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[redacted]

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Submission on the Clean Water package 2017

I welcome the government's proposed policy package in relation to water quality. However, I have a number of concerns in respect of the proposed time frames, and the possibilities for unacceptable exemptions to the proposed standards arising from various loopholes and the classification of smaller waterways.

I live in Europe, and when I mention the government's efforts to increase the proportion of rivers that are swimmable to 90%, there is disbelief that *any* river in New Zealand might not be safe for swimming. New Zealand's public image has some way to fall to catch up with reality, and the consequences for the tourism and primary sectors, likely to be already under mounting pressure over the coming years in relation to climate change, could be rather severe. Fixing this problem is good, long-term insurance for the New Zealand economy, regardless of moral arguments and arguments for the sake of the environment itself, which I feel speak for themselves.

It is a shameful state of affairs that in such a short history, New Zealand has managed to do so much damage to its natural environment, and to have attained this level of impact with such a tiny population. Agriculture in particular is much more actively managed in other parts of the world where population densities two orders of magnitude greater over time-scales thousands of years longer than our own have inflicted environmental damage of, in many cases, only a similar order. This point is not lost on actual and potential consumers of New Zealand's exports, including tourism, who hail from these countries.

There is also a fundamental injustice in a state of affairs where a small minority of property owners can effectively monetise ongoing damage to a public asset, namely waterways. This a democratic issue.

Beginning therefore with my broader concerns with the proposed programme, I note that by 2040, quite a meaningful percentage of New Zealand's current population will no longer be around to paddle in these newly minted swimming holes, and indeed, anyone currently at the paddling stage will be having their own kids by the time the problem is resolved. Must we wait an entire generation to get back in the creek? I suggest that the target be moved forward. Even to 2035 would be a start, and I suggest that the 80% target likewise be moved to 2025. More money will doubtless be required, and it should be spent.

Concrete actions that I suggest might be useful in accelerating the programme economically include:

Specific targets for swimmability in each region of New Zealand, which are capable of enforcement against councils by the Environment Court. I make the related point that the Streamlined Planning Process which gives the Minister an effective override on Environment Court jurisdiction is, in my view, dangerous. This is nothing short of a power grab by the executive and should be roundly condemned. New Zealand may feel insulated from the Kafkaesque politics unfurling in other parts of the world, but worsening inequality and a lack of respect for the fundamentals of democracy, such as the separation of powers, is how these nightmares begin. A slower pace of planning is a price worth paying for the preservation of this separation.

Stream-side planting has been proven to slow the passage of nutrients into waterways, reduce erosion of stream banks, and provide shade, helping to lower water temperature and increase dissolved oxygen content, all important factors for aquatic health. Make it mandatory. Fencing is very much a half-baked solution, and I don't expect farmers to be happy when, ten years from now, the government, in order to achieve its own targets, has to ask them to move their freshly-installed fences backwards a few paces and add some flax bushes. This sort of thing is a recipe for tractors on parliament steps. Likewise, the method for determining which streams should be fenced (and planted) should be clearly articulated as part of the policy package. Certainty and clarity are important, particularly when obligating stakeholders to incur material cost.

Moving from my views regarding pace to those regarding coverage, I am concerned that the current proposals leave a number of areas open to potential loopholes. While there is no doubt an intention to fill in some of these gaps, I would like to see specific actions articulated in order to be sure that the gaps will indeed be plugged, and with something solid. For example:

Provision should be made to require councils to identify traditional or historic swimming sites and that these be included in the list of protected waterways, regardless of their size. While the argument that the need to make grade for major waterways will place implicit limits on pollution of tributaries has some force, nothing prevents this pollution from being concentrated in certain streams. Not all small waterways are of equal value to the community, and steps should be taken to identify those which are especially valued.

There should be a red line *E. coli* count that may never be breached. The current proposal would permit that the 10% of rivers not included in the standard may be completely written off. I am opposed to such an approach.

The Land & Water Forum's recommendations for ecological health should be included in the National Policy Statement, and likewise, the LWF's work on sediment, zinc and copper continue with a view to inclusion. *E. coli*, while important, is not the only indicator of stream health.

The National Policy Statement should clearly obligate councils to give effect to its provisions by notifying plan changes within 3 years.

Regional Councils should submit maps showing their proposed Freshwater Management Units to the Secretary for the Environment to ensure compliance with Ministry guidelines. Councils will be under considerable pressure in many cases, and will have an incentive to game their mapping to exclude the worst performing rivers in order to make grade on the others. This opportunity should be denied.

References to economic well-being should be clarified so that water quality, environmental and human health are given first priority.

Section 104 should be amended to ensure that limits are indeed limits.

Decisions regarding exceptions to limits should be at the exclusive discretion of central government, in accordance with Appendix 3.

Finally, I make some observations in defence of the "complex" and "confusing" system of measurement. While I agree some mental gymnastics are required to understand what is proposed, I am of the view that it is fit for purpose. One can express the requirement as being that 90% of rivers must be swimmable 95% of the time. Or alternatively, that 90% of rivers must be swimmable, except in flood conditions. This is good way of defining the requirement.

Further complexity was introduced by the proposal's discussion of what "swimmable" means, in context of which it has outlined the probability of contracting Campylobacter at various levels of contamination. At a river's 95th percentile *E. coli* count, i.e., probably when it is in flood to a reasonable extent, the chances of contracting Campylobacter are estimated at 1-in-20. Again, I find this means of quantifying and expressing the risk to be appropriate for the task.

However, this does raise some questions about the level of ambition of the programme. While I accept that an "excellent" river in full flood might legitimately be expected to deliver a 1-in-20 risk of Campylobacter, I am less persuaded that it is acceptable that a river might be considered "fair" if this 1-in-20 level is attained as much as 20% of the time, as the specification provides. To my mind, this stretches the definition of "fair" to breaking point. Would the Ministry of Health provide a food safety certificate to a restaurant if the chances of contracting Salmonella were calculated at 1-in-20 on 20% of kitchen inspections?

I reiterate my view that the statistical methods proposed are appropriate, and that the definition of an "excellent" river is probably appropriate. However, I think the words "good" and "fair" in my personal vocabulary are more aspirational than in the mouth of the government on this occasion. The positions taken are probably a good start, and the framework well designed. I think that provided my concerns about loopholes are addressed, the proposal does equate to an improvement in water quality more or less across the board. There is no denying however, that it could go further.

Insofar as this complexity makes the swimmer's decision difficult, I note that the LAWA website does offer a simple indicator of a river's swimmability. There are some weaknesses in this system which could be improved however. There is great variation between regions in the amount of data collected, meaning the indication given by LAWA in some regions is often out of date, and even when current, has a lower degree of certainty owing to fewer data points. I note that a computer model has been created to assist in the preparation of the maps used in the government's discussion document, and this model could be integrated with the LAWA website to provide modelling based on river flows and the interval since the last river flushing. This way, LAWA could provide swimmers with a computer generated prediction at a reasonable level of confidence even in a data deficient environment. Obviously, increasing the number of data points would also help, for which the Internet of Things has probably turned up at an auspicious moment.

I look forward to seeing cleaner rivers in the near future.

Erin Salmon