

Performance area	Key questions	Indicators and other information Common indicators across Challenges are shown in bold	Measures <i>Italicised text are aspirational (stretch) numbers.</i>
1. Delivery of Challenge objective	<p><b>To what extent has progress been made towards achievement of the Challenge objective?</b></p> <ul style="list-style-type: none"> <li>Challenge activities focus on and contribute to achieving the Challenge objective</li> <li>Challenge consortium has a clear pathway to achieve the Challenge objective</li> <li>Challenge programme delivers science and outputs that contribute to the Challenge objective</li> <li>Challenge is making significant progress towards its objective</li> </ul>	<p>Challenge-specific indicators agreed between MBIE and each Challenge, based on the Challenge's outcomes framework:</p> <p>1.1. Existing marine industry efficiency, sustainability, security, value and market access is enhanced, and innovative approaches to the diversification of the marine industry portfolio are promoted</p> <p>1.2. Innovative tools and decision support systems are incorporated into policy development, decision making and resource utilisation that ensures the maintenance of ecosystem resilience while developing a prosperous marine economy</p> <p>1.3. Science underpinning an ecosystem-based-management approach to resource utilisation is incorporated into marine resource management and social, cultural, and economic values are incorporated into decision making on marine resource utilisation so that monetary and non-monetary values are part of the evaluation of marine resource use..</p> <p>1.4. Mātauranga Maori is valued and incorporated in to decision making and resource utilisation by regulators and industry</p> <p>1.5. Meaningful engagement of stakeholders by our communications team, in the management of marine resources increases. This means that public engagement improves social licence to operate for improved marine resource utilisation</p>	<p>1.1.1 Two innovation products (products, models, maps, concepts) introduced to industry annually by the Challenge.</p> <p>1.1.2 By 2019, a baseline in the number of marine industries reporting interest in use of Challenge frameworks, models/data which will demonstrably add economic value will be established. Information will be gathered by survey.</p> <p><i>1.1.3 By 2021, 15% increase above baseline in marine industries reporting use of SSC frameworks/models/data to demonstrably add economic value.</i></p> <p><i>1.1.4 By 2024, 30% increase above baseline.</i></p> <p><i>1.1.5 Increase the value of economic marine resource utilisation 7% annually from 2018. Baseline established 2016/2017.</i></p> <p>1.2.1 Three frameworks, three datasets, 10 meetings/hui, one map and two models will be developed annually from 2016/2017.</p> <p>1.2.2 The Challenge will use the tools in measure 1.2.1 to influence the development of New Zealand marine environmental policy. For example, influence in 3 Regional Coastal Plans (RCPs) by 2019.</p> <p><i>1.2.3. Influence in all 16 RCPs by 2024.</i></p> <p>1.2.4 The Challenge will influence the outcome of any reviews of New Zealand marine environmental legislation when appropriate throughout the duration of the Challenge.</p> <p>1.3.1 By 2019, 20% and 30% by 2022, of all <b>applicants</b> for marine resource consent demonstrate an awareness of the potential to use Challenge outputs when making Challenge relevant consent applications. By 2024, 40% demonstrate incorporation of Challenge outputs into Challenge relevant consent applications.</p> <p><i>1.3.2 By 2022, 40% and by 2024, 60% of all Challenge relevant <b>applications</b> for marine resource consents incorporate Challenge outputs.</i></p> <p>1.3.3 Prior to 2019 narrative evidence will be provided annually to demonstrate that regulators and decision makers are aware of Challenge outputs that will become available for incorporation into marine resource management and notified resource consents.</p> <p>1.3.4 By 2020, 5% of Challenge-relevant notified marine resource decisions made by <b>regulators</b> and decision makers demonstrate incorporation of Challenge outputs. By 2024, 10% of Challenge relevant marine resource decisions made by regulators and decision makers demonstrate incorporation of Challenge outputs</p> <p><i>1.3.5 By 2020, 10% of Challenge relevant notified marine resource decisions made by <b>regulators</b> and decision makers demonstrate incorporation of Challenge outputs. By 2024, 20% demonstrate incorporation of Challenge outputs.</i></p> <p>1.4.1 100% of programmes within the Challenge have a VM component. The Kāhui will report annually to the Board on progress of VM within the Challenge</p> <p>1.4.2 70% of Maori involved in Challenge research report confidence in Challenge outputs. To be measured by annual survey. Initial surveys of case study area, and to be widened out to focal region in 2019.</p> <p>1.5.1 8% increase in public awareness in case study area by 2019 and 4% increase in the focal region by 2024, of the marine economy and the EBM approach to marine resource management. To be measured by annual survey. Base-line to be established 2016/2017</p>

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2. Science quality	<p>To what extent is the Challenge achieving appropriate and world-leading, ground-breaking science?</p> <ul style="list-style-type: none"> <li>The Challenge delivers high-quality, ground-breaking science of a strategic nature</li> </ul>	<p><b>2.1. Mean citation score for journals in which the Challenge has published (bibliometric analysis undertaken by MBIE based on publications data provided by the Challenge)</b></p> <p><b>2.2. Field-weighted citation index of Challenge publications (bibliometric analysis undertaken by MBIE based on publications data provided by the Challenge)</b></p> <p>2.3. Science quality is independently monitored</p>	<p>2.1.1. 70% of publications from the Challenge in journals of an impact factor &gt; 1.5 (or field-specific equivalent).</p> <p>2.2.1 The average number of citations by the weighted index for the journal in which they are published exceeds the weighted average of all citations in all environmental journals.</p> <p>2.3.1. The ISP will report annually to the Board on the quality of science within the Challenge, and the Board will note and action appropriately.</p>
3. Best research team collaboration	<p>To what extent is New Zealand's best research team working on delivering the Challenge objectives?</p> <ul style="list-style-type: none"> <li>Research team works together across disciplines and member institutions (relationships are built that did not exist previously) and draws on and aligns capabilities and resources outside the Challenge</li> <li>Research team has the right capability, gaps are filled, and Challenge tests itself with new ideas, approaches, and mechanisms</li> <li>Emerging talent has opportunities (in research or leadership roles)</li> <li>International science expertise is used where appropriate</li> </ul>	<p><b>3.1. % of publications by collaboration type (New Zealand institutions, international) on a 12-month rolling average (bibliometric analysis undertaken by MBIE based on publications data provided by the Challenge)</b></p> <p><b>3.2. Effectiveness of research team, eg science leadership, skill mix (biennial survey conducted by MBIE)</b></p> <p>3.3. Successful development of interdisciplinary science to achieve the Challenge Objective</p>	<p>3.1.1. &gt;50% with co-authors from more than one NZ based research organisation.</p> <p>3.1.2. &gt;15% publications with international co authors.</p> <p>3.2.1 At least 1 per Programme invited, oral or keynote presentations at international conferences relevant to the Challenge annually.</p> <p>3.2.2 1 cross-project research collaboration i.e. instances of data collection/stakeholder engagement, Maori engagement, and/or data incorporation per project annually.</p> <p>3.3.1. By 2019, 30% of challenge publications have multi-disciplinary authorship, with 10% in 2016/2017, 20% 2017/2018 and 30% 2018/2019.</p> <p>3.3.2. ISP will report annually to the Board on development of interdisciplinary approach within the Challenge, the balance of funding across the Challenge programmes and the level of international collaborations occurring.</p>
4. Stakeholder engagement	<p>To what extent is the Challenge engaging with stakeholders and to what extent are stakeholders using the Challenge research results?</p> <ul style="list-style-type: none"> <li>Stakeholders inform and influence Challenge priorities and research agenda</li> <li>Stakeholders take up and use research results</li> <li>Challenge influences activities and investments of external stakeholders</li> </ul>	<p><b>4.1. Satisfaction among stakeholders with research priority setting (biennial survey conducted by MBIE)</b></p> <p><b>4.2. Satisfaction among stakeholders with knowledge exchange and technology development (biennial survey conducted by MBIE)</b></p> <p>4.3. Stakeholders demonstrate the value of Challenge research by co-funding or aligned research to the Challenge</p> <p>4.4. Knowledge of, and communication with stakeholders promotes alignment of Challenge Research Plan with marine industry strategies</p>	<p>4.1.1. A satisfactory or better result in the survey of stakeholder perceptions in biennial survey conducted by MBIE</p> <p>4.2.1. The stakeholder panel is operating effectively and panel members are engaged with 80% attending meetings.</p> <p><i>4.3.1 In-kind and aligned co-funding from collaborative parties and stakeholders demonstrated annually</i></p> <p>4.4.1 The Challenge engages with, considers and accounts for, the strategies of marine based industries.</p>
5. Māori involvement and mātauranga	<p>To what extent are Māori and mātauranga Māori engaged to achieve the Challenge objective? To what extent is the Challenge addressing the needs and aspirations of Māori?</p> <ul style="list-style-type: none"> <li>Māori are involved in the Challenge or at least add influence - where appropriate - as researchers, stakeholders, governance entity members, advisors</li> <li>Challenge research unlocks knowledge, resources, and potential of Māori</li> <li>Mātauranga Māori is used in the Challenge research, where appropriate</li> </ul>	<p><b>5.1. Satisfaction among Māori stakeholders with their influence on, engagement with, and value received from the Challenge (biennial survey conducted by MBIE)</b></p> <p><b>5.2. \$ value of research and related activities that 1) specifically target Māori needs and aspirations and 2) employ mātauranga Māori.</b></p>	<p>5.1.1. Satisfactory or better result in survey of Māori perception survey.</p> <p>5.1.2. Annual report from the Kāhui to the Board indicates good performance in VM and the progress of the Tangaroa programme.</p> <p>5.1.3 At least 4 Challenge researchers, including iwi researchers and partners, are invited to present at hui or through Māori media annually (This value is likely to change over time, from 4 initially to 10 in 2019).</p> <p>5.2.1 15% of research funding supports Tangaroa and Vision Mātauranga programmes and VM activities annually.</p>

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6. Effective governance and management	<p data-bbox="359 289 863 407"><b>To what extent do the right governance and management arrangements exist and work strategically and effectively?</b></p> <ul data-bbox="359 443 1026 747" style="list-style-type: none"> <li>• Governance entity ensures that Challenge research portfolio maintains strategic focus on Challenge objective</li> <li>• Effective processes are in place (such as performance reporting and monitoring, financial management, audit)</li> <li>• Governance entity operates effectively</li> <li>• Governance and management processes for the Challenge complement other governance and management processes elsewhere in the science system</li> </ul>	6.1. <b>Qualitative assessment of governance processes.</b>	<p data-bbox="1727 289 2555 317">6.1.1. The Challenge is promptly established and continues to operate effectively.</p> <p data-bbox="1727 338 2665 365">6.1.2 Quality financial and project management in accordance with budgets and delegations.</p> <p data-bbox="1727 386 2594 443">6.1.3. High quality documentation for annual reporting, planning, meeting papers and minutes.</p> <p data-bbox="1727 464 2273 491">6.1.4. Effective management of external relationships.</p> <p data-bbox="1727 512 2614 569">6.1.5. The Sustainable Seas Board reviews its own performance and performance of the Director and Science Leadership team on an annual basis.</p>
7. Public participation	<p data-bbox="359 768 863 865"><b>To what extent is there effective engagement between the Challenge and the public?</b></p> <ul data-bbox="359 921 1026 1050" style="list-style-type: none"> <li>• Challenge undertakes an appropriate programme of public engagement</li> <li>• Members of the public are involved in the Challenge where appropriate, and engaged in the aspirations of the Challenge</li> </ul>	7.1. <b>Index of public attitudinal and behavioural engagement in science (regular (possibly triennial) survey conducted by MBIE).</b>	7.1.1. Satisfactory or better result in the survey of public attitudes towards the Challenge.