

Summary

Water forecasting information is needed by a range of decision makers, particularly forecasts or predictions of river flows which allow decisions to be made in advance of a hydrological event (e.g., a flood or drought).

This feedback document is a summary of the findings from a series of interviews conducted for a water forecasting project at NIWA. The interviews were undertaken with eight selected stakeholders and decision makers designed to inform the current and future direction of NIWA's river flow forecasting research and tools.

Eight participants involved in this study were from five different organisations, including regional and central government, the farming sector, the energy industry and the recreational sector. All participants had a considerable amount of experience in their area of expertise and interest (between 12-30 years).

Key findings

Some of the key considerations highlighted in the interviews for NIWA to reflect on within our current research activities and tool development include:

- Re-alignment of flood forecasting capabilities with stakeholder decision needs by addressing in-house scenario testing flexibility or offering impact forecast information with longer lead times;
- Provision of forecast error quantification for downstream modelling;
- Reflection of more suitable Climate Outlook information to support decision-making needs;
- Consideration of strategy to accommodate sectors of users who value human interpretation of model outputs (e.g., consultation with forecasters); and
- Development of trust-building strategies for new forecasting modelling tool technology with stakeholders; a philosophy of mutual improvement could significantly help address potential concerns of capture from local authorities for NIWA's NZ river flow forecast research projects.

New opportunities to address stakeholder challenges and support their decision needs emerged from the interviews. Science prospects comprise the following water forecasting areas:

- Water allocation in the weeks to months river flow forecasting timeframe;
- Flood forecasting for communicating awareness and impact, and flood forecasting for water harvesting;
- Water forecasting for tourism, water sports and recreational users; and
- Water quality forecasting.

We would like to thank the eight participants who willingly donated their time for this research project.

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