



FACT SHEET

What will influence achievement of the 2030 Agenda on Sustainable Development?

Developed by a team from the Global Change Institute, The University of Queensland led by Dr. Nina Hall

A. An Australian study

The 17 Sustainable Development Goals (SDGs) and their associated targets form a comprehensive and internationally agreed agenda for development. Yet, their presentation invites treatment goal by goal—to the neglect of the mutual influences among them. Understanding the direct and indirect influences on the SDGs can impact their attainment. To determine the various influences and thus determine a starting point for action and investment, a research group in Australia applied a transdisciplinary systems thinking approach to explore the relationships among all 17 SDGs and specifically between the eight targets of SDG 6 (on water and sanitation)¹. Although they looked at the approach in the Australian context, their research is relevant to other national contexts.

B. How to manage these interactions

A transdisciplinary systems approach was adopted to understand the relationships among the 17 SDGs and all the targets of SDG 6 to prioritize the SDG targets for action and investment and to determine the appropriate administrative agencies within the government. A simplified Bayesian network approach was then used to produce a diagram that displays interlinkages between “nodes”, also known as “directed acyclic graphs”². During two workshops, the research group created visual representations that clarified the cause-and-effect relationships among the goals and targets. They then ascribed the strength of influence between the goals and targets using expert judgement to develop estimates, known as “expert elicitation”³. The final stage, a simplified form of policy analysis, considered the relevant Australian Government portfolios that could best manage the SDG activities, both within Australia and overseas.⁴

1 Hall, N., and others (2016). Achieving the UN Sustainable Development Goals for Water and Beyond. Brisbane, Australia: Global Change Institute, The University of Queensland. Available from www.gci.uq.edu.au/achieving-un-sustainable-development-goals-water-and-beyond.

2 J. Cain: Planning Improvements in Natural Resources Management: Guidelines for Using Bayesian Networks to Support the Planning and Management of Development Programmes in the Water Sector and Beyond (Wallingford, UK, Centre for Ecology and Hydrology, 2001); S. Nadkarni, and P. Shenoy: A causal mapping approach to constructing Bayesian networks. *Decision Support Systems*, vol. 38, No. 2 (2004), pp. 259–281.

3 P. Kuhert, T. Martin, and S. Griffiths: A guide to eliciting and using expert knowledge in Bayesian ecological models. *Ecology Letters*, vol. 13 (2010), pp. 900–914.

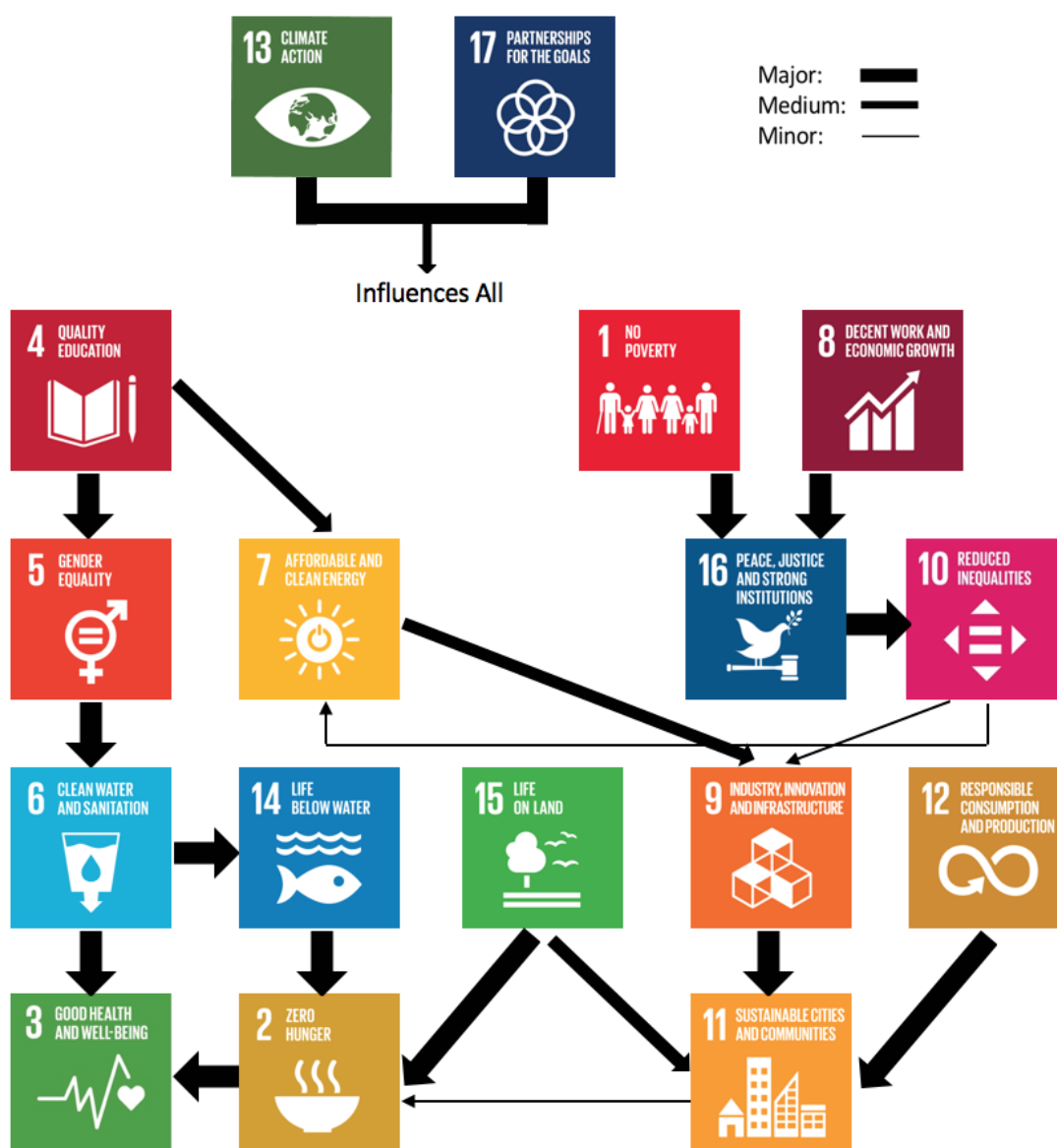
4 R. Wilson: Policy analysis as policy advice. In *The Oxford Book of Public Policy*, M. Moran, M. Rein, and R. Goodin, eds (Oxford, UK, Oxford University Press, 2006).



• Influences among the 17 SDGs

The results show that the goals for global partnerships (SDG 17) and climate action (SDG 13) have major and overarching influences. These are considered as “enabling goals” that can generally influence all the other goals through a range of complex links. SDG 17 can influence the priorities of aid spending—thus facilitating attainment of the other goals. After much debate during the workshops, the goal for health and well-being (SDG 3) was agreed as also an influencer on all the other goals. Its role reflects the interdependency of health outcomes on the range of physical and social aspects, including (most directly) from clean water and adequate sanitation and the reduction of hunger and malnutrition incidence.

Interlinkages and strength of influences (as indicated by line thickness) among the 17 SDGs, in the Australian context

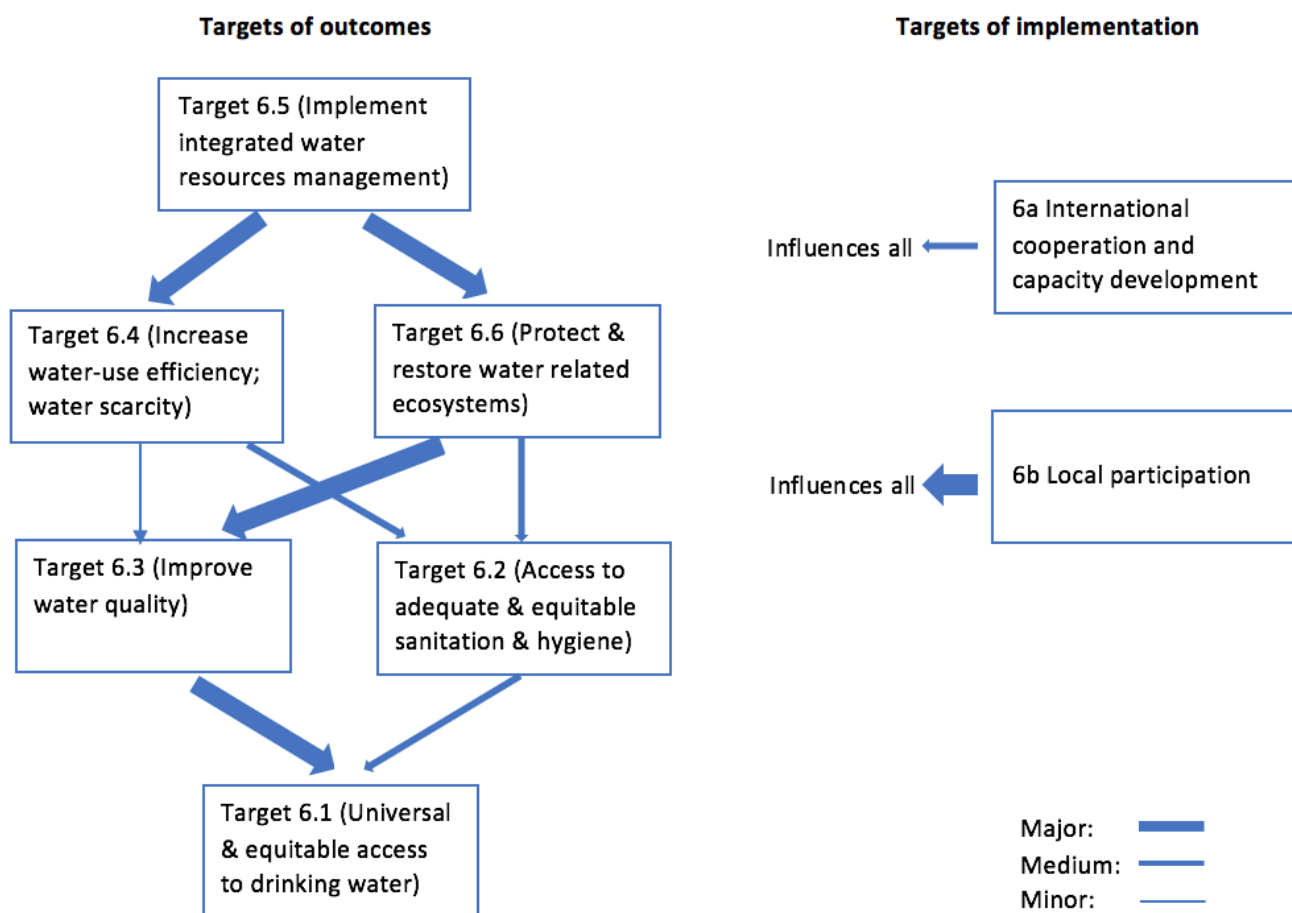


• Influences among the targets for SDG 6 on water, sanitation and hygiene

The overarching target of SDG 6 is safe, accessible and affordable drinking water for all people (target 6.1), which contributes to health and well-being (SDG 3). Integrated water resources management (target 6.5) is the primary influence for achieving all the other SDG 6 targets. The “implementing targets” of cooperation and capacity (target 6.a) and local participation (target 6.b) are crucial for the attainment of all the other SDG 6 targets.



Relationships between the targets of SDG 6 on water and sanitation in the Australian context



C. Recommendations

In planning SDG approaches, the interlinkages among the goals and targets need to be understood within each national context to avoid unintended negative consequences and to enhance the benefits. Cross-over, liaison and inter-agency collaboration are required at the local, national and international levels to achieve each goal and their respective targets. The overarching goals of climate action (SDG 13) and partnerships (SDG 17) need to be the initial focus of all plans for achieving the SDGs. The health and well-being goal (SDG 3) needs to be considered in response to the other SDGs because it is influenced by all the other goals. The integrated water resources management approach should be a key focus in plans to attain all elements of SDG 6. Investment in water, sanitation and hygiene programmes should be conducted within upstream water management and treatment regulations to ensure maximum and long-term benefits.

Edited by Ms. Karen Emmons.

Layout by Mr. Jeff Williams.