

Submission by



to

**Fisheries New Zealand / Ministry of Primary Industries**

on the

**Draft Fisheries Industry Transformation Plan  
Mahere Takahuritanga Ahumahi Hao Ika**

9 June 2023

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**9 June 2023**

## **NZTECH SUBMISSION ON THE DRAFT FISHERIES INDUSTRY TRANSFORMATION PLAN**

### **SUMMARY**

1. NZTech thanks Fisheries New Zealand / Ministry for Primary Industries for the opportunity to submit on the Draft Industry Transformation Plan.
2. We support the Draft ITP's goals of strengthening environmental performance, improving profitability and productivity, and supporting people and communities.
3. Tech is vital to achieving these goals, and in particular ensuring that the fishing industry remains sustainable. Increasing use of tech and the industry's constant drive for innovation highlights the need to focus on data standards and quality, data security and privacy, digital identity, artificial intelligence (AI) and algorithms and digital skills development. These are the subjects addressed in this submission.

### **BACKGROUND**

4. NZTech is the peak body for the tech sector in New Zealand and a leading voice for the New Zealand technology ecosystem. We represent 20 tech associations with over 2,000 members who collectively employ more than 100,000 New Zealanders.
5. Our mission is to support a values-led, nationally connected tech community that is collectively lifting equity, sustainability and prosperity for all in Aotearoa New Zealand by creating jobs, export growth and impact through tech for good.
6. NZTech is a lead partner in the Digital Tech ITP, a collaboration between the New Zealand tech sector and the New Zealand Government, to help grow the sector.

### **COMMENT**

#### **7. Data Standards and Quality**

We support the Draft ITP's call for the industry to improve its use of data to fish selectively and with least effort. This includes addressing barriers to the regular and timely release and sharing of data collected from fishers, building technology and products that leverage data, and using data to support timely decision-making to manage local distribution, seasonal variation, and effects on the aquatic environment.

8. Tech has a major role to play in improving the industry's resilience to climate change. This includes the capability to develop and/or refine industry benchmarking and standardised measurement tools to help the industry measure and reduce its carbon footprint.
9. Tech also underpins the industry's access to information on export market requirements and its ability to compile the data needed to meet transparency and traceability stipulations.

10. The quality and scale of data available is also an essential foundation for enabling the effective use of analytics, AI and machine learning.
11. **Promoting Data Security and Privacy, and Safeguarding Digital Identity**

We recommend the final ITP encourage industry to adopt best practice regarding personal information protection, processing, storage and deletion. If feasible, industry members should appoint a data security lead, or establish a role that oversees data security and privacy. This advice is in line with that of Digital Identity New Zealand (DINZ) – a member of the NZTech Group – from its report *Digital Identity in Aotearoa*, to which NZTech contributed.<sup>1</sup>
12. **AI and Algorithms**

There is great potential for the industry to use AI and algorithms to better control harvesting and improve fisheries sustainability. This includes the potential for machine vision and AI to recognise species and size while the fish were still in the water, and using that to control what’s caught.
13. Examples of early applications include Sealord’s involvement with “precision harvesting”, using technology to allow for more precise catches and fish to be landed in better condition, and its advanced analytics project – working alongside tech company Datacom – to help with its sustainable fishing goals. This project brings together historical fishing data with satellite environmental data and real-time sensor readings from fishing vessels to more accurately predict where to find different fish species and minimise bycatch of non-quota fish species.
14. While AI has exciting applications for the fishing industry, it brings both great benefits and great risks for our digital future. NZTech believes these risks need to be managed through an explicit social license, underpinned by ethical standards. While New Zealand is well positioned to ensure this happens, we currently lack a national AI strategy that can facilitate agreement on what is most important for New Zealanders, provide a co-ordinated approach to the adoption and use of AI in our country, while also showcasing the New Zealand brand on the international stage. Such a national strategy would promote a mātauranga Māori worldview and an ethical base in the development and implementation of AI, one that promotes New Zealand businesses as developers of safe, inclusive, innovative and creative AI products.
15. **Innovation**

Tech-driven innovations continue to enhance the industry’s development. One example is the ongoing development of a modular harvesting system (MHS), initially designed by one of our members, Plant & Food Research, and then by Precision Seafood Harvesting in partnership with MPI, Sealord, Moana and Sanford.<sup>2</sup> The system replaces the lengthener and cod end of a traditional mesh trawl net with a membrane-based system comprising a series of cylindrical modules, some of which contain openings in the sides, designed to create a low-flow, low-turbulence environment. This allows specific species and sizes to be targeted, while increasing the survivability of small fish and bycatch either by escapement from the openings in the MHS or by being able to be released alive. The result is reduced environmental impact, lower bycatch, and improved quality of fish landed.
16. The Draft ITP includes a plan to establish a joint industry/government project to source and develop technology that minimises adverse impact on the ocean floor to the maximum extent

practicable. We support this initiative, and also the determination to incentivise and facilitate fast adoption of proven efficient and environmentally sustainable fishing gear and methods.

**17. Digital Skills**

Like all other sectors, the fisheries industry will experience difficulties in accessing enough people with appropriate advanced digital skills as the industry takes on more digital tools. Rather than try to address this challenge individually, NZTech recommends explicitly noting this potential future challenge in the Fisheries ITP and identifying the opportunity to partner with the Digital Technology ITP's core workstream of developing the nations digital skills for all sectors.

**CONCLUSION**

18. Thank you for the opportunity to provide feedback on the Draft ITP. We are happy to engage further to discuss our submission and provide any further assistance.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Graeme Muller".

**Graeme Muller**

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<sup>1</sup> [https://nztech.org.nz/wp-content/uploads/sites/8/2023/02/Digital-Identity-in-Aotearoa-Report\\_final.pdf](https://nztech.org.nz/wp-content/uploads/sites/8/2023/02/Digital-Identity-in-Aotearoa-Report_final.pdf)

<sup>2</sup> <https://www.plantandfood.com/en-nz/article/taking-successful-sustainable-fishing-technology-to-the-world>