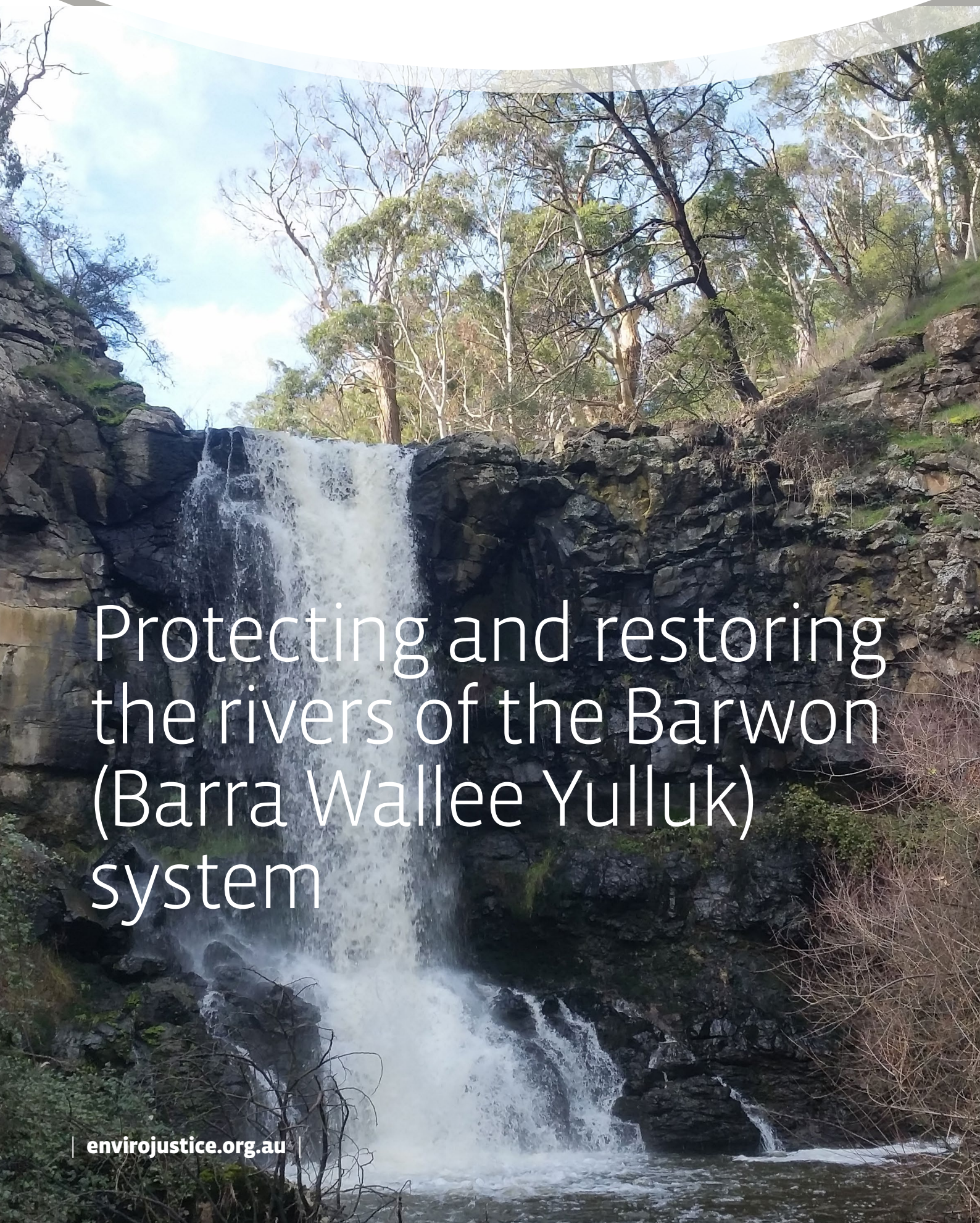
Friends of the BARWON

Environmental Justice Australia



Protecting and restoring the rivers of the Barwon (Barra Wallee Yulluk) system

About Environmental Justice Australia

Environmental Justice Australia is a not-for-profit public interest legal practice. Funded by donations and independent of government and corporate funding, our legal team combines a passion for justice with technical expertise and a practical understanding of the legal system to protect our environment.

We act as advisers and legal representatives to the environment movement, pursuing court cases to protect our shared environment. We work with community-based environment groups, regional and state environmental organisations, and larger environmental NGOs. We also provide strategic and legal support to their campaigns to address climate change, protect nature and defend the rights of communities to a healthy environment.

While we seek to give the community a powerful voice in court, we also recognise that court cases alone will not be enough. That's why we campaign to improve our legal system. We defend existing, hard-won environmental protections from attack. At the same time, we pursue new and innovative solutions to fill the gaps and fix the failures in our legal system to clear a path for a more just and sustainable world.

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Summary

In anticipation of the work of the Ministerial Advisory Committee, Friends of the Barwon and Environmental Justice Australia have convened a series of structured discussions and prepared the proposals set out in this report to achieve a healthy, flowing, life-sustaining Barwon River system.

The Barwon system is at a turning point. It is water system highly modified by human impacts but a singular living and functioning ecosystem nevertheless. Growing pressures on the system from water and land use decisions continue to put serious pressures on the integrity of the Barwon system. For example, notwithstanding the emergence of environmental water arrangements since the mid-2000s, there remains a significant (and growing) gulf between the actual conditions of the rivers system and river health.

In the context of these pressures, aggravated by climate change, the Barwon system faces an existential crisis as a network of 'living rivers'. To be understood as 'living' entities the rivers must sustain a base of ecological integrity and biological diversity.

Change to the management of this river system is inevitable. The question is in which direction it will proceed. Will priorities that take from the rivers continue, to the detriment and decline of the Barwon system, or will more sustainable and adaptive management prevail?

Our proposals below include place-specific legislation for protection of and improvement to these waterways, alongside complementary actions and programs. We propose governance reforms better adapted to recognition of the system as a 'living' system. We propose a framework for strategic planning, as well as behaviour-shifting mechanisms applying to how decisions are made and resources are directed to management of these waterways. These include water resources reforms aimed at achieving river health. Within these frameworks, key decisions – often politically difficult decisions – will need to be made to secure practical and specific measures consistent with pathways to river health.

In the absence of those pathways, rivers and waterways will decline, if not die, as living and 'life-giving' systems.

We advance these proposals as pathways to the changes needed for healthy, living rivers and to advance new ways to relate to them.

Introduction

Environmental Justice Australia (**EJA**) and Friends of the Barwon (**FoTB**) have collaborated in the preparation of these proposals for improved protection and restoration of key waterways in the Barwon River system (**Barwon (Barra Wallee Yulluk)**).

Between July and September 2019, EJA and FoTB jointly convened three workshops to discuss the following themes:

- reforming river governance for the Barwon River system;
- improving the existing 'law of the river'; and
- draft proposals.

Each workshop was informed by background papers looking at legal, practical and policy context, as well as other legal policy models for river management.

On behalf of both organisations, on 19 August EJA wrote to the Ministerial Advisory Committee investigating the future of the Barwon (Barra Wallee Yulluk) outlining preliminary thinking from the July and August workshops.

This report builds on the proposals contained in that correspondence and the work of the earlier workshops.

The challenges

Overall, the rivers and waterways of the Barwon system are in poor to moderate health. There does not seem to be a clear, coherent and unambiguous pathway to reverse this situation and establish new trajectories of improving river health.

Important efforts have been made over decades to recognise and ameliorate past, harmful practices, such as riparian revegetation, removal of polluting industries, and allocation of environmental flows. But the pressures on the Barwon (Barra Wallee Yulluk) are not presently abating.

The Barwon (Barra Wallee Yulluk), like other river systems, will face the impacts of a changing and drying climate. This acute pressure will be compounded by growing regional population, especially in Geelong and larger towns, under existing development models.

The Barwon (Barra Wallee Yulluk) is a highly modified water system. Key impacts have been extensive land clearing in the catchment, the removal or disconnection of wetlands and floodplains from river channels, large-scale impoundments, and diversions of water for water supply (urban, town, agricultural).

As healthy, biodiverse, natural entities, the rivers of the Barwon system face an existential crisis arising from the accumulating factors noted below.

The challenges a healthy Barwon (Barra Wallee Yulluk) confronts include:

- growth in demand for water supply and potentially insufficient water sources;
- land use changes impacting on flows and floodplain ecosystems, such as private dams, floodplain developments, and vegetation removal;
- compromised river health;
- climate change, including potentially non-linear trajectories of change and drying of hydrological systems;
- moderately to highly modified hydroecological systems, including for example floodplains functionally disconnected from river channels and growing frequency of 'cease to flow' events;
- constraints on the effectiveness of environmental watering;[1]
- fragmented governance of the Barwon (Barra Wallee Yulluk) system; and
- limited engagement by the general community in the fate of the Barwon (Barra Wallee Yulluk) system, or in other words the need for a heightened presence of the rivers in the public imagination.

The proportion of water allocated to consumptive uses has increased and proportion allocated to the environment has decreased, as long-term averages, in drying climatic conditions.[2] Water sources for consumptive use have diversified in this system but that comes with costs, especially to groundwater systems, which have not been internalised in resource accounting or decision-making.

This does not account for future climate risk.

This schedule of challenges and risks represents 'business as usual'.

We are at a turning point. It is foreseeable decline in waterway health can be contained and strategies and practices enabling improved health can be entrenched. In our view, we have no option but to address these challenges and opportunities.

1 Constraints on the benefits of held environmental water under these releases for the middle Barwon River (e.g. from Boundary Creek to Winchelsea) include limits of capacity to maintain low flows and avoid 'cease to flow' events 'under current system operations': VEWH 'Upper Barwon River', http://www.vewh.vic.gov.au/rivers-and-wetlands/central-region/upper-barwon-river. Cf CCMA *Environmental Flow Determination for Barwon River: Final Report – Flow Recommendations* (2006), 32–34.

2 DELWP Long-term Water Resources Assessment: Basin by Basin Synopsis (2019), 166–169.

What should be the long-term ambitions for the Barwon (Barra Wallee Yulluk)?

FoTB have come together with following stated goal:

> A healthy, flowing, life-sustaining Barwon River system which is valued by all the community.

This is both a 'goal and [an] obligation to the generations to come'.

River health needs to be understood in terms of the ecological integrity of the river system and its biological diversity. These are primary considerations. Human benefits and values are ultimately derivative of these primary considerations, in that in their absence rivers are essentially drains or channels.

The Barwon system, like all rivers and wetlands, has minimum thresholds for ecological health. Our current understanding of these thresholds is informed by science. Ensuring those conditions of health are met is not only a matter of good policy and practice; it is a matter of justice. These are just outcomes to current and future generations and underpin our obligations to rivers themselves. Dead, dying or seriously impaired rivers are an injury to our human souls as much as to nature.

The Barwon (Barra Wallee Yulluk) is an ecosystem of natural and human forces. That will continue to be the case. In that context, a healthy, flowing life-sustaining river system will require trajectories to be revised and reset, with the ultimate aim of embedding continuing improvement.

Trajectories of waterway health can be built on protection and restoration of waterways. Those outcomes can also be a product of *enabled* ecologies and *re-built* ecosystems and ecological functioning, in which humans either actively intervene or step aside and create space for nature to revive.

Finally, river health must also be accounted for in, and contribute to, climate resilience. Enabling natural processes, sustaining and re-establishing water ecosytems, and using 'nature-based' solutions to the climate crisis will be strategically crucial to mitigation and adaptation.[3] The Barwon system is amenable to this approach especially because of its extensive rural areas, forested headwaters and intact estuarine sections.

The effects of the climate emergency on our water resources generally is now well known.[4] That includes the Barwon system.[5] Not to take these effects into is not only unwise, it is negligent. That is a negligence currently playing out in the Murray-Darling Basin[6] and we insist it is not viable or acceptable for the Barwon.

What tools do we presently have at our disposal to achieve long-term ambitions?

There are various legal and practical, both formal and informal, measures protecting the Barwon (Barra Wallee Yulluk). These include:

- practices and ethics of care for waterways;
- water resources management including the environmental water reserve;
- scientific and technical knowledge;
- land use planning;
- public lands and stream reserves;
- environmental laws, including international protections; and
- protections of Aboriginal heritage and Aboriginal uses and values.

We will need to mobilise and integrate as best as possible all of these elements and features of river health management in order to achieve the trajectories of change needed and sought for our rivers and wetlands.

3 See e.g. Peter Davies 'Climate change implications for river restoration in global biodiversity hotspots' (2010) 18 *Restoration Ecology* 3 261; WWF and ABI *Climate Change and Water: Why Valuing Rivers is Important* (2019), https://d2ouvy59p0dg6k.cloudfront.net/downloads/wwf_abi_water_climatechange__final_.pdf

4 See generally CSIRO Climate Change in Australia, https://www.climatechangeinaustralia.gov.au/en/

5 CSIRO and DELWP *Barwon Climate Projections 2019*, https://www.climatechangeinaustralia.gov.au/media/ccia/2.1.6/cms_page_media/508/Vic%20Climate%20Projections%202019%20Regional%20Report%20-%20Barwon.pdf

6 South Australia *Murray Daring Basin Royal Commission Final Report* (2019)

Forging new tools and adapting the ones we have

A new phase in river management must be built on the foundations we have in order to better meet current and anticipated challenges. Trajectories need to be reset in order to 'drive change' toward healthy and restorative practices.

Key features of this new phase are set out below.

Reformed governance

Rivers legislation and the Barwon system as a 'living entity'

Special purpose, 'place-based' laws are a powerful, potentially transformative mechanism to protect, restore and create the conditions for the health of the Barwon (Barra Wallee Yulluk).

We propose a *Barwon (Barra Wallee Yulluk) Protection and Restoration Act* (the 'Barwon (Barra Wallee Yulluk) Act') which would establish clear direction from Parliament for a new phase of river governance, better alignment of the work of public decision-makers, and an intention to achieve positive trajectories of change.[7]

The Barwon (Barra Wallee Yulluk) Act would recognise the river system *as a living, natural entity*. Recognition would be accompanied by obligations to ensure the system's ecological integrity and require resource use based on the river system to be consistent with sustainability and a demonstrable contribution to long-term river health.

Recognition of the Barwon (Barra Wallee Yulluk) as a living entity can occur with or without the vesting of *legal* personhood in the river system. Under the *Yarra River Protection (wilip-gin Birrarung murron) Act 2017* the river is recognised as a type of cultural person or entity. In other words, the existence of the river as an 'entity' is a 'statutory fact' on which management and governance of the river proceeds.

A 'Rivers Council' and reformed institutional space

We propose reform to how the Barwon (Barra Wallee Yulluk) system is governed.

Whether as a legal or factual entity, management of the Barwon (Barra Wallee Yulluk) will rely upon human institutions for its protection, integrity and improving health.

Other basin-wide or corridor-scale projects have developed models that can inform governance of the Barwon system, such as the Yarra River, Parramatta River, Swan River, Brisbane River, Derwent River and Whanganui River.

Policy-making, advocacy, executive and technical functions all need to be considered and integrated transparently into governance. Without being conclusive, we propose the following elements.

- We propose establishment of a 'rivers council' as the system's guardian. The Council would include senior representatives (CEO level) from each relevant municipality and public authorities, community groups associated with each main river community; and indigenous representation.
- The Corangamite Catchment Management Authority should be the 'lead agency', operating at the strategic planning, 'project coordination' or 'delivery engine'[8] level.

7 The *Yarra River Protection (wilip-gin Birrarung murron) Act 2017* is a model for this type of legislation. However, legislation for the Barwon (Barra Wallee Yulluk) would need to be framed for the circumstances and governance needs of that system.

8 See *Parramatta River Catchment Group: Master Plan Governance*

- There should be a Technical Panel, providing expert advice, peer review and scientific evaluation of proposals and performance.
- Oversight of performance should be included, which may be by an independent statutory officer (such as the Commission for Environmental Sustainability) or otherwise by way of independent review.

Protect and restore land and waters to the maximum degree practicable

To achieve river health and enable trajectories of improvement over the long-term, Barwon (Barra Wallee Yulluk) management must manage and integrate land and water resources.

Strategic planning for connected river corridors

We propose statutory strategic planning for the Barwon (Barra Wallee Yulluk) system, founded on an adaptive 50-year vision and framework plan, and built on periodic (e.g. 10-year), integrated strategic plans.

Geographically, this planning arrangement must encompass the course of the various major rivers and waterways (longitudinally), and traverse at least river channels, riparian lands and floodplains (laterally). This would be the declared area of the Barwon (Barra Wallee Yulluk) system. Complementary actions can and should occur outside these declared areas in the rivers' catchments.

'Naturalistic' flow regimes based on river health thresholds

Current and historic water use patterns, including growing consumptive use and declining environmental water, will not be sustainable in the future, especially in the context of a drying climate. In effect, current practices and 'business as usual' in relation to water management is eroding the 'natural capital' base of the Barwon (Barra Wallee Yulluk) system.

Land use changes will only be sustainable if development trajectories are matched and out-performed by ecological restoration achievements in catchments, on floodplains, and in riparian zones.

River health requires naturalistic flow regimes, as well as land custodianship, sympathetic land uses, and the improvement of biodiversity and ecological processes. Revegetating the landscape will be important, as will re-creating waterscapes to the greatest degree practicable, with the Barwon (Barra Wallee Yulluk) becoming biodiversity and amenity corridors.

The underpinning principle of water management in the Barwon (Barra Wallee Yulluk) system will have to include flows management within requirements of objectively-determined health of the river system, based on the best available science. 'Best available science' will be the key, if not predominant, source of objectively determined health.

This broad approach is consistent with a model of sustainability. Water management in Victoria is based on the principle of sustainability.[9]

This river health outcome will require adjustment of the environmental water reserve as applied to the Barwon (Barra Wallee Yulluk) system and potentially amendment to the statutory model of the environmental water reserve. The current environmental water reserve as applied to the Barwon (Barra Wallee Yulluk) system will be insufficient to achieve river health and establish 'naturalistic' flow regimes.[10]

Pathways to sustainable flows

There are minimum thresholds to river health, informed by science,[11] and these are not being met. It is not clear what the pathways are to meeting them. In our view, nonetheless, it is essential they be met, by structured, time-bound arrangements, underpinned by law.

A Barwon (Barra Wallee Yulluk) Act would include requirements for the establishment of pathways to sustainable flows management,[12] in the terms outlined above, by 2025.

While we do not seek to be prescriptive as to how those pathways may be configured, one direction should include innovation in water sources, in particular based on treatment and water re-use. To the extent these innovations and the diversification of water sources emerge, benefits from 'new' water resources must be transferred to rivers for the purposes of river health (in effect transferred to the environmental water reserve). In essence, one important mechanism to enable trajectories of river health to be achieved, based on ascertained thresholds, is to require innovation in water sources, where these do not compromise (or rather further compromise) river health. The savings product is 'returned' to the rivers in terms of reductions in diversions. Innovation in this context must also include innovation in savings in relation to existing water sources.[13] The opportunity for 'savings' and transfers to river health through, for instance, recycling and alternative management of water as 'discharge' is significant.[14]

Another improvement approach is to require a planned transfer of water resources from consumptive uses to the environmental water reserve, based on a fixed quantity per year. Barwon (Barra Wallee Yulluk) management would work with water users and institutions to determine the best water to achieve this outcome until the minimum river health threshold is met.

Further, reduction or removal of system inefficiencies in

9 *Alanvale Pty Ltd v Southern Rural Water (Red Dot)* [2010] VCAT 480

10 See Jacobs *Moorabool River FLOWS Study Update: Final Report* (2015); Alluvium *Upper Barwon, Yarrowee and Leigh Rivers FLOWS study update* (Report prepared for Corangamite Catchment Management Authority, 2019)

11 In particular the FLOWS studies cited above.

12 See also PALM *Submission to State Government Water Plan 2016*, 13 May 2016, http://mooraboolriver.org/index.php/water-plan-submission

13 For example, rule-based changes requiring volumetric controls on stock and domestic extractions to give priority to the environmental water reserve.

14 Around 90% of 'wastewater' from the Barwon basin is not recycled and is discharged to the ocean: DELPW Victorian Water Accounts 2017-18 (2019), Table 3-6, p 46

water supply in Barwon Water system and Central Highlands systems could contribute thousands of megalitres of water savings that could be returned to river health.[15]

This approach requires priority to be given to the 'public resource' imperatives in water management rather than commercial imperatives.

In order to facilitate river health management in the terms outlined above, we propose that a Barwon (Barra Wallee Yulluk) Act include obligation on decision-makers to demonstrate a *net gain for the environment* in individual decisions, policies, plans and programs that concern the Barwon (Barra Wallee Yulluk) system. Progressively, this approach will drive institutional actions, community thinking and behaviour beyond 'business as usual'. This approach could employ development and resource-use protocols requiring joint development/restorative objectives, such as proposed by 'biodiversity-sensitive urban design' methods. A 'net gain for the environment' rule will enable norm- or behaviour-shifting outcomes, to which Victoria's biodiversity laws are also intended now to contribute.[16]

A legislative scheme for the protection of the Barwon (Barra Wallee Yulluk) system should also include clear and enforceable *targets for river health* which would be set for the Barwon (Barra Wallee Yulluk) *at major confluences*, such as at Inverleigh and at Fyansford. Targets would be specific, measurable and time bound, informed by best available scientific knowledge.

The Statement of Obligations applying to water authorities should be amended to include an obligation to balance water supply and waterway health[17] and to exercise functions and powers, to the maximum degree practicable, in a manner consistent with trajectories of long-term river system health.[18]

By definition, the above proposals depend on models of 'best available science' and translation of that framework into various statutory contexts. This turns attention to the need for legal, institutional and practical measures sufficient to ensure this standard is met and that decision-making and action is so informed. The public should have ready access to relevant scientific information, including data and analytical methods. This information should encompass knowledge generated by public, private and nongovernmental actors where relevant to public management functions of the Barwon (Barra Wallee Yulluk) system. Additionally, key public authorities should be obliged to collect and disseminate scientific and environmental information relevant to system management. This can operate as a general obligation[19] alongside any current requirements to collect and disseminate particular types of forms of information.[20]

The management of knowledge for protection and improvement of the Barwon (Barra Wallee Yulluk) system should be based on a statutory repository established for that purpose.[21]

Provide the resources to enable change

Long-term river health requires resources. Currently, resources are directed to these ends in the form of natural resources funding, environmental water, and staffing of government agencies and nongovernmental organisations. Resourcing, whether financial or human, is implicit in a positive program and framework for river health.

The Barwon (Barra Wallee Yulluk) is influenced presently by programs for:

- riparian restoration and stream rehabilitation,[22]
- monitoring and applied sciences;
- citizen science and public connections to waterways;
- community and school education;
- private land conservation;
- environmental watering;
- recreation;and
- planning.

Management of the Barwon (Barra Wallee Yulluk) system, as a single, living entity, can be informed by ecological-economic models relating to the values and uses of these rivers and catchments. Those models can provide a framework and tools for transparent accounting of resource needs. Not only commercialised transactions, such as water supplied to residences and industries, should be accounted for in the allocation of funds and resources. The intangible and non-commodified benefits of river health and a restored Barwon (Barra Wallee Yulluk) need to be recognised and paid for – clean water, biodiversity, carbon sequestration, recreation, human health, and so on. This is a debt past and current generations are paying to future generations.

The Victorian Government's biodiversity policy insists on this type of approach.[23]

A method or formula for contributions to resourcing the health of the Barwon (Barra Wallee Yulluk) from all key stakeholders – the State, public agencies, local government, and community – should be established.

15 DELWP Victoria Water Accounts 2017-18 (2019), Tables 8-35 and 8-37, pp 289-290

16 Recent amendments to the *Flora and Fauna Guarantee Act 1988* (Vic), introducing a new section 4B, include a 'strengthened' duty on public authorities and Ministers to implement biodiversity conservation and restoration in the course of their business. This provision is intended to shift the norms and behaviours of public authorities in a manner similar to that operating under the Chapter of Human Rights and Responsibilities Act 2006 (Vic): see *Bare v IBAC* [2015] VSCA 197, [235]

17 Statement of Obligations (General) (2015), cl 6-1

18 E.g. by amendments to Statement of Obligations (General) (2015), cl 7-2

19 See e.g. the general obligations set out under Article 5 of the Aarhus Convention: https://www.unece.org/fileadmin/DAM/env/pp/documents/cep43e.pdf.

20 For example, information on the Water Register or information provided under the Statement of Obligations applying to water authorities.

21 This arrangement could build on the 'knowledge base' of the Corangamite CMA: http://www.ccmaknowledgebase.vic.gov.au/

22 See eg Ian Rutherford et al A Rehabilitation Manual for Australian Stream (Land and Water Resource Research and Development Corporation and Cooperative Research Centre for Catchment Hydrology, 2000)

23 Victorian Government *Protecting Victoria's Environment – Biodiversity 2037* (2017), Ch 5; Minister for Energy, Environment and Climate Change and the Minister for Health *Victorian Memorandum for Health and Nature* (2017), https://www.environment.vic.gov.au/biodiversity/victorian-memorandum-for-health-and-nature

Conclusions

Challenges to the health of the Barwon (Barra Wallee Yulluk) remain. The ecological health of the river system is related closely to the practices and behaviours of communities and institutions in the region and in the catchments of these waterways and wetlands.

A wide range of regulation and measures are currently applied to the Barwon (Barra Wallee Yulluk) system with the aim of protecting the ecology and natural values of these waterways and wetlands. Protection of these values is generally balanced with resources uses and exploitation, such as water supply, farming, recreation and infrastructure.

These measures and trade-offs are not sufficient to ensure the long-term health of the river system, especially in a changing climate.

Our proposals advance the objective of long-term ecological resilience of the Barwon (Barra Wallee Yulluk), with communities and institutions ensuring that resilience. Communities will be the major beneficiaries of a resilient, flowing and healthy river system.

Reforms to governance will serve this ambition for long-term resilience of the Barwon (Barra Wallee Yulluk). A shift in focus is required. We propose that shift is best given effect by means that include, but are not restricted to, special purpose legislation for the protection and rehabilitation of the Barwon (Barra Wallee Yulluk) system.

That legislation would be a centrepiece in new governance arrangements and enhanced programs for river protection. It would aim to set a vision, and to establish legal and practical arrangements for healthy, flowing, restored Barwon (Barra Wallee Yulluk), over the next 50 years.

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