

The waves of change in water resource management & the rising challenge for water professionals: calling time for a Water Resource Classification & Reporting Code (WRCRC)

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Extended Abstract

The role & setting of water professionals is changing in water resource management. Multiple factors are driving the change – changing stakeholders, regulatory environments, markets, cost pressures, climate & water uses, technology, society & so on. Demand for water resources has grown, bringing greater competition for water, expanding water markets & potential for challenges, disputes & impact^[1]. Carried on the tide of these changes, water professionals are now assessing more complex systems, with higher consequences & wider audiences than in the past, as guidance in legal proceedings, policy development, impact assessments & investments. Given the gravity of the outcomes, there is an increased expectation of leading practice, consistency, disclosure, transparency & integrity on & between the work of water professionals with effective communication of findings & confidence as qualification of risk via uncertainty. The intensifying environment is a wave of change, & it is essential that water professionals recognise & adapt to the changing conditions to deliver both reputation & service value – for now & for the future.

In searching strategy options for response, a review of approaches of other industries who have faced similar challenges previously for professional outputs revealed a shared style of action: development & implementation an industry-level tool or code which enables & guides classification & reporting in the public space. Both the mining & petroleum industry have reporting codes: in Australia, the JORC Code^[2] was introduced in the 1980's as a Code for Reporting of Exploration results, Mineral resources & Ore reserves following a series of events breaching market & consumer confidence, now with versions in place internationally; & similarly, the petroleum industry began introducing standards in the 1930's, with an international Petroleum Resources Management System achieved in 1997^[3]. More broadly, the International Standards Organisation (ISO) develops & publishes an array of international standards, such as ISO14000: Environmental Management^[4]. Compliance to these standards or codes are strictly required for public communication & establish benchmark methods of industry communications, development strategies & measurement.

As an innovative, adapted approach, a Water Resources Classification & Reporting Code^[5] (WRCRC) was developed as could be applied to water professionals as an example. The draft Code outlines guiding principles of transparency, accountability, discernibility, competency, adaptability & accessibility for reporting & a two-component classification system, allocating a separation in technical definition & knowledge of 'water sources' from the applied use & management of 'water resources' or water management units (shown in Figure 1). Conversion from a water source into a resource requires consideration of modifying factors, such as environment, social or economic factors, or measures of resilience. Multiple levels of classification allow description of varying levels of confidence, certainty (uncertainty) or management capacity, increasing down the matrix with advancement, with limitations of what can be converted to/from sources or resources to align technical knowledge & management capacity. A number of classification examples are developed, along with a WRCRC style report as demonstration & discussion.

As water management decisions become more complex, critical & wide reaching, it is fundamental the industry recognise new tools are required to maintain integrity & public trust for the present & future. History of comparable industries shows classification & reporting codes as powerful instruments able to deliver accountability, technical & risk veracity in the public arena, & the development & implementation of a code for the water industry is a major opportunity for reform & leadership to take the industry forward.

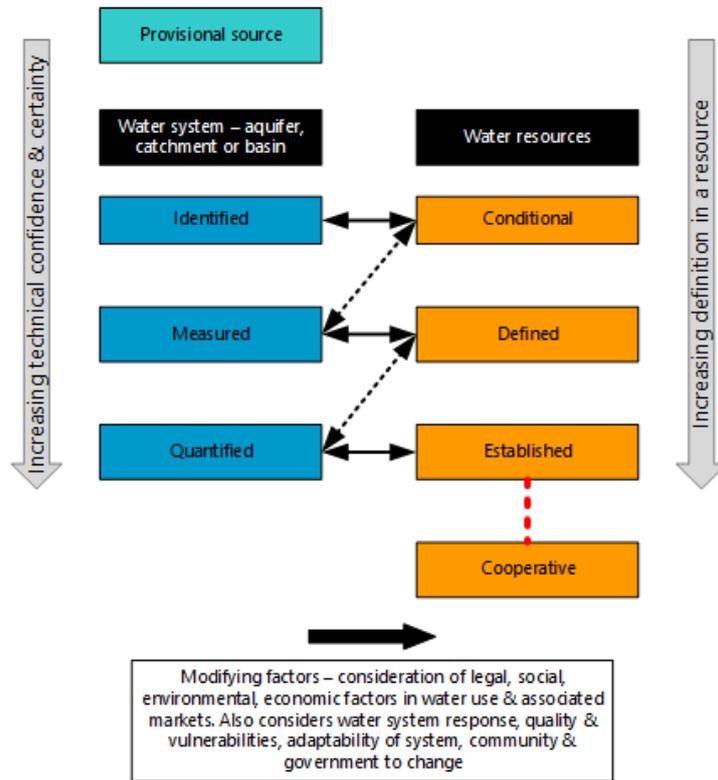


Figure 1: A starting framework for a WRCRC (adapted from Kennedy, 2008)^[5]

Key words: Water resources, water professions, industry, reporting, classification, futures, foresight

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