

Measuring the use of science for collaborative watershed management in New Zealand's Canterbury Region

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Abstract:

The use and diversity of scientific information are crucial in successful watershed planning, as they enable informed and inclusive decision-making. This can indicate how well-informed and inclusive watershed management decisions are in the Canterbury region of New Zealand. Effective watershed planning is essential for maintaining water quality, ensuring sustainable water use, and protecting ecosystem health. Prior research indicates that scientific information is scarcely discussed in executive committee meetings due to various factors. This lack of scientific information can hinder comprehensive understanding and integration of diverse perspectives, leading to less effective management strategies. Here we sought to quantify trends in scientific and stakeholder inclusion by conducting coded analysis on 36 meeting documents from three zone committees over two years. Results showed that only 15% of the scientific content discussed was social science, and there was a decline in the proportion of meeting items containing scientific information over time. However, audience interaction increased across all committees. While stakeholder support was evident in 36% of presentations, only 6.5% included indigenous knowledge. The meeting processes were similar for all committees, with initial meetings featuring more scientific information, which shifted to discussions in later meetings. The lack of social science and indigenous knowledge highlights that there is room for greater inclusion of diverse types of knowledge. Addressing these gaps can improve the inclusivity and effectiveness of watershed management by incorporating a wider range of insights and expertise, ultimately improving decision-making processes and outcomes.