



**Hon Amy Adams & Hon Nathan Guy**  
**Water Reform Directorate**  
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**8 April 2012**

Dear Ministers,

**FEEDBACK ON THE FRESHWATER REFORM DISCUSSION DOCUMENT  
NEW ZEALAND FRESHWATER SCIENCES SOCIETY**

**Introduction**

1. The New Zealand Freshwater Sciences Society (NZFSS) was established in 1968 as the New Zealand Limnological Society. It is a constituent body of the Royal Society of New Zealand and has some 430 members. The Society's membership spans the breadth of academics and researchers to resource managers in the field of freshwater. The NZFSS is the key professional society for practitioners in freshwater science and management in New Zealand. The Society aims to "establish effective liaison between all persons interested in any aspect of fresh or brackish water research in New Zealand, and to encourage and promote these interests".
2. The NZFSS welcomes the opportunity to comment on the discussion document entitled '*Freshwater reform 2013 and beyond*' which proposes amendments to the Resource Management Act 1991 (RMA) and the introduction of other regulatory and guidance methods to change the way freshwater is managed in New Zealand.
3. The NZFSS is concerned about the widespread decline in aquatic biodiversity and water quality in New Zealand<sup>1</sup>. A large proportion of the Society's membership is directly involved in resource management as experts at the local government, Environment Court and central government levels and a number of members are accredited as independent hearings commissioners through the '*Making Good*

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<sup>1</sup> <http://freshwater.science.org.nz/index.php/news/media-statement-nzfss-key-closing-messages/>

*Decisions'* programme. These constituents have a wealth of science and resource management expertise to contribute to the RM reform and Freshwater Management processes. Additionally, many of the Society's members have been involved in the Land and Water Forum (LAWF) and in the National Environmental Monitoring and Reporting (NEMaR) project in some capacity.

4. The NZFSS have provided feedback on the following matters:
  - a. General comments on the approach the government is taking for freshwater management
  - b. Planning as a community
  - c. A National Objectives Framework
  - d. Managing within quantity and quality limits

#### **General comments on the freshwater reforms discussion document**

5. The NZFSS **supports** the government in requiring more integrated, targeted and sustainable management of New Zealand's freshwater resources as a priority. As the key professional freshwater science body, the NZFSS is willing to contribute positively to the freshwater reforms (beyond the considerable contribution of many individuals and agencies to date) through providing the government with access to an independent, collective scientific peer review of national objectives, bottom lines, the Water Research Strategy and the like.
6. The NZFSS **supports** and encourages measures to improve the efficient use of water, whilst maintaining ecological and other non-market values. The Society also supports the concept that freshwater environments need to be healthy and resilient. However, statements regarding the maintenance or improvement of 'overall' freshwater quality (transferred from the NPS Freshwater Management) need to be further defined. The NZFSS **opposes** any method that allows for 'sacrificial waterways' or trade-offs of the health of one waterbody for another. This does not meet the definition of sustainable management, nor the purpose of the Act. If the definition of 'overall' water quality includes such trade-off concepts it is not supported.

7. Although the proposed freshwater reforms include a collaborative planning process and a National Objectives Framework, the reforms are not fully consistent with the LAWF recommendations. The NZFSS supports the recommendations of LAWF and believes *full* implementation of the forum's consensus recommendations will better progress freshwater management in New Zealand. Where the proposed reforms have only partially addressed a particular LAWF recommendation there is potential to undermine the consensus behind each recommendation. Individual recommendations were designed to be implemented in their entirety; this was the basis for the LAWF consensus. Many recommendations were also designed to be implemented as packages. Only 48% of the 153 recommendations from the LAWF have been (either wholly or partially) included in the reforms. Given the strength of consensus developed from such a diverse range of stakeholders in water management, due diligence should be given to examining the effects of unravelling the LAWF process and recommendations. An alternative approach is for the government to produce a pathway for implementation of the LAWF recommendations over time.
8. In particular, the recommendations from LAWF on co-governance and recognition of the rights and interests of Māori need to be better incorporated into the proposals. There is support amongst the Society's membership for a co-management framework for freshwater resource management in partnership with iwi/Māori. Co-management language is not reflected at all in the discussion document. Stronger signalling of co-management throughout any and all reform processes is needed.
9. The NZFSS supports the role of the Environment Court as a body that provides consistency of process and decision making in environmental matters. A narrowed referral process has the potential to lead to poorly informed decision making on complex environmental matters that need to be taken beyond a council resolution process. The role of the Environment Court in resolving complex environmental matters should not be reduced. The Society recognises the value of the Environment Court in making impartial determinations and the value of the wealth of case-law to inform careful and measured decision-making.
10. The use of or reference to nationally outstanding water bodies and wetlands requires further clarification. The NZFSS is concerned that specified lists of outstanding waterways will not meet ecological, community or iwi needs with respect to the maintenance and enhancement of freshwater health and quality

across *all* water bodies, including wetlands. Specification of outstanding waterways increases the risk of second-class or poor management of ‘non-outstanding’ waters.

11. The NZFSS provided considerable feedback on the proposed changes to the RMA through submission on the RM reforms discussion document. In that submission the Society expressed its concern for the ‘economy before environment’ tone of the discussion document and the changes proposed for section 6 and 7 of the Act. We find the tone is similar throughout the freshwater reform document, although we support many of its recommendations. The NZFSS is **opposed** to the introduction of an economic development priority into the RMA and into the water reforms generally. The purpose of the Act is to enable social, cultural and economic development *while* ensuring adverse effects of that development are avoided, remedied or mitigated. Long-term sustainability of the environment to secure values for future generations is not to be traded-off in favour of the economic concerns of the day. This does not meet the definition of sustainable management.

#### **Planning as a community**

12. Although the NZFSS generally **supports** the implementation of a collaborative planning process as recommended by the Land and Water Forum, the Society **opposes** the loss of appeal rights as part of the collaborative process. Consensus was not reached on this issue by LAWF. A number of other aspects to planning via the collaborative route have changed in the RM reform proposals, making the loss of appeal rights an even riskier proposition than that considered by LAWF.
13. The lack of a decision-making mandate for the collaborative body undermines the collaborative process for plan development. If Councils can over-turn the decision of the collaborative body and the ‘independent’ hearing panel decision there are considerable potential risks and costs for stakeholders in taking a collaborative pathway, particularly if appeals to the Environment Court are reduced. The requirement that collaborative decisions are binding has been identified as a key element for success of consensus-building processes in environmental management. In addition, all participants must be equally resourced. Collaborative bodies with binding decision-making powers and equitable resourcing will reduce the risks and effects of stakeholders opting out at a later stage to achieve alternate outcomes via more adversarial processes.

14. The NZFSS believe greater independence in decision-making is needed at the regional level before reduced appeal rights can be considered. If an 'independent' panel is to hear submissions on the collaboratively developed policy statement or plan, the Society believes this panel should be truly independent, not appointed by the Council nor containing Councillors. There could be an independent body to appoint commissioners to hearings panels (there is a large number of accredited independent commissioners listed on the MfE website). More independence in panels would also benefit the traditional Schedule 1 planning process.
15. Any regulation or guidance on collaborative decision-making should include requirements of Councils to meet basic standards for the collaborative stakeholder group to ensure that participants represent a sufficient diversity of interests (e.g., environmental, cultural and economic). The council should also be required to meet standards for resourcing the participants to ensure that all members are able to participate equally and fully in the consensus-building process.
16. The Land and Water Forum recommended that iwi have a role in assigning hearing commissioners. The NZFSS is concerned that this recommendation has not carried through into the government's proposals. This undermines the progress made by LAWF on the issue of co-governance. 'Advise' and 'recommend' are low on the ladder of co-governance language. Partnerships between scientists and iwi resource managers are already established in many catchments.

### **A National Objectives Framework**

17. The NZFSS broadly **supports** the concept of a national objectives framework. The Society believes the current state and trends in water quality and aquatic biodiversity require a focussed, national approach. However, national bottom lines should not be confused with objectives. Objectives are outcome focussed whereas bottom lines are minimum thresholds. The difference between these two needs to be clear in any policy or regulation. Minimum bottom lines for freshwater are not objectives to aspire to. The reform should re-emphasise the 'maintain or enhance' approach of the NPS Freshwater Management and should clearly state that no water body should be allowed to degrade or worsen.

18. The NZFSS asks that the government consider the relationship of proposed national objectives and minimum bottom lines to existing freshwater objectives and limits already in regional plans. The risk of a national objectives framework diluting regional objectives, limits or standards should be investigated and addressed prior to the drafting of RMA amendments or regulations. Guidance should be provided so that more stringent, locally-derived objectives and limits for freshwater are encouraged.
19. Stringent peer review of numeric objectives to be added to the national objectives framework for human health (secondary contact) and aquatic health are required. Transparency in how the numeric objectives were derived and the underlying assumptions and research basis will also require examination by the wider freshwater science community, noting that the same science community will be required to advise and participate in the development of limits and objectives at the regional level.
20. The NZFSS requests that the development of the numeric objectives to be used in the framework, how they were derived, their statistical meaning and how compliance will be determined, are documented in a technical reference report appended to the framework. This technical reference will need to be updated whenever numbers are added to the framework or changed.
21. Determining compliance with numeric objectives, bottom lines, targets and limits is a critical factor that requires careful and strategic analysis. What is the burden-of-proof to determine whether an objective is being met? Precautionary, even-handed or permissive stances can all be taken depending on the data statistic used to determine compliance with a numeric objective. The degree of attainment with these numeric values can be strongly influenced by that choice. For example, the current MoH Drinking-Water Standards contain compliance rules based on a precautionary approach, consistent with public-health protection—providing stricter compliance rules. In contrast, the current New Zealand Wastewater Monitoring Guidelines contain compliance rules based on a permissive approach—providing generous compliance rules. Elaborating this issue is an example of how the NZFSS can provide specialist assistance in reviewing the framework.
22. We note that the “river values example” provided on page 30 omits mention of contaminants such as heavy metals or organic contaminants – only nitrate, ammonia, sediments and *E. coli* are included. Management of other contaminants

(e.g., copper and zinc) is essential to achieve the majority of the values in the table, including the two mandatory values “Ecosystem health...” and “Human health for secondary contact”. Water quality guidelines for contaminants are available in ANZECC & ARMCANZ 2000 (currently under review) along with an adaptive management process to be applied if, upon initial evaluation, basic water quality guidelines are not met. While difficult, we propose that it is possible to relate ANZECC water quality guidelines (including those for livestock water supplies, and aquaculture) to the “band” system proposed in the National Objectives Framework and thus incorporate this existing expert knowledge into national water quality management. If required, the NZFSS can provide expert assistance to achieve this outcome also.

23. As the key professional society for freshwater science in New Zealand, the NZFSS is a critical stakeholder in any national objectives peer review process. The Society’s members are willing to undertake this review role collectively through workshop and formal submission processes. We request that the Ministers liaise directly with the Society’s executive to facilitate a timeframe for review to occur whilst also noting that many NZFSS members have already been involved in water reform processes (e.g., through the Land and Water Forum, the NEMaR process and the National Objectives Framework).
24. The NZFSS reserve any comment on changes to section 69 of the RMA until these changes can be seen and the mechanisms for their implementation clarified. Also requiring clarification is the relationship between the National Objectives Framework, bottom lines and section 107 of the RMA in relation to discharges.
25. The NZFSS believes no water body should be excluded from the national objectives framework or exempt from national bottom lines.

### **Managing within quantity and quality limits**

26. The NZFSS strongly supports the use of systems to account for all freshwater takes and contaminants and the collection of data to allow for such accounting. The accounting data should be available not only for central government but to the wider science community to better enable the development of public good science around the management of freshwater resources. For example, the outputs of tools

such as the CLUES<sup>2</sup> model of land use impacts on freshwater nutrient loads would be considerably more reliable with better availability of data relating to contaminant loads (both point source and diffuse). The uncertainties in such models could be greatly reduced, considerably enhancing their predictive powers and improving their usefulness in decision-making.

27. The NZFSS can also provide collective peer review of methods determined for regulation of accounting for sources of contaminants. Many of the Society's members have been involved at regional and national levels in developing contaminant load calculation methods and other such tools. There are significant advantages to peer review and potentially achieving consensus (within the freshwater science community) prior to drafting regulation.
28. The NZFSS **supports** the over-arching aim of managing for "ecosystem health", of which water quality and quantity are a part. Managing within limits also needs to address other important aspects of ecosystem health to provide for a holistic management approach that will deliver the intended ecological outcomes. Other aspects of ecosystem health that need to be addressed include habitat quality, ecological processes, connectivity, riparian management and pest species' impacts. The NZFSS would strongly support the inclusion of an approach that links activities which adversely affect aquatic ecosystem habitats (e.g. reclamation, piping, stock access, river control) to the over-arching aim of managing for ecosystem health.
29. Review of the Water Research Strategy: the NZFSS wishes to be involved and is able to independently review any strategy relating to future freshwater research. The NZFSS supports the strengthening of the freshwater quality management system through science, research, knowledge and information transfer needed for water quality management. Additionally, the Society notes that for this reform objective to be met freshwater *must* be included as one of the National Science Challenges. Funding of freshwater (and other environmental) sciences has declined in New Zealand over many years. There are capacity and successional issues relating to these funding declines which will need to be addressed by the government in order to meet the information needs to fully implement the reforms.

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<sup>2</sup> <http://www.niwa.co.nz/freshwater/our-services/clues-%E2%80%93-catchment-land-use-for-environmental-sustainability-model>

## Conclusion

30. The NZFSS recommends the water reform directorate liaise directly between central government and the NZFSS executive to investigate and facilitate opportunities for the Society's membership to provide a collective peer review role in the freshwater reform process, particularly the National Objectives Framework.
31. The NZFSS wishes to be engaged in any future process in respect of these reforms and be given the opportunity to be heard in any forum such as a select committee.



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