

Why the Proposed Natural and Built Environments Act Might Fail

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New Zealand's primary planning legislation, the Resource Management Act 1991, is due to be repealed and replaced. This article reviews from an ecological perspective the proposed replacement, a Natural and Built Environments Act. The review concludes the replacement is insufficiently clear to deliver the high-level goal of protecting and enhancing the natural environment, and the wording reveals a poor understanding of ecosystem processes. A particular term needing to be removed is "environmental limit", along with the concept of minimum biophysical states and maximum amounts of environmental harm or stress. Instead, a concept such as "biophysical capacity" should be introduced, drawing on dynamic ecological processes and the need to enhance and restore ecosystems as a primary outcome of environmental legislation. "Capacity" allows for continuing improvements in ecological values, whereas "limits" relate to accounting concepts such as bottom lines and overall benefits across ecological, economic and social domains. New wording is proposed that would at least expose the contradictions inherent in creating legislation aimed at improving ecological outcomes without sufficient use of robust ecological terminology. This could form the basis for further refinement to create more useful legislation.

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1. INTRODUCTION

A major review of New Zealand's resource management laws recommended among other things replacing the country's primary planning legislation, the Resource Management Act 1991 (RMA). In response in July 2021 the New Zealand Government released for public comment an "exposure draft" of a proposed Natural and Built Environments Bill (ENBEB). This added an extra stage to the usual public input, prior to the Bill being tabled in Parliament and going through the Environment Select Committee process.

The Resource Management Review Panel (the Panel) had recommended legislation along the lines of the exposure draft, as well as a new Strategic Planning Act to "facilitate the integration of legislative functions across the resource management system".¹ The system would include the proposed Natural and Built Environments Act (NBA), and the existing Local Government Act 2002, Land Transport Management Act 2003, and the Climate Change Response Act 2002. Also recommended was a new Managed Retreat and Climate Change Adaptation Act.

This article critiques the ENBEB and in particular one of the rationales for introducing the new legislation, the need to improve environmental outcomes. The article argues that in its current form the proposed legislation is poorly worded and ignores a range of biophysical concepts that should underpin legislation designed to improve outcomes. The wording may change following public input. But the lack of terminological rigour is worth examining as an indicator of the lack of attention paid to the ecological sciences when drafting environmental legislation.

2. BIOPHYSICAL FRAMEWORK

According to the Panel, an NBA would focus "on enhancing the quality of the environment and on achieving positive outcomes to support the wellbeing of present and future generations".² The Purpose of the resulting draft of the NBA as released by the Government, the ENBEB, is provided in Table 1 and is compared with the RMA.

1 Resource Management Review Panel [RMRP] *New Directions for Resource Management in New Zealand: Report of the Resource Management Review Panel* (June 2020) at 5.

2 At 5.

Importantly, identifying and working within environmental limits partly reverses the mitigation hierarchy. The hierarchy looks to avoid ecological harm associated with development, and add value where possible. Reversing the hierarchy looks to requiring added value as an outcome.^{3, 4, 5} This can be seen in the United Kingdom Environment Bill which proposes development in England contributes to improving on-site habitat biodiversity value by at least 10 per cent of pre-development value, and can include using off-site biodiversity gains (Environment Bill, sch 14).⁶

However, the ENBEB lacks clarity over how the delivery part of the legislation marries with the goal of producing positive outcomes. By allowing environmental limits to be formulated as either the minimum biophysical state of the natural environment, or the maximum amount of harm or stress (s 7(3)), the proposed NBA fails to create an operational framework within what are described as biophysical or planetary boundaries.⁷ This is for a variety of reasons, as explained below.

3 J Kiesecker, H Copeland, A Pocewicz and B McKenny “Development by Design: Blending Landscape-Level Planning with the Mitigation Hierarchy” (2010) 8(5) *Frontiers in Ecology and the Environment* 261.

4 B Phalan and others “Avoiding Impacts on Biodiversity Through Strengthening the First State of the Mitigation Hierarchy” (2017) 5(2) *Oryx* 316.

5 Defra “Environment Bill Summer Policy Statement: July 2019” (2019) Department for Environment, Food & Rural Affairs, United Kingdom <<https://www.gov.uk/government/publications/draft-environment-principles-and-governance-bill-2018/environment-bill-summer-policy-statement-july-2019>>.

6 S Knight-Lenihan “Achieving Biodiversity Net Gain in a Neoliberal Economy: The case of England” (2020) 49(12) *Ambio* 2052.

7 LS Andersen, O Gaffney, W Lamb, H Hoff and others *A safe operating space for New Zealand/Aotearoa: Translating the planetary boundaries framework* (Potsdam Institute for Climate Impact Research, Stockholm Resilience Centre, Mercator Research Institute on Global Commons and Climate Change, 2020).

RMA Purpose (s 5)	NBA Purpose (s 5)	Comment
Promote sustainable management of natural and physical resources. This means managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while <ul style="list-style-type: none"> • sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations • safeguarding the life-support capacity of air, water, soil, and ecosystems • avoiding, remedying, or mitigating any adverse effects of activities on the environment. 	Enable the protection and enhancement of the natural environment, and people and communities to use the environment in a way that supports the well-being of present generations without compromising the well-being of future generations. To achieve the purpose, use of the environment must comply with environmental limits, and outcomes for the benefit of the environment must be promoted, and any adverse effects on the environment must be avoided, remedied, or mitigated. The Act would enable the upholding of Te Oranga o te Taiao, which incorporates the health of the natural environment, the intrinsic relationship between iwi and hapū and te taiao, ⁸ the interconnectedness of all parts of the natural environment, and the essential relationship between the health of the natural environment and its capacity to sustain all life.	Complementing the Purpose rewording is establishing the need to protect the ecological integrity of the natural environment, and/or human health (ENBEB, s 7(1)). This is done by establishing environmental limits. These limits may be formulated as: the minimum biophysical state of the natural environment or of a specified part of that environment; the maximum amount of harm or stress that may be permitted on the natural environment or on a specified part of that environment (s 7(3)). Arguably this reinforces existing moves away from the overall broad judgement (OBJ) approach towards creating identifiable limits that cannot be breached (a bottom line approach). ⁹ However: <ul style="list-style-type: none"> • This is not the same as requiring an improvement in ecological values. • It still uses the mitigation hierarchy, though clarifies the use of environmental offsets or compensation as per the definition of mitigation in s 3. The provision to require improving ecological values may appear through a proposed national planning framework (ENBEB, pt 3) or in a consent condition. Given the wording in the Purpose is to promote (not require) beneficial environmental outcomes, there remains the potential to see the avoidance of harm rather than the requirement for enhancement or restoration (see text for further discussion on these points).

Table 1 Comparing aspects of the Resource Management Act 1991 and the proposed Natural and Built Environments Act.

8 Iwi: extended kinship group or tribe, usually associated with a distinct territory; hapū: clan, tribe or subtribe; te taiao: the environment.

9 Interpretation of the Resource Management Act 1991 [RMA] favouring the trading off of ecological, economic and social values as

Linking environmental limits to minimum biophysical states mirrors the National Policy Statement for Freshwater Management approach of requiring the improvement in waterways up to or above minimum standards. However, minimum states do not necessarily result in continuing improvement in ecological values. Global¹⁰ and local¹¹ ecological decline demonstrates the need to keep improving values beyond the minimum. In addition, identifying the maximum amount of harm or stress permitted reinforces the idea that natural systems exist to absorb negative effects.

Environmental limits may not require addressing cumulative losses within a system, although planning authorities may exercise discretion to do so. Limits also suggest a static system. In contrast, a legal framework requiring ongoing improvement in ecological values would be closer to creating a resilient social-ecological system that continually evolves and adapts.¹²

There are logical inconsistencies and leaps in faith in using limits to promote ecological integrity. As defined in s 3 of the ENBEB, “ecological integrity” is the ability of an ecosystem to support and maintain its composition, biotic and abiotic structure, its functions, and its resilience to disturbance. At s 7, the exposure draft says the purpose of environmental limits is to protect either or both ecological integrity and human health. By its very nature, integrity is a complex evolving interaction of sub-systems that defies a simple process of identifying relevant limits or baselines.¹³ This is exemplified by a lack of global consensus on how to assess ecosystem integrity, and its fundamental relationship to thermodynamics and self-organisation.¹⁴

part of a balanced judgement was challenged by the 2014 *King Salmon* Supreme Court decision which established identifying environmental limits was a valid interpretation, limiting the extent of trading off permitted (*Environmental Defence Society Inc v New Zealand King Salmon Co Ltd* [2014] NZSC 38, [2014] 1 NZLR 593). Differing interpretations of the Supreme Court decision claim either it is the RMA itself that contains bottom lines, or that bottom lines are attached to specific planning provisions generated by the RMA, such as in this case the New Zealand Coastal Policy Statement. See T Daya-Winterbottom “Country Report: New Zealand, the Role of Sustainable Management in the Coastal Environment: King Salmon in the Supreme Court” (2015) IUCN Academy of Environmental Law eJournal <<http://www.iucnael.org/en/86-journal/issue/491-issue-20142>>.

- 10 REA Almond, M Grooten and T Petersen (eds) *Living Planet Report 2020: Bending the curve of biodiversity loss* (WWF Gland, Switzerland, 2020).
- 11 New Zealand’s Ministry for the Environment and Statistics New Zealand’s *Environmental Reporting Series: Environment Aotearoa 2019 and Our Land 2021* (MFE and Stats NZ, Wellington, 2019, 2021).
- 12 MM Sellberg and others “From Resilience Thinking to Resilience Planning: Lessons from practice” (2018) 217 Journal of Environmental Management 906.
- 13 Y Rohwer and E Marris “Ecosystem integrity is neither real nor valuable” (2021) 3 Conservation Science and Practice e411.
- 14 J Zelený, D Mercado-Bettín and F Müller “Towards the evaluation of regional ecosystem integrity using NDVI, brightness temperature and surface

This is apart from allowing for the purpose of environmental limits to protect *either* ecological integrity *or* human health, which seems akin to saying either support the fabric of life, or humanity. It is an unnecessary distinction.

There is an assumption that maxima or minima are identifiable across natural systems listed in s 7(4) (air, biodiversity, habitats, ecosystems, coastal waters, estuaries, freshwater and soils) and that it is acceptable for systems to accumulate to these impact capacity limits or bottom lines. Identifying such limits is not just complicated and contestable, but in some instances makes little sense. For example, what is the agreed minimum level of biodiversity?

Also unclear is the connection between the various natural environment domains. Using ecosystems and biodiversity as examples, it is highly unlikely that values associated with these two categories are not declining while, for example, waterways (fresh, coastal, and estuarine) are declining. Equally, if ecosystem and biodiversity values are in decline, it is more than likely soils and waterways (including ecotones such as wetlands and riparian zones) are also threatened.

The crucial role of life-supporting ecological complexes is not included in the proposed Act's definitions.¹⁵ Creating legislation that favours limits rather than processes fails to recognise and therefore support the concept of ecosystem evolution and the need to enhance ecosystem functioning.

Provision is made to provide for offsetting or compensation for environmental impacts through the national planning framework or via resource consents (ENBEB, s 3 “mitigate” definition, and pt 3). Offsetting in particular could contribute to enhancing existing ecosystems and restoring degraded ones. However, not clarified is the process for offsetting, including decisions regarding trades that are like-for-like, like-for-unlike, the challenge of assessing additionality, and depreciation of future benefit, as well as accounting for the limited empirical evidence offsetting works.^{16,17}

3. THE MYTH OF BOTTOM LINES

Further to the above, bottom lines create the expectation that once minimums are identified development can continue. This is nonsensical.

heterogeneity” (2020) 796 Science of the Total Environment 148994 <<https://doi.org/10.1016/j.scitotenv.2021.148994>>.

¹⁵ S Urlich “What is ‘quality’? Zen and the art of resource management reform” (April 2021) Resource Management Journal 8.

¹⁶ Knight-Lenihan, above n 6.

¹⁷ S Burgin and T Hundloe (eds) *Environmental Offsets* (CSIRO Publishing, Melbourne, 2021).

Ecosystems operate at different spatial and temporal scales, are nested, and complexity is a function of these overlaps and interactions. Patterns become apparent at a systems level but defeat absolute levels of quantification at a component level.¹⁸ Applying concepts relating to safety margins borrowed from engineering and business may aid in transmitting meaning to a wider public, but have no practical value in legislation designed to address ecological degradation. This applies as much to descriptive limits as quantifiable ones.

An analogy is the concept of asset management. Investing in infrastructure or plant and machinery includes asset depreciation. Investing in ecological enhancement or restoration is predicated on asset appreciation. That is, natural systems get better at doing what they do, not worse, if things are set up well to start with. Establishing minimum conditions reflects an accounting approach to ecosystem management, creating an unintended but real barrier to investment decision-making.

This asset appreciation approach has been around a while. The Christchurch City Council's late 1990s Waterways and Wetlands Natural Asset Management Strategy modelled two contrasting approaches to stormwater management, one using pipes, the other nature-based solutions including restoring wetlands and streams. It concluded that the investment costs per metre were similar, but if designed well, the nature-based approach appreciated in value (got better at what it was designed to do) while contributing to a range of other non-stormwater benefits including ecosystem restoration, heritage, culture, landscape and recreation.¹⁹

The potential of nature-based green infrastructure (GI) solutions should not be oversold. The degree of benefit long term is difficult to quantify, the maintenance regime for some systems may be high, and returns are socialised, requiring a long-term public-private development approach.²⁰ Variations of the nature-based-GI approach, such as sustainable urban drainage systems,

18 A review of how ecological processes can be accounted for in a legal process, including a full literature review underpinning the scale, interaction and complexity principle referred to here, was published in the New Zealand Journal of Environmental Law under Harker and others "The Government Policy Statement on Land Transport Funding and Ecological Sustainability" (2012) 16 NZJEL 319.

19 S Knight "Integrating Stormwater Management with Economic, Social, Cultural and Ecological Goals in Christchurch, New Zealand" (2003) 10(3) Australasian Journal of Environmental Management 181.

20 AJ Scott and M Hislop *What does good green infrastructure policy look like? Developing a policy assessment tool to assess plans, policies and programmes* (PERFECT Expert Paper 3, Town and Country Planning Association, London, 2020).

sustainable stormwater management and water sensitive design, have varying levels of success.²¹

However, the potential for investing in appreciating assets remains. While legislation exclusively designed to enforce GI may not be necessary, as concluded in the European Green Infrastructure Strategy,²² creating a new legislative regime identifying the potential for continually improving ecological values and functioning appears to offer an opportunity to overtly support GI-type initiatives.²³ The ENBEB does not go far enough in exploring this potential.

4. NET POSITIVE OUTCOMES

As noted, the ENBEB fails to establish the need to require improving ecological values. The Act's purpose of enabling the enhancement of the natural environment (s 5(1)(a)) implies improvement, but achieving the purpose is driven by *promoting* beneficial outcomes (s 5(2)(b)) within environmental limits (s 5(2)(a)). This does not necessarily mean achieving *net* positive outcomes, which would be overall gains rather than just less harm.

This *overall gain* goal is fundamental to tools such as biodiversity offsets, where no-net-loss and preferably net gains in biodiversity values are crucial to influencing project design.^{24, 25, 26, 27} Given the proposed NBA will allow environmental compensation and offsetting, it is important to use precise language in this context.

The lack of precision is further complicated by the definition of environment (ENBEB, s 3). This includes the natural environment, people and communities

21 Y Wang, M van Roon and S Knight-Lenihan “Opportunities and challenges in water sensitive industrial development: an Auckland case study, New Zealand” (2021) 28(2) International Journal of Sustainable Development and World Ecology 143.

22 Scott and Hislop, above n 20.

23 An iteration of this is nature-based solutions aimed at improving ecological and human welfare outcomes. See <<https://www.iucn.org/theme/nature-based-solutions>>.

24 BBOP Glossary (Business and Biodiversity Offsets Programme, Forest Trends, Washington DC, 2012).

25 M Brown and others “Ecological compensation: an evaluation of regulatory compliance in New Zealand” (2013) 31 Impact Assessment and Project Appraisal 34.

26 JD Pilgrim and others “A process for assessing the offsetability of biodiversity impacts” (2013) 6(5) Conservation Letters 376.

27 HJ Rainey and others “A review of corporate goals of no net loss and net positive impacts on biodiversity” (2015) 49 Oryx 232.

and the built environment, and social, economic and cultural conditions. This opens up the possibility of continued trading off and a return to an overall broad judgement approach,²⁸ a problem that also applies to establishing environmental upper and lower limits.

The wording in the draft implies we have some biophysical headroom, when this is not the case for many of the ecological categories named under environmental limits in s 7(4).²⁹ The emphasis should be on enhancing and restoring, and not maintaining, avoiding, or minimising. This is discussed further in the following part.

5. NATIONAL PLANNING FRAMEWORKS, PLANNING COMMITTEES, AND CAPACITY

Given the above, the role of the national planning frameworks and planning committees will be critical, as will the capacity of planning authorities to implement legislative intent. The purpose of the national planning framework (NPF) is to provide “integrated direction” on matters of national significance or matters where national or local consistency is desirable (ENBEB, s 10). It is not clear what “integrated direction” looks like in practice, though the intent in part is to better align current RMA requirements³⁰ and other national directives (see part 6 below). That is, it “will be the tool under the NBA for strategic and regulatory direction from central government on the use, protection and enhancement of the natural and built environments in the interests of all New Zealanders”.³¹

As both the terms “enhance” and “restore” are used in the ENBEB, it would be useful to adopt the following distinction: *enhance* can be seen as improving the ecological condition of, while *restore* is to re-establish species or habitat by direct action.³² This idea is incorporated below as part of proposed rewording of the purpose of the ENBEB.

Related to this, part of the role of an NPF is to help in the process of trading off. The draft Act does not use those words, instead saying that the NPF and all plans must promote a range of environmental outcomes relating to ecosystem values, society, economy, and culture (ENBEB, s 8). Presumably this would require balanced decision-making within identified environmental limits. As

28 Above n 8.

29 MfE and Stats NZ, above n 11.

30 New Zealand Government *Natural and Built Environments Bill: Parliamentary paper on the exposure draft* (June 2021) <<https://environment.govt.nz/assets/publications/Parliamentary-Paper-on-the-Exposure-Draft-of-the-NBA.pdf>>.

31 At 36.

32 Urlich, above n 15.

currently worded, the framework and plans would promote the protection, restoration, or improvement of the following environmental outcomes:

- The quality of air, freshwater, coastal waters, estuaries, and soils.
- Ecological integrity.
- Outstanding natural features and landscapes.
- Significant indigenous vegetation and significant habitats of indigenous fauna.

Also to be set out in an NPF are provisions relating to natural character and public access, Māori relationship with land and water, cultural heritage, customary rights, greenhouse gas emissions management and climate change (including improving environmental resilience to impacts), ensuring resilient urban form, housing supply, diversity and affordability, creating adaptable and economically resilient rural communities, protecting highly productive land, the protection and sustainable use of the marine environment, and the ongoing provision of infrastructure services. This complex array will create contradictory as well as complementary goals, and planning authorities must navigate through these various goals with (at least currently) limited guidance as to how to prioritise.

The parliamentary paper on the exposure draft notes that “decisions relating to plan-making and development, including the approval or rejection of submissions, will be made by the planning committee for the region rather than solely by local authorities”.³³ The committee must have regard to among other things cumulative environmental effects, significant or irreversible effects on the natural environment, and apply a precautionary approach (ENBEB, s 24(2)) and where relevant decide on environmental limits (s 25). There is no provision for requiring committees to consider ecological enhancement or restoration, as this is driven by the NPF.

Overall, while the proposed wording creates opportunities to enhance and restore ecosystems, implementation will depend on the capability and capacity of the decision-making system. That is, the dedication of elected officials and senior management to budget, plan and prioritise, as well as the ability of central and local agencies to plan, monitor and analyse.^{34, 35}

33 New Zealand Government, above n 30, at 48.

34 M Day, M Backhurst, N Erickson and others *District Plan Implementation Under the RMA: Confessions of a Resource Consent (Second PUCM [Planning Under a Co-operative Mandate] Report to Government)* (The International Global Change Institute, University of Waikato, Hamilton, 2003).

35 N Borrie and A Memon *Long-Term Council Community Plans: A Scoping Survey of Local Authorities (PUCM)* (The International Global Change Institute, University of Waikato, Hamilton, 2005).

Not addressing capability and capacity will result in repeating many of the RMA application errors. That is, the gap between intent and delivery will only be partly bridged, and realising aspirations will be compromised. The lack of national policy statements and environmental standards for the first decade and a half of the RMA created a decision-making vacuum exacerbating the lack of capability and capacity. It also contributed to the call to get rid of the RMA.

6. CURRENT RMA REQUIREMENTS AND NATIONAL DIRECTIVES

The potentially contradictory and complementary nature of the various outcomes is captured by the parliamentary paper on the exposure draft³⁶ which notes that the Government also expects councils to work with current RMA requirements and “[t]he development of the NPF is intended to capture the policy intent of existing national direction, align it with the new legislation, and determine how to fill in gaps”.³⁷ Given decisions are being made now based on existing national directives, plans and resource consent applications, trading off will continue in order to align current RMA requirements. Given the ENBEB intent, this will need to be explicitly dealt with under the NPF process in order to minimise conflicting and maximise complementary actions. Examples of high-level requirements and directives are summarised and commented on below.

6.1 National Policy Statement on Urban Development (NPSUD) 2020

The NPSUD 2020 *supports* the objective of urban greenhouse gas emissions reductions and resilience to climate change impacts, but *requires* sufficient development capacity for the next 30 years, and development capacity must be infrastructure-ready (emphasis added). Future Development Strategies (FDSs) are required to identify infrastructure and development constraints, and these FDSs must account for all other NPSs and emission budgets and adaptation plans generated by the Climate Change Response Act 2002. Potentially this may result in significant shifts in transport planning to reduce emissions. However, supporting lower greenhouse gas emissions objectives is not as strong a policy directive as requiring development capacity. As discussed below (part 6.5), the dominant capacity requirement might prevent effective emissions reductions.

The NPSUD also may compromise ecological enhancement and restoration efforts, depending on how infrastructure is defined and implemented. If

³⁶ New Zealand Government, above n 30.

³⁷ At 23.

infrastructure includes green infrastructure, and if all development is required to contribute to net ecological benefit, there could be a positive outcome. An improvement would be to require enhancement and restoration as an outcome under the NPSUD.

6.2 National Policy Statement for Freshwater Management (NPSFM) 2020

Under the NPSFM 2020, if fully realised, and in tandem with the Resource Management (National Environmental Standards for Freshwater) Regulations 2020, land use practices may change to complement wetland, soil and vegetative changes that contribute to ecological enhancement and restoration objectives. This is because the regulations require such changes in order to generate water quality and supply improvements. This would also contribute to climate change adaptation through, for example, better stormwater management using biological systems.

6.3 Proposed National Policy Statement for Indigenous Biodiversity (NPSIB)

The proposed NPSIB, coupled with the NPSFM, potentially alters land use to realise indigenous biodiversity goals. This is because realising biodiversity goals requires existing land use change, potentially in a complementary manner to that required under the NPSFM. Again, if realised, freshwater and coastal wetlands, fresh waterways, soils, and vegetative change, could contribute to enhancement and restoration.

6.4 Proposed National Policy Statement for Highly Productive Land (NPSHPL)

The proposed NPSHPL contributes to protecting agricultural soils. The NPSHPL also influences urban and rural development and therefore infrastructure needs.

There are also other regulatory requirements apart from those in the RMA that will influence environmental outcomes. Two examples focusing on climate change outcomes as a particularly vital biophysical limit are provided below.

6.5 Regional Land Transport Plans

Requirements to reduce emissions and prepare for climate change impacts (the Climate Change Response (Zero Carbon) Amendment Act 2019) clash with land transport management plan goals required under the Land Transport Management Act 2003. Auckland Council has indicated its own 2030 emissions reductions targets cannot be achieved under current transport planning

modelling, unless electric vehicle uptake substantially increases.^{38, 39} The latter depends in part on the success of the New Zealand Government's clean car rebate on imported new and used light electric and low emission vehicles.⁴⁰ Transport infrastructure also impacts on ecosystem enhancement and restoration by influencing land use patterns.

6.6 Urban Development Act 2020 (UDA) and Kāinga Ora formed in 2019 through the Kāinga Ora — Homes and Communities Act 2019 (KOA)

These include provisions to override existing local plans formulated under the RMA. Kāinga Ora has to provide for climate change impacts and lowering emissions as part of urban development. The process for overriding existing plans is complicated and provides opportunities for central government and local community input. It is currently unclear how this process may align with emissions reductions targets and adapting to climate change.

The potential for missing opportunities for aligning the above requirements, and creating contradictory goals and so environmentally undesirable outcomes, is exemplified by Auckland Council recently noting that the lack of alignment between central government policy documents, and unplanned and out of sequence greenfield expansion, will likely increase emissions. Fragmentation also made infrastructure planning more uncertain, costlier and riskier.⁴¹ In 2016, Local Government New Zealand (LGNZ) made similar observations about the lack of integration between the RMA, the Local Government Act 2002 (LGA) and the Land Transport Management Act 2003 (LTMA).⁴²

Two initiatives influencing alignment will be the proposed Strategic Planning Act, and the New Zealand Infrastructure Commission.

7. STRATEGIC SPATIAL PLANNING

The Panel's proposal for a Strategic Planning Act (SPA) aims to among other things help integrate the functions of the proposed Natural and Built

38 Auckland Council *Draft Auckland Regional Land Transport Plan 2021–2031* (Auckland Council, Auckland, 2021).

39 Auckland Council *Draft submission to the Climate Change Commission's draft advice* (Auckland Council, Auckland, 2021).

40 See <<https://www.transport.govt.nz/area-of-interest/environment-and-climate-change/clean-cars/>> accessed 22 July 2021.

41 Auckland Council, above n 39.

42 LGNZ submission to the New Zealand Productivity Commission's Better Urban Planning: draft report, cited in RMRP, above n 1, at 118.

Environments Act, and legislation covering local government, transport, and climate change. The SPA is also intended to integrate land use planning and infrastructure.

The New Zealand Infrastructure Commission was formed in 2019.⁴³ It supports Government agencies and local authorities to deliver major infrastructure, and at the time of writing was preparing a national infrastructure strategy.

Both the SPA and Commission address spatial planning, defined by the Review Panel as “a form of strategic integrated planning that ideally covers a large geographical area, such as a region or major urban centre, and looks out 30 years and beyond”⁴⁴. The Review Panel proposed mandatory regional spatial planning. Auckland is the only region currently required to prepare a spatial plan. The need for spatial planning to allow good strategic planning relates to criticism that the RMA’s effects-based framework led to a planning culture focused on dealing with negative effects rather than promoting positive outcomes.⁴⁵ An SPA would allow long-term national goal setting influencing regional and local plans.

Arguably the lack of implementing of existing RMA provisions with similar objectives (national policy statements and environmental standards) contributed to the negative effects focus, as did the poor alignment with the LGA and LTMA noted by LGNZ above. The Review Panel recognises integration is now needed as part of its discussion on creating an SPA. If an SPA is adopted along with a Natural and Built Environments Act, the Government needs to clarify how the capability and capacity barriers that previously existed, and were touched on earlier in this article, are to be overcome.

Equally, spatial and strategic planning requires clearly worded planning practice legislation. This article argues a priority need for clarity includes removing any doubt over what is required to protect and improve ecological values. This is to ensure human activity remains within the biophysical capacity of the natural environment. As a step towards this, changes are suggested to the ENBEB in the following part.

8. PROPOSED CHANGES TO THE ENBEB

There should be an explicit requirement for regulatory authorities to identify the extent to which biophysical capacity has been exceeded, and how development

43 See <<https://www.tewaihanga.govt.nz/strategy/>>.

44 RMRP, above n 1, at 112.

45 At 112.

activity can contribute to enhancement and restoration.⁴⁶ This would need to be done at a local level, while accounting for national or global implications. In addition, the currently fragmented approach to environmental domains (air, biodiversity, habitats, ecosystems, coastal waters, estuaries, freshwater, and soil; ENBEB, s7(4)) (in fact a mix of ecological processes and components) needs to change.

For example, if some environmental domains are relatively healthy in a region, this may allow development that avoids degradation while using a developer contribution to assist in ecological restoration in other domains where ecosystem values have declined. It would be necessary to outline the spatial and temporal extent of transitory negative effects as part of this process. For example, this could mean accepting that an investment in offsetting impacts may not pay dividends until some time in the future,⁴⁷ and accepting the risk that some initiatives may fail.⁴⁸

Also, while some regions will have significantly exceeded local biophysical capacity, others relatively speaking will not. In some circumstances this might mean modifying or excluding activities, or removing activities from one catchment or region to another. For example, the biophysical capacity of Auckland has been exceeded, measured by for instance the decline in the health of the Hauraki Gulf caused significantly in part by land-based activities.⁴⁹ Restoration may require the removal of some activities to different catchments or regions, or a process of deintensification.

This process may be done through the proposed Strategic Planning Act. However, a Natural and Built Environments Act needs to establish the mechanisms and statutory requirement to realise enhancement and restoration goals.

Taking these points and earlier discussions into account, some suggested additions and changes to the wording of the proposed Act follow.

8.1 Interpretation (ENBEB, s 3)

The following are suggested principles needing further refinement.

8.1.1 Biophysical capacity

Reference needs to be made to the fundamental ecological principles of scale, interaction and complexity, biogeochemical cycles, and specificity of place, and the negative trends of disturbance, modification and fragmentation; contaminant

46 Urlich, above n 15.

47 Burgin and Hundloe, above n 17.

48 Knight-Lenihan, above n 6.

49 Hauraki Gulf Forum *State of Our Gulf 2020* (Hauraki Gulf Forum, Auckland, 2020).

accumulation and accumulated physical change; and biodiversity decline. There are a range of indicators associated with these trends that exist or can be developed to identify biophysical capacity locally, regionally, nationally and globally.^{50, 51}

The capacity of a system is influenced by the extent to which biophysical boundaries have been exceeded, or by contrast, where human activity is currently within boundaries. One approach is downscaling the planetary boundaries analysis to the New Zealand conditions.⁵²

8.1.2 Ecological net benefit

Where all development must demonstrate a proportional contribution to improving ecological processes, net of negative impacts on those processes. Transitional costs over time and space will be allowed.

8.1.3 Ecological processes

References the earlier observation that ecosystems create patterns that become apparent at a systems level but defeat absolute levels of quantification at a component level. Investing in ecological processes (for example, through green infrastructure) generates appreciating assets that become better at delivering “services”.⁵³

8.1.4 Enhancement

To facilitate species recruitment, co-existence and succession processes by stabilising ecological functioning through time.⁵⁴

8.1.5 Environment

Modify the current definition as follows:

- (a) ~~the natural environment~~ ecological processes and biotic and abiotic complexes.

50 J Harker, P Taylor and S Knight-Lenihan “The Government Policy Statement on Land Transport Funding and Ecological Sustainability” (2012) 16 NZJEL 319.

51 Almond and others, above n 10.

52 Andersen and others, above n 7.

53 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services *Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services* (IPBES, Germany, 2019).

54 Urlich, above n 15.

8.1.6 Restoration

Re-establish species or habitat by direct action.⁵⁵

8.2 Purpose of this Act (ENBEA, s 5)

- (1) The purpose of this Act is to enable—
 - (a) uphold Te Oranga o te Taiao by protecting and enhancing the natural environment to be upheld, including by protecting and enhancing the natural environment; and
 - (b) enable where required the restoration, enhancement and protection of ecological processes; and
 - (b)(c) require people and communities to use the environment identify and work within the biophysical capacity of a district and region, and account for planetary boundaries, in a way that also supports the well-being of present generations without compromising the well-being of future generations.
- (2) To achieve the purpose of the Act,—
 - (a) use of the environment must comply with environmental limits; individuals and communities must be enabled to restore, enhance, and protect ecological processes, including as part of economic, social, and cultural activities, and
 - (b) outcomes for the benefit of the environment ecological processes must be promoted identified and pursued where required to achieve section 1 of this clause; and
 - (c) any adverse effects on the environment of its use must be avoided, remedied, or mitigated; where this is not possible, any activity must result in an ecological net benefit; in any case, all activities should contribute to an ecological net benefit.
- (3) In this section, **Te Oranga o te Taiao** incorporates—
 - (a) the health of the natural environment; and
 - (b) the intrinsic relationship between iwi and hapū and te taiao; and
 - (c) the interconnectedness of all parts of the natural environment; and
 - (d) the essential relationship between the health of the natural environment and its capacity to sustain all life.

⁵⁵ Urlich, above n 15.

8.3 Environmental Limits

Remove s 7(3) defining environmental limits as minima or maxima. Remove reference to environmental limits at s 12. Replace term with “biophysical capacity”.

At s 7(3): Biophysical capacity is established by defining the extent to which regional activity is within biophysical boundaries and where these boundaries are exceeded. Where boundaries have been exceeded, activities contributing to those exceedances should be changed over time until cumulative impacts operate within boundaries.

At s 12: Replace the term “environmental limits” with “biophysical capacity”. Biophysical capacity is identified through the national planning framework, or may be made in plans if the national planning framework prescribes the requirements relevant to the setting of biophysical boundaries.

9. CONCLUSION

The wording of the exposure draft of the Natural and Built Environments Bill is insufficiently clear to deliver the high-level goal of protecting and enhancing the natural environment. A particular term needing to be removed is “environmental limit”, along with the concept of minimum biophysical states and maximum amounts of environmental harm or stress.

Instead, the concept of “biophysical capacity” should be introduced, drawing on dynamic ecological processes and the need to enhance and restore ecosystems as a primary outcome of environmental legislation. *Capacity* allows for continuing improvements in ecological values, whereas *limits* relates to accounting concepts such as bottom lines and overall benefits across ecological, economic, and social domains. The *limits* approach will not result in overall improvements in environmental values.

Also required is clarity over how under-resourcing of local and central government, and a lack of political commitment, is to be addressed. These factors contributed to a failure to realise provisions in the Resource Management Act 1991, provisions which would have in part provided the strategic goals now identified as needing to be addressed through the proposed new legislation. In addition to the exposure draft, there is a recommendation to implement a Strategic Planning Act. This would deliver some of the strategic outcomes envisaged in the RMA.

The exposure draft provides an example of the danger of drafting environmental legislation without sufficient attention paid to scientifically accurate terminology. While the recommendations made here draw on ecological concepts, final drafting of a Natural and Built Environments Bill requires further expert input.