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Governance of Our Oceans

an Aotearoa New Zealand perspective

Toitū te marae a Tāne Mahuta, toitū te marae a
Tangaroa, toitū te tangata; if the land is well, and
the sea is well, the people will thrive.

Abstract

This article investigates Aotearoa New Zealand's ocean governance challenges against a backdrop of competing paradigms and proposes a pathway towards transformative, anticipatory marine stewardship. It is contended that a 'relational paradigm' to ocean governance is essential given the interdependence of ocean health and human wellbeing. This relational paradigm is operationalised through anticipatory governance, and underpinned by four foundational elements: long-term public value creation, adaptive management, multi-layered accountability, and alignment of ambition and execution. The article aims to catalyse public debate about how anticipatory governance can improve current ocean governance systems, while building foundations for deeper transformation when political conditions allow.

Keywords oceans, governance, long-term thinking, relational paradigm, stewardship

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For generations, navigators have traced pathways across the ocean (te moana), yet our collective understanding of the marine environment, from a Western perspective, remains anchored to terrestrial thinking, unable to fathom the ocean's vastness as a system unto itself.

Over the past 25 years, Aotearoa New Zealand has approached ocean governance not as stewardship of a distinct and interconnected marine realm, but as an extension of land-based management frameworks. As a result, we have created a policy system that consistently fails the ocean and the communities that depend upon it, unable to protect declining species or halt the mounting pressures from climate change and our activities on land and at sea (Ministry for the Environment, 2022). The marine environment that once sustained generations now bears the compounded burden of our fragmented approach. Fundamental questions about our relationship with te moana – how we understand its health or life force (mauri),

and honour this intrinsic value – remain unresolved, demanding nothing less than a fundamental shift in how we conceive of ocean governance.

This article explores the opportunity to embed anticipatory governance as a necessary feature of any future oceans management system in Aotearoa New Zealand. Anticipatory governance equips us to navigate the profound uncertainties facing *te moana* in the Anthropocene, the current geological age, in which human activity is the dominant influence shaping ocean socio-ecological systems. We set out four foundational elements: long-term public value creation that transcends electoral cycles and embraces intergenerational responsibility; multi-layered accountability that weaves together Crown, *iwi*, community and commercial obligations; adaptive management that embeds learning while maintaining strategic coherence; and aligned execution that bridges ambition and action.

The article does not describe the detailed structural change required to implement anticipatory governance. Rather, after outlining possible pathways, it presents a number of first principle questions that we hope will catalyse public debate about how we manage and govern our oceans.

The role of *te Tiriti o Waitangi* and *te ao Māori* values in the management of our oceans is acknowledged. We consider that this is best addressed by those with appropriate expertise and authority to speak to these relationships. Management of our oceans is also shaped by a host of international obligations. This subject is briefly touched on in this article, leaving a more detailed analysis to others to pursue.

Context

Oceans as interconnected systems

Aotearoa New Zealand holds jurisdiction over the fifth-largest exclusive economic zone globally – approximately 430 million hectares, an area 15 times larger than its land mass (Ministry for the Environment, 2007). This expansive marine territory offers significant opportunities for sustainable resource use (from rotational fisheries harvest to aquaculture development and extraction of minerals), but also presents complex challenges

which demand coordinated action across local, national and international levels.

There is increasing commercial interest in using previously underutilised marine resources to support innovation and emerging industries, while also addressing global environmental challenges. These include harvesting critical minerals for green technologies, developing renewable energy infrastructure, farming seaweed to reduce methane emissions from livestock, exploring carbon storage and sequestration, and shifting some food production from land to sea through offshore aquaculture. But a tension lies between resource extraction for climate mitigation technologies and the protection of the ocean's health to maintain ecosystem provisioning services (IPCC, 2023; Almeida

successive governments. There is, however, no singular world view that defines the challenges confronting the collective management of our oceans, nor indeed the solutions required to address them. This plurality of views reflects the deep values and belief systems that shape how we understand our relationship with the ocean. The relative importance assigned to the natural environment and to economic growth manifests in fundamental tensions over whether mechanisms such as marine protected areas represent essential ecosystem safeguards, or constraints on economic opportunity. This tension surfaces in every major ocean policy decision – from debates over seabed mining rights to allocation of marine space for offshore renewable energy –

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et al., forthcoming). As oceans play a fundamental role in climate regulation, coordinated policies that ensure the overall health of marine ecosystems are vital to making these opportunities possible.

Environmental reporting clearly indicates continued decline in marine health due to fishing impacts, land-based pollution (including sedimentation) and climate change (Ministry for the Environment, 2022). Evidence of this decline is visible in increased beach closures in the Auckland region, rising frequency and intensity of marine heatwaves (particularly on the west coast), and shifts in species distribution, such as snapper stocks expanding further south.

Competing world views

Knowledge of the individual and cumulative pressures on our oceans has not yet generated appropriate or proportionate governance responses from

reflecting deeper philosophical divisions about whether the ocean's primary value lies in its capacity to generate economic returns or its role as a complex life-support system requiring protection from intensive human use.

These competing values have fundamentally shaped how ocean policy has been designed and implemented in Aotearoa New Zealand, creating a patchwork of legislation rather than coherent stewardship. This contest of ideas is arguably best captured in the form of three paradigms: intrinsic (the right of nature to exist in its own right); instrumental (the use – extraction and pollution – of nature for the benefit of society); and relational (the mutual dependence of people and the natural environment). Each paradigm carries within it different assumptions about responsibility, reciprocity, and the appropriate relationship between humanity and the ocean.

All three paradigms coexist and are represented to a lesser or greater extent in our current ocean management frameworks. The Marine Reserves Act 1996 embodies intrinsic values by establishing areas where nature's right to exist takes precedence, while the Fisheries Act 1996 operates primarily from an instrumental perspective, treating marine resources as economic assets to be allocated and managed as property rights for maximum sustainable yield. The Resource Management Act 1991 attempts to balance these approaches, but often defaults to economic considerations when conflicts arise. This philosophical fragmentation has produced governance systems where agencies operate from fundamentally different value frameworks – the Department of Conservation prioritising

interconnected ocean ecosystem (Erinosho et al., 2022; Le Heron et al., 2020; Kelly, Ellis and Flannery, 2019; McGinnis, 2012; Sustainable Seas, 2024; Watson-Wright and Valdés, 2018).

This article contends that the adoption of a relational world view is essential given the role of the oceans as part of our earth systems, cascading realities of climate change and continued pollution of our oceans, which highlight the interdependence of people and nature. The relational paradigm does not erase intrinsic or instrumental values; rather, it reframes them within a system of reciprocal relationships and mutual responsibility. The critical shift lies not in abandoning other paradigms entirely, but in fundamentally reweighting our governance approach so that relational values guide

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ecological protection, the Ministry for Primary Industries focusing on economic productivity, and regional councils struggling to reconcile competing demands without clear guidance on how to weigh environmental against economic outcomes. The result is policy incoherence, where decisions are influenced more by which agency has jurisdiction than by what approach best serves long-term ocean stewardship.

Policy reforms typically place greater emphasis on one paradigm over another at any given time. The debate about paradigms is fundamentally about a change of mindset, a different type of conversation and awareness to make the shift required in how we govern, how we consider information, and how we think about the future. This governance problem is well recognised as an urgent global challenge, with researchers worldwide grappling with how to move beyond fragmented, reactive approaches towards integrated stewardship of our

decision making, while instrumental and intrinsic considerations operate within this broader framework of stewardship and connection.

The common denominator: a failure of governance

Ocean governance is the system of institutions, policies and processes that determine how we collectively make decisions about marine resources and ecosystems. We acknowledge that there is a system in place that delivers operational day-to-day management of our oceans, but it does so in an increasingly uncoordinated and ad hoc manner. From a critical analysis perspective, past ocean-related reform initiatives and the management system as a whole share a common denominator – a failure of governance. Despite extensive research, consultation and policy initiatives over recent decades, governance failures continue to hinder the effective management of Aotearoa New Zealand's oceans.

A pattern of reform failure

A substantial body of work – including from the parliamentary commissioner for the environment (2014), the prime minister's chief science advisor (Office of the Prime Minister's Chief Science Advisor, 2021), the Environmental Defence Society (Severinsen et al., 2022) and the Ministry for the Environment (2022) – has thoroughly canvassed both the challenges and the opportunities facing marine management. Ten years of the Sustainable Seas National Science Challenge (2014–24) has further deepened understanding of marine ecosystems and governance needs.

Yet this knowledge-rich environment has not translated into effective reform. The persistence of well-documented problems reveals a systematic inability to bridge the gap between comprehensive understanding and coordinated action, reflecting deeper structural barriers within our governance frameworks themselves and the consequence of competing world views.

Key reform initiatives over the last 25 years include the following:

Oceans policy, 2000–05

A comprehensive policy initiative was launched in 2000, accompanied by extensive public consultation led by a ministerial advisory committee. Although draft proposals were completed in 2003, the process was suspended to address contentious iwi rights and interests regarding the foreshore and seabed. A later attempt to revive the policy was abandoned following a change of government, with the new government instead prioritising the development of legislation to expand and streamline regulatory frameworks for oil and gas exploration within the exclusive economic zone in 2012. This shift exemplifies a recurring pattern in New Zealand's approach to ocean governance: when faced with the choice between comprehensive environmental stewardship and immediate economic opportunities, policy decisions have consistently favoured extractive industries and short-term economic growth over sustainable prosperity and intergenerational equity.

Marine Reserves Act reform, 2002–12

Efforts to modernise the Marine Reserves Act 1971 culminated in a bill introduced in 2002. However, the bill was withdrawn

in 2012 after an inconclusive select committee process, leaving the legislation outdated and misaligned with current marine conservation needs.

Marine Protected Areas Act proposal, 2016

In 2016 the government released a consultation document proposing new marine protected areas legislation. Despite the consultation, no bill was introduced, and the reform effort stalled. New Zealand has pledged to meet the United Nations Global Biodiversity Framework's target of protecting 30% of coastal and marine areas by 2030; marine reserves currently protect 7% of New Zealand's coastal marine area, and most of these reserves are concentrated around remote offshore islands, leaving large areas of ocean under-protected (Ministry for the Environment, 2008). Achieving this ambitious goal will require significant coordinated effort involving policy development, stakeholder negotiations, legislative reform, comprehensive spatial planning, substantially increased funding, and enhanced enforcement capabilities (Rechberger et al., 2025).

2023 Blueprint for a Better Environment

The National Party's 2023 election manifesto proposed an integrated ocean management framework across government agencies and renewed marine protection efforts. However, this initiative was abandoned during coalition negotiations due to fundamental ideological conflicts between the coalition partners. ACT's deregulatory agenda and New Zealand First's primary industry priorities directly contradicted comprehensive environmental governance, while economic concerns took precedence over environmental issues, which ranked lowest among voter priorities. This outcome further exemplifies the challenges of building lasting policy momentum when environmental governance conflicts with immediate economic and political interests.

Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012

A key reform that was implemented was the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012. It

stands as testament to this fragmented approach: borne not from a holistic ocean policy vision, but from the expedient assumption that land-based management tools could simply be stretched across the blue.

These reform failures represent lost opportunities to build a coherent and effective governance framework. Legislative processes have tended to rely heavily on technocratic solutions, such as regulatory fixes, without adequately addressing deeper tensions between resource exploitation and ecological integrity. This reflects what Peters and Nagel term 'zombie ideas': the persistent belief that changing structures will automatically produce better policy results, despite repeated evidence that such approaches fail to address underlying

the Prevention of Marine Litter and Plastic Pollution and its Impacts, 2021; and the Apia Commonwealth Ocean Declaration, 2024) create a complex, multi-layered series of obligations and commitments, domestically and internationally (Boyle and Redgwell, 2018; Carlson and Palmer, 2019). Recent trade agreements now include environmental commitments – for example, the New Zealand–United Kingdom free trade agreement, 2022 – further strengthening the status of such commitments.

Due to the vastness of our ocean resources, New Zealand needs to be at the leading edge of responsible management, but at the same time not exceeding our rights and obligations, consistent with international law. We have benefited from

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organisational commitments, path dependencies, and the absence of genuine policy alternatives (Peters and Nagel, 2024).

It can be argued that it is New Zealand's international obligations that are proactively driving our domestic management settings, not the converse. In stark contrast to the scope and progress of domestic ocean reforms, New Zealand has been an active participant in international forums. A range of global conventions (inter alia, the United Nations Convention on the Law of the Sea, 1982; the Convention on Biological Diversity, 1992; the International Convention for the Prevention of Pollution from Ships (MARPOL), 1973; the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972) and regional agreements and declarations (such as the Agreement on the Conservation of Albatrosses and Petrels, 2001; the Pacific Regional Declaration on

the extension of maritime boundaries, but this is with the cooperation of our neighbours and maritime powers. This is a double-edged sword: the scale of jurisdiction that creates opportunity also demands governance systems capable of meeting the responsibilities that accompany such extensive maritime authority.

Our management record, and hence governance, is potentially increasingly vulnerable to market access scrutiny (as evidenced by the debate regarding the implications for free trade agreements of the enactment of fast-track legislation), consumer activism and legal challenge, domestically and internationally (Ministry of Foreign Affairs and Trade, 2024; Bevin, 2025; United States Court of International Trade, 2022). In response to several successful legal reviews of ministerial fisheries decisions, the government announced in August proposals to amend the Fisheries Act to constrain litigants.

What this demonstrates is that ocean governance and management is not immune from tensions between litigation and legislative response; from approaches that provide short-term resolution, but fail to address the more substantive underlying issues.

Systemic issues

A handful of systemic issues have accumulated over decades through incremental and ad hoc decisions by successive governments. Together, they reveal a governance system fundamentally misaligned with the

as separate from human communities, failing to recognise that healthy ocean ecosystems and thriving human communities are mutually constitutive.

The challenge for ocean governance is that marine ecosystems operate on timescales that far exceed political and fiscal cycles. Yet recent public policy initiatives – including the abandonment of wellbeing budgeting, proposed removal of long-term insights provisions from the Public Service Act, and planned changes to the Resource Management Act – suggest a retreat from institutionalised long-term thinking by the public sector.

Scientific knowledge about marine systems is inherently fragmented across disciplines and agencies, creating siloed understanding rather than integrated insights

complex, interconnected nature of marine ecosystems.

The absence of a shared vision or agreed outcomes to guide decision making across the complex web of local, national and international governance levels

This manifests in competing ministerial and institutional priorities, including ongoing tension between single-stock fisheries management over ecosystem-based approaches; contested allocation of ocean space for future offshore aquaculture, offshore wind and seabed mining activities; and the relative priority assigned to ocean-related budget bids. Chronic underfunding of ocean-related domestic and international obligations is symptomatic of the lack of vision or strategy.

Short-term economic benefits prioritised over long-term public value

Current ocean management rests on mainstream notions of short-term fiscal value and does not recognise the long-term public value or the ecological significance of the oceans for the prosperity of future generations. This approach treats the ocean

Fragmented legislative and institutional settings where agencies operate in silos, preventing effective coordination and integration

Decisions by successive governments have resulted in multiple statutes and agencies responsible for similar functions (with distinct research, data management, compliance, monitoring and enforcement regimes) and subject matter, such as biodiversity (protected species, protected areas, resource management) and resource allocation (Resource Management Act 1991, Crown Minerals Act 1991, Fisheries Act 1996, Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012, Fast-track Approvals Act 2024). While the legislative framework enables specialisation where appropriate, it has resulted in disconnected instruments, inefficiencies, duplication and competing policy initiatives, all of which prevents long-term integrated strategies from taking shape, creating a governance system that responds to immediate pressures rather than strategic vision. The ten-year Sustainable Seas National Science Challenge exemplifies this failure – producing valuable research, but gaining

little policy traction across agencies. This is symptomatic of chronic underfunding of marine management.

Competing objectives across legislation and sectors which remain unreconciled, creating ongoing conflicts between different resource users and conservation goals

The fragmented legislative framework enables competing interests to play different regulatory systems against each other, creating fundamental tensions between resource exploitation and ecological integrity, and undermining the ability to develop and implement coherent long-term strategies. A clash of world views is evident in ongoing tensions between fisheries property rights and protected area initiatives in the Hauraki Gulf and the Kermadecs, as well as the continued prominence of self-reported over observed fisheries data despite well-known discrepancies between the two.

The persistent gap between policy ambition and execution, where repeated reform efforts fail to address the complex interplay between customary rights, commercial exploitation and conservation imperatives

Limited institutional oversight and accountability of regulatory implementation by independent bodies compounds this problem, while lack of institutional capacity at central and local government levels, and within Crown research institutes (now called public research organisations), results in expertise shortfalls, gaps in essential data, and wide variance in policy capability and implementation.

Underlying limitations of evidence-based decision making

Management of our oceans typically operates on the basis of an evidence-based framework which treats facts as if they could speak for themselves, often with insufficient attention given to underlying assumptions, the contested nature of evidence, and the complex political realities that shape how information is interpreted and used. This approach reflects what Cairney (2017) identifies as a persistent myth in policymaking: that rational, transparent processes automatically lead to better outcomes.

In practice, this evidence-centric approach faces significant limitations. Scientific knowledge about marine systems is inherently fragmented across disciplines and agencies, creating siloed understanding rather than integrated insights. Evidence is rarely neutral; it emerges from particular research traditions, funding priorities and institutional perspectives that reflect deeper world views about the relationship between people and te moana. Most critically, the same evidence can support fundamentally different policy conclusions, depending on whether it is interpreted through intrinsic, instrumental or relational paradigms. This approach has significant risks and drawbacks: perfect information remains unattainable; institutional incentives push towards reactive rather than anticipatory responses; overconfidence in predictive models creates false precision over meaningful accuracy; prolonged methodological debates enable indefinite delay; it results in systematic neglect of competing political and economic drivers; and institutional short-termism prioritises immediate outcomes over long-term sustainability.

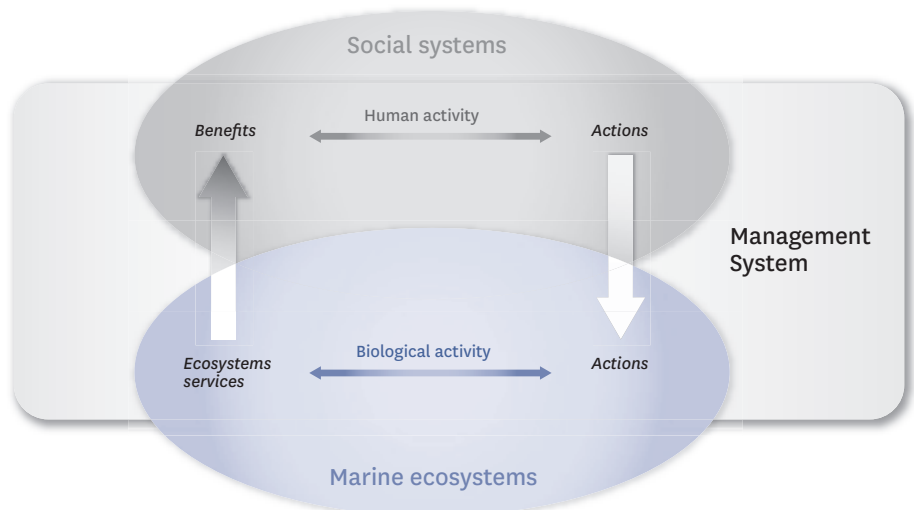
Why structural reform is necessary

The government has a responsibility to be anticipatory, to look beyond the immediate landscape for the betterment of society over multiple generations. Despite repeated efforts, Aotearoa New Zealand has been unable to achieve comprehensive oceans reform that would reconcile competing world views, leaving critical governance gaps unresolved.

Climate change now amplifies this failure. As marine ecosystems face unprecedented pressures – from ocean acidification to shifting species distributions – fragmented governance structures prove increasingly inadequate to manage cascading risks. What were once manageable tensions between customary rights, commercial exploitation and conservation imperatives risk becoming irreconcilable conflicts in a rapidly changing ocean environment.

These issues have accumulated over decades through incremental and ad hoc decisions by successive governments, creating a governance system that cannot match the scale and urgency of

Figure 1: Interactions that make up the ocean management system



Source: Authors own diagram, 2025

contemporary challenges. Overcoming these systemic obstacles is essential to ensure that Aotearoa New Zealand can sustainably manage its marine resources for the long term, balance ecological protection with economic development, and meet its international commitments to biodiversity and climate goals.

We can strive for a better future, even though we cannot know the exact path, choosing to approach the unknown not with trepidation but as an opportunity to reimagine the relationship between people and nature – and how we manage our oceans (Figure 1).

Transformational change does not dictate wholesale repudiation of the status quo, although a detailed understanding of the current paradigm is vital if we are to avoid repeating the mistakes of the past. The current-day fixation on economic development dependent on ever-increasing material and energy use has become a core driver of marine ecosystem degradation, treating oceans primarily as sources of extraction and sinks for waste rather than as complex life-support systems. This approach relies on markets to optimise narrow goals like economic ‘efficiency’, while systematically ignoring the collective social and environmental outcomes that determine long-term ocean health. The result is governance frameworks that can measure short-term economic returns from fisheries, aquaculture or seabed mining, but discount or underplay the cumulative impacts on marine ecosystem resilience, coastal community wellbeing, and the ocean’s

capacity to regulate climate systems. Understanding this paradigmatic foundation is essential because attempts at reform that fail to address these deeper assumptions about value and efficiency will inevitably reproduce the same patterns of fragmentation and short-term thinking that characterise current ocean governance failures.

The consequences extend far beyond current political cycles. Decisions made today will shape the state of our oceans for generations to come, yet the tendency to pursue seemingly prudent trade-offs between competing values – such as economic development and environmental protection – constrains future options for sustainable governance. This reflects the path dependency challenges where seemingly reasonable compromises can lock in institutional commitments and policy trajectories that become increasingly difficult to reverse. The long lags between policy choices and their full environmental consequences are often inadequately considered in short-term political cycles. Without shared long-term goals – such as commitments to 30–50-year outcomes – short-term political decisions risk locking in adverse environmental trajectories that degrade marine ecosystems and foreclose more ambitious economic options for future generations. The challenge is not simply improving individual policies, but fundamentally reorienting our governance approach towards anticipatory stewardship of te moana.

Critically, we know that ocean ecosystems can regenerate if given the opportunity, making this a choice about

Box 1

Anticipatory governance is a system of institutions and processes that enables society to systematically anticipate, assess and respond to emerging challenges and opportunities before they become entrenched or irreversible, moving beyond reactive, crisis-driven policymaking towards proactive preparation for future conditions (Guston, 2014; Boyd, 2010; Fuerth, 2009). Anticipatory governance is a tool that can

be applied across any system, not just oceans, making it an essential instrument for resolving complex governance problems. In its purest sense it is value-neutral regarding paradigm or policy choices. However, its essential purpose is to enable decisions that deliberately consider long-term implications, rather than being constrained by electoral cycles.

intergenerational stewardship rather than inevitable decline. This is actively highlighted in the Nice Ocean Action Plan (Robinet, 2025; Attenborough, 2025).

Anticipatory governance – an essential pathway forward for oceans governance

Major structural reform opportunities may not arise in the next 5–10 years. This creates a strategic challenge: while comprehensive transformation remains the ultimate goal, we must identify key advances that can be achieved within existing constraints and a limited political appetite for large-scale institutional change.

The Environmental Defence Society and others have outlined comprehensive reform packages that could fundamentally restructure ocean governance. However, if such comprehensive approaches prove politically unattainable in the near term, we face a critical choice about where to focus limited resources and political capital for maximum impact.

Long-term planning and anticipatory governance are increasingly recognised as a means of supporting institutional and policy frameworks to bridge the gap (Craig, 2012; United States Commission on Ocean Policy, 2004; Erinoshio et al., 2022; Morgera, 2011; Guimarães et al., 2023; Sustainable Seas, 2024). Anticipatory governance (see Box 1) emerges as an essential pathway forward, regardless of the pace of structural reform. Unlike comprehensive institutional restructuring, anticipatory governance can be implemented within existing frameworks, while building capacity for future transformation.

From a relational perspective, anticipatory governance acknowledges the inter-

dependence of nature and people, recognising that systemic changes will occur simultaneously in both natural and social systems. This understanding shapes how we design governance frameworks that can adapt to and anticipate these interconnected changes. Essential elements that comprise the building blocks of an anticipatory governance system for oceans are discussed below. While international examples exist, there are no plug-in-and-play solutions for the Aotearoa New Zealand context; any framework must be tailored to our unique institutional, cultural and geographical circumstances.

In the marine management context in Aotearoa New Zealand, we propose that anticipatory governance needs to encompass four key elements: reimagining longer-term public value creation; adaptive management approaches; multi-layered accountability systems; and alignment between policy ambition and implementation capacity.

Long-term public value creation

The state has a responsibility to be anticipatory, recognising the wellbeing of current and future generations. This demands an ocean management model built on mutual dependence, where human activities actively contribute to ocean regeneration, while ocean health directly supports community resilience across environmental, social, cultural and economic dimensions within defined generational time frames of 50–100 years. Development proposals must demonstrate genuine ‘additionality’ – measurable contributions to the reciprocal relationship between human and ocean

wellbeing – rather than simply extracting value from marine ecosystems. Adopting more dynamic forms of value such as social and environmental additionality, which the OECD identifies as essential for sustainable governance frameworks, is critical (OECD, 2020, 2021).

A relational world view requires development conditions that strengthen rather than weaken these interdependencies: for example, environmental additionality where human activities actively restore ocean capacity through habitat regeneration; or species recovery that directly benefits community resilience and performance accountability through binding commitments that recognise the long-term reciprocal obligations between human activities and marine ecosystem health.

Adaptive management

Adaptive management and planning can be effective when facing increasing climate change impacts on marine biodiversity, through anticipatory zoning and precautionary regulation (Sustainable Seas, 2021). The Arctic Fishery Management Plan (North Pacific Fishery Management Council, 2009) closed federal waters to fishing until ecosystems could be better understood, while Seychelles has used marine spatial planning to proactively balance biodiversity goals with economic needs (Republic of Seychelles, 2025).

While these international examples offer valuable insights, it is difficult to identify a clear blueprint that addresses Aotearoa New Zealand’s unique context – a vast exclusive economic zone encompassing numerous inhabited and uninhabited islands in a remote part of the world. Environmental justice litigation is increasingly being deployed as a tool to address the intergenerational burden and inequality of climate change impacts, and may in time become a vehicle for challenging the policy failures evident in ocean governance. Simultaneously, the United Nations is working to strengthen international law to address the systemic global failures in ocean governance, recognising that domestic reform efforts alone cannot resolve the transboundary nature of marine ecosystem challenges that transcend national jurisdictions (Robinet, 2025).

Adaptive ocean planning requires governance that operates at strategic and regional levels, rather than project-by-project decision making. This approach encompasses envisioning future scenarios that account for climate impacts, engaging stakeholders to formulate adaptation strategies, and integrating results into governance frameworks with predetermined response mechanisms.

Critically, adaptive management must be oriented towards achieving long-term environmental outcomes rather than simply enabling activities to proceed despite uncertainty. This requires establishing clear 'what action to what response' protocols in advance, recognising that marine ecosystems often exhibit sudden, non-linear changes rather than gradual transitions. Effective adaptive management expects surprises – including ecological tipping points and threshold responses – and builds capacity to respond quickly when monitoring indicates that conditions are changing.

Rather than treating uncertainty as a barrier, adaptive ocean management embraces it as a design feature, creating governance frameworks that can learn and evolve while maintaining focus on desired environmental outcomes. This moves beyond reactive management towards proactive stewardship that anticipates change and has predetermined responses ready for implementation.

Multi-level accountability

Effective accountability requires clear lines of responsibility from the executive level of government through to regional implementation, with transparent decision making and reporting on how trade-offs and competing priorities are assessed. This demands systems oversight that evaluates whether existing institutions can deliver the accountability required for anticipatory governance.

While long-term insights briefings are an important first step, they represent only the beginning of what is required. The public service has an essential role in translating long-term thinking into practical implications and recognising the extended time frames necessary for ocean stewardship. A persistent challenge is ensuring that ten-year strategies drive

priorities and resource allocation, rather than remaining aspirational documents.

Multi-level accountability requires transparent reporting on:

- how ecological and time frame considerations influenced decisions;
- what trade-offs were made between competing priorities;
- how community and iwi values were integrated into decision-making processes; and
- what monitoring and evaluation mechanisms ensure delivery of promised outcomes.

Alignment between ambition and execution

Bridging the persistent gap between policy ambition and implementation requires

- Political bodies need to align to ensure continuity of the ocean agenda. This demands cross-party collaboration mechanisms that maintain strategic direction and resource commitments across electoral cycles, preventing the political disruption that has undermined previous oceans policy reform efforts.
- Financial resources directed towards addressing the core nature of ocean governance problems are urgently required, with coordinated investment that supports system-wide transformation rather than fragmented initiatives.

Together these elements address many of the structural challenges in current ocean management, while helping to

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long-term commitment to adequately resourcing effective monitoring, evaluation and evidence-gathering systems. This alignment requires significant institutional, political and financial investment.

- Institutional capacity will need to be built across levels through training, resources, and institutional support for collaborative decision-making processes. Development of effective feedback loops by way of monitoring, evaluation and learning systems, and monitoring systems that track environmental, social and economic outcomes over generational time frames, with regular reporting and adaptive management processes, are needed. Monitoring and evaluation are ineffective without meaningful enforcement mechanisms, and adequate resources for compliance monitoring and enforcement are required to ensure that development conditions and accountability requirements are met in practice.

refocus institutional attention on a shared understanding of desired future states and realistic long-term outcomes. However, making this shift requires a fundamental change in how we govern, how we consider information, and how we think about the future. A core premise is that securing a sustainable future demands a fundamental shift in mindset and behaviours, alongside a reconfigured socio-economic system. Environmental policy alone is unlikely to realise a sustainable future unless accompanied by genuine systemic change.

Values that people hold about the environment need to be resurfaced at a system level, dismantling structural barriers that prevent those values from being given effect. Society as we know it today is shaped by social norms, learned behaviours and relationships: these can be recast, enabling a plurality of values and reinvigorating social consent. A new world view, new institutional voices, new policy approaches, new tools, and new ways of understanding policymaking are required,

discarding the dominant theories and practices that have led us down an ideological cul de sac.

Conclusion

‘Thinking in systems over longer periods of time is the revolution of our time’ (David Orr, quoted in Wahl, 2016). Management of our oceans is at a critical juncture, locally, nationally and globally. Significant change over the next 30–50 years can be

foreseen, while other changes fall into the category of the ‘unknown unknowns’. Past and present investment in management of our oceans remains inadequate to address current and future risks and opportunities.

While not starting from a completely blank slate, compared with management of our land, there is ample scope to do things differently in the oceans. Decisions we make now, and in the future, can deliver benefits for people and the natural

environment. But decisions without a clear sense of direction have the potential to compound existing systematic issues.

Anticipatory governance is a means of ensuring that long-term considerations are appropriately reflected in decision making. Anticipatory governance is a discipline that can support overall ocean governance in an imperfect policy landscape. It offers a pragmatic way forward without requiring wider legislative change. The choice is ours.

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