



CRC for  
Water Sensitive Cities



## How can scientists have greater influence in policy making?

Industry Note  
Project A3.3

For a long time, social scientists have been intensely studying how policy is made and why certain outcomes occur and others don't. Modern theories of the political and bureaucratic processes of policy making stem from scholarly traditions that began in the 1940s and 1950s. Put simply, policy making is an extremely complex area of politics that brings together many different considerations, contexts, institutions and personalities.

*Strategies for influencing the political dynamics of decision-making* ([Project A3.3](#)) of the CRC for Water Sensitive Cities unpacked some of this complexity in the urban water sector and developed strategic and tactical advice for those who want greater influence in the policy process. One of our main observations is that the role science and research play in a policy area can vary significantly and partly depends on how the problems are **defined and structured**. Scientists need to recognise this if they are to realistically appraise possibilities for interacting with the policy dynamics of an issue.

### Understanding policy and policy makers

How do we define policy and policy makers? Political scientists have debated this question, which can be quite complicated. Thomas Dye gave the most commonly assumed definition of public policy in 1972 when he said public policy is 'what governments do, why they do it, and what difference it makes'. Indeed, most people attempting to influence policy do so by focusing their efforts on influencing political and bureaucratic leaders. Many traditional descriptions of policy making rest on the assumption that government makes policy because it reviews options, evidence and political and economic considerations and then produces an output that becomes the laws and rules through which resources, efforts and behaviour are directed.

*Influencing policy making can be more a matter of influencing outside organisations than influencing the government.*

It's worth pointing out though that although legally the government of the day has authority for making policy, the reality may be very different. Many political scientists are quick to point out that thinking of the 'government' as an 'actor' can be dangerous. For them, government is better described as the 'arena' in which various interests, institutions and factions interact, negotiate and even do battle with each other to produce a final policy. In this model, different institutions have variable amounts of authority and influence. Official hierarchies rarely reflect the reality of authority in a policy making space.

Further, focusing on 'what government does' ignores the possibility that stakeholders outside of government often have a great deal of influence over what policy gets made. Influencing policy making can be more a matter of influencing outside organisations than influencing the government. Or in the absence of government policy, what these stakeholders do might constitute official policy for an area. Government might not lay down industry associations and codes of practice but these entities can be functionally equivalent to policy if key players in a sector believe in and abide by them. Although government-set policies will usually be the most important in any given area, it's not unusual for industry, business, non-government organisations, stakeholder groups or community organisations to set standards or rules that go further than government and are widely adhered to.

Therefore, it's important when approaching policy making not to assume that influencing what government does will be the only, or even the most important and effective means to achieve a policy outcome. Gaining a deep understanding of a policy area (and no two are identical) and the distribution of power and authority is a critical first step when developing a strategy.

*Gaining a deep understanding of a policy area (and no two are identical) and the distribution of power and authority is a critical first step when developing a strategy.*

## Defining problems and solutions

Achieving agreement over what the problems are is often the most important issue between the work of researchers and the work of policy makers. In recent years, there has been a lot of discussion about the **wickedness of problems**, which points out that many major policy issues (such as urban water policy) have highly problematic characteristics, such as: 1) being ongoing and having no end-point; 2) being difficult to test solutions for; 3) being heavily interconnected with and often symptomatic of problems elsewhere in society or policy; and 4) generating innumerable potential responses to the problem, none of which will be completely accepted as a 'solution' by all stakeholders or can be judged as such on all criteria.

Many studies have looked at the idea of wicked problems, however even cursory analysis of the breadth and depth of most issue areas in modern society reveals that most problems that governments must handle are at least somewhat wicked. Several studies have overlaid the wicked problems typology to water management and found it apt. There are no hard and fast rules for working with wicked problems, but an important takeaway from the wicked problems literature is that often policy making becomes a protracted and highly contested process as most parties at the table become mired in their own definition of and thinking

about what constitutes the problem. For example, in the Australian water context, although at the broadest level most groups agree that security of supply is paramount, this can be defined as being a problem that affects the entire water cycle (including supply to waterways, wetlands and vegetation) or narrowly defined as supplying water to people. It can be defined as a problem of insufficient technology and infrastructure or a problem of poor management, community engagement and environment practices. Varying definitions mean that there is no common starting point.



## The structure of policy problems

The role science and research play in a policy area can vary significantly and partly depends on how the problems are **defined and structured**. Scientists need to recognise this if they are to realistically appraise possibilities for interacting with the policy dynamics of an issue. One way of

conceptualising policy challenges is to array them across an axis from highly structured to unstructured. An adapted framework from Turnhout, Hisschemoller and Eijsackers, which incorporates some of the ideas of wicked problems, can be helpful:

	Well structured	Moderately structured	Poorly structured	Unstructured
Process	Rule-based	Negotiation	Compromise	Learning
Scientists	Problem solvers	Advocates	Accommodators	Signallers
Knowledge	Data	Arguments	Concepts	Opinions

Scientists are often the most effective in either well structured or unstructured problems. In well structured areas, stakeholders agree on the definitions and base new policy on data and rules developed, to work towards the agreed goal. Scientists and engineers will play a predominant role in determining the policy for these areas since there is little politics to contend with. Transport safety, for example, is an area virtually above politics and in which the developed policy is well connected to the latest data and best practices, but relatively few areas fall into this category. Drinking water is another example, where there is political and community agreement on the need for clean drinking water, and scientists play a crucial role in setting the standards. The Australian Drinking Water Guidelines, published and maintained by the National Health and Medical Research Council, are based on the best available scientific evidence and provide a framework for managing drinking water supplies.

Unstructured problems have significant confusion and uncertainty, and scientists often play a critical role in these areas by signalling relevant policy focal points and the potential risks and problems going forward. Policy is a learning process during this period and scientists and experts often play a key role in shaping the debate. Eventually, unstructured problems take on a structure and firmer policy can be set, but in the initial years there is significant scope for science to shape the terms of the future debate. The internet and obesity were for a long time unstructured policy problems, but they're now taking on firmer dimensions. Similarly, science has helped to define terms such as 'integrated water management'. The Victorian Government's Water for Victoria policy, for example, builds on 15–20 years of research on innovations and practices that can help create sustainable and resilient urban areas. Now, this policy redefines what was once perceived as innovative and risky as standard practice.

Poorly and moderately structured problems differ mainly in the degree of political conflict involved. 'Poorly structured' are problems in which there is irreconcilable disagreement over problems and goals, while 'moderately structured' are problems where there's a major challenge of distribution (that is, who wins or loses) but relatively secure agreement on the problem itself. Many policy problems fit in either of these two categories. In these categories, the role and importance of scientists tends to decline significantly since larger battles over problem definition and distribution tend to overwhelm the debate and move it into the political realm. In that case, science becomes not an answer but simply another argument, and scientists tend to take on roles as advocates and accommodators if they wish to become involved in the policy process.



The politicisation of science is not a prerequisite for these policy challenges, but it often occurs. Climate change and environmental issues predominantly fall into these two categories, because either there is no clear agreement over the actual problems, or there is but there is also fierce disagreement over how the problem should be solved and who the policy should affect and how. To be effective in such policy areas, scientists need at least to understand political realities and the complexity of the policy process they must contend with, even if they do not intend to directly take on advocate or accommodator roles.

While some have suggested that policy problems should ultimately progress from unstructured to policy based principally on data and evidence, history does not bear out this idea. Many issues, such as taxation, trade policy, health care, censorship, and human rights, have remained poorly or moderately structured for a long time. In any case, a strategy that relies on the terms of a policy debate changing is likely to be too optimistic to be practical.

## So, what can we expect from the policy process?

Every area of public policy encompasses a wide range of constituencies and institutions, few of which will have closely aligned interests. Many studies confirm what many cynics assume—that political considerations tend to trump all others in the making of policy in areas where there is significant disagreement over objectives and solutions. Outsiders can feel frustrated and despondent about this, and begin to believe the policy process is compromised or corrupted and that influencing it is futile.

While political considerations are always likely to be the most influential, they are also the most changeable. Scientific, economic and social considerations can certainly be spun to suit certain purposes, but they are grounded in realities that change at a much slower rate than politics. A week is a long time in politics, but it is not a long time in the natural or scientific world. Because the politics of an issue area is so dynamic and fast changing, those who invest in the skills, knowledge and contacts required to succeed in that area are far more likely to see quick results than those who remain unengaged with it.

A scientist or researcher who wants to contribute effectively to an issue that is moderately or poorly structured and politically contentious (as most burning issues of our time are) will need the skills, networks and understanding to direct their energies efficiently and ensure they are heard.

This does not mean that to succeed in influencing policy one must become partisan and obsequious or engage in lobbying and rent seeking, but it does mean that for the work of researchers to be relevant and effective within the policy environment, strategic and tactical thinking and investment in researchers' skills and understanding and the presentation of research are required. A scientist or researcher who wants to contribute effectively to an issue that is moderately or poorly structured and politically contentious (as most burning issues of our time are) will need the skills, networks and understanding to direct their energies efficiently and ensure they are heard. By default, science and research communities tend to be poorly ranked among the voices within most policy processes.

This seems arbitrary and irrational if the policy process takes on its simpler definition of 'what government does', but if we see government as the 'arena' in which policy disputes are resolved, then it is not particularly arbitrary and is an acknowledgement that some participants in policy debates are more effective in wielding argument and influence than others. To rectify this imbalance, science and research need to develop a more sophisticated strategy and set of tactics.

As Peter Cullen said in *Speaking truth to power*: 'Unless they understand the rules and tactics of policy debate it is like them walking onto a tennis court equipped only with golf sticks'.

## Further information

Laing, M. (2015). *Scientists and policy influence: a literature review*. Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities.

Laing, M. & Walter, J. (2018). *Policy influence: tactics and strategies for researchers*. Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities.

CRC for Water Sensitive Cities (CRCWSC). (2018). *Strategies and tactics for influencing decision making*. Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities.



Level 1, 8 Scenic Blvd  
Monash University, Clayton  
Victoria 3800, Australia



<https://watersensitivetocities.org.au/content/project-a3-3/>



[info@crcwsc.org.au](mailto:info@crcwsc.org.au)



@crcwsc



CRC for  
Water Sensitive Cities

© 2018 - CRC for Water Sensitive Cities Ltd.