



Establishing a new entity to influence land and water policy in Australia

Final report to The Ian Potter Foundation and
The Myer Foundation

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alluvium



For every subtle and complicated question, there is a perfectly simple and straightforward answer, which is wrong.

—H. L. Mencken

I am sure that the power of vested interests is vastly exaggerated compared with the gradual encroachment of ideas ... But, soon or late, it is ideas, not vested interests, which are dangerous for good and evil.

—John Maynard Keynes

Too little attention has been paid to water challenges, yet they are among the most significant threats facing humankind today. We have better evidence on the scale and nature of the problem than ever before, but we have not succeeded in building and sustaining the political momentum needed to deliver on our commitments as far as water is concerned.

—Angel Gurría, OECD Secretary-General

Acknowledgement of First Peoples and Country

We acknowledge Australia's First Peoples and pay respect to the past, present and future Elders of Australia's First Peoples' communities. We honour the deep spiritual, cultural and customary connections of Australia's First Peoples to their lands and waters.



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1. Executive summary

A bold ambition

Following an extensive study of the major issues affecting Australia's freshwater systems, The Ian Potter Foundation and The Myer Foundation (the Foundations) wish to seriously consider establishing an independent entity with the expertise, authority, political nous and community outreach required to catalyse transformative policy reform that protects, restores and maintains Australia's inland waters and their catchments for the benefit of all Australians.

A critical challenge

Sustainable management of Australia's freshwater resources and their catchments is one of the critical challenges that will determine Australia's future prosperity and the survival of many iconic Australian ecosystems. While long-term projections are inherently uncertain, CSIRO projects that water demands in Australia could double by 2050 at the same time as surface water availability in key catchments is highly likely to be reduced as a result of climate change.^{1,2,10} Yet our policy and management settings for addressing this challenge are not up to the task.

Despite nearly three decades of internationally-recognised reform, water and catchment policy-making in Australia is only getting harder. As competition for water intensifies, it is more difficult to achieve consensus on the direction and speed of water reform. Under current land and water management settings, many river basins and their waters will be degraded with adverse impacts on agriculture, regional and urban communities, and ecosystems from the Ramsar-listed wetlands of the Murray-Darling Basin to the Fitzroy River in the Kimberley and the Great Barrier Reef in Queensland. Long-term, sustainable management of the nation's waters and catchments is a critical issue, but without reform, existing conflicts and policymaking challenges will become more difficult to resolve.

The challenges are already with us and are increasing

The impacts of the unsustainable management of our waters and catchments are already starkly visible. In the Murray-Darling Basin, the Barwon-Darling system is an "ecosystem in crisis" because too much water is extracted.³ In Queensland, poor water quality from ineffective land use management is one of the major threats to the Great Barrier Reef, with consequent economic impacts on communities reliant on industries like tourism and fishing.^{4,5}

In our cities, future population growth and climate change will only increase the pressures on existing sources of supply as well as hundreds of kilometers of urban waterways and estuaries.^{6,7} We need innovative ways to integrate water and catchment policy into the broader planning frameworks that manage an ever-changing urban metabolism.⁸ Yet some existing regulatory structures limit

innovation and lock us into outdated and expensive approaches to urban water supply and management.⁹

Australia's major agricultural areas will be affected by a changing climate. Rainfall, runoff and temperature changes will introduce major transformational challenges to an industry with a gross value of around \$60 billion,³² which supports many regional communities. More vigorous and continuous public policy reform will be necessary to manage the often competing water needs of agriculture, regional communities, Indigenous communities, rivers, wetlands and catchments under a changing climate.^{10,11,12,13,14}

Action over the next decade is crucial

Australia faces many significant water and catchment management decisions over the next decade. Some will have long-term consequences because of the deep path dependency and potential for lock-in that comes with water and catchment decisions—particularly those involving new infrastructure. We need to break current policy deadlocks as a matter of urgency.

We need a new approach and philanthropy has an important role

Water and catchment management decisions are often enmeshed with regional development, urban planning, or agricultural and industrial transformation challenges. Reform and cross-cutting policy innovation that catalyses government action—regulatory, legislative and fiscal—are essential. The need for a respected, independent voice in the policy formulation process is stronger today than ever before, because public confidence in government institutions has eroded.^{18,19,20,21}

Too often those with knowledge—scientific, Indigenous, or local—have little power in decision-making and those with power do not have the knowledge required to make good, integrated and enduring decisions. Effective water and catchment management requires deep expertise, community and stakeholder engagement, and deliberative methods capable of working with entrenched values conflicts. Australia needs a new approach to engaging experts, stakeholders, policy-makers, politicians and communities to help make the difficult trade-offs and compromises required for the sustainable management of our waters and catchments. Part of that new approach is introducing new actors, and this is where philanthropy can drive transformative change.

Wide-ranging consultation has indicated that there is a critical need for an independent entity able to catalyse policy reform by helping to bridge the gaps between knowledge and power. There is a clear role for philanthropy to fund such an entity so that it can operate independently of any external influence for at least a decade in the interests of all Australians. The Foundations are interested in contributing to such an investment.

*Sustainable management of Australia's
freshwater resources and their catchments
is a critical challenge that will determine
Australia's future prosperity.*

Focus on the process not the outcome

A new, autonomous entity would have the greatest impact by acting as an independent “honest broker” able to bring experts, communities, policymakers and politicians together to focus on specific policy decisions. The new entity would have considerable opportunities to catalyse change if it prioritises processes of decision-making over the production of studies that advocate for preferred outcomes.

Good decisions cannot be made by poorly-informed stakeholders. Effective approaches to difficult water and catchment management decisions will always involve engaging deep technical expertise from a wide range of disciplines and building bridges between experts, policy-makers and communities. While such approaches will always require considerable political nous, extensive networks, and a range of sophisticated ways to engage communities, there is no “one-size-fits-all” approach that will work for all issues.

We recommend establishing a new organisation, independent of any partisan, industry or government influence, focused on using and further developing innovative approaches to policy co-design and deliberative decision-making. The organisation should:

- engage and build extensive networks between all relevant communities, stakeholders, land and water managers, policymakers, politicians and experts in a continuous and ongoing cycle of policy reform
- offer evidence-based, independent, best-in-field expert advice focused on long-term sustainable solutions that aim to protect, restore and maintain freshwater systems and catchments across urban and rural systems as well as high-value, relatively untouched ecosystems
- integrate water and catchment policy challenges with broader issues such as regional futures, agricultural transformation and urban planning, all in the context of climate change
- help stakeholders better understand complex trade-offs and highlight that implementable solutions are likely to require all parties to find acceptable, rather than optimal, solutions
- maintain close links with policy-makers and politicians across Australia so as to be ready and able to respond authoritatively to policy windows when they appear
- be able to tailor its approach to the specific geographical, community, political and ecological context of each policy problem as well as learn and apply lessons from past work.

Water policy decisions are often characterised by rancorous debates that overlook the considerable hydrological, ecological, cultural, economic, historical, political and social complexities of catchment and water management in Australia. The major risk

for any investment by the Foundations is contributing one more, oversimplified, perspective to these debates—a contribution that would be unlikely to lead to transformative change. As such, we recommend that any investment made is of a scale sufficient to create a breakthrough in water policy co-design, as articulated above, or no investment be made at all.

Recommendations

If the Foundations wish to *catalyse transformative policy reform that protects, restores and maintains Australia's inland waters and their catchments for the benefit of all Australians*, we recommend:

1. *The Foundations establish an independent entity with its own corporate identity and with a charter to deliver this objective.*

A minimum viable organisation most likely to deliver transformative change requires at least 10 staff and an annual budget of \$3.5 million. We understand that the Foundations do not have funds available to meet this level of investment. We recommend:

2. *The Foundations actively seek to raise a mix of untied corpus and other untied contributions sufficient to independently fund a minimum viable entity at \$3.5 million per year for at least ten years. Of that amount, the Foundations would contribute at least \$1 million annually for ten years (subject to an interim five-year funding review).*

In its first years, a new entity would benefit considerably from being incubated in an existing, high-profile organisation with: (a) a reputation for independence, authoritative expertise and excellence; (b) extensive professional networks; (c) outstanding convening power; and, (d) exemplary communications capability. We recommend:

3. *The Foundations actively engage with the Australian Academy of Science (AAS) to establish the terms of a three-to-five-year incubation period for the entity at the AAS—preferably with contributions from the Australian Academy of Technology and Engineering (ATSE) and the Academy of Social Sciences in Australia (ASSA).*

The minimum 10-year investment recommended should not blunt the Foundations' ambition to raise a larger quantum of funding able to support the entity for a longer period. However,

4. *If the minimum funding required to support the independent operation of the entity for 10 years cannot be raised within one year, we recommend the Foundations take no further action.*

Given the urgency of the issue and the time required to recruit key executives and board, we urge that every effort be made to secure funding for such an entity in less than 12 months.

2. Outlining the challenges

A critical challenge

Sustainable management of Australia's freshwater resources and their catchments is one of the critical challenges that will determine Australia's future prosperity and the survival of many iconic Australian ecosystems. Our policy and management settings for addressing this challenge are not up to the task—particularly in the context of climate change.

Despite nearly three decades of internationally-recognised reform, water and catchment policy-making in Australia has reached an impasse where,¹⁸ as one eminent senior official has noted, “a fog of irritable, shouty, partisan, partial decision-making” dominates.²² Most work to improve the condition of Australia's freshwater systems focuses on treating symptoms, not primary causes. Under current land and water management settings, many river basins and their waters will continue to be degraded. Relatively undisturbed catchments, particularly in northern Australia, are at risk if we repeat the mistakes already made in the over-developed south. Reforms to date have not prepared the nation to cost-effectively and fairly manage the risks Australia faces from the next long drought, climate change and population growth.

Australia is the driest inhabited continent and it has some of the most highly variable rainfall and runoff on Earth. Long-term, sustainable management of the nation's waters and catchments is a critical issue. While long-term projections are inherently uncertain, CSIRO has projected that water demands in Australia could double by 2050 at the same time as surface water availability in key catchments is highly likely to be reduced as a result of climate change (Figures 1 & 2).^{1,2,10} Without an ongoing, major reform effort, the pressures on ecosystems, agricultural systems, regional communities (including Indigenous communities) and cities will become more unsustainable. Without reform, existing conflicts and policy-making challenges will increase.

The challenges are already with us and are increasing

The impacts of our unsustainable management of some waters and catchments are already starkly visible. For example, the

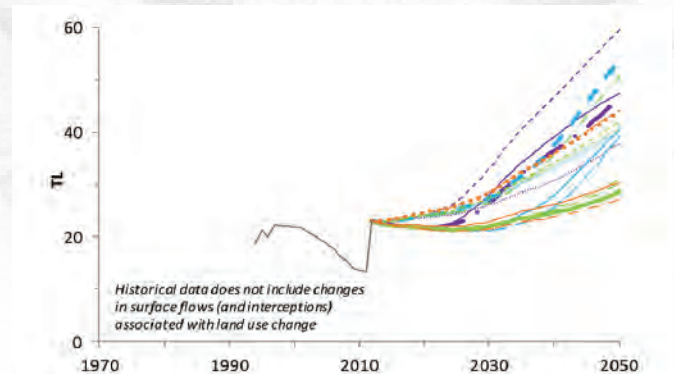


Figure 2: Projected increases in total water use in Australia to 2050 from modeling work completed as part of CSIRO's Australian National Outlook 2015.^{1,2}

New South Wales Natural Resources Commission assessed the Barwon-Darling as an “ecosystem in crisis” in July this year. The Commission's review confirms criticism that the existing water sharing plan allows too much water to be taken from the river and has added to pressures on the entire Murray-Darling ecosystem. Drought and upstream extractions have contributed to damaging low flows, but the review shows that inappropriate water-sharing rules are the major problem and have contributed to the loss of drinking water for regional communities, water for stock, and large numbers of fish and river mussels.³

Poor water quality in rivers flowing into the Great Barrier Reef lagoon is one of the major threats to the Reef, with consequent economic impacts on communities and industries—e.g. tourism, commercial and recreational fishing—that depend on it.⁵ Ineffective management of agricultural land use in catchments adjacent to the Reef is the primary cause of poor water quality because pollutants wash into rivers, which flow into the sea. Fine sediments from erosion block the light that corals need to survive and grow. Nutrients from fertiliser use promote algal growth and crown-of-thorns outbreaks, and herbicides and pesticides damage seagrass beds and corals. The localised and manageable impacts from poor water quality magnify the pressures on the Reef from warming waters associated with climate change.⁴

In our cities, urban planning frameworks require major reform to protect and improve the health of hundreds of kilometers of urban waterways and estuaries. Future population growth and climate change will only increase the pressures on these systems and the need to integrate water and catchment policy into the broader planning frameworks that manage an ever-changing urban metabolism. Major innovations in the ways we supply and use water in cities and towns are required to reduce the future costs and environmental impacts of meeting the needs of a growing population in a hotter and drier future.^{6,7,8} However, some existing regulatory structures limit innovation and lock us in to outdated and expensive approaches to urban water management.⁹

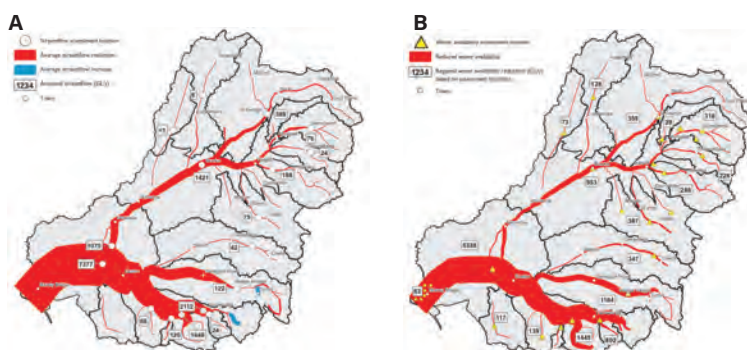


Figure 1: Comparison between: **A** changes in average annual streamflow in the Murray-Darling Basin as a result of current water resources development; and, **B** average annual reductions in water availability under a dry future climate in 2030. Reductions in water availability under a dry 2030 future represent over 70% of current average water resources development reductions.¹¹

Australia's major agricultural areas will be affected by a changing climate. Rainfall, runoff and temperature changes will introduce major transformational challenges to an industry with a gross value of around \$60 billion,³² which supports many regional communities. The Deputy Governor of the Reserve Bank, Guy Debelle, recently warned of the long-term trend impacts of climate change on agricultural output and aggregate GDP.²³ In the southern half of Australia, the most likely climate change impact is a strong drying trend that will increase time in drought and could substantially reduce runoff in some catchments over the next decade compared to long-term averages (Figure 3).¹⁰

By 2030, increasing temperatures and reduced rainfall could make the climate in a town like Griffith in the heart of the Murray-Darling Basin more like Kalgoorlie in Western Australia today.¹⁰ By the same date, average river flows in southern Australia are likely to decline by between 5–30% under median climate change scenarios and up to 30–50% under the driest projections. While projections of future rainfall and runoff differ depending on the emissions scenarios used, average annual runoff in the Murray-Darling Basin could be as low as that found in the worst historical droughts by 2050 under some scenarios (Figure 4).¹⁴ None of our major reforms in rural water and catchment management is up to the task of sustainably balancing the often competing needs of agriculture, regional communities, Indigenous communities, rivers, wetlands and catchments under a changing climate.^{10,11,12,13,14}

The next decade is critical

Australia faces many major water and catchment management challenges and policy decisions over the next decade. Some will have long-term consequences because of the deep path dependency and potential for lock-in that comes with many water and catchment decisions—particularly those involving infrastructure.

Supplying water of the right quality, in the right place, at the right time, at a price users are willing to pay, with a minimum of ecological impacts presents a set of complex collective action problems. Decisions about who gets water, when and at what price have generated political and social conflict in Australia since European settlement. Dreams of abundant, cheap and reliable water from major infrastructural investments have been repeatedly shattered by Australia's hydrological realities.²⁶

Australia cannot be "drought-proofed" and under the impacts of a drying climate we need a new way to approach the difficult trade-offs and compromises required to sustainably manage our precious water resources.

Figure 4: Difference in rainfall and runoff between 1998–2008 during the Millennium Drought and the long-term average (1895–2008). By 2070 under median climate change projections, or by 2050 under dry extreme projections, Millennium Drought conditions could be the new average in the Murray-Darling Basin and other areas of south-eastern Australia.¹⁴

We need a new approach

Water and catchment management decisions are often enmeshed with regional development, urban planning or agricultural and industrial transformation challenges. Reform and cross-cutting policy innovation that catalyses government action—regulatory, legislative and fiscal—are essential. The need for a respected, independent voice in the policy process is stronger today than ever before, because public confidence in government institutions has eroded.^{18,19}

This erosion in public support mirrors a general trend where Australian citizens' confidence in governments and the political process has halved since 2007¹⁹ and debates about many issues of national importance have become hyper-partisan. Trust in the expert knowledge required to deliver viable solutions to major policy problems has also declined.^{15,16}

Australia needs a new approach to engaging experts, stakeholders, interest groups and communities in the design of practical and acceptable water and catchment management policy decisions. Too often those with knowledge—scientific, cultural, indigenous or local—have little power in decision-making and those with power do not have the knowledge to make good, integrated and enduring decisions. Wide-ranging consultation with water and catchment policy experts, public policy experts and policymakers has indicated that there is a critical need for an independent entity able to catalyse policy reform by helping bridge the gaps between knowledge and power.

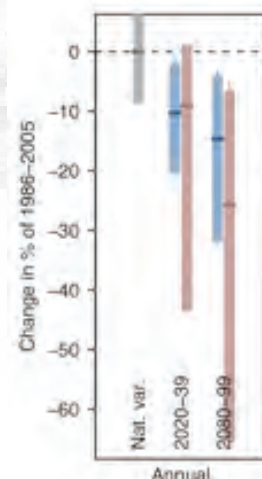
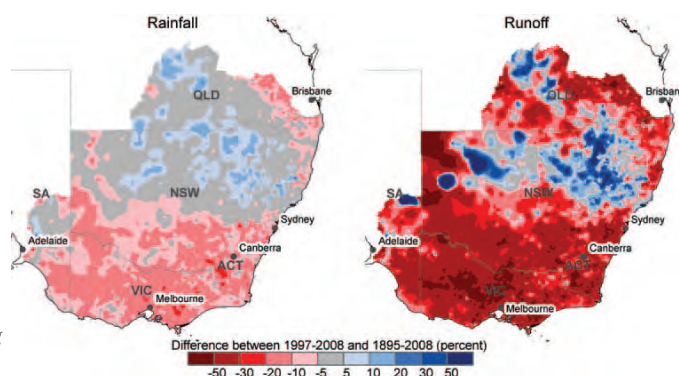


Figure 3: Median and 10th to 90th percentile range of projected change in annual runoff in southern Australia for 2020–39 and 2080–99 with respect to 1986–2005. Ranges associated with (a) natural variability only (grey); (b) under a lower emissions future (blue); and, (c) under a future with little emissions reduction (purple). Fine lines show the range of individual years and solid bars for twenty year running means.¹⁰



3. A bold ambition

Following an extensive study of the major issues affecting Australia's freshwater systems, The Ian Potter Foundation and The Myer Foundation wish to seriously consider establishing an independent entity with the expertise, authority, political nous and community outreach required to catalyse transformative policy reform that protects, restores and maintains Australia's inland waters and their catchments for the benefit of all Australians.

This is a bold ambition. As the Foundations' study showed, sustainable, long-term management of water and catchments in Australia has been repeatedly confounded since Alfred Deakin's reforms of the 1880s (a summary of this study and its conclusions can be found at Appendix C). Confounding factors include:

- a “hydro-illogical” policy cycle characterised by periods of policy inertia and paralysis followed by periods of crisis-driven decision-making
- rent-seeking and regulatory capture by vested interests
- significant partisan conflict (e.g. between geographic locations, jurisdictions, water users, and communities); many of the most significant conflicts are driven by differences in basic values.^{24,25,26}

None of these confounding factors has yet been satisfactorily addressed and a new entity will enter a crowded and divided

policy space where deep scientific expertise needs to be applied to decisions where there are long-standing values conflicts between highly partisan interest groups. Substantial geographical and administrative differences exist between water and catchment management challenges across Australia. A new entity will need to be nimble and authoritative and have extensive networks of influencers, ranging from community and industry leaders to senior officials in government agencies and state and Commonwealth cabinet ministers.

A new entity will need access to a very wide range of experts and must be able to continuously adjust and learn to improve its approaches and engage constructively with all sides of highly contentious debates. As far as we can tell, there is no entity quite like this anywhere in Australia. We have looked closely at a number of very successful organisations focused on policy change including ClimateWorks, the Grattan Institute, the Centre for Policy Development, and the Wentworth Group. While each has had demonstrable successes in their respective spheres of influence and important lessons can be learnt from their work, we doubt that any one of them can be augmented to succeed in the water policy arena. Our view is that a new organisation and a new approach is required to drive the transformative change in water and catchment management that the Foundations seek.

4. Restoring faith in institutions through policy-making innovation

Alongside citizens' loss of confidence in established government institutions there is clear evidence that they want to be more involved in policy formulation. Australians strongly support new modes of citizen engagement in policy decision-making, including citizen juries and models of policy co-design—this support transcends party allegiances, gender, age and geography.^{19,20}

Restoring faith in the institutions, in the science and the other expertise needed to sustainably manage Australia's waters and catchments requires new ways of engaging citizens—farmers, First Peoples, land and water managers, policy makers, academic experts and regional and urban communities—in the collaborative design and implementation of land and water policy solutions.

Public institutions and elected representatives are not often well-placed to drive the kinds of thoughtful and consultative policy-making experimentation required to catalyse transformative change in the way water and catchment policy issues are currently understood and managed. Risky, long-term experiments in new modes of policy formulation are difficult to implement from inside government or public sector agencies—particularly in a climate of institutional distrust.²⁷

Philanthropic investment can provide the independence and the ability to support risk-taking and innovation in policy-making with a focus on long time horizons.²⁷ If the methods and approaches developed and proven by a philanthropic investment are replicable, scalable and adopted by government organisations, such an approach has the potential to make a significant contribution to helping resolve Australia's long-standing water and catchment management challenges by changing the way problems are approached and conflicts resolved.

Our consultation has highlighted that there is a substantial opportunity for philanthropy to fund a new entity designed to act as an independent “honest broker” able to bring expert knowledge, communities, policymakers and politicians together to focus on important but fraught water policy matters. An appropriately resourced organisation with the right leadership team could catalyse transformative change in the way water and catchment policy issues are currently understood and managed by focusing on changing *how decisions are made* rather than attempting to dictate a set of predetermined policy outcomes. All those we consulted expressed considerable enthusiasm for the creation of an independent, philanthropically-funded entity operating under the model described here.

5. Defining the Foundations' ambition and a theory of change

Defining the ambition

The Foundations have stated that their ambition in investing in a new water and catchment policy entity is to *catalyse transformative change* in the way water and catchments are managed in Australia. The Foundations wish to ensure that any new entity is able to engage with water and catchment management challenges to catalyse change at any of the following scales:

- national (e.g. the creation of a long-term, sustainable national water and catchment management strategy that addresses the likely impacts of climate change)
- state (e.g. water resource planning, monitoring and compliance activities, and urban water management done by states)
- basin (e.g. the management of contested, transboundary water resources in systems like the Murray-Darling Basin)
- catchment (e.g. specific requirements of managing a particular catchment).

The Foundations also wish to ensure any new entity is able to catalyse change across the following three quite distinct systems:

- urban water systems in major cities as well as municipal systems in regional communities
- waters and catchments in highly modified rural systems like the Murray-Darling Basin
- relatively undisturbed water and catchment systems (e.g. in northern, central and western Australia).

Defining a theory of change

The work of any new water and catchment policy entity will begin where there are already over 100 years of policy conflict and more than 35 years of recent and extensive policy reform effort including the expenditure of over \$13 billion in the Murray-Darling Basin alone.¹⁸ A number of the tensions evident in today's water and catchment management discourse were equally apparent at Federation.^{25, 26} Consequently, a new entity will begin "in the middle of things" and achieving the Foundations' ambition will require an organisation able to rapidly build trust and a reputation as an "honest broker" with the independence and authoritative standing to convene committed groups of stakeholders, community leaders, policy-makers and experts to address specific policy issues.

Much of the high-quality water and catchment policy advice developed by publicly funded research agencies, universities, think tanks and NGOs produces reports done within a "study frame"—reports identify problems, present information and provide recommendations about current and future policy direction. Unfortunately, many such studies are not as influential with decision-makers as they could be. A substantial body of international research suggests that major environmental and

social policy problems are better approached through a "decision frame", which presents and analyses complex policy problems with reference to the decisions that must be made to resolve them in consultation with identified decision-makers and affected parties. Effective structuring of the decision-making process and engagement with those involved in making the decision, or who will be affected by it, often delivers better and more enduring decisions by helping those engaged to understand and accept the range of compromises and trade-offs often required in complex and contested policy decisions.^{28, 29}

More than 30 years of research also demonstrates that people often do not have fixed, pre-existing preferences for difficult social and environmental decisions despite often expressing passionate viewpoints. Preferences have been repeatedly shown to be constructed through processes of choice and deliberation.^{28, 30} People's choices can change markedly when they are presented with novel decision framings or new settings and new information when considering difficult decisions.^{28, 30, 31} The potential for such changes in preferences is diminished or absent when people are not directly engaged in processes of decision-making with the potential to influence outcomes.

This presents a new, independent entity with considerable opportunities to catalyse change if it prioritises processes of decision-making over the production of studies designed to present a set of preferred outcomes. Successful implementation of new decision-making approaches will require strong knowledge and awareness of Australia's existing political and policy-making networks and processes.

Good decisions cannot be made by poorly informed stakeholders, however well engaged. Effective approaches to difficult water and catchment management decisions will always involve engaging deep technical expertise from a wide range of disciplines and building bridges between experts, policy-makers, politicians and communities. Considerable political nous, extensive networks and a range of sophisticated approaches to community engagement will be critical success factors for any new entity. There is no "one-size-fits-all" approach that will work for all issues. In many cases, any approach will need to be flexible enough to be reshaped while addressing an issue or decision.

Consequently, the Foundations' ambition for transformative land and water policy change in Australia can be best achieved by:

- recruiting and deploying Australia's best-in-field experts to work on tough land and water policy issues on a well-defined project basis focusing on critical decisions that need to be made

- understanding that relevant expertise is broader than academically trained experts and includes policymakers, politicians, local communities and Indigenous knowledge holders
- recognising that building new policy networks and “epistemic communities” that bridge the gaps between experts, policymakers and civil society will be as important as deploying expertise on specific problems
- synthesising and translating the best research and knowledge into language that is understandable, reliable, and accessible for policymakers and the public, and disseminating it widely and strategically to change the narratives around land and water management in Australia.

6. Defining objectives for achieving the ambition

To meet the Foundations’ ambition, we recommend establishing a new organisation, independent of any partisan, industry or government influence (other than that of untied investment in a corpus) focused on using and further developing innovative approaches to policy co-design. The new organisation must be able to:

- engage all relevant communities, stakeholders, land and water managers, policy makers and experts in a continuous and ongoing cycle of policy reform
- offer evidence-based, independent, best-in-field expert policy advice focused on long-term sustainable solutions that aim to protect, restore and maintain freshwater systems and catchments anywhere in Australia and across urban and rural systems as well as high-value, relatively untouched ecosystems
- integrate water and catchment policy challenges with broader issues such as regional futures, agricultural transformation and urban planning, all in the context of climate change
- help stakeholders and communities better understand complex trade-offs and highlight that implementable solutions are likely to require all parties to find acceptable, rather than optimal, solutions.
- be recognised as a leading source of critical analysis and authoritative policy advice that both understands the political process and “cuts through” to create and take advantage of policy windows across a wide range of water and catchment systems (e.g. rural, urban, high-value ecosystems) anywhere in Australia
- be recognised as a leader in delivering integrated policy advice across related policy areas (e.g. regional development, agricultural transformation, urban planning)
- be recognised as a leader in communications able to change narratives and cut through entrenched ways of viewing water and catchment management problems
- flexibly deploy bespoke teams of best-in-field expertise appropriate to specific policy issues across the scales and systems listed in Section 5 above
- use a suite of approaches to policy analysis and development applying those that are best suited to specific policy issues (e.g. Chatham House Rule forums, citizens juries, structured decision-making tools)
- develop and maintain broad networks of experts, policy-makers, politicians, stakeholders and community leaders across state and Commonwealth jurisdictions
- begin with the minimum viable organisational size required to drive transformative change in the management of Australian water and catchments.

An entity capable of meeting the Foundations’ ambitions must be able to deliver the following objectives:

- be independent of, and be seen to be independent of, external influences (including government and special interests) to provide leadership without partisanship and a commitment to transparency and openness in its operations

7. A proposed organisational design to meet objectives

No single methodology or team is likely to be able to meet the objectives outlined above. Expertise will be needed across a wide range of disciplines including ecology, biology, botany, hydrology, climatology, economics, law, political science, sociology, geography, agronomy, public policy and public administration. Experience will be required in water management (urban and rural), catchment management, agricultural production, regional development, urban planning, climate change science and policy, industrial change, Indigenous policy, community engagement and social change policy. Regional differences will require regional knowledge and networks to gain the credibility and authority required to engage local decision-makers and communities.

We therefore propose a model for an organisation that is an honest broker, persuader and catalyst for change able to recruit, coordinate and deploy independent, “best-in-field” expertise on specific policy issues and strategically influence water and catchment management decisions over short- and long-term horizons. The organisation would focus on top-down work with policy makers and major interest groups and bottom-up work with communities and other historically excluded stakeholders depending on the requirements of specific projects and decisions.

The design elements for a minimum viable entity capable of meeting this unique challenge are outlined below. We tested a range of options for the new entity and looked at a number of national and international examples (see Appendix A).

A core team

A viable organisation capable of meeting the objectives outlined above would require a minimum of 10 core staff:

- a Chief Executive Officer (CEO) able to network as a peer with senior officials as well as engage with community and industry leaders and attract best-in-field experts to work with the entity
- four directors with strong networks, project management and facilitation skills to convene and coordinate external, multidisciplinary teams to cover the following domains: (a) urban systems, (b) rural systems, (c) natural capital and environmental water, and (d) policy co-design, deliberative decision-making methodologies, and community outreach
- four supporting early and mid-career researchers
- an administrative officer.

A primary role of the core team is to:

- develop a forward work program through extensive consultation across the land and water management sectors and relevant communities
- manage the work program and individual projects
- convene, coordinate and manage the bespoke teams required

- for defined periods of time to deliver specific policy projects
- build and extend the entity's networks
- help synthesise the results of expert analysis for policy change.

The entity could usefully grow this core team over time as funding permits. The skills of the initial team will be integral to the new entity's success and a strong and patient search process will be required.

Bespoke, best-in-field teams recruited for specific projects

Each project in the entity's forward work program will be led by the relevant director, supported by in-house researchers (and other directors as required), and delivered by a bespoke delivery team made up of best-in-field experts drawn from academia, industry, government policymakers, and relevant community and Indigenous leaders. Teams would be recruited for specific time periods to contribute best-in-field expertise to a specific policy challenge in the entity's program of work. Team members, or their institutions, would be offered remuneration for their contributions as appropriate (for example, some public officials would not be able to be remunerated under existing employment conditions).

Experts who have contributed with distinction to at least one project and who the core team would like to engage again would be invited to occupy fellowship positions with the entity. Fellowship positions would not be remunerated, but fellows would be remunerated for contributing to projects. When it can afford to do so, the entity should consider contributing to the cost of supporting short-term residencies by esteemed fellows.

Governance

The entity requires an independent board to provide leadership, oversight and stringent quality assurance and risk management. The entity's charter should ensure the board is actively engaged in setting and reviewing the entity's forward work program and reviewing management team performance. Members of the board should be selected for their ability to make a significant contribution to the entity's influence and should have peer-status with ministers and departmental secretaries and extensive networks across policy-makers, stakeholders and communities. The board will require an audit sub-committee and a nominations sub-committee.

A separate research advisory committee of high-profile water experts and thought leaders will be required to advise and guide the CEO and board on the overall work program and review the quality of applied research performed. A research committee of at least five members is also required to obtain approved research institute (ARI) status.

A small influence advisory committee reporting to the CEO should be convened with approximately five members with

extensive networks and a reputation for bipartisanship, able to connect the CEO with influential decision-makers at a ministerial or departmental secretary level and thought leaders in relevant areas of the entity’s focus across Australia. Members should also be able to provide advice on the political and broader community response to the entity’s work and direction. The formation of this committee follows examples set by the Monash Sustainable Development Institute/ClimateWorks and the Grattan Institute, which have similar advisory committees.

Members should be available for the CEO to seek advice on particularly contentious or difficult issues. They should be peers of the board members and Chair but drawn from those unable to make the commitment to the broader governance of the entity. Members could include former state and Commonwealth ministers, senior ministerial advisors and departmental secretaries with consideration given to former lobbyists or interest group leaders (wise choices will need to be made with this latter group). Members should have experience with water, agriculture or environment portfolios. See Figure 5 for the suggested structure.

Funding

The entity requires sufficient upfront funding to attract the high-quality personnel and external teams needed to ensure it is able to fully demonstrate the potential of its approach. We project that a minimum annual budget for such an entity is in the order of \$3.5 million allocated as outlined in Table 1.

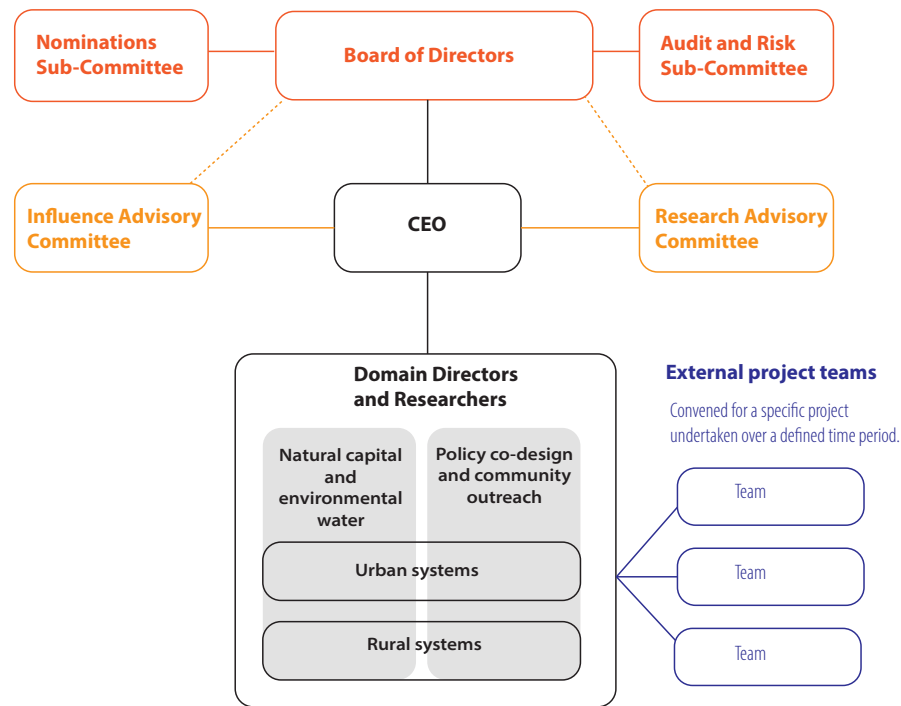


Figure 5: Organisational structure for the proposed entity

These expenses assume an independent, stand-alone entity paying all costs with the exception of in-kind contributions for legal and accounting services from reputable firms.

Philanthropic grants and other untied corporate and government contributions are likely to be the most important sources of funding to maintain the entity’s independence. The entity should be established with sources of untied funding adequate to guarantee the independent operation of a core team for at least 10 years. This will require raising funding in addition to the Foundations’ proposed 10-year funding commitment (funding for the second five years would be subject to a five-year review). This should not blunt ambition for raising a larger corpus able to support the entity for a longer period.

At a minimum, 10-years operation requires \$35 million of funding over this period. Sources of funding can include annual or multi-year grants from a range of funders or the contribution of funds to create a sustainable corpus. When accepting funding the independence of the entity must remain a priority.

Modeling undertaken by The Ian Potter Foundation CEO indicates that a corpus of approximately \$20 million when combined with \$1.3 million of annual funding (\$1.0 million provided by the Foundations) would fund an entity for 10 years, with the corpus largely expended by the end of this period. A corpus closer to \$45 million with a minimum of \$1.3 million in annual grants for the first 10 years, would sustain the organisation for a much longer timeframe.

The entity should consider gaining ARI status along with deductible gift recipient (DGR) endorsement to assist with future fund-raising. ARI status is not confined to the natural sciences and is available for organisations with an applied science focus, defined by the Australian Taxation Office as “the application of some branch of science for the solution of practical problems (it is not confined to the natural sciences).” CSIRO provides the approval for ARI status.

During establishment, the Foundations should also seek to obtain long-term arrangements for in-kind provision of legal and accounting services from reputable firms.

Ensuring an incubation period

In its first years, a new entity would benefit from being incubated in an existing,

prestigious organisation with (a) a reputation for independence, authoritative expertise and excellence; (b) extensive professional networks; (c) outstanding convening power; and, (d) exemplary communications capability.

We recommend that the Foundations actively engage with the Australian Academy of Science (AAS) to establish the terms of a three- to five-year incubation period for the entity at the AAS, preferably with contributions from the Australian Academy of Technology and Engineering (ATSE) and the Academy of Social Sciences in Australia (ASSA). ATSE has a strong water-domain fellowship and an existing water policy forum, which could offer considerable support. ASSA offers strong links to the broader social science community in Australia. The three academies have worked together successfully on projects in the past. The AAS has prior experience in incubating organisations that go on to lead a separate existence and would provide an environment that would maximise the new entity's independence.

Our analysis of options for a new entity suggests that only the AAS has all the characteristics required to maximise the successful, independent incubation of a new entity. Our reasons for coming to this conclusion include:

1. *The AAS has unparalleled convening power for establishing the bespoke teams required for the new entity's work*
 - The reputation, independence and authority of the AAS is outstanding. Its convening power is not limited to academic researchers and experts will always feel more motivated to work with the AAS due to its prestige and neutrality than they would for any individual university or existing think tank. Links with ATSE and ASSA expand this reach.
 - The AAS (and ATSE and ASSA) have extensive networks of subject matter experts that are much broader than any one university and are truly Australia-wide.
 - The AAS is the linking body with all other national Academies of science and other similar organisations around the world. Its international networks are unparalleled in Australia.

- The AAS is completely independent of any inter-university competition and, in terms of maximising the potential to encourage particular academic experts to provide their time for specific projects outside of any long-term partnership agreement, this independence and neutrality provides a considerable advantage.
2. *Complete independence of ideas and action to innovate as required and tailor approaches to the needs of specific projects*
 - The operation of the new entity will break completely new ground. Incubation at AAS provides the benefits of a stand-alone organisation with a series of important and difficult to replicate "add-ons". This independence of ideas and action will be crucial to the entity's successful operation across very different issues, communities and geographies (e.g. issues in the Murray-Darling Basin are very different from those in Queensland relating to water quality and the Great Barrier Reef, which are different again to addressing the issues arising from management of the Indigenous Estate and future water resources development in northern Australia).
 - Establishing a new entity alongside or within many other existing organisations risks reducing the new entity's openness to developing, deploying, iteratively testing, refining and validating its own new and innovative approaches. Other organisations, particularly those with a strong corporate identity or with their own well-established, codified and successful approaches to policy influence, are likely to exert a "gravitational pull" on ideas that may limit the new entity's innovation, particularly in the early years when it is establishing its own identity. The AAS does not present this risk.
 3. *Access to an internationally renowned communications team and platforms with broad reach and authority across Australia*
 - The AAS has a large and experienced communications team with extensive networks into traditional media organisations and a significant multimedia capability (in 2018, the AAS's social media video series had a greater reach than BBC Science). We were unable to identify a communications unit with similar skills and reach at any of the other organisations examined. Our staffing profile above does not include communications staff because it assumes a successful incubation period with the AAS and use of the AAS's communications team.

Table 1: Allocation of annual costs for a minimum viable entity

Total expenses ('000)	FTE	Core staff costs ('000)	Bespoke team costs ('000)	Other costs ('000)	Contingency (10%) ('000)
3,500	10	1,850	500	800	350

The AAS has a strong, well-established strategic direction from both its Executive Committee (board) and CEO, which has

been developed over the last three years. A key component of this strategic direction is far greater engagement in policy influence in areas where expertise is critical to good decision-making than it has had in the past. One substantial co-benefit of an incubation period with the AAS in partnership with ATSE is that it creates a model for future, practical engagement by Australia's learned academies in other policy areas, building bridges between knowledge and power for other issues of public and national importance.

As a secondary benefit, an incubation period within the AAS may also provide opportunities for the entity to save operating costs should the Academy provide certain services as an in-kind contribution. However, these should not be expected to be substantial as the AAS currently has about 80 staff and incubating another 10 will cause a reasonable impost.

Preliminary discussions have been held with the AAS, which has indicated its interest in hosting the new entity.

The Foundations should consider a fallback option for incubating the new entity in case negotiations with the AAS do not come to

an acceptable conclusion. Such an alternative is an important risk mitigation strategy. We discuss a fallback option at Appendix A.

Entity lifespan

Australia will face major water and catchment management challenges for the foreseeable future. A new entity would thus ideally continue operations indefinitely. However, Australia faces a series of major challenges and critical policy decisions over the next decade. An entity without a perpetual endowment would still be capable of substantial impact over the next, critical decade for water and catchment decision-making in Australia.

Effective operation requires a minimum lifespan of 10 years (with a review of operations and future funding after the first five years). The entity is likely to require at least three years to fully demonstrate its potential impact. If not already achieved prior to the project proceeding, the entity and the Foundations should aspire to raise additional funding over the course of the first 10 years of operation, to ensure the entity's operation in perpetuity. Australia's water and catchment challenges will require ongoing, independent catalysts for change.

8. Determining a work program

A new entity's forward work program should be developed by way of an extensive consultation process consistent with the entity's focus on engaging stakeholders and experts in the design of practical policy solutions. However, the entity's charter should require a focus on water and catchment management policy decisions that are:

- high consequence (i.e. with potential for substantial impact on water and catchment management outcomes)
- a good fit with the entity's approach (e.g. involving multiple stakeholders, jurisdictions, expert knowledge, contested values)
- vital to the long-term interests of all Australians.

Examples of possible areas of focus where such decisions need to be made could include:

- climate change effects on surface water availability and consequent impacts on cities, agriculture and water-dependent industries
- balancing consumptive water users and environmental water requirements, particularly in the context of a drier future in southern Australia

- demands for future water resources development in northern Australia
- the reintegration of catchment management into water policy debates and water management practice
- First Peoples' water rights and First Peoples' engagement in water and catchment planning and management processes
- trade-offs between water availability, energy use, food production and ambitions to increase carbon in Australian landscapes under a changing climate
- policy links with regional development, agricultural transformation and urban planning in a changing climate
- the adequacy of monitoring and evaluation frameworks for assessing water and catchment management decisions to encourage adaptation and learning.

9. Recommendations

If the Foundations wish to *catalyse transformative policy reform that protects, restores and maintains Australia's inland waters and their catchments for the benefit of all Australians*, we recommend:

1. *The Foundations establish an independent entity with its own corporate identity and with a charter to deliver this objective.*

A minimum viable organisation most likely to deliver transformative change requires at least 10 staff and an annual budget of \$3.5 million. We understand that the Foundations do not have funds available to meet this level of investment. We recommend:

2. *The Foundations actively seek to raise a mix of untied corpus and other untied contributions sufficient to independently fund a minimum viable entity at \$3.5 million per year for at least ten years. Of that amount, the Foundations would contribute at least \$1 million annually for ten years (subject to an interim five-year funding review).*

In its first years, a new entity would benefit considerably from being incubated in an existing, high-profile organisation with (a) a reputation for independence, authoritative expertise and excellence; (b) extensive professional networks; (c) outstanding convening power; and, (d) exemplary communications capability. . We recommend:

3. *The Foundations actively engage with the Australian Academy of Science (AAS) to establish the terms of a three- to five-year incubation period for the entity at the AAS—preferably with contributions from the Australian Academy of Technology and Engineering (ATSE) and the Academy of Social Sciences in Australia (ASSA).*

The minimum 10-year investment recommended should not blunt the Foundations' ambition to raise a larger quantum of funding able to support the entity for a longer period. However,

4. *If the minimum funding required to support the independent operation of the entity for 10 years cannot be raised within one year, we recommend the Foundations take no further action.*

Given the urgency of the issue and the time required to recruit key executives and board, we urge that every effort be made secure funding for such an entity in less than 12 months.

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Appendices

Appendix A - Overview of analysis

We structured our work on the establishment of a new water and catchment policy entity capable of catalysing transformative change in Australian water and catchment policy as follows:

1. Define the Foundations' ambition for the new entity and identify objectives for achieving it
2. Identify major challenges to good water and catchment policymaking in Australia
3. Identify major lessons from previous attempts to influence water and catchment policy in Australia
4. Examine international and Australian examples of successful organisations designed to influence policymaking
5. Develop a design for the entity which:
 - a. would be capable of achieving the Foundations' ambition
 - b. responds to the challenges of water and catchment management policymaking and the lessons of past attempts to influence policy
 - c. learns from international and Australian examples of successful organisations and matches the lessons learnt to the specific challenges of influencing water and catchment policy in Australia
6. Identify an operational model that would best position the entity to achieve the Foundations' ambition including options for delivery (e.g. including a water program in an existing think tank or the creation of a new entity). If a new entity were to be recommended, identify:
 - a. "minimum viable" size and budget for any future entity
 - b. options for the entity's organisational structure
 - c. options for incubating or housing a new entity within a larger, existing organisation like a university.

Our summary of the Foundations' ambition and our definition of objectives for achieving it can be found in Sections 5 and 6 of the main paper along with our final design and incubation recommendations. This Appendix summarises our other work and provides additional detail on the analysis behind our recommendation to incubate a new entity at the Australian Academy of Science.

1. Challenges to influencing water and catchment policy in Australia

Any new entity that aims to influence water and catchment policy in an Australian context faces many challenges. A number of these challenges are listed below, followed by the characteristics of any future entity able to respond to them and catalyse change.

These characteristics are highlighted in bold.

Challenge 1: Water and catchment policy requires better engagement with expert knowledge

- The complexity and contestability of water and catchment policymaking is such that it requires a reinvigorated use of expert knowledge. This is particularly important for areas where:
 - issues require urgent attention and are the subject of significant public concern and political debate
 - those constituencies most likely to be affected by policy changes hold strong, values-based positions
 - trust in public institutions is low
 - knowledge is complex with many uncertainties that will not be resolved in the time frames within which important decisions need to be made.
- There remains a strong urban/rural divide with regard to the objectives of water and catchment policy reform in Australia. This, alongside poor water literacy (particularly in urban areas), has led to strong positions being held in public debates by those with a limited understanding of the relevant facts and issues.
- Water and catchment policymaking has become highly partisan and politicised. Former Chair and CEO of the National Water Commission, Ken Matthews, recently described water policy as having become dominated by "a fog of irritable, shouty, partisan, partial decision-making". These changes demand a re-engagement with independent expert knowledge. Our discussions with senior officials in a number of government agencies evidenced a strong desire for a source of independent expertise separate from both government and non-government organisations with strong, partisan viewpoints.
- We stress that simply infusing the water policy making process with selective expert knowledge alone will not suffice. The manner in which experts engage with interested parties and convey their insights to the broader public is critical. Experience shows that setting the right membership, method, tone and timing for an expert-driven consultative process is vital for success.

Any new entity needs to be able to bridge the gaps between experts, policymakers and wider civil society, while remaining completely independent of partisan influence. It needs to be able to drive decision-making processes that engage constituencies across partisan divides with the independent expertise required to make good policy decisions.

Challenge 2: Australian governments require help to integrate expert knowledge into policymaking

- The hollowing out of expertise within public sector agencies and the mobility of officials between agencies mean that governments now have less in-house expertise to draw on.
- Political decision-makers do not always seek external, expert input and public officials sometimes see their role as delivering policy that meets ministerial requirements rather than evaluating options shaped by knowledgeable assessment of available evidence.
- There has been a precipitous decline in public confidence and trust in political leaders and government agencies. This has not been helped by recent, well-documented failures of monitoring, compliance and enforcement arrangements for water management enabled by ethical and administrative failures in state public sector agencies.
- In areas like water and catchment policy, governments' inability to draw on truly independent policy analysis to help reconcile the positions of competing interests has sometimes led to policy paralysis.

Any new entity must rapidly develop a reputation for authority, expertise and independence to gain the trust of communities and policymakers. Associating the entity with an existing organisation, which has a strong and well-established reputation would be a considerable advantage in the entity's early years of operation.

Challenge 3: Water and catchment policy presents complex problems with competing interests and values—a strong evidence base needs to be supported by an equally strong values base

- Water and catchment management presents a set of inherently complex and uncertain policy problems.
- Multiple complex and often delayed relationships between policy actions and management outcomes often make it difficult to show definitive and unambiguous improvements in periods of less than 10 years. This is particularly true of actions taken to improve the condition of damaged or threatened ecosystems.
- Multiple interests compete for a scarce resource usually under zero-sum terms and, as a consequence, substantial values conflicts exist between interest groups as well as in the general community.
- The strong values conflicts in the water and catchment policy arena require effective, expert-based policy influence to

support problem identification and evidence presentation with a clear articulation of the values to be realised through policy reform.

- Good water and catchment policy relies on the integration of multiple areas of expertise with stakeholder and broader community concerns as well as explicit links to allied policy domains including regional development, agricultural structural adjustment and urban planning. It is a cross-disciplinary endeavour requiring expert input from a wide range of disciplines from the natural and social sciences.
- Complex, trans-jurisdictional interactions between existing water and catchment policies mean policy reform efforts need to be coordinated across different levels and agencies of government.

Any new entity must have access to an extensive range of expertise across a wide range of disciplines. It needs to ensure that its definition of relevant expertise is broader than academically trained experts and includes policymakers, politicians, local communities and Indigenous knowledge holders. It would not be cost-effective or possible for a future policy entity to maintain such expertise in-house. Thus, any new entity needs an approach to using multi-disciplinary teams of external “best-in-field” experts with the expertise required for specific policy problems.

Any new entity needs to focus on building new policy networks and “epistemic communities” that bridge the gaps between experts, policymakers and civil society. This will be as important as deploying expertise on specific problems. Because many water and catchment policy challenges involve values conflict, the entity will need to develop and manage processes of deliberative decision-making and policy co-design. It will need to be able to help stakeholders better understand complex trade-offs and highlight that implementable solutions are likely to require all parties to find acceptable, rather than optimal, solutions.

Any new entity will need to be able to synthesise and translate the best research and knowledge into language that is understandable, reliable, and accessible for policymakers and the public, and to disseminate this knowledge widely and strategically to change the narratives around land and water management in Australia.

Challenge 4: Geographical differences and history matter

- There exists a high path-dependency in water and catchment policy that limits future options.
- Historically, the policy cycle has been messy, reactive and dominated by a "hydro-illogical cycle"—governments have had a strong tendency to be over-reactive during times of drought and flood, and otherwise to be disinterested in the challenges of policy reform.
- There is a long history of failed attempts to stimulate an ongoing and productive water and catchment policy dialogue across the Australian community.
- Water policy problems differ widely across the continent and there are few "one-size-fits-all" solutions.

Any new entity needs the openness to developing, deploying, iteratively testing, refining and validating its own new and innovative approaches that are "fit-for-purpose" for specific policy issues. Using expert teams with local knowledge and the ability to deal with specific local histories and geographies will be essential. Providing this capacity "in house" is unlikely to be possible—the regular use of external, bespoke teams brought together for specific projects is much more likely to catalyse change.

2. Lessons from previous attempts to influence land and water policy in Australia

There have been a range of previous attempts to influence land and water policy in Australia with varying levels of success. The major lessons from these attempts are that:

- public and government interest in land and water policy fluctuates sharply, driven largely by water availability
- major policy interventions tend to be designed and announced during times of crisis and can be over-reactive
- windows for policy influence and change are often only open for short periods and are usually associated with crises
- policymakers can willingly engage with experts if strong, trusted relationships are developed
- authoritative policy advice from best-in-field experts can cut through and get the attention of policymakers (e.g. the Australian Academy of Science coordinated report, and the Vertessy report, into the Menindee fish kills)
- provoking adverse media attention can backfire and cause policymakers to lose trust in experts and dismiss them as stealth advocates for partisan viewpoints.

Any new entity needs to be agile, well-informed and well-connected so as to be able to take advantage of "policy windows" as they appear. It should build and cultivate trusted advisor relationships between experts and policymakers and use media attention skillfully and judiciously.

3. Lessons from the best international public policy influencers

We used the University of Pennsylvania's Think Tank and Civil Societies Program's *Global Think Tank Index* to identify a subset of best practice organisations from around the world for further analysis. The Global Think Tank Index adopts the following broad definition of "think tank":

Think tanks are public-policy research, analysis and engagement organisations that generate policy-oriented research, analysis, and advice on domestic and international issues, thereby enabling policy makers and the public to make informed decisions about public policy. Think tanks may be affiliated or independent institutions that are structured as permanent bodies, not ad hoc commissions. These institutions often act as a bridge between the academic and policymaking communities and between states and civil society, serving in the public interest as independent voices that translate applied and basic research into a language that is understandable, reliable, and accessible for policy makers and the public.

Given the challenges and characteristics identified above we drew our subset of think tanks for further analysis from the following Global Think Tank Indices:

- Top think tanks world wide
- Top environment policy think tanks
- Think tanks with the most significant impact on public policy
- Think tanks with outstanding policy-orientated research programs
- Best transdisciplinary research think tanks
- Best new idea or paradigm developed by a think tank.

We examined the following organisations that appeared in high-ranking positions in more than one of these lists:

- Brookings Institute (USA)
- RAND Corporation (USA)
- Wilson Centre (Woodrow Wilson International Center for Scholars) (USA)
- Chatham House (UK)
- World Resources Institute (USA)
- Urban Institute (USA)

- International Institute for Strategic Studies (UK)
- Peterson Institute for International Economics (USA)

Our research identified that the best international public policy influencers focus on bridging the gaps between experts, policymakers and wider civil society. They establish their authority, legitimacy and standing by building productive communities of best-in-field experts to contribute to an important public good mission. The best organisations act as talent magnets by engaging the best people who attract others. They build trust by fiercely defending their independence and engaging creatively with stakeholders, policymakers, relevant communities and other constituencies, and the media.

We identified the following 10 lessons that can be learnt from these think tanks relevant to the creation of a new water and catchment policy entity in Australia:

1. Clearly articulate a mission, values and agenda and develop a coherent work program that contributes to the mission and remains consistent with values
2. Remain non-partisan and independent, but have a clear opinion and perspective on relevant issues
3. Retain core theme or area directors and a small number of permanent support staff to coordinate work
4. Build and maintain strong links to knowledge institutions through a wider fellowship of best-in-field scholars/experts who are directly engaged in the production of work and influencing policy—scholars/experts can be either on staff, in-house for defined periods, or part of a non-resident, external fellowship with a home at other institutions or with other primary income sources
5. Establish channels and programs to link experts with policymakers and political decision-makers—e.g. via well-established policy forums, rotations of scholars/experts into policy making areas of government and policy-makers into think tanks
6. Utilise a wide-range of mechanisms to report on findings and influence both government policy and the wider policy-relevant research agenda (do not rely only on reports)
7. Diversify funding sources while remaining fiercely independent with strong governance principles that require funding to be rejected if it might compromise the mission (funding sources include investment income, private and family foundations, government grants, consulting activity (primarily for governments), corporate donors) and maximise endowment-based funding to increase long-term financial stability and independence where possible
8. Ensure strong media and social media outreach for core messages—all organisations reviewed have dedicated in-

house outreach and communications teams and most have a strong multimedia online presence, none relies solely on the production of reports

9. Deploy a multi-generation strategy that drives engagement with tomorrow's voters and leaders as well as today's
10. Regularly measure and evaluate impact.

Given the top think tanks listed above have annual revenues ranging from low tens of millions to hundreds of millions (USD), we also looked at the Global Think Tank Index rankings for “Top think tanks with annual operating budget of under USD5 million” per annum. These think tanks included:

- Center for Social and Economic Research (CASE) (Poland)
- Foreign Policy Research Institute (FPRI) (USA)

Both of these think tanks maximise their budgets by having a small in-house team of experienced staff (including communications staff) who leverage a larger fellowship of scholars and experts. In addition to its fellowship, CASE expands its reach through a network of 1000 experts in relevant fields. FPRI coordinates conferences, symposia and forums alongside a strong multimedia presence and a multi-generational strategy that produces school curricula and programs to engage students and teachers with top scholars and fellows.

Our research into successful policy influence organisations elsewhere in the world underpins our recommendation that designing and positioning an entity that flexibly uses external “best-in-field” teams to target specific policy issues will maximise:

- the influence of a new entity given its necessarily limited budget
- the capacity of a new entity to meet the Foundations’ ambition.

Over time, a new entity should consider creating a fellowship of experts who have contributed with distinction to entity projects. When it can afford to do so, the entity should also consider contributing to the cost of supporting short-term residencies by esteemed fellows.

The 10 lessons identified above have been incorporated into our recommended design.

4. Lessons from Australian policy influencers

We examined the work and engaged with leadership teams from a number of think tanks and other organisations concerned with influencing public policy in Australia. These included: the Grattan Institute, ClimateWorks and the Centre for Policy Development. With regard to water and catchment policy, we

tested the reputations of existing organisations like the Wentworth Group of Concerned Scientists with senior officials. Each of the organisations we dealt with had a different approach to influencing policy. Those approaches relevant to a new entity seeking to catalyse change in water and catchment policy are outlined below.

The Center for Policy Development's (CPD) "create, connect convince" model particularly stood out for its relevance to contentious water and catchment management policy challenges. CPD strongly influenced some of our recommendations for the establishment of a new entity. We believe the leadership team of any new entity could liaise usefully with CPD to learn more about their approach and adopt those elements relevant to specific water and catchment policy issues.

CPD aims to work beyond electoral cycles and examine contentious and difficult issues that governments and other stakeholders have limited capacity to address. Their model is to:

- "create ideas from rigorous, evidence-based, cross-disciplinary research"
- "connect experts and stakeholders to develop these ideas into practical policy proposals"
- "work to convince governments, businesses and communities to implement these proposals" (<https://cpd.org.au/about/>).

CPD's use of strategies adopted from Track II diplomacy could be of particular utility for a number of contentious water and catchment management issues. Examples include Chatham House Rule forums and other facilitated workshops that allow participants including senior officials, who usually attend in their personal capacity, to work through contentious issues and develop personal relationships. The leadership team of a new entity could usefully examine CPD's work through the Council on Economic Participation for Refugees, funded by The Myer Foundation and the Vincent Fairfax Family Foundation. Any new entity could usefully augment CPD's approach with elements of the Dahlem Workshop Model.

ClimateWorks' emphasis on the importance of networks and a deep understanding of how policy is successfully made and how to influence the political process will be important for any new entity. ClimateWorks has successfully created a strong network of stakeholders and influencers in the areas of climate change policy it has chosen to work. ClimateWorks' approach emphasises the importance of engaging with trusted advisors or becoming a trusted advisor to politicians, political advisors and bureaucrats in order to gain access to the political arena where policy decisions are made. ClimateWorks has successfully occupied a trusted advisor role to both governments and the private sector to increase its overall influence.

ClimateWorks also demonstrates the importance of the Chair

and CEO to the success of any new entity that aims to influence policy. John Thwaites' networks and influence as Chair have been critical to ClimateWorks' success as has the strategic approach and leadership of CEO, Anna Skarbeck.

Both the Grattan Institute and ClimateWorks have a panel or board sub-committee of trusted advisors including former leading bureaucrats, senior academics and former cabinet ministers to provide advice on strategy and access to political decision-making networks. Any new entity should introduce such a panel.

The late Peter Cullen's influence on Australian water and catchment policy confirms the importance of exemplary leadership and a highly networked champion for any new entity in the water and catchment policy space. Under Peter Cullen's stewardship, the Cooperative Research Centre for Freshwater Ecology and later the Wentworth Group of Concerned Scientists, created a highly successful model of water and catchment policy influence—engaging successfully with the media, the Australian public, major stakeholders in water policy, and bureaucrats and politicians—that catalysed major change in the management of water in Australia and particularly the Murray-Darling Basin. However, during our consultations for this project a number of senior government officials noted that the Wentworth Group's work on water policy has become focused on issue advocacy more recently and, as a result, the Group's influence on policy has diminished.

Careful appointments to the board and executive of a new water entity will be critical. The leadership of a new entity should be strongly encouraged to engage with and learn from existing organisations with a strong record of policy influence. The approach of the Centre for Policy Development merits particular attention as some aspects of its approach could be usefully modified and adapted for a number water and catchment policy challenges.

5. Bridging the divide between experts and policymakers: understanding the policy process, boundary organisations and structured decision-making

We also examined current literature on linking expert knowledge and policymaking and consulted with an international expert on this subject, Sir Peter Gluckman, the President-elect of the International Sciences Council and former Chief Scientist to the Prime Minister of New Zealand.

Gluckman emphasises the importance of the strategic integration of expertise into policy networks for enduring and effective policy decisions. He rejects the “policy cycle” model of policy making (see Figure 1) often presented in textbooks and the training of government policymakers as an unrealistic abstraction compared with what actually happens in the “real world”.*

Instead, policy emerges through the action of formal and informal networks of actors, elected and unelected, which coalesces into influence on the executive of government. Such influence rarely takes the same pathway and certainly does not arise from a well-defined “cycle”. Instead, policymaking is a complex and often disorderly process with some elements appearing by chance. Gluckman represents the usual policy making process as shown in Figure 2 below.

Expertise and what Gluckman calls “evidential input” needs to be introduced across the policy ecosystem to ensure its



Figure 1: one representation of the “traditional” policy cycle.*

influence over final policy decisions (see Figure 3 overleaf). This requires organisations that wish to influence policy to develop and engage with very broad networks, something best achieved with bespoke teams assembled to work on a specific policy decision and with an identified policy “client” or decision-maker.

Gluckman’s work is part of a rich literature on improving the links between those who have deep knowledge of particular issues—e.g. academic researchers, natural resource users, community leaders, Indigenous knowledge holders—and those with the power to make and strongly influence policy decisions—politicians, political

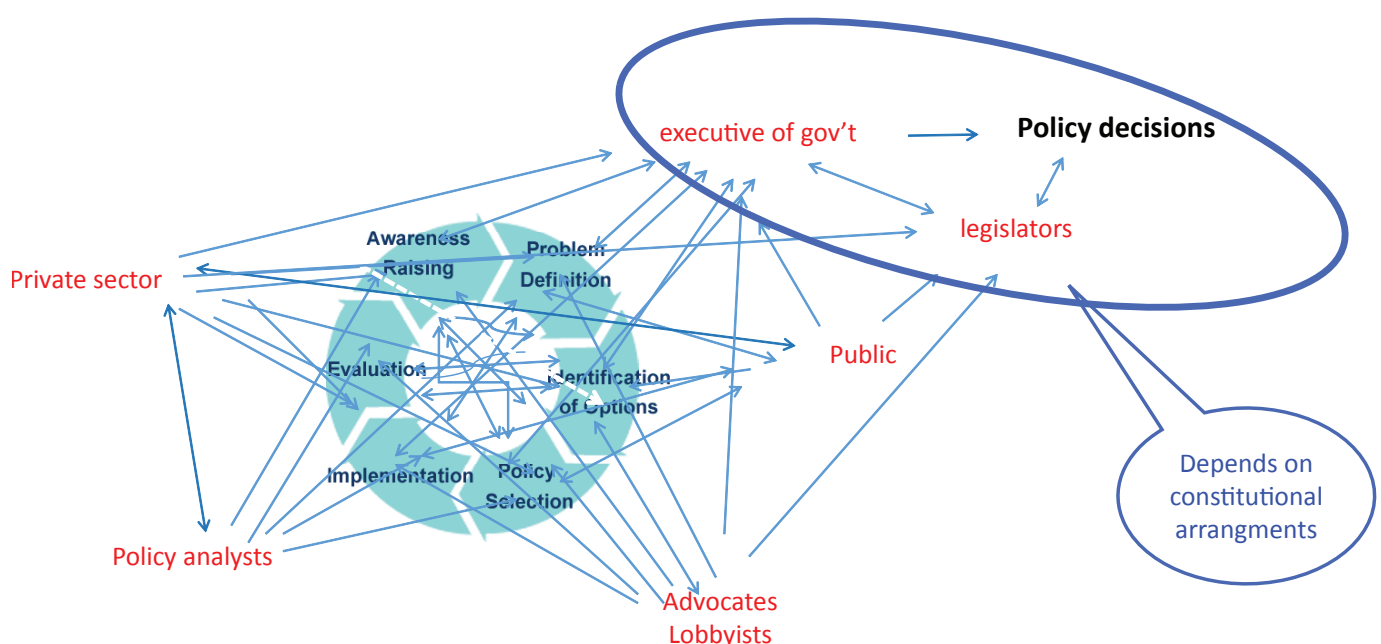


Figure 2: policy emerges through the action of formal and informal networks of actors, elected and unelected, coalesces into influence on the executive of government.*

*Diagrams reproduced from Gluckman, P. 2018. The role of evidence and expertise in policy-making: the politics and practice of science advice. *Journal & Proceedings of the Royal Society of New South Wales*, 151(1): 91–101

advisors and bureaucrats. One of the important concepts in this literature is that of the “boundary organisation”. This is a separate organisation established to bridge gaps between knowledge and power by cultivating diverse networks of stakeholders and decision-makers that maintains its credibility through a fiercely defended independence. Such organisations have been shown to successfully bring together groups with strong values conflict or conflicting objectives for the management of limited natural resources. They have been shown to be particularly effective when operating on specific issues in specific geographical locations—one of the key policy requirements for a new water and catchment policy entity.

A very successful example of such a “boundary organisation” in practice is the California Ocean Science Trust, a non-for-profit organisation with a mandate to catalyse improved ocean and coastal management decisions in California with the best available science. The California Ocean Science Trust, has shown itself to be particularly effective on controversial issues in California including decisions associated with the operation of the oil and gas sectors in marine environments or the marine impacts of climate change. The Trust expresses its approach across six dimensions as follows:

1. *Learn*—“We are researchers, but not in the way that people imagine. When we embark on a project it’s important for us to understand the institutions involved, different ways of looking at the issue, the range of relevant science. We use tools such as interviews, focus groups, and literature reviews to develop this knowledge.”
2. *Translate*—“The communities we work with speak different

languages. We help those communities understand and highly technical concepts from the scientific, policy, and management realms. This requires trust, scientific knowledge, and effective communication.”

3. *Frame*—“We actively shape projects so that participants can see a role for themselves and engage constructively. This is not just about translation, but about how the problem is defined; what matters and what doesn’t, and how things are connected.”
4. *Collaborate*—“The process is as valuable as the product. Collaboration means building new relationships, and sharing credit for our collective work. Through collaboration our projects are far more valuable to the state of California and our many partners, and we emerge stronger and better prepared for future work.”
5. *Share*—“We’re not just communicating science but sharing it: building relationships and buy-in, so that others feel empowered to use and share science that can inform difficult problems. OceanSpaces is the online community tracking the health of California’s oceans by sharing a common body of scientific knowledge.”
6. *Adapt*—“We learn lessons, and apply them. Our approach to ecosystem monitoring is based on community priorities and lessons learned across the state. Our technical review process is tailored for each topic. We are constantly adjusting and learning to better our work on behalf of our oceans.” (<https://www.oceansciencetrust.org/our-work/>)

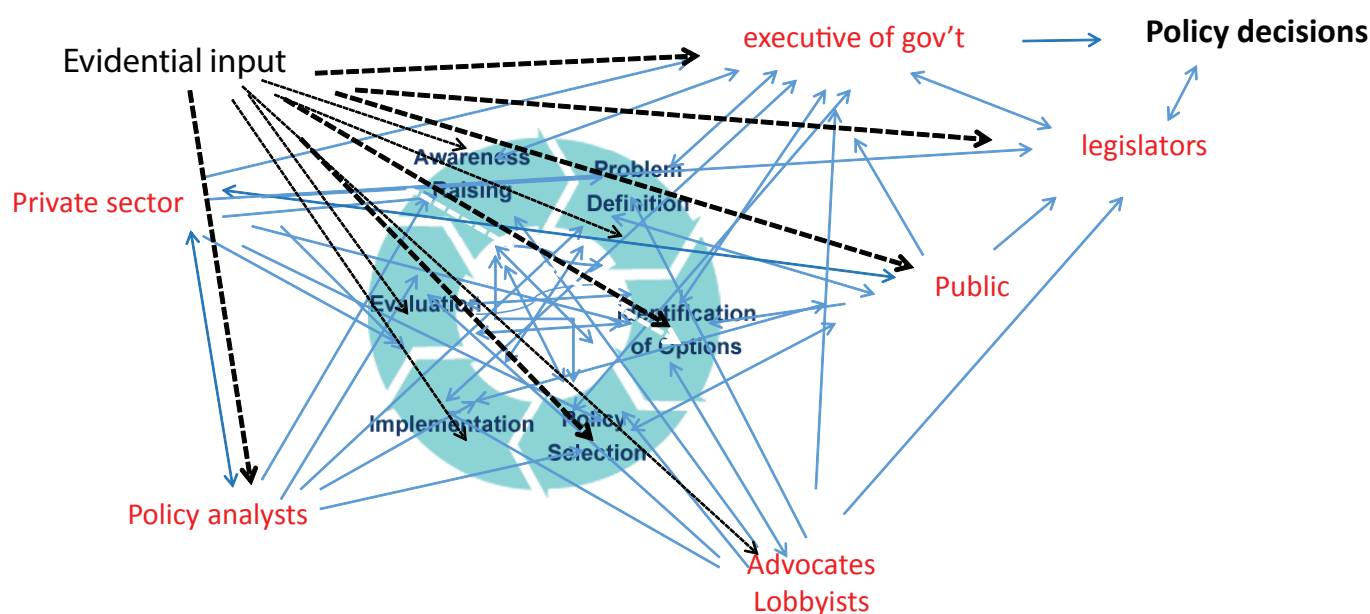


Figure 3: “Evidential input” needs to be introduced across the policy ecosystem to ensure its influence over final policy decisions *

The work of Dr Robin Gregory and the team at the US-based *Decision Science Research Institute* also provides important lessons for a new entity. The *Decision Science Research Institute* is a not-for-profit entity dedicated to improving policy decision making. An excellent account of their work and approach can be found in Gregory's 2012 book, *Structured Decision Making: A Practical Guide to Environmental Management Choices* (Wiley Blackwell). Gregory and his co-authors describe the "structured decision making" approach as one designed to help:

groups think through tough multidimensional choices characterized by uncertain science, diverse stakeholders, and difficult trade-offs. This is the everyday reality of environmental management, yet many important decisions currently are made on an ad hoc basis which lacks a solid value-based foundation, ignores key information, and results in selection of an inferior alternative. Making progress – in a way that is rigorous, inclusive, defensible, and transparent – requires combining analytical methods drawn from the decision sciences and applied ecology with deliberative insights from cognitive psychology, facilitation, and negotiation.

Their approach has been successfully applied to highly contentious water and catchment management decisions in the Mackenzie River Basin, home to Canada's longest river system and the second largest river basin in North America after the Mississippi. Like the Murray-Darling, the Mackenzie is a transboundary river basin across British Columbia and Alberta with 58 shared water bodies and a significant history of conflict between the hydroelectricity industry, fishers, conservationists and First Nations.

Gregory and his co-authors' ideas had a substantial influence on our design decisions for a new entity particularly their emphasis on the:

- ways strongly-held preferences change during carefully-structured processes of deliberative decision making
- importance of extending the definition of expertise to include a broader set of groups beyond academic researchers—e.g. policymakers, politicians, First Peoples and community leaders
- adoption of a "decision frame" rather than the more usual "study frame" (see main report for further discussion)
- importance of rigorously designing structured processes of decision-making so they are fit-for-purpose for a specific decision or set of decisions.

Considerable time and effort should be devoted to building a "toolkit" of well-researched and proven approaches to policy influence and deliberative decision making during any new entity's first year or two of operation. Consideration should be given to bringing thought leaders to Australia and/or

targeted study tours by the new entity's executive. The new entity's effectiveness will be significantly boosted by having access to a wide range of approaches that can be altered and adapted to fit the requirements of the specific projects within the entity's forward program of work. This future program must be developed through a consultative process, which is also likely to benefit from the application of such techniques.

6. Characteristics of an entity best positioned to influence water and catchment policy in Australia

Lessons from past attempts to influence policy as well as from the best international and national policy-influencing organisations suggest that any new entity should demonstrate:

- Leadership without partisanship
- Clearly articulated values, mission and agenda
- Commitment to transparency and openness in its operations
- A clear plan to develop trusted authority from proven "best-in-field" expertise on any of the issues within the scope of the Foundations' ambition combined with strong relationships with policy makers
- Creative communications to achieve cut through and change narratives.

Leadership without partisanship

The entity needs to demonstrate policy research and development leadership by remaining fiercely independent, cultivating access to deep expertise that allow it to produce innovative and intellectually rigorous products designed to influence and engage its extensive networks of water and catchment stakeholders.

Any new entity should be led by a respected leadership team:

- with existing trusted personal relationships with priority stakeholders or the ability to develop these relationships
- drawn from a set of candidates with deep expertise in relevant areas, but who are not "marked" by having previously taken strong, polarising positions in water and catchment policy debates
- able to attract and retain high-quality staff, while building networks across major hubs of best-in-field expertise.

Clearly articulated mission, values and agenda

The entity needs a clearly articulated mission, values and agenda. A provisional mission could be:

To catalyse policy reform that protects, restores and maintains Australia's lands and waters for the benefit of all Australians.

Achieving the mission will require the entity to develop and maintain coherent programs of well-defined policy projects designed to influence change towards specific policy outcomes. The programs should be developed following widespread consultation and include short- and long-term projects. The program should be subject to regular review. Suggested selection criteria for the forward program of work as well as areas that should be considered are provided at Section 8 in the main body of the report.

The entity's values should include:

- Independence
- Intellectual rigour
- Innovation and experimentation
- Collaboration
- Transparency and openness
- Benefits for all Australians
- Trusted authority from proven expertise combined with strong relationships with policy makers, stakeholders and the broader community.

The entity needs to be able to:

- establish its authority and standing as a trusted source of independent policy evaluation and advice
- draw on high levels of demonstrable and authoritative best-in-field expertise across a wide range of disciplines
- provide reputable advice on catchment and water policy as well as related policy areas such as regional development and agricultural structural adjustment
- establish strong links with cabinet ministers, ministerial offices and senior government officials in state and Federal government agencies as well as local management bodies
- collaborate widely and bring diverse stakeholders and communities together for respectful debate about critical policy issues
- work effectively across the entire nation, despite geographical and political differences
- work flexibly and nimbly to take advantage of policy "windows" for change at the same time as being able to work

on issues requiring long-term pressure and influence

- remain attentive to a range of concerns among interest groups and able to identify new ways of creating coalitions of common interest consistent with its overall mission.

Creative communications to achieve cut through and change narratives

The entity requires access to an effective and creative communications team able to drive a communications strategy that understands the human drivers for initiating, promoting or hindering change. The entity should be able to act as an effective communicator and persuader to cultivate debate and drive consensus for policy change consistent with its overall mission. Depending on annual budgets and the eventual scope and scale of the entity, this could include:

- linking expertise with broader community concerns and values to change the narratives that drive Australia's currently unsustainable use of its lands and waters
- developing an authoritative and independent media and social media presence using a wide range of communications modalities as appropriate to the project and issue under consideration (e.g. media briefings, reports, short films, blogs, podcasts)
- engaging creatively with the general public and the media using a range of approaches sensitive to urban/regional/rural contexts
- improving Australians' water literacy by developing a comprehensive strategy to engage with different generations via the media channels they use most often and the institutions they trust.

Given the scope of the Foundations' ambition and the likely budget constraints, any future entity should seek to establish links to an organisation with an exemplary communications team able to offer the above services (e.g. through some form of hosting or incubation arrangement).

7. Funding a program within an existing Australian think tank or like organisation

A number of existing think tanks or similar organisations expressed interest in receiving funding from the Foundations to establish a water and catchment policy program alongside their existing work. Such a program could be established quite cost-effectively. For example, the Grattan Institute has indicated that it would be able to establish a new water program for ~\$700,000 per year. This funding would cover three dedicated staff (a program director, a fellow and a junior) as well as a contribution to general communications and other shared program costs. A program could be up and running by 2020 (were funding available) and

the work completed in Stage 1 of the Australian Freshwater Study would give the program a head start. However, the Grattan Institute's experience with previous programs is that it takes three years for a program and its team to get up to full speed.

Options for funding a program in existing think tanks and other organisations that were examined through desktop analysis and/or consultation included:

- Grattan Institute
- ClimateWorks or the Monash Sustainable Development Institute (Monash University)
- Centre for Policy Development
- Wentworth Group of Concerned Scientists
- Australian Rivers Institute (Griffith University)
- Global Change Institute (University of Queensland)
- Melbourne Sustainable Society Institute (Melbourne University)
- CSIRO.

An investment in an existing organisation would be an easy option to implement given there are already a number of interested parties. It is likely, however, that such an investment would require the Foundations to reduce their ambitions with regard to the geographic and thematic reach (from Australia-wide to specific regions) and the quality (from transformative to incremental) of change achieved. Other limitations include:

- the impact and approach of the program would be highly dependent on the host's existing reputation and broader "house" approach to policy influence
- opportunities to grow the size of the program may be limited in some organisations (e.g. Grattan Institute) because the demands of the organisation's thematic breadth may limit the size of any individual program
- opportunities to work with best-in-field experts would be limited as (a) a number of the organisations listed above do the majority of their work in-house; (b) experts from around Australia may be less likely to work with an existing and potentially competing organisation; (c) some organisations would have limited convening power
- some organisations are more likely to want to progress a regional or specific water system focus.

The most likely outcome of the Foundation's investing in the creation of a program in an existing organisation would be to add another voice to the current debate. It is important to note that our analysis of 175 organisations in Stage 1 of the project identified a number that already devote part of their effort to water and catchment policy influence (e.g. Australia Institute, EDONSW,

Environmental Justice Australia, Humane Society, Wentworth Group). Creating one more such organisation is unlikely to lead to the transformative change the Foundations aim to catalyse.

Establishing a program within an existing organisation or think tank is unlikely to lead to the Foundations' achieving their ambition—indeed, investment in some organisations could be counterproductive. Some form of new, independent entity is required.

8. Positioning a new entity

A number of options exist for positioning a new entity. We examined and tested the following options and consulted with a range of relevant organisations:

1. a program within an existing, independent think tank or like organisation (analysed in more detail in the previous section and included in Table 2 overleaf for full comparison with other options)
2. an entity established as an unincorporated partnership with a university
3. an independent entity, with its own corporate identity, within a university
4. an independent entity, with its own corporate identity, initially incubated within an existing high-profile organisation (e.g. the Australian Academy of Science (AAS)) with a plan for growth towards stand-alone independence over a predetermined time-frame (e.g. five years)
5. an independent entity established as a stand-alone organisation.

Our analysis of these options against the objectives identified in Section 6 above can be found in Table 2 overleaf. However, we stress the following points:

- Reducing the costs or receiving in-kind provision of establishment and ongoing services (e.g. accommodation, payroll, HR) should not be a major deciding factor in any decision about locating a new entity. With the rise of cloud computing and increased availability of shared office space (e.g. WeWork), these services are commodity items that can be procured for a stand-alone entity for around 20% of total annual costs. The risks to the entity's independent operation and recruitment of best-in-field external teams arising from a sub-optimal hosting arrangement would greatly outweigh the benefits of such cost savings. Options for reducing costs should be considered as no more than ancillary benefits preferably as part of a hosting arrangement during an initial "incubation period."
- All our consultation with organisations to date suggests that the Foundations should consider negotiation as the preferred

approach to any future hosting, incubation or partnership arrangement for a new entity. A Request for Tender or other similar market-based approach is unlikely to help the Foundations fully explore the details of any future relationship for the new entity with another organisation.

- Establishing a program within or as an independent entity inside some existing organisations may present risks to the full implementation of the approach to catalysing transformative change recommended here. A number of organisations expressed considerable interest in receiving funding to establish a water program or an allied organisation under the auspices of an existing institute. Members of leadership teams of these organisations expressed a high-degree of confidence that their existing models of policy influence and engagement were an excellent fit for the water and catchment space and that few, if any, modifications to their modes of operation would be required. Establishing a new entity alongside or within an existing organisation that has its own corporate identity and well-established and codified approaches to policy influence may risk reducing the new entity's openness to deploying, iteratively testing, refining and validating a new approach to policy influence.

A fallback option

The Foundations should consider a fallback option for incubating the new entity in case negotiations with the AAS do not come to an acceptable conclusion. Having such an alternative is an important risk mitigation strategy. Our analysis suggests that the Monash Sustainable Development Institute (MSDI) at Monash University would be an acceptable fallback candidate for incubating the new entity. MSDI is moderately stronger than other alternate university or think tank hosting propositions that we examined—John Thwaites' role as Chair is a contributing factor to our assessment here.

However, it should be noted that an entity incubated at MSDI would likely evolve quite differently to one incubated at AAS. The existing corporate identity of MSDI and the existing approaches of MSDI organisations like ClimateWorks and BehaviourWorks have the potential to exert a strong influence over the development of the new entity. Considerable effort would need to be made to

ensure its complete independent operation and development of the approach identified here during any incubation period with MSDI.

Organisations consulted

The following organisations were directly consulted with regard to an interest in hosting or incubating a future entity or water program:

- Australian Academy of Science
- Australian Academy of Technology and Engineering
- Centre for Policy Development
- eWater
- Grattan Institute
- Griffith University
- Monash University, the Monash Sustainable Development Institute and ClimateWorks
- University of Melbourne.

Table 2: Evaluation results

Objective	Evaluation criteria	Independent corporate identity, incubated within an existing high-profile organisation (e.g. Australian Academy of Science)	Stand-alone independent corporate identity	Independent corporate identity within a university	Unincorporated partnership with a university	Program in an existing think tank or similar organisation
1. <i>Be independent of, and be seen to be independent of, external influences so as to provide leadership without partisanship</i>	<ul style="list-style-type: none">Financial independenceIndependent governanceUnfettered project selectionUnconstrained communication	<ul style="list-style-type: none">Independence requirements metAble to leverage host's considerable reputation for independenceReputation of AAS is a magnet for talent	<ul style="list-style-type: none">Independence requirements met	<ul style="list-style-type: none">Most independence requirements metRisks associated with being the smaller party in a relationship with a much larger entity.	<ul style="list-style-type: none">Difficult to ensure separate and independent boardProgram and project selection limited by partnership arrangementStaffing independence limitedRisks associated with being the smaller party in a relationship with a much larger entity	<ul style="list-style-type: none">Independence tied to that of hosting or auspicing entityDifficult to ensure separate and independent boardProgram and project selection may be limited by host
2. <i>Be recognised as a source of leading critical analysis and authoritative policy advice that “cuts through” across a wide range of water and catchment systems (e.g. rural, urban, high-value ecosystems) anywhere in Australia</i>	<i>Ability and capacity to synthesise expert knowledge, stakeholder values, policy-maker concerns and political constraints into viable policy recommendations</i>	<ul style="list-style-type: none">Able to leverage host's existing reputation and brandAAS hosting would provide considerable reputational advantages over other options	<ul style="list-style-type: none">Would need to build reputation and networks from scratchLag in establishing a brand identity	<ul style="list-style-type: none">Able to leverage host's existing reputationLimited regional knowledge, networks, credibility and authority outside own regionMinor risk of being typecast by the host's reputation	<ul style="list-style-type: none">Able to leverage host's existing reputationLimited regional knowledge, networks, credibility and authority outside own regionModerate risk of being typecast by the host's reputation	<ul style="list-style-type: none">Able to leverage host's existing reputationLikely limitations on breadth of issues considered for analysisLimited regional knowledge, networks, credibility and authority outside own regionStrong risk of being typecast by host's reputation
3. <i>Be recognised as a leader in delivering integrated policy advice across related policy areas (e.g. regional development, agricultural transformation, urban planning)</i>	<i>(2) above combined with the ability to provide broader, integrated analysis of socio-ecological systems and policy advice in related areas</i>	<ul style="list-style-type: none">Able to leverage host's existing reputationAAS hosting would provide considerable reputational advantages over other options	<ul style="list-style-type: none">Would need to build reputation from scratch	<ul style="list-style-type: none">Able to leverage host's existing reputationPossible limitations on depth of expertise available for cross-cutting issues	<ul style="list-style-type: none">Able to leverage host's existing reputationPossible limitations on depth of expertise available for cross-cutting issues	<ul style="list-style-type: none">Able to leverage host's existing reputationRisk of limitations on breadth of cross-cutting issues considered for analysis
4. <i>Be recognised as a leader in communications, able to change narratives and cut through entrenched ways of viewing water and catchment management problems</i>	<i>Able to access or provide outstanding communications capability across multiple media at national and regional level</i>	<ul style="list-style-type: none">Access to internationally recognised public communications unitGood regional focus	<ul style="list-style-type: none">Would need to build communications capability from scratch	<ul style="list-style-type: none">Draw on existing organisations' communications and media resources and networks, which are likely to be more sophisticated than a think tankMay be limitations in regional communications	<ul style="list-style-type: none">Draw on existing organisations' communications and media resources and networks, which are likely to be more sophisticated than a think tankMay be limitations in regional communications	<ul style="list-style-type: none">Draw on existing organisation's communications and media resources and networksMay be limitations in regional communications

Objective	Evaluation criteria	Independent corporate identity, incubated within an existing high-profile organisation (e.g. Australian Academy of Science)	Stand-alone independent corporate identity	Independent corporate identity within a university	Unincorporated partnership with a university	Program in an existing think tank or similar organisation
5. <i>Flexibly deploy bespoke teams of best-in-field expertise as needed to address specific policy issues</i>	<i>Ability to recruit and deploy to nationally and internationally recognised expertise in relevant policy areas and, where relevant, expertise with credible regional knowledge and experience</i>	<ul style="list-style-type: none"> AAS reputation and links with other academies (nationally and internationally) would provide the best opportunity to recruit best-in-field expertise 	<ul style="list-style-type: none"> Ability to recruit best-in-field would depend on establishing reputation for excellence and would be more difficult in early years 	<ul style="list-style-type: none"> Attracting best-in-field team members from across Australia may be more difficult, particularly if they are from competing institutions 	<ul style="list-style-type: none"> Risk that proposed model for extensive use of external teams is limited Attracting best-in-field team members from across Australia may be more difficult, particularly if they are from competing institutions 	<ul style="list-style-type: none"> Use of external expertise likely to be limited Risk that proposed model for extensive use of external teams is highly modified or abandoned
6. <i>Use a suite of approaches to policy analysis and development, applying those that are best suited to specific policy issues</i>	<i>Capacity and capability to effectively deliver a wide range of approaches to policy analysis and development (e.g. Chatham House Rule forums, citizens juries, structure decision-making tools) as appropriate to policy issues</i>	<ul style="list-style-type: none"> Unencumbered, flexibility to test approaches 	<ul style="list-style-type: none"> Unencumbered flexibility to test approaches 	<ul style="list-style-type: none"> No special benefits or limitations 	<ul style="list-style-type: none"> No special benefits or limitations 	<ul style="list-style-type: none"> Range of approaches available likely to be limited by existing methodologies and approaches
7. <i>Develop and maintain a broad network of experts, policy-makers, politicians, stakeholders and community leaders across state and Federal jurisdictions</i>	<i>Ability to attract and retain staff with existing relevant networks and the capacity and time to develop them further.</i> <i>Effective convening power</i>	<ul style="list-style-type: none"> Able to draw on AAS's (and ATSE's/ASSA's) considerable networks, reputation and convening power ATSE has deep water networks, so links with ATSE strongly recommended 	<ul style="list-style-type: none"> Would need to build networks and rely exclusively on networks of management team and board 	<ul style="list-style-type: none"> Depending on university, may have very strong water networks 	<ul style="list-style-type: none"> Depending on university, may have very strong water networks 	<ul style="list-style-type: none"> Able to draw on existing organisations' considerable networks and reputation Unlikely to have strong networks in the water field
8. <i>Establish the minimum viable organisation required to catalyse transformative change in the management of Australian water and catchments.</i>	<i>Able to achieve a minimum size of 10 FTE alongside growth in fellowship of at least 10 fellows per year with an annual budget of \$3.5M.</i>	<ul style="list-style-type: none"> No special benefits or limitations Possible that AAS could provide various operating services at no or reduced cost 	<ul style="list-style-type: none"> No special benefits or limitations 	<ul style="list-style-type: none"> No special benefits or limitations Likely that hosting institution could provide various operating services at no or reduced cost 	<ul style="list-style-type: none"> No special benefits or limitations Likely that hosting institution could provide various operating services at no or reduced cost 	<ul style="list-style-type: none"> Some options (e.g. Grattan Institute) would likely limit total size of program given need for balance with other programs

Appendix B - Key role descriptions

The board and senior staff of the entity should be strong systems-thinkers with the ability to link academic research, community objectives and political and policymaking imperatives across the major areas of focus. This requires an ability to analyse water issues both independently and in relation to allied policy areas such as regional development, urban planning and agricultural transformations, particularly in the context of climate change.

The Chief Executive Officer (CEO), directors and staff should all be hands-on and ready and able to work in a “start-up” culture with a small team and limited resources and able to lead a program to deliver on the entity’s mission with a high degree of independence and autonomy.

Chair of the board

The Chair will need to lead a diverse and high-powered board of eminent Australians with the independence, authority and knowledge required to govern the entity and develop trust among all key stakeholders. The Chair should be a respected top executive from public or private sectors or a retired state or Commonwealth cabinet minister with water and/or environment portfolio experience, a strong track record of leadership and a reputation for being an independent, “honest broker” with no partisan allegiances. Agricultural or regional development portfolio experience would be an added benefit. She or he must have peer access with CEOs, boards of major stakeholders and water authorities, departmental secretaries and ministers across Australia and be known as knowledgeable and passionate about water and catchment management issues. He or she must be able to devote significant time to the role and be an advocate for the organisation as they will need to remain actively engaged in setting the strategic direction of the entity and promoting the entity’s work and capability among his or her peer networks.

Board members

Board members should be peers to the Chair and able to provide similar levels of independence, authority and knowledge. They should balance key roles, age, gender and geography. Members should be a diverse group able to provide strategic advice and governance to the entity.

They should have extensive board experience, preferably across government, private and NGO sectors and demonstrate a mix of academic, private sector, public sector, NGO and political experience across areas drawn from the following: environmental management, agriculture, urban water and urban planning, Indigenous affairs, regional development, policymaking, finance, economics.

Research advisory committee members

A research advisory committee should have at least five people who are appropriately qualified in the fields of research to be

undertaken by the entity and/or have experience in reviewing research. The committee’s role is to help shape and evaluate the research undertaken by the entity and ensure it is, or may prove to be, of value to Australia.

Members should have a proven ability, evidenced by their academic qualifications and professional experience, to direct the entity’s research program. As a group, they should represent a range of high-level experience across areas drawn from the following: environmental management, agriculture, urban water and urban planning, Indigenous affairs, regional development, law, policymaking, finance, economics, ecology, hydrology, and social change and deliberative decision-making.

Influence advisory committee members

A small influence advisory committee, reporting to the CEO, should have approximately five members with extensive networks and a reputation for bipartisanship, able to connect the CEO with influential decision-makers and thought leaders in relevant areas of the entity’s focus across Australia. Members should be able to provide advice on the political and broader community response to the entity’s work and direction. The formation of this committee follows the examples set by the Monash Sustainable Development Institute/ClimateWorks and the Grattan Institute, which have similar advisory committees.

Members should be available for the CEO to seek advice on particularly contentious or difficult issues. They should be peers of the board members and Chair but drawn from those unable to make the commitment to the broader governance of the entity. Members could include former ministers, senior ministerial advisors and departmental secretaries with consideration given to former lobbyists or interest group leaders (wise choices will need to be made with this latter group).

Chief Executive Officer

The CEO should be a collaborative, innovative and empowering leader, comfortable with uncertainty and with experience operating across multi-stakeholder environments. The CEO should have demonstrated proficiency in developing diverse and high-performing teams and be comfortable working in an environment where outcomes are not known in advance and where ongoing learning is required. With the support of the board, the CEO will be required to articulate the entity’s vision, advance the entity’s strategy towards achieving its mission to drive transformative change in water, catchment and related policy decision-making in Australia. She or he will lead the development and delivery of the entity’s overall program of work.

The CEO will need to drive a culture of learning, collaboration and excellence that constantly adjusts and improves its approaches. Achieving these goals will require the CEO to represent the entity,

sustain and enhance its reputation and profile and develop and sustain the entity's networks including partnerships and relationships with key stakeholders. Candidates for the CEO role should have demonstrated experience and strong presentation skills required to be the "public face" of the entity. Given the importance of collaborative processes in the development and delivery of the entity's work programs the CEO will need to be a person of vision and intellect, with high empathy and integrity. She or he will require a high "EQ" and be capable of connecting with stakeholders and communities from a wide range of backgrounds (e.g. Indigenous leaders, agriculturalists, policymakers, industry leaders, political advisers, cabinet ministers).

Domain directors

The domain directors will lead the entity's work in one of the domains outlined in Section 7 and at Figure 5 and collaborate as required with other domain directors while managing external "best-in-field" team members and other advisors. Given the nature of the decisions that the entity will focus on, its projects will almost always be cross-cutting and multi-disciplinary. Directors must be able to work collaboratively within the entity and with expert teams and broader coalitions of stakeholders and communities. They will lead and coordinate the work of bespoke expert teams as well as manage a range of community engagement and deliberative decision-making processes. They must be able to represent the entity and enhance its reputation and profile while developing and sustaining the entity's networks including partnerships and relationships with key stakeholders.

Directors should have demonstrated leadership and program management experience with a knowledge of issues facing water and catchment management in Australia and internationally. They should be able to demonstrate expert knowledge and long-

standing experience in their domain of work for the new entity and should be peers of the experts likely to be engaged as bespoke team members. They will require high-level communication and coordination skills and the openness required to lead, work with, and learn from bespoke expert teams. As a group, they should represent a range of relevant knowledge domains (e.g. hydrology, ecology, economics, geography, law, political science, decision sciences, engineering) and have had post-doctoral or equivalent training in such areas.

Researchers

The researchers will support the entity's work in one of the following domains and collaborate as required with domain directors, other researchers, external team members and other advisors. Given the nature of the cross-cutting and multi-disciplinary projects, researchers must have the skills and aptitude to work collaboratively. Researchers should have project management experience and demonstrated training at post-doctoral level or equivalent in an area relevant to one of the program domains for the new entity. They should have high-level research, data analysis, writing and communications skills. As a group combined with the domain directors, they should represent a range of relevant knowledge domains (e.g. hydrology, ecology, economics, geography, law, political science, decision sciences, engineering) and have demonstrated experience in innovative problem solving using expert knowledge.

Appendix C - Summary of the Foundations' previous work

The Ian Potter Foundation and The Myer Foundation sought to better understand the ways philanthropic investment might transform the management of Australia's freshwater resources, protect their ecological integrity and ensure Australia's long-term water security.

Together, the Foundations funded a study of major issues affecting Australia's freshwater systems, which constitute the nation's inland waters. The consulting firms Point Advisory and Alluvium were commissioned to undertake this study, which was conducted between August 2018 and April 2019.

The study emphasised the major challenges of matching growing demand for water on a continent where fresh water is both scarce and its supply from rainfall and runoff so variable. These challenges will become more severe in future given the likely impacts of climate change. Past attempts to secure reliable water supplies for agriculture, industry and urban development have irreversibly damaged many of Australia's important inland water systems. However, the primary finding from the study is that the fundamental water and catchment management challenges facing Australia are policy challenges.

Good policy is required to provide the institutions, the laws, the knowledge and the finances to govern the tensions and the politics inherent in the distribution of a finite resource and balance human needs with those of catchment and freshwater ecosystems. The study identified two key problems with Australia's current water policy settings:

1. The management and use of Australia's inland waters is not sustainable. Australia's river basins and waters will continue to be degraded under current land and water policy settings. Relatively undisturbed catchments, particularly in northern Australia risk being degraded by repeating the mistakes made to date in already over-developed areas.
2. More than 20 years of reform has not created sustainable water policy. Interest groups and political conflict continue to compromise water policy-making. Most work to improve the condition of Australia's freshwater systems and catchments focuses on treating symptoms not causes.

The study found that any transformative change in the way Australia manages its inland waters to address these two problems fundamentally requires a reignited policy reform process across the states and Commonwealth. This policy reform must be done with the objective of delivering enduring policy that merges land and water management for the common good. Reform must include an understanding of climate change impacts. However, the study also found that catchment and water policy reform in

Australia has stalled. No-one is driving the policy reform required.

A major gap impairing Australia's policy reform efforts is that Australia has no independent, trusted source of dedicated catchment and water policy advice big enough to catalyse such complex reform.

There is a role for philanthropic investment to fill this gap and catalyse transformative change by establishing a source of trusted, independent, non-governmental policy advice to identify, influence and monitor the policy reforms needed to protect, restore and maintain the ecological integrity and productivity of Australia's lands and waters.

The results of the study strongly suggested that if the Foundations wished to catalyse transformative change in the way water and catchments are managed in Australia they should consider:

Establishing a source of trusted, independent, non-governmental advice at the scale required to catalyse policy reform that protects, restores and maintains Australia's inland waters and their catchments for the benefit of all Australians.

In March and April 2019, the Boards of each Foundation agreed to co-fund a second stage of work to identify a model for establishing a new independent water and catchment policy entity capable of helping respond to Australia's water and catchment management challenges and drive transformative change in water and catchment policy decisions.

This report presents the conclusions from this second stage of work.

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