


Role of modelling and monitoring hub in fostering interagency collaboration

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Abstract: More than 150 different government organisations carry out water modelling and/or monitoring in New South Wales. Water modelling performed across so many state and local NSW government organisations has the potential to create institutional and technical silos resulting in duplication of efforts, diminished innovation and lack of communication and information sharing. This challenge is compounded by the current short supply of specialist modelling resources impacting delivery efficiency. However, the diversity and linked capabilities of these organisations also has the potential to cross fertilise thinking, expand the effectiveness of available resources and knowledge, and develop innovative solutions to water challenges. This paper presents the experiences of a NSW government knowledge hub aimed at improving water modelling and monitoring collaboration and knowledge sharing. It is hoped that this paper inspires other jurisdictions and large organisations with these types of organisational challenges.

The NSW Modelling and Monitoring Hub (MaMH) was launched in September 2018 following the decision of the NSW Parliamentary Review Committee (Committee on Expenditure Review) to develop a knowledge hub that would leverage existing modelling and monitoring knowledge and facilitate knowledge sharing between selected government agencies and state-owned corporations. The MaMH is endorsed by the Department of Planning and Environment and led by a working group with agreed terms of reference and information sharing principles. It develops, captures, and disseminates specialist water modelling and monitoring information supporting effective water, catchment and coastal management in NSW, through the delivery of agreed special projects, forums and other activities.

The MaMH team has successfully shared knowledge and developed shared resources through several collaborative projects including a state-wide survey of water modelling activities; an assessment of water data sharing systems; development of a federated and spatially based water information discovery portal with web application for NSW government users; and establishment of technical communities of practice in both water modelling and monitoring. Project reports play an important role to share the lessons learnt among the modelling community, while annual forums are vital to involve the broader NSW water industry in a range of relevant topics, including recent advances and critical issues in water modelling, engaging Aboriginal voices in the water industry and developing future collaboration projects. The MaMH's work supports NSW strategic priorities by making models and data openly accessible, and promoting collaboration to harness new research, innovation and technology. Strategic interagency links have been strengthened with the Queensland Water Modelling Network, NSW Data Champions and the NSW Chief Scientist and Engineer's office.

The modelling technical community of practice has initially focused on three streams of practice: hydrology, hydraulics and groundwater. The monitoring community of practice has focused on effective methods and lessons when implementing new technologies. The communities of practice provide opportunities for learning from each other, developing and maintaining a knowledge base, identifying knowledge and resource gaps, identifying and solving shared issues, building new and long-lasting networks, fostering innovation for common goals and sharing different perspectives. The communities of practice also enable extended engagement across modelling communities from other organisations involved in the water sector.

The MaMH's experiences provide an opportunity to gain insights into the importance of trust across the teams which is enhanced by working together, sharing experiences and enabling collaboration frameworks. The success of this initiative relies on member organisations' engagement and contributions, including modest funding. Executive-level support, agreed operational principles, linkages to strategic priorities and communication tools provide the enabling framework for the working group and the MaMH's activities. Lastly, a key lesson learnt is that collaboration is best achieved when the MaMH motto is followed: *Think big, start small and act fast.*

Keywords: Water modelling, community of practice, collaboration, knowledge sharing