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy (ANZBS). These agencies were asked to comment on the relevance of indicators in the Outcome Monitoring Framework (OMF)² that the Department of Conservation Te Papa Atawhai (DOC) uses as a foundational starting point for co-developing an outcome monitoring framework for Te Mana o te Taiao – ANZBS. These indicators were listed in relation to the Te Mana o te Taiao - ANZBS benefits framework organised by the five key drivers of biodiversity loss (invasive species, direct exploitation, climate change, land and sea use, and pollution)³ in an Excel workbook that was circulated to support a workshop in May 2022.

Agencies were asked to consider the following questions in their responses.

- Do the indicators make sense and work for your agency or do they need to evolve and, if so, how?
- 2. Where do the indicators align with indicators used in your existing and future or planned strategies/plans/programmes? (Please provide details for these)

- Regarding the elements attributed from point 2 above, are these active indicators (ie are they being measured and reported on)? If yes, please provide any supporting indicator templates where possible.
- 4. Are you able to provide any other supporting information about work your agency has undertaken in the past to scope shared monitoring and reporting systems?

We received feedback from:

- Ministry for Primary Industries Manatū Ahu Matua (MPI), including Biosecurity New Zealand, Te Uru Rākau – New Zealand Forest Service, Policy and Trade, and Agricultural Investment Services, but excluding Fisheries New Zealand
- Ministry for the Environment Manatū Mō te Taiao (MfE)
- Toitū Te Whenua Land Information New Zealand (LINZ)
- Stats NZ Tatauranga Aotearoa
- Ministry of Business, Innovation & Employment Hīkina Whakatutuki (MBIE)
- regional councils.

^{1.} Department of Conservation 2020: Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy. Department of Conservation, Wellington. 72 p. www.doc.govt.nz/nature/biodiversity/aotearoa-new-zealand-biodiversity-strategy/

^{2.} www.doc.govt.nz/our-work/outcome-monitoring-framework/

 $^{{\}tt 3.} \quad {\tt www.nature.scot/scotlands-biodiversity/key-pressures-biodiversity}$

Summary of findings

1. Roles and responsibilities of agencies

While all participating agencies agreed that their work programmes have the potential to collectively contribute to the outcomes of Te Mana o te Taiao – ANZBS, they differ substantially in their roles and responsibilities. It has previously been assumed that there is an equity in investment on reporting progress in outputs and outcomes across the sector. However, we made the following observations.

- Reporting on outcomes: Some agencies
 (DOC and regional councils) collect data that
 are relevant to reporting on progress towards
 the outcomes of Te Mana o te Taiao ANZBS.
- **Reporting on outputs:** A number of agencies (MPI and LINZ, as well as DOC and regional councils) primarily collect data that are focused on outputs, rather than outcomes. Such data report on organisational performance (what was done and where it was done). Operational data (eg extent or number of full-time equivalents (FTEs)) can be used to interpret data that report on progress towards outcomes, as noted by LINZ: 'data we collect could be used as a proxy for indicators rather than a direct measure'. However, while reporting on outputs provides useful interpretation that is relevant to the outcomes of Te Mana o te Taiao - ANZBS, it does not substitute for the use of indicators to report on progress towards outcomes.
- Passive data collectors: Other agencies
 (MfE and Statistics NZ) are 'passive harvesters
 of data from other agencies rather than
 actively conducting monitoring programmes'.
 MfE does collect some data that are relevant
 to reporting on progress towards the
 outcomes of Te Mana o te Taiao ANZBS,
 however (ie the Land Use and Carbon Analysis
 System (LUCAS) programme and Land Use
 Map, which were developed to contribute
 to international reporting on Aotearoa New
 Zealand's existing carbon stock and changes
 in these).

• Stewardship roles: MBIE 'does not have its own strategies or operations for biodiversity, so its role is more as stewards of the Research, Science and Innovation (RSI) system. In this capacity, it has an interest in how the ANZBS will be carried out and the role that the RSI system plays in this.'

2. Achieving a more inclusive interagency approach

For DOC's OMF to be more widely useful, it is essential that it reflects the wider group of agencies involved in delivering on Te Mana o te Taiao – ANZBS and their accountabilities, enabling a whole-of-government approach.

At a simple level, this requires some rewording to make the framework applicable beyond DOC, particularly with respect to social indicators and matters of people's welfare. Examples of individual indicators that require change to be more broadly useful include:

- Indicator 4.3.2: 'DOC's partnership work ensures and enhances the retention of rangatiratanga over taonga', which becomes 'Partnership work of the Crown and local government ensures and enhances the retention of rangatiratanga over taonga'
- Indicator 4.3.3: 'DOC and whānau, hapū and iwi make informed decisions through engagement', which becomes 'The Crown, local government, and whānau, hapū and iwi make informed decisions through engagement'.

Some indicators may also need to be reworded to be applicable across all of Aotearoa New Zealand, not just public conservation lands and waters. For example, Te Uru Rākau noted that it could report on the role plantation forestry plays in contributing to the outcomes of Te Mana o te Taiao – ANZBS as it 'supports a variety of ecosystem services including biodiversity and provides the renewable resources required for New Zealand to meet our sustainability objectives'.

Other indicators within DOC's OMF require rewording to make them more applicable across agencies, especially those with different responsibilities from DOC. Examples include:

- Indicator 3.5.1: 'Significant conservation values are protected from harm resulting from recreation', which becomes 'Significant conservation values are protected from harm resulting from recreation and industry'
- Indicator 4.1.1: 'Awareness, understanding and knowledge of, and attitudes towards conservation', which becomes 'Awareness, understanding and knowledge of, and attitudes towards conservation, pest management and biosecurity'.

Those terms that would need to be changed to make DOC's OMF more widely applicable have been italicised and placed in square brackets in Table 1.

Achieving an effective and inclusive interagency approach also requires alterations to the template in which the indicators currently sit (Table 1) to ensure that source data are generated for indicators and measures. For example, a monitoring objective such as reducing the spread and dominance of exotic species (1.3 in Table 1) is as germane to outcomes of biosecurity strategies as to outcomes of Te Mana o te Taiao – ANZBS, so source data collected should inform both. For this process to work best in terms of reporting on selected measures (and therefore indicators), it will require interoperability (eg agreed common data standards and means of sharing data among agencies).

3. A pathway to action

Most agencies considered that indicators from DOC's OMF provided a suitable first step towards measuring progress towards the outcomes of Te Mana o te Taiao – ANZBS. Biosecurity New Zealand noted that the OMF and its indicators are 'very conservation-geared, which is to be expected since it is a DOC Framework' and that its integration with indicators to measure progress towards the outcomes of other initiatives (eg the National Policy Direction for Pest Management⁴) would maximise its chances of being successful and more widely adopted.

When considering Aotearoa New Zealand's capacity to inform environmental management, the Parliamentary Commissioner for the Environment (PCE), Simon Upton, observed in the 2019 report Focusing Aotearoa New Zealand's environmental reporting system that 'ours has been a passive system that has harvested whatever data is there and done the best it can to navigate what's missing ... In my judgment, what there is, is clearly inadequate.'5 He also noted that "huge" gaps in data and knowledge undermine our stewardship of the environment' in a precis of that report.6 As examples, he described a lack of 'consistent, authoritative time-series data and comprehensive spatial coverage' and warned that 'every year we delay the collection of data identified as a significant gap, we commit New Zealand to flying blind in that area' in an associated FAQs document.⁷ Many of the gaps that the PCE described pertain directly to many of the indicators in Table 1 that have received little, if any, investment to date.

Making progress towards filling the gaps in data and knowledge that the PCE identified will require a structured approach within and among agencies to identify which are priorities for action. Table 1 has been developed as a draft for comment with the intention of helping to prioritise which indicators and measures require concerted investment. In terms of prioritising investment, agencies generally considered that 'to properly assess whether the indicators work for our organisation or not, a finer level of detail would be required. Of particular importance are the specific measures that sit beneath each of the indicators' – a view that was shared by MfE, regional councils and others. Other views included the need for:

- consistent definitions of the things that need to be measured and the units of measurement to use, which are agreed on among agencies (eg how to define ecosystems, per comments from regional councils)
- the identification of responsible agencies and land managers (which is pertinent in the case of land either administered directly or leased from the Crown, per comments from LINZ).

^{4.} www.mpi.govt.nz/biosecurity/about-biosecurity-in-new-zealand/national-policy-direction-for-pest-management/

^{5.} Parliamentary Commissioner for the Environment 2019: Overview. P. 4 in: Focusing Aotearoa New Zealand's environmental reporting system. Parliamentary Commissioner for the Environment, Wellington. www.pce.parliament.nz/media/196940/focusing-aotearoa-new-zealand-s-environmental-reporting-system.pdf

^{6.} www.pce.parliament.nz/publications/focusing-aotearoa-new-zealand-s-environmental-reporting-system

^{7.} Parliamentary Commissioner for the Environment 2019: Focusing Aotearoa New Zealand's environmental reporting system: frequently asked questions. 2 p. www.pce.parliament.nz/media/196936/focusing-aotearoa-new-zealands-environmental-reporting-system-faqs.pdf

4. Making progress towards all outcomes of Te Mana o te Taiao – ANZBS

Three pou (pillars) provide direction and focus to guide us towards the transformational change needed to achieve the outcomes of Te Mana o te Taiao – ANZBS.

- Tūāpapa getting the system right
- Whakahou empowering action
- Tiaki me te Whakahaumanu protecting and restoring

Figure 1 shows the interactions among these pou and highlights the need to always consider them together rather than in isolation to identify and realise the interconnections that will enhance protection and restoration efforts by empowering others and enabling or enhancing supporting systems.

There are significant indicators relating to Tūāpapa and Whakahou that are not considered under DOC's OMF and thus do not feature in Table 1. It is also important to note that not all monitoring objectives and indicators from DOC's OMF were included in documents for feedback (eg indicators within 'Our history is brought to life and protected' were omitted).

The feedback received from agencies made it clear that investment in monitoring and reporting on progress towards outcomes related to Tiaki me te Whakahaumanu are generally more advanced across agencies than those related to Tūāpapa and Whakahou (Table 1), so interagency consensus will be needed to redress that imbalance. A new draft framework for Te Mana o te Taiao – ANZBS based on Table 1 will highlight those gaps that can be collectively developed in the future based on shared prioritisation.

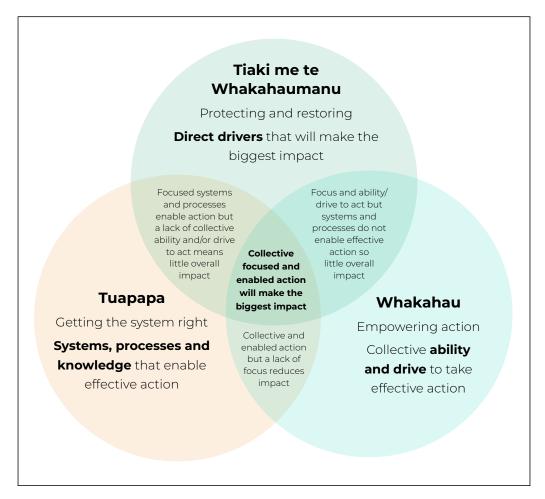
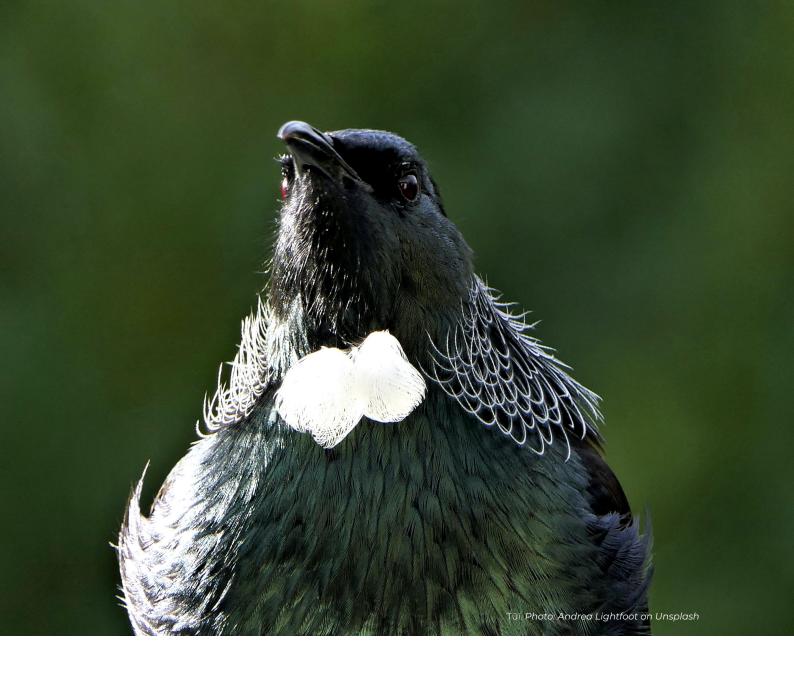


Figure 1. Interactions between the three pou that guide us towards the transformational change needed to achieve the outcomes of Te Mana o te Taiao.



Note that a framework for monitoring and reporting on progress towards the outcomes of Te Mana o te Taiao – ANZBS from a Te Ao Māori (Māori world) perspective is being developed as a separate workstream within the guiding principle of He Awa Whiria (ie the periodic interweaving of bi-cultural approaches) where appropriate. Table 1 notes the relevance of scale (site-specific or national) for the application of indicators in DOC's OMF. It is likely that many or most indicators developed and applied from a Te Ao Māori perspective will be site-, or perhaps rohe-, specific, and that aggregating these at larger (including national) scales may be an anathema to mana whenua.

It is necessary to develop consistent approaches across all those who are involved in monitoring and reporting in relation to Te Mana o te Taiao – ANZBS to ensure the efforts at community, district

and regional levels can be aggregated to inform national pictures and decision making. The Te Mana o te Taiao – ANZBS monitoring and reporting system will leverage off previous investments in tools, methods and processes and will encourage a cycle of continuous improvement.

Another key gap in measuring progress towards the outcomes of Te Mana o te Taiao – ANZBS relates to indicators and the concept of quality assurance (eg how well are institutions performing and how well are governance systems working?). The Te Mana o te Taiao – ANZBS monitoring and reporting team will continue to work with the implementation team and interagency partners to ensure that the delineation of assurance monitoring and reporting is captured alongside measuring and understanding the framework and future system's efficiency and effectiveness.

Table 1. A framework for indicators that have the potential to be suitable for tracking progress towards the outcomes of Te Mana o te Taiao – ANZBS.

The structure shown reflects DOC's existing OMF, which could form the basis for a shared interagency outcome monitoring framework that reflects the needs, priorities and work of all agencies that can or could contribute to monitoring and reporting on progress towards the outcomes of Te Mana o te Taiao – ANZBS. The intermediate outcomes are current for DOC, and the outcome objectives include a set of key factors that contribute to each intermediate outcome. A set of qualitative or quantitative indicators could be assessed in relation to each outcome objective.⁸ Note that LINZ and MBIE did not provide any specific comments and so have not been included in this table.

Key

DOC staff have assigned the status of each indicator along a four-point scale of development, following a biodiversity inventory and monitoring review published in 2005.9 For the purposes of this draft, DOC staff have also assigned a status, domain and scale to indicators that regional councils and MPI noted were either in use or of interest to them. The codes and abbreviations used in Table 1 are explained below.

Dev	elopment:	Status:	
0	Operational now or in the short term Data elements defined, technical issues resolved and historic datasets available.	DOC1	Largely concerns public conservation lands and waters or is a primary DOC responsibility. For the most part developed, organised, collected and
D	Development required Importance and usefulness [to DOC] defined, data elements identified, but organisational and operational features require further work.	NATI	analysed by DOC. National measure, extending beyond public conservation lands and waters, but DOC will contribute and may assist with the organisation,
R	Research required Potential useful measure, but data elements require further development, analysis and research.	NAT2	collection, collation and analysis of data. Fundamental national data layer collected, collated and analysed largely by other agencies.
С	Consideration required Interesting or novel measure, and may be used internationally, but utility [for DOC] requires further exploration.		
	Turtrier exploration.		
Don	nain (pertinent at measure, rather than indicator, level):	Scale:	
Don L F M	·	Scale: S N	Site-specific National
L F	Land Freshwater Marine	s	·
L F M	Land Freshwater Marine	s	·
L F M Oth	Land Freshwater Marine	s	·

^{8.} McGlone, M.S.; McNutt, K.; Richardson, S.J.; Bellingham, P.J.; Wright, E.F. 2020: Biodiversity monitoring, ecological integrity, and the design of the New Zealand Biodiversity Assessment Framework. *New Zealand Journal of Ecology* 44: 3411.

^{9.} Lee, W.; McGlone, M.; Wright, E. 2005: Biodiversity inventory and monitoring: a review of national and international systems and a proposed framework for future biodiversity monitoring by the Department of Conservation. *Landcare Research Contract Report LC0405/122*. 213 p.

DOC intermediate outcome	Outcome objective	Indicator	DOC	Regional councils	МРІ	MfE Resource management targets and limits	MfE & Stats NZ Environmental reporting
1 The diversity of our natural heritage is	1.1 Maintaining ecosystem processes	1.1.1 Substrate quality	O, S (Sedimentation, sediment quality)	O (Soil quality)		V	√
maintained and restored		1.1.2 Ecosystem function	O, S (Flower, fruit production)			V	√
		1.1.3 Water quality and quantity	O, S	0		V	√
		1.1.4 Ecosystem structure	O, N	(Wetland condition)	(Biosecurity – wilding conifer control, Hydrilla verticillata eradication)	√	√
		1.1.5 Disturbance	O, S			√	√
		1.1.6 Land cover	O, N	• (Wetland extent)		V	√
	1.2 Limiting environmental contaminants	1.2.1 Non-nutrient contaminants	o, s	(Compliance and monitoring of contaminated land)		√	V
	1.3 Reducing spread and dominance of exotic species	1.3.1 Exotic species occurrence	O, S, N			√	√
		1.3.2 Invasive species dominance	O, S, N (Focus on predators and herbivores, not weeds)		D, N (Biosecurity – wallaby eradication)	√	V
	1.4 Preventing declines and extinctions	1.4.1 Conservation status of indigenous taxa	O, N		D, N (Biosecurity – kauri protection)	√	√
		1.4.2 Security of threatened and at-risk taxa	O, N		D, S, N (Biosecurity – kauri protection)	V	√
		1.4.3 Loss of genetic diversity	O, S (Limited investment: highly taxon- specific, focused mostly on rare vertebrates)			V	Not currently but potentially

DOC intermediate outcome	Outcome objective	Indicator	DOC	Regional councils	МРІ	MfE Resource management targets and limits	MfE & Stats NZ Environmental reporting
	1.5 Maintaining ecosystem composition	1.5.1 Species composition and diversity	O, S, N	(Investment highly variable among councils)		√	√
		1.5.2 Species occupancy of natural range	O, N (Limited investment: highly taxon- specific, focused mostly on vertebrates)	(Investment highly variable among councils)		√	√
	1.6 Ensuring ecosystem representation	1.6.1 Ecosystem representation and protection status	O, S, N			√ (Probably not protection)	√
	1.7 Adapting to climate change	1.7.1 Basic climate series	O, N (Ex NIWA: some S investment)			V	√
		1.7.2 Biological responses to climate change		(Investment highly variable among councils – emerging pests)		√	√
	1.8 Human use and interaction with natural heritage	1.8.1 Hunting and harvesting of indigenous resources	D, S, N		D, S, ?N (Biosecurity – kauri protection)	Potentially (depending on human health definition)	V
		1.8.2 Hunting and harvesting of non-native species and resources	D, S, N (Concessions, permits, etc)			No (definition of biodiversity specifically sets out indigenous)	√
		1.8.3 Human health and wellbeing and natural ecosystems			D, N (Biosecurity – Protection outcome, BNZ strategy)	√	√
		1.8.4 Exploration, appreciation and investigation of natural ecosystems			D, N (Biosecurity – Sustainability outcome, BNZ strategy)	Potentially (depending on human health definition)	√

Table 1 continued

DOC intermediate outcome	Outcome objective	Indicator	DOC	Regional councils	МРІ	MfE Resource management targets and limits	MfE & Stats NZ Environmental reporting
2 Our history is brought to life and protected	2.1 Historic and cultural heritage is protected, conserved and maintained	2.1.1 Status of historic and cultural heritage	O/D, S, L				
	2.2 Demand for historic and cultural heritage experiences is understood	2.2.1 Current demand for heritage experiences [on PCL&W]	O, S				
		2.2.2 Latent and future demand for heritage experiences [on PCL&W]	R				
	2.3 Facilities, services, communication and marketing support the historic and cultural heritage products demanded, and enhance the valuing of heritage	2.3.1 Current portfolio of heritage experiences provided	O, N				
		2.3.2 Heritage products provided meet customer expectations and preferences	O, S				
		2.3.3 Financial performance of heritage destinations and products	O, N				
		2.3.4 Marketing, communication and outreach grow awareness and selection of [DOC] heritage destinations and products, and increase its importance	O/D, N				

Table 1 continued

DOC intermediate outcome	Outcome objective	Indicator	DOC	Regional councils	МРІ	MfE Resource management targets and limits	MfE & Stats NZ Environmental reporting
	2.4 [DOC] works with others to achieve historic and cultural heritage goals	2.4.1 Contributions of [DOC's] partners to protecting history [on PCL&W] and bringing it to life	D, S				
		2.4.2 Quality of engagement with stakeholders	O/D/R, S				
		2.4.3 Tangata whenua cultural connections to heritage managed by [DOC] maintained and enhanced	R				
	2.5 The benefits of people engaging with historic and cultural heritage [on public conservation lands and	2.5.1 Contribution of heritage [on PCL&W] to local, regional and national economic prosperity	D				
	waters] are understood and valued	2.5.2 Contribution of heritage [on PCL&W] to individual and societal wellbeing	R				
3 New Zealanders and our visitors are	3.1 Demand for recreation experiences [using public conservation lands and waters] is understood	3.1.1 Current demand for recreation [on PCL&W]	O, S				
enriched by outdoor experiences		3.1.2 Latent and future demand for recreation [on PCL&W]	R				
		3.1.3 National recreation and tourism trends	O, N				

DOC intermediate outcome	Outcome objective	Indicator	DOC	Regional councils	МРІ	MfE Resource management targets and limits	MfE & Stats NZ Environmental reporting
	3.2 Facilities, services and marketing support recreation	3.2.1 Current portfolio of recreation experiences provided	O, N				
	experiences demanded	3.2.2 Opportunities, facilities and services provided meet customer expectations and preferences	O, S				
		3.2.3 Financial performance of destinations, experiences, facilities and services	O, N				
		3.2.4 Marketing, communication and outreach grow awareness and selection of [DOC] destinations, experiences, facilities and services	O/D, N				
	3.3 [DOC] works with others to achieve recreational goals	3.3.1 Contributions of [DOC's] partners to provision of recreational opportunities, facilities and services [on PCL&W]	D, S				
		3.3.2 Quality of engagement with stakeholders	O/D/R, S			No	No
of precriping considerations of principles and considerations are considerated as a consideration of principles are considerated as a considerate and considerated as a considerate are considerated as a	3.4 The benefits of people recreating [on public conservation lands and waters] are understood and	3.4.1 Contribution of recreation [on PCL&W] to local, regional and national economic prosperity	D			Potentially (depending on human health definition)	√
	valued	3.4.2 Contribution of recreation [on PCL&W] to individual and societal wellbeing	O/D, N			Potentially (depending on human health definition)	√

Table 1 continued

DOC intermediate outcome	Outcome objective	Indicator	DOC	Regional councils	МРІ	MfE Resource management targets and limits	MfE & Stats NZ Environmental reporting
	3.5 Impact of recreation use on significant conservation values	3.5.1 Significant conservation values are protected from harm resulting from [recreation]	D/R, S		D/R, ?N (Biosecurity – Sustainability outcome, BNZ strategy)	No	No
4 New Zealanders connect and contribute to conservation	4.1 Conservation is core to New Zealanders' identity, values and thinking	4.1.1 Awareness, understanding and knowledge of and attitudes towards [conservation]	O, N		D/R, ?N (Biosecurity – Sustainability outcome, BNZ strategy)	No	No
		4.1.2 Māori concepts, paradigms and values are intrinsic to New Zealanders' awareness and understanding of conservation	R			No	No
		4.1.3 Contribution to conservation awareness and engagement	O/D, N				
	4.2 More conservation is achieved by others	4.2.1 Quality of relationships with partners and stakeholders				No	No
		4.2.2 Capability and capacity development by partners (individuals and organisations)	D/R		D/R, ?N (Biosecurity – Sustainability outcome, BNZ strategy)	No	No
		4.2.3 Contribution by partnerships to conservation	D, S			No	No
		4.2.4 [DOC] management and outcomes for conservation funds under its administration	O, N				

DOC intermediate outcome	Outcome objective	Indicator	DOC	Regional councils	МРІ	MfE Resource management targets and limits	MfE & Stats NZ Environmental reporting
	4.3 [DOC] meets its obligations to its Treaty partners	4.3.1 [DOC] meets its partnership obligations in good faith, reciprocity and reasonableness	D/R			No	No
		4.3.2 [DOC's] partnership work ensures and enhances the retention of rangatiratanga over taonga	R		R, S (Biosecurity – Treaty anchored/ grounded principle, BNZ strategy)	No	No
		4.3.3 [DOC] and whānau, hapū and iwi make informed decisions through engagement	o, s		R?, S (Biosecurity – readiness and response capability; Treaty anchored/ grounded principle, BNZ strategy)	No	No
	4.4 Investment in conservation is essential to Aotearoa New Zealand's	4.4.1 New Zealanders' support for investment in conservation	O, N				
	prosperity and brand	4.4.2 Contribution to Natural Capital assessment and awareness	D			No	√
		4.4.3 [DOC] submissions or advocacy on conservation-related issues	O, N				
		4.4.4 Contribution to economic prosperity	D/R		D/R, N (Biosecurity – Prosperity outcome, BNZ strategy)	No	V
		4.4.5 Contribution to social prosperity	R			Potentially (depending on human health definition)	√
	4.5 [DOC's] commercial activities maximise conservation	4.5.1. Investment, delivery and value added from [DOC] goods and services	O, N				
	outcomes	4.5.2 [<i>DOC</i>] brand development and awareness	O, N				