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INNOVATIVE, ADAPTIVE AND ENGAGING POLICY DEVELOPMENT FOR NUTRIENT MANAGEMENT WITHIN INTENSIVE FARMING SYSTEMS: WHERE POLICY, SCIENCE AND AGRICULTURE INTERSECT

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Abstract

The impacts of diffuse sources of contaminants generated from various activities, including farm systems, are managed via regional planning instruments. The processes to make, or even just to change those planning instruments can be slow and unwieldy, begging the question, how can plan making and policy development be more agile and adaptive? Horizons applied two innovative approaches within the development and submissions phases of Plan Change 2 – *Existing Intensive Farming Land Uses*. Firstly, an innovative scenario based workshop was held to test example consents against a set of draft nutrient management policies. This provided an insight into the practicability and potential impact of the draft provisions. And secondly, a 'friend of the submitter' service, was available to potential submitters wanting independent support to engage in the plan change process.

Background

The Horizons One Plan was an innovative regional planning instrument for nutrient management and regulation at the time it was notified in 2007. It was a first step toward the regulation of diffuse sources of contaminants in the Horizons Region, through the application of a natural capital approach to achieve reductions in nitrogen leaching (as proxied through Land Use Capability (LUC) class and production potential).

Horizons Regional Council officers are currently working through a plan change (*Proposed Plan Change 2 (PPC2*)) to the One Plan which proposes changes to policies and rules within the nutrient management framework. The purpose of these changes is to update elements of the framework with the latest science and modelling approaches, as well as to improve the workability of the Plan in a practical sense. It is also desired that, where possible, policy can be developed in a manner that is inclusive and collaborative to socialise and 'test' how implementable the draft provisions would be.

Scenario based workshop

The purpose of this initiative was to test proposed policy and rule changes within the One Plan framework for managing nutrient losses from intensive farming land use activities. In this case

we tested a proposed "discretionary activity" pathway which would apply to existing intensive farming land use activities exceeding a set of nitrogen loss limits.

The scenario testing enabled Horizons officers to trial the draft provisions with experts and stakeholders and socialise the findings in a workshop format. Learnings from the workshop would further inform our plan change work.

Three (anonymised) scenario properties were chosen for testing, using inputs drawn from real farm data:

- Two dairy farms in the Upper Manawatū, that are being used as part of Dairy NZs 'Partner Farms' project
- A horticulture operation located in the Waikawa that previously held a restricted discretionary land use consent, and which no longer operates

None of the properties considered for testing were able to meet the revised Table 14.2 cumulative nitrogen leaching maximums and therefore were eligible to be tested through the draft "discretionary pathway" provisions.

Fundamentally we wanted to learn:

- Would the revised draft policies provide comprehensive and robust criteria to guide decision making and condition setting in a manner consistent with the objectives of the One Plan?
- How accurately could the effects of an intensive farming land use activity be gauged in the context of the wider water management sub-zone?
- What information would be required for an evidence based assessment of environmental effects as part of an application for a discretionary intensive farming land use consent?

Key findings:

- Would the proposed policy guidance in Policy 14-6 support robust assessment and decision making of intensive land use farming activities?
  Somewhat. Further consideration of the wording is needed. Some participants felt the policies needed to be more directive and/or descriptive to allow for clearer decision making.

- Are the Policy considerations appropriately balanced?
  When read in isolation, there appeared to be weighting towards economic considerations.

- Can a reduction of N losses translate to an improvement in water quality despite still exceeding the table limits?
  The scientific consensus was yes on principle (i.e. a reduction of N loss is positive). However, there were questions about how to quantify "how much is enough". N surplus and N efficiency were suggested as matters to be considered.

- What information would be required for an evidence based AEE?
  There was a number of suggestions, including: surface water and ground water monitoring/reports, cultural assessment information, current and projected nutrient use/loss, economic analysis/modelling, GMP's and use of technology.

Stakeholder involvement

Participants in the scenaro testing exercise comprised of both internal Horizons staff from rural advice and consenting teams, in addition to external consultants and experts from planning, farm consultancy and scientific disciplines. Individuals were allocated to one of six teams – three teams were tasked with drafting a "test" application for three farm scenarios – two dairy and one commercial vegetable operation; a further three teams were tasked with processing the test applications.

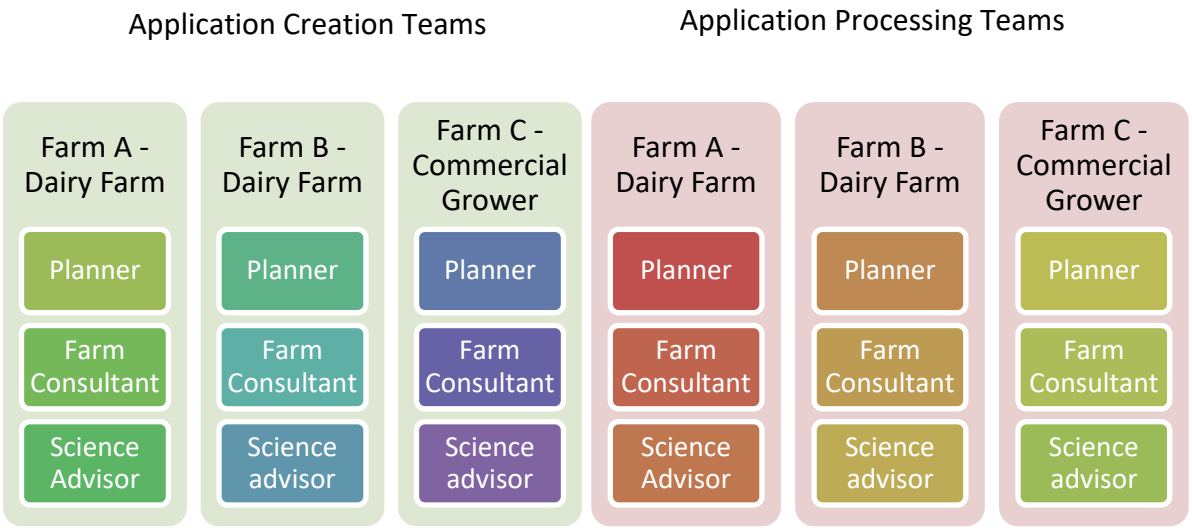

Table 1 Scenario team structure

Each team had about four days to create the test application for their respective scenario, and then a further four days to process the application. Each processing team was given access to an expert science advisor, as well as a separate science panel, simulating 'peer review' of specific questions. Most teams made use of at least one science expert. The applications and consent decision reports were all drafted and submitted to the scenario coordinator prior to the plenary workshop on the 15th of May 2019.

Iwi and stakeholders were invited to be part of the process as observers at the plenary workshop held to discuss findings and share team experiences. All observers were provided with a code of conduct setting out their role prior to attending the workshop. Nine observers attended representing a cross section of organisations including Iwi, ENGOs, industry, and TLAs. Observers were invited to provide feedback after the workshop, as a further input into the shaping of draft plan provisions.

Workshop overview, learnings and outcomes

General:

- Each scenario was considered as suitable to be assessed under a discretionary consent pathway.
- Each application team highlighted the difficulties in lack of information around the science (ground and surface water), and well as cumulative effects.
- The lack of information would likely need to be addressed through an RMA section 88 request.

- The relationship between the policies and other national instruments (for example NES for drinking water) would benefit from being clarified.
- Each of the teams were unable to define where the "appropriate limit" might be, and how much over the table is "too much" in deciding whether to grant a consent.

Dairy farm examples:

The application teams found it difficult to create an assessment of environmental effects (AEE) in the time available, but also noted that even with more time, they would not have had enough information to produce a full AEE. The processing teams felt both farms could qualify for the exceptions provide for in the policy, but had concerns as to how the applications would pass the RMA statutory tests respectively in relation to completeness of application, determination of effects on the environment, and whether the objectives and policies of the One Plan would be met. The teams noted that the NES Drinking Water and NPS Freshwater Management, were not addressed in the applications and that furthermore, the draft criteria shifted the focus unhelpfully away from surface water quality policies.

How to use mitigations outside of Overseer was discussed, with one team taking a precautionary approach when using plantain at the very bottom of its reduction range. Both teams assumed that public notification of the applications could not be ruled out, and noted the statutory acknowledgement over the area in which both the farms were located. It was felt that there were some key elements missing from the policies in respect of an identifiable nitrogen reduction trajectory.

Both of the dairy farm applications attempted to use some economic data to highlight how far the farms could reduce their nitrogen leaching, but this was not woven inextricably enough into the environmental effects, and was as a result, a shortfall in the policy detail. Questions were asked about whether an economist would have been needed to help complete the application from a farm tipping point/viability view. Though participants had access to some financial information, it was outside of their areas of expertise to be able to comment on this in detail.

Results from the dairy scenarios:

The higher leaching farm could not gain consent through the pathway, and was recommended as a decline. The lower leaching farm (2kg over at year 20) could potentially be granted.

Horticulture Property:

The team creating the horticulture application saw this as an expensive process for a grower to go through. Growers currently have no certainty around what they need to do, with the only quantifiable being the Table 14.2 nitrogen loss limits, against which there are no means to measure grower performance. The application therefore included the implementation of a monitoring regime, as horticulture is not provided for adequately in the Overseer model to measure actual losses. The application creation team also suggested a shorter (10 year) term would be more suitable to apply for. Based on the team's industry knowledge, the mitigations included in the application pushed the grower as far as they could go. The team assumed non-notification, based on the operation being an existing land use and reducing effects from its current state.

The horticulture processing team thought that an erosion sediment control plan, and a nutrient budget would need to be included with the application, as calculation of soil loss and application of techniques and technology could show demonstrable mitigations. On the face of

it, the application would not meet the RMA section 88 test for completeness of information. Nor would it pass the section 95 notification test as there was insufficient information to demonstrate that the effects of the activity on the environment would be less than minor.

It was noted that the objectives and policies were predominantly focused on the extent of non-compliance with the table - the application could not demonstrate this. The team felt that the application would not meet the draft criteria to be classed as an exception. The processing team assessed that it would be necessary for the application to be publicly notified. The key concern for the processing team was that there was no base nitrogen level or reduction targets that clearly set out the trajectory for the applicant's contribution to a reduction in nitrogen (and any relationship with water quality improvement). It was suggested that N-surplus calculations would be a useful starting point. The suggested mitigations were thought to be an inadequate basis on which to grant consent.

Result from the Horticulture Scenario:

The application would be recommended to be rejected pursuant to section 88 given the lack of nutrient management information.

The Friend of the Submitter

During the submissions period of Plan Change 2, Horizons appointed an independent 'Friend of the Submitter' to assist stakeholders in understanding the submission process, and in writing a clear and comprehensive submission. It was anticipated this service would be especially helpful to individual farmers and members of the communities. This was a new initiative for Council, with the intent of breaking down barriers to making a submission, and making the process more accessible.

The friend of the submitter service was completely confidential, however we know that a number of stakeholders and members of the community did take the opportunity to use the service. There were a total of 85 submissions to PPC2 and the quality of those submissions was very good, resulting in an efficient process for accepting and evaluation of submissions.

Conclusion

The scenario testing and workshop enabled Horizons to trial draft nutrient management provisions in a "laboratory" setting, and provided a platform for engagement and exchange between council officers, experts and stakeholders. Farm scenarios, based on real farm inputs and data were developed so that participants could interrogate as authentic consent information as possible. Notes and feedback provided to us by participants, as well as by observers who attended the plenary workshop, contributed to the development of a more finely tuned set of provisions, which eventually became the notified set of provisions for PPC2. In particular, the nexus of expertise between planners, agricultural advisors and water quality experts was found to be pivotal to the consent assessment process.

Approaches like the practical workshop can be risky. However, the benefits, in this case the level of engagement attained, and the added robustness gained in respect to the refinement of policy provisions, can make it a risk well worth taking. We found the scenario workshop and friend of the submitter initiatives to be tremendously positive in terms of the learnings, insights and level of engagement achieved and we are looking forward to a higher level of collaboration and engagement as we move forward into our catchment reviews.