

# How meeting time is spent in New Zealand collaborative watershed management groups over time

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## Introduction and Prior Research

Science is an important part of collaborative research groups, but it is not always brought into decision-making. “Grey literature”, for example, in the form of government reports, is an important source of information that is not necessarily peer-reviewed but is useful as a supplement or substitute for scientific reports. Collaborative groups may bring “grey literature” into discussion because it is useful for informing budget and eligibility for funding. Our study uses document analysis of meeting minutes from three different watershed groups in New Zealand to examine how meeting time allocation has changed over the course of the study period. According to a 2018 study, ecosystem management plans often include “grey literature” including scientific and technical reports, but don’t include peer-reviewed scientific information (Koontz and Thomas, 2018). In a study of the Everglades, the investigators found that the topics of collaborative group meetings changed over time (Heikkila and Gerlak, 2016).

Our study focuses on two research questions:

1. How does the amount of science presentations that mention budget change over time across three zone committees?
2. How does the amount of “grey literature”(government reports) brought into presentations change over time across three zone committees?

## Methods

Document analysis takes preexisting documents and applies codes based on rules set by a codebook created to support the goals of a study (Weber, 1990). In this study, meeting minutes from collaborative watershed groups, called zone committees, were analyzed and coded. Each researcher individually read through meeting minute documents and corresponding agendas looking for blocks of text that indicated a presentation had occurred in the meeting. The timeframe for meeting documents ranged from 2021-2023. Researchers then met in pairs to compare codes and reconcile intercoder disagreements to 100% agreement. Each presentation was coded using 24 yes/no questions. Applicable questions include does this presentation bring in scientific information? Does the presentation talk about budgets or funding? Was information sourced from the government or another organization? Across three zone committees (Banks Peninsula, Lower Waitaki, and Selwyn-Waihora), 70 meetings were coded for a total of 221 presentations for the time periods 2010-2013 and 2021-2023.

## Results

- The number of presentations which included reports from government bodies or other organizations remained relatively stable in the Lower Waitaki and Banks Peninsula zones over the observed time period.
- The number of presentations which included reports from government bodies or other organizations in the Selwyn-Waihora zone increased from 3 per 45 (6.7%) presentations in the period 2010-2012 to 31 per 33 (93.9%) presentations in the period 2021-2023.
- Presentations that include science and are related to budget increased from 3 to 15 presentations in the Selwyn-Waihora zone committee. (Figure 1).
- Presentations that include science and are related to budget increased from 2 to 14 in the Lower Waitaki zone committee (Figure 1).
- Presentations that include science and are related to budget increased from 2 to 4 in the Banks Peninsula zone committee.
- Figure 1 shows a clear increase in budget presentations that use science when comparing 2010-2013 meetings to 2021-2023 meetings. This pattern is seen across all three zones.
- Banks Peninsula had a noticeably lower change compared to the other two zone committees.

## Discussion

- Over the observed time periods, we found that scientific presentations that included budget/funding increased significantly. This could indicate that more funding was available in the years 2021-2023 than in the years 2010-2013. It could also indicate that the budget/funding process had become more streamlined over this time period. The Canterbury Water Management Strategy, which provides funding for the zone committees, was initially launched in 2011 (Eppel, 2015).
- As seen in figure 1, the Banks Peninsula zone committee experienced only a slight increase in science presentations that are related to budget. This zone could have been discussing other topics besides budget compared to the other zones, or their budget presentations brought in less scientific information.
- Over the observed time period there was a significant increase the number of government reports, or “grey literature”, used in presentations in the Selwyn-Waihora zone. In contrast, the use of government reports in the Banks Peninsula and Lower Waitaki zones remained relatively consistent.
- Since there is an increase in budget conversations, this aligns with prior research that the topics discussed in collaborative groups change over time.
- Further research is needed to see how these changes evolve in groups across wider spans of time and in different locations.

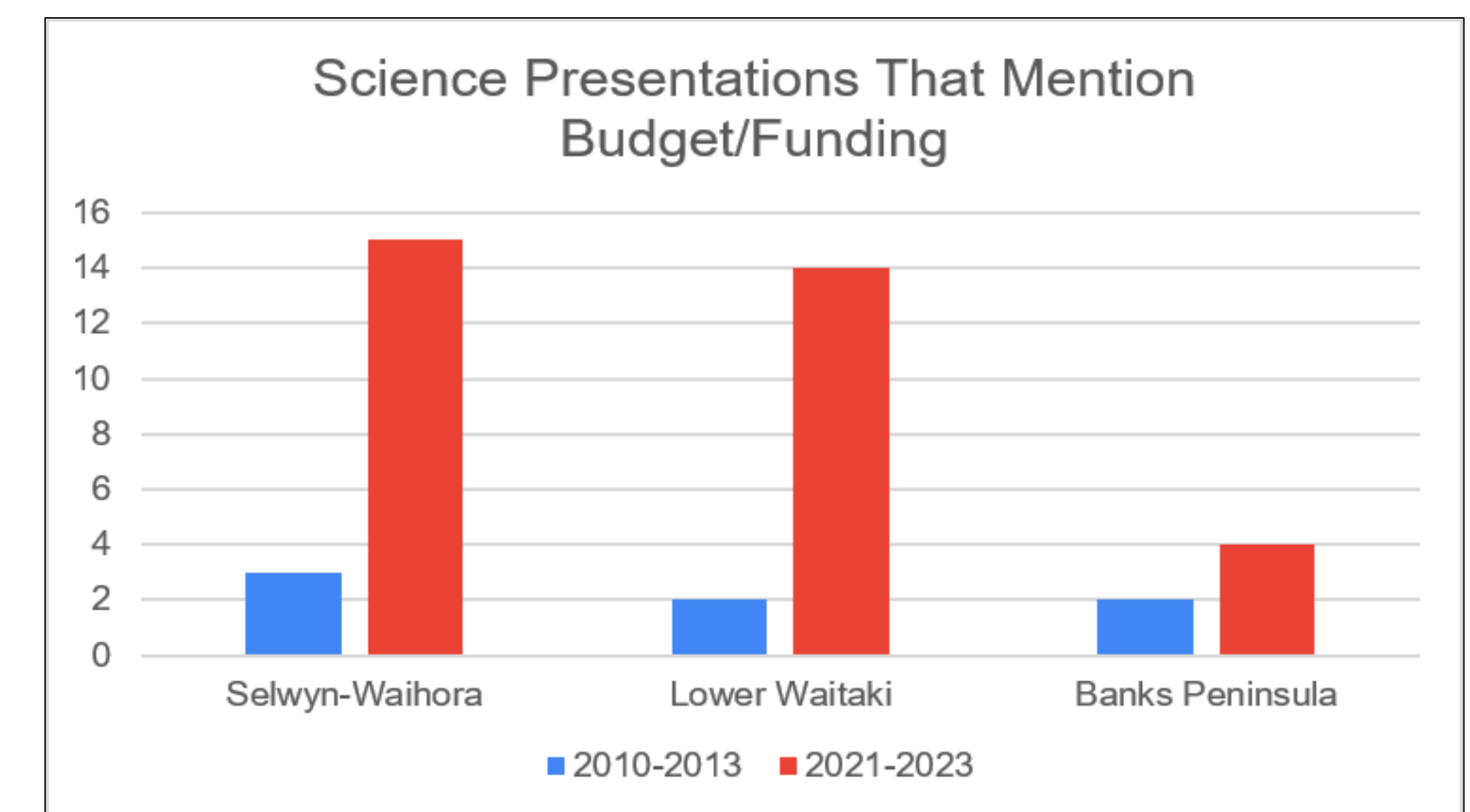


Figure 1: Bar graph showing instances of science presentations that mention budget/funding as defined by the codebook. For each zone committee, two separate time periods of meetings are shown.

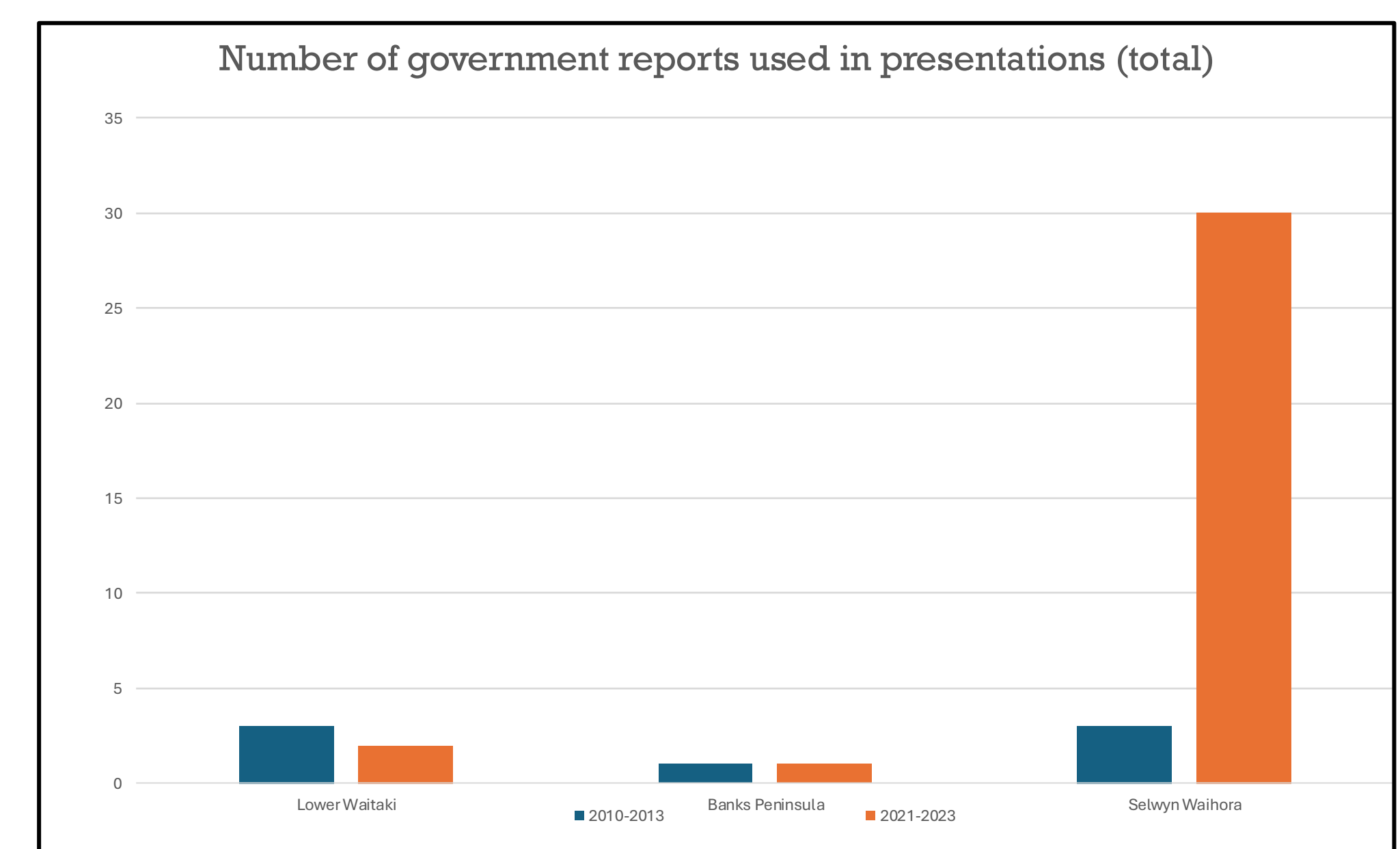


Figure 2: Bar graph showing the total number of government reports used in zone committee presentations



Image of the Lower Waitaki River in New Zealand

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