

OVERSEER® GOVERNANCE 2014 AND BEYOND

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OVERSEER® Nutrient Budgets is a strategic management tool that supports farmers and growers to improve performance through better use of nutrients on farm and to manage potential environmental impacts for a brighter future for New Zealand agriculture.

In late 2013, as a response to increasing interest in OVERSEER, the owner organisations (the Ministry for Primary Industries, the Fertiliser Association of New Zealand and AgResearch Limited) installed a General Manager to manage the OVERSEER development programme and engage directly with users and interested parties.

Managing OVERSEER well is about ensuring we listen our users and our decisions are transparent and fully informed. In the last year, three advisory groups have been established to support this approach. The advisory groups include a strategic-level stakeholder group, a customer-service level expert user group and an independent scientist group advising on quality assurance.

The Stakeholder Advisory Group

The Stakeholder Advisory Group has been established to ensure the OVERSEER strategic plan and development agenda are fully-informed by our growing stakeholder base. The Group comprises farmers and growers, other software developers, science organisations, a range of agricultural industry bodies and regional and central government.

The first meeting of this group, in November 2014, was a workshop to capture what members of the Stakeholder Advisory Group identified as priorities for the development of OVERSEER. The workshop used the Validating Strategies' Project-Result-Use-Benefit (PRUB) model of identifying existing and future uses of OVERSEER, the benefits they can produce, the results needed to achieve those benefits and finally on the required projects to deliver those results.

The workshop identified some high-level priorities for investigation. What it also clarified was that there is a long list of desired development opportunities for OVERSEER which are difficult to prioritise given there is limited information on the additional value they bring in terms of benefits to the users. Quantifying the benefits to support prioritisation is seen as a key step that will be needed to ensure prioritisation is evidence based.

The results of this first workshop are still being compiled, however, a number of themes were repeatedly raised at the workshop which provide a high-level summary.

Accuracy and precision – There is a need to bring all stakeholders to the same state of awareness of OVERSEER’s current and realistically achievable levels of accuracy and precision including how to interpret the long-term average estimates.

Interoperability – A desire for OVERSEER to ‘talk’ to other tools and datasets, improving ease of use and reducing potential for errors.

Data Entry – There need to simplifying the OVERSEER user interface to reduce time and cost in generating a nutrient budget while continuing to maintain the flexibility to better model complex and highly variable farm systems.

Validation benchmarking and best practice – Greater confidence in OVERSEER outputs was desired, particularly by end-users. This was articulated as validation of OVERSEER itself, benchmarking of the impact of nutrient management decisions relative to other equivalent systems, and the establishment of best-practice guidelines to guide land managers in their responses to OVERSEER outputs.

The User Advisory Group

The Users Advisory Group are at the coal-face working with Farmers and Regional Councils to support nutrient management. This group work with OVERSEER regularly and have a good knowledge of the range of farm systems in New Zealand and how OVERSEER works across that range. The focus for advice from this group is on improvements to OVERSEER and our customer services to ensure they are able to use OVERSEER effectively to support good nutrient management on farm.

The first User Advisory Group report to the OVERSEER Owners supports ongoing use of OVERSEER as an effective nutrient budgeting tool, and identifies ten recommendations:

1. The Government needs to resource OVERSEER adequately.
2. Other funding opportunities should be sourced, potentially including user charges.
3. Eliminate bugs and modelling errors as a priority.
4. Increase the speed of delivery.
5. Provide a faster response to queries and problems.
6. Support users by providing information on bug fixes and changes that better describe the impacts on the model.
7. Provide more informative error messages and in-application help.
8. Improve the functionality of the existing farming systems and bring in validated mitigation options as soon as possible.
9. Calibrate the model for the wider range of soils and climate zones being applied.
10. Validate the model across a wider range of conditions.

The group also identified seven priorities for improving user support services.

This advice has fed back into the ongoing maintenance programme, including making changes to the user interface in the current upgrade. Several projects have been identified that the Group will help to scope up for prioritising within the key development themes for the coming years.

The Technical Advisory Group

The Technical Advisory Group comprises a group of scientists and modellers with experience in farm systems and knowledge of OVERSEER. This group will advise the owners on quality aspects of the OVERSEER engine to support development. Building confidence in OVERSEER nutrient budget reports is increasingly important as they are used in regulatory processes and an independent technical group will ensure good process is followed.

To date, this group has discussed the form and content of a proposed sub-model peer review programme and a sensitivity analysis of the model outputs. Initial priorities identified by the group include a review of the Animal Model and prioritising a sensitivity analysis of the inputs that impact on nitrate leaching.

The advice we have received from these groups gives us a better sense of the road map for OVERSEER and we are now working this into the ongoing development plan.