

Submission on the Ministry for the Environment's Clean Water consultation document*

The New Zealand Association of Scientists (NZAS) is a genuinely independent association of scientists who work and lobby to:

- promote science in New Zealand,
- increase public awareness of science and expose pseudo-science,
- debate and influence government science policy,
- improve working conditions for scientists, including gender and ethnic equality,
- promote free exchange of knowledge and international co-operation, and
- encourage excellence in science.

The consultation document reflects that 'Clean Water' is an issue that New Zealanders care deeply about, placing it at the top of their list of environmental issues¹. It is an issue that needs to be addressed, and requires substantial science input into societal decision-making processes².

Another report³, released during the closing week of this consultation, shows ongoing concerns about our water resources based on the state and trends of key indicators representing both ecological health and human health during recreation.

From the broad perspective of NZAS, we note this consultation has been unusual in key respects, and we express concern that the role of science in supporting the consultation's public and stakeholder discourse has been undermined.

Our key concerns are:

1. The development of the Clean Water document is intended to reflect an ongoing consensus involving key stakeholders through the Land and Water Forum, which was established in 2009. Three key stakeholders representing widespread public interest have now withdrawn from the Forum, expressing concern that implementation is inconsistent with agreed recommendations from the Forum. This undermines the basis for the document under consultation.
2. Experts in freshwater indicators, including the President of the New Zealand Freshwater Sciences Society, have expressed public concern⁴ that the indicators proposed in the report are so confusing that even experts do not understand a number of issues related to the proposal. The issues have not been clarified during the consultation period.

3. There is a mismatch between the goals of indicators, desired outcomes and timeframes. For instance, the report is primarily focused on indicators of human health during recreation. In contrast, the perceptions of New Zealanders are likely to be that ecological health should be a primary goal, but is given only the weakest possible basis in section 3.4.

In light of these types of concerns, and wider submissions, we strongly urge revision of the Clean Water 2017 document and programme, and a new phase of consultation. We consider this to be an unusual request that we do not make lightly. It is important that it be considered where processes of discourse, including the Land and Water Forum and public consultation, do not appear to have operated adequately to ensure that scientific evidence is considered properly in long-term decisions. This is particularly relevant when addressing complex ecological systems with time lags or hysteresis, which cause disconnects between indicators, desired outcomes and timeframes. Under these conditions, a lack of scientific understanding informing and steering policy and management will result in a likelihood that the ecological systems will overshoot acceptable boundaries. Precaution is advised to avoid unacceptable overshooting of thresholds of ecological health – particularly where there is the threat of species extinctions. Our concerns led us to suggest that we also support the views of informed scientific and societal stakeholders requesting more targeted limit setting with a greater focus on nutrients and ecological health, as well as earlier timeframes for implementation.

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On behalf of NZAS Council

* Ministry for the Environment. 2016. *Next Steps for Fresh Water: Consultation document*. Wellington: Ministry for the Environment.

¹ Hughey, K.F.D., Kerr, G.N., Cullen, R. 2016. *Public Perceptions of New Zealand's Environment: 2016*. EOS Ecology, Christchurch. http://www.lincoln.ac.nz/Documents/LEaP/perceptions2016_feb17_LowRes.pdf

² Office of the Prime Minister's Chief Science Advisor, 12 April 2017. *New Zealand's fresh waters: Values, state, trends and human impacts*. <http://www.pmcsa.org.nz/wpcontent/uploads/PMCSA-Freshwater-Report.pdf>

³ Ministry for the Environment & Stats NZ 2017. *New Zealand's Environmental Reporting Series: Our Fresh Water 2017*. <http://www.mfe.govt.nz/publications/environmental-reporting/ourfresh-water-2017>

⁴ Radio New Zealand 26 April 2017. Freshwater scientists confused by clean water package. *Morning Report*. <http://www.radionz.co.nz/national/programmes/morningreport/audio/201841531/freshwater-scientists-confused-by-clean-water-package>