

Securing funds for waterway investment – boring but important

Les Tate¹

¹ Catchments Branch, Victorian Dept of Environment, Land, Water and Planning, 8 Nicholson St Melbourne, VIC 3002, les.tate@delwp.vic.gov.au

Key Points

- Government processes for securing investment are convoluted, data driven, and focus on economic arguments
- A powerful, unified narrative is vital, therefore a core team of quality writers sustained over a year or more will deliver the best results
- Collaboration across key stakeholders and agencies to build the investment story “bottom up” is required to incorporate the complexity necessary
- Writing a business case is a process, not a document

Abstract

In Victoria, the Department of Treasury and Finance controls allocation of funds to programs through processes under the Investment Management Standard, particularly the writing of a template-driven business case. In the 2015-16 round of business case submissions, Catchments Branch within the Department of Environment Land Water and Planning set a goal of substantially improving the quality of its submission for waterway health and environmental water program funds. Goals were particularly set in relation to: the theory and evidence used to support economic arguments; the level of collaboration between catchment management authorities and departmental business case writers; and the establishment of a small team dedicated to the writing effort. A new "top down" theoretical economic methodology was mixed with specific "bottom up" case study material to develop an integrated powerful narrative, with positive results.

Keywords

Waterway health, investment, business case, environmental water, logic map

Introduction

Just like rivers in Victoria, money doesn't always “flow” from the Treasury out into government programs. No funding is guaranteed for anything, and the government departments that strive to deliver programs must regularly justify the need for further funding through a business case or similar document. At global, federal and state levels, there is a long term economic drought, and “cease to flow” events are not uncommon...

Within the Victorian Government, business cases for government programs nominally follow a similar process, which entails a competitive process of assessment to determine alignment to policy, value for money and community need and benefits. A program of river restoration isn't quite directly compared to a program of school building restorations, but this is the overarching principle of the centralized process.

This competitive element can also apply *within* a government Department, such as Justice or Environment. A program of terrestrial threatened species management may be preferred over a program of river restoration. The Minister and their advisers will make their own expert judgment on which of these programs to support through a given funding round, based partly on the quality of the information provided to them, and of course the political priorities and sensitivities of the day.

Given these layers of competition for the public purse, the writing of a compelling, integrated and data driven business case is a vital element of ensuring funding still flows to regional waterway restoration programs. This paper unwraps the key aspects of writing a successful business case under the Victorian Department of

Tate, L. – Securing funds for waterway investment

Treasury and Finance (DTF) Investment Management Standard (IMS) model, using the recent experience of the Waterway Health and Environmental Water (WHEW) teams in the Catchments Branch in the Victorian Department of Environment Land Water and Planning (DELWP). All documents related to a specific round of business cases (including the business case itself) are cabinet-in-confidence, and cannot be presented or quoted here, so this paper outlines the key aspects of the process and content at a broad level.

A quick history of waterways investment in Victoria

Prior to the establishment of catchment management authorities (CMAs) in Victoria in 1996 under the *Catchment and Land Protection (CaLP) Act 1994*, integrated programs of waterway protection or restoration were rare. Funding tended to focus on local community-based efforts, including those under the Victorian Water Trusts, where they existed.

Under the Ministerial Statement of Obligations for CMAs¹, these agencies are required to develop and deliver programs of waterway health works. This requirement provided the clarity and certainty for both federal and state governments to allocate funds to a range of programs. As CMAs evolved, so did their ability and capacity to develop longer term plans and strategies. This occurred alongside one of the worst droughts in Australia's history (2000-2010), and extensive amounts of funding were provided through large federal programs including NAP and NHT. The Murray Darling Basin Plan also demanded large scale planning and works which directly involved CMAs. In this way, environmental imperatives, community awareness, agency capability and legislated opportunity aligned in a lovely marriage that provided significant and sustained investment in waterway health in Victoria throughout the decade.

At the same time in Victoria, the Bracks/Thwaites Labour government established the Environmental Contribution Levy. As noted in the Victorian Auditor General's Office (VAGO) 2014 report²:

The *Water Industry Act 1994* (the Act) states that the monies raised by the levy are to be used specifically to promote sustainable management of water and/or address adverse water-related environmental impacts[...] and it is expected that just under \$1 billion will be raised by the end of the third tranche in 2015–16 [ie over 12 years].

The ECL originated in 2004 as the key funding mechanism for the Victorian Government's *Our Water Our Future* policy, which identified a number of water reforms and environmental initiatives aimed at improving the sustainability of our water supply and usage.

Why should government fund these waterway restoration programs? It is essentially the private sector that derives the benefit from water supply for agriculture and the economy at large, so why don't they pay? The argument is essentially one of public good and non-excludable benefits (there is no "market" for private enterprise to "sell" such programs), and not the scope of this paper. By establishing the ECL, the Victorian government provided a mechanism whereby all members of the public make a direct financial contribution to waterway restoration, linked back to the benefits that all sectors of the community and economy derive from efficient water supply. However, the funds collected under the ECL still go into Treasury, and can only then be distributed to programs via an accountable process run by DTF – the Investment Management Standard.

¹ http://delwp.vic.gov.au/_data/assets/pdf_file/0020/318053/Statement-of-Obligations_CMA-2006.pdf

² *Administration and Effectiveness of the Environmental Contribution Levy*, Victorian Government, June 2014

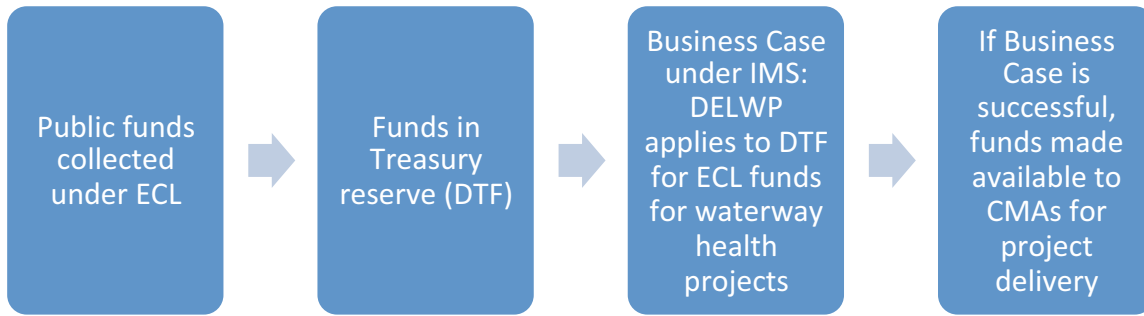


Figure 1. Simplified representation of flow of WHEW funding under ECL

The DTF Investment Management Standard

The Investment Management Standard (IMS) is “a collection of simple, commonsense ideas and practices that help organisations to direct resources to deliver the best outcomes.”³

The central part of the IMS process is the writing and submission of a business case according to the requirements and templates established by DTF. The IMS is designed to focus the program developer (ie the government department/team that seeks the funding) on four key elements of a program:

1. Problem(s) – in simple terms, what is the program trying to “fix”
2. Benefit(s) – if the problem is fixed, what will be the benefits
3. Strategic responses – at a high level, what are the main approaches that could be applied in fixing the problem
4. Solution – considering the pros and cons of the strategic responses, what is the most pragmatic and low risk mix of approaches that should be implemented

Diagrammatically, the IMS process is underpinned by the development of an Investment Logic Map (ILM). This is a customized type of Program Logic, built around the above four elements. It can be pictured as a “Program Logic turned sideways”, and with a stronger focus on problem definition. Essentially it structures the narrative of the business case as follows:

“We’ve identified the following problem(s). If these problem(s) are fixed/remediated, the State (communities and government) will receive the following benefits. We have considered a range of broad strategic responses for addressing the problems, and decided on the following mix of responses as the best approach. In order to achieve these strategic responses, we’ve planned the following program, which features the following key elements.”

The process of developing an ILM is tightly ordered – it occurs within a week, starting with a focused two-hour workshop where only a central handful of those responsible for the program attend in a “stand-and-deliver” approach. Attendees must be well prepared to support their program – especially with recent and relevant data and evidence that clearly shows how and why the program should be implemented. The development of an ILM must be facilitated by an independent consultant who is accredited by DTF. In this way, DTF maintains a level of quality control over what is produced.

³ <http://www.dtf.vic.gov.au/Investment-Planning-and-Evaluation/Understanding-investment-planning-and-review/What-is-the-investment-management-standard>

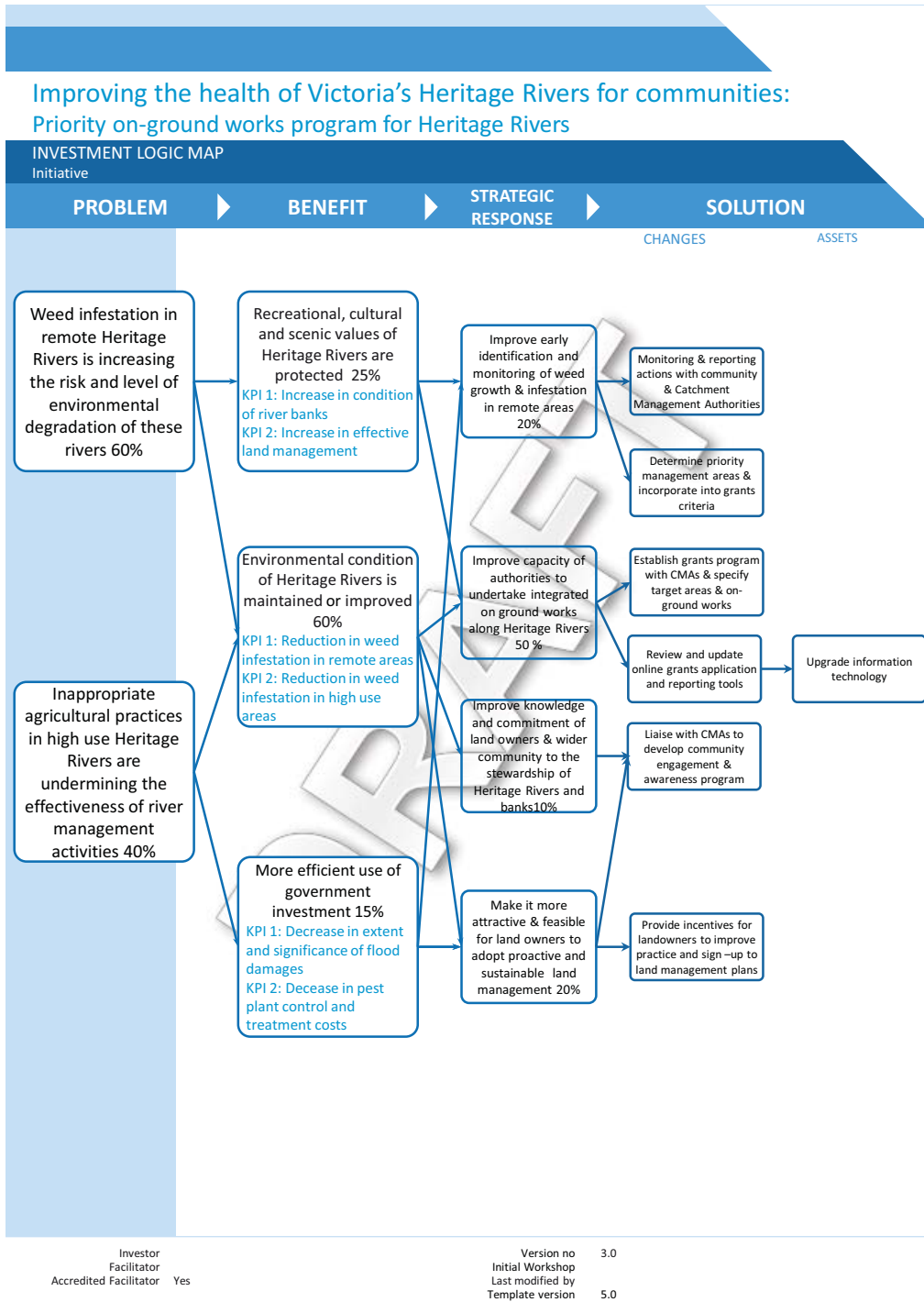


Figure 2. Sample ILM for a waterway health program

It can be seen from this sample that an ILM sits at a high level, and doesn’t deal with particular rivers, landscapes, the politics of riparian landholder agreements, scour holes, fishways, spring freshes, and all the other myriad details of a waterway health and environmental water program.

Tate, L. – Securing funds for waterway investment

The IMS Business Case as a dissertation on risk management

Arguably the most central theme that unifies the DTF IMS Business Case template is risk. Governments must be risk-averse, as they have a fundamental responsibility to public taxpayers to expend funds in a low-risk fashion, underpinned with good governance and probity. Risk has to be managed at a range of levels, including:

- Funding will be spent – the planned program can actually be delivered in the timeframe and manner described; the funds won't remain in Treasury with the program not implemented, presenting an embarrassing situation for government and reduced service to communities.
- Equity of access – the program is delivered and distributed across the population in a way that does not unreasonably exclude groups within the community, eg the elderly, regional towns, soccer players, Presbyterians, recreational fishers.
- Designed to meet the identified problem(s) – there is data and evidence to demonstrate that using the funds in the way described will actually address the problem, and not just “do some good works”, ie the funds are well-targeted.
- Limited disbenefits – delivering the program won't have adverse outcomes on other aspects of society, for example, won't contribute towards pollution, or won't create an imbalance in a market sector.
- Strong protection against corruption or other misuse of funds – the program mechanisms prevent individuals from misdirecting the funds for personal benefit, particularly in the way contracts are awarded.

In other words, a substantial amount of the business case is directed towards providing evidence to support the following basic statements:

- We know *how* to spend the money, and we *can* spend it in the timeframe.
- We will buy the things we say we will buy.
- We can effectively guard against corrupt misuse of the money.
- Spending the money won't have adverse impacts on other areas of society.
- The problem(s) we have described are genuine, immediate and need remediation – they are not “made up” to justify the funding – and the funding will directly contribute to remediation of the problem(s).

These are obviously not issues or concerns related to the environment in general, or waterways in particular, or about the anticipated environmental outcomes of the proposed program. They are fundamental issues that government faces when considering any sort of program for implementation, whether it be changes to tax law or building submarines or issuing permits for works on waterways.

DTF's assessment process – the 16 questions.

In making a balanced and defensible judgement on which programs to fund, DTF uses a matrix of 16 key questions. As with the risk management element of the business case document described above, these questions are not focused on the specific content of a given program, but on an assessment of the business case's clarity of articulation of the problem(s), benefit(s), strategic response(s) and solution(s). A business case is very unlikely to proceed until all 16 questions can be clearly answered with a 'Yes'. Where there is doubt, the case will require further review and development, which can mean it is delayed for a year.

PROBLEM	BENEFITS	STRATEGIC RESPONSE	SOLUTION
1. Is it clear what the problem is that needs to be addressed, both the <i>cause</i> and <i>effect</i> ? Yes Partial No ?	5. Have the benefits that will result from fixing the problem been adequately defined? Yes Partial No ?	9. Has a reasonable spread of <i>strategic interventions</i> been identified and packaged into sensible strategic options? Yes Partial No ?	13. Consistent with preferred strategic option, has a reasonable <i>spread of project options</i> been analysed? Yes Partial No ?
2. Is there <i>sufficient evidence</i> to confirm both the cause and effect of the problem? Yes Partial No ?	6. Are the benefits of high value to the government? Yes Partial No ?	10. Is there evidence to demonstrate that the strategic options are feasible? Yes Partial No ?	14. Is the recommended project solution the <i>best value for money way</i> to respond to the problem and <i>deliver the expected benefits</i> ? Yes Partial No ?
3. Does the problem need to be addressed <i>now</i> and by this government? Yes Partial No ?	7. Are the KPIs SMART and will they provide strong evidence that the benefits have been delivered? Yes Partial No ?	11. Were the strategic options <i>evaluated fairly</i> to reflect their ability to respond to the problem and deliver the benefits? Yes Partial No ?	15. Is the solution <i>specified clearly and fully</i> ? (all business changes and assets) Yes Partial No ?
4. Does the defined problem capture its full extent/scope? Yes Partial No ?	8. Have key dependencies critical to benefit delivery been considered? Yes Partial No ?	12. Is the <i>preferred strategic option</i> the most effective way to address the problem and deliver the benefits? Yes Partial No ?	16. Can the solution really be delivered (cost, risk, timeframes etc.)? Yes Partial No ?

Figure 3. DTF assessment criteria of a business case under the IMS

The challenge for Catchments Branch in 2015-16

Within the context of both the previous recent history of waterways funding and the IMS process described above, the Catchments Branch in DELWP approached the 2015-16 business case process with the clear goal of “doing better” – to secure more funding for WHEW programs over the 2016-20 period.

A “perfect storm” of opportunity had been identified:

- clearer and stronger State and regional waterway strategies had been developed and approved by government over the previous three years.
- a Labour government (traditionally more responsive to environmental issues) was in place, with a Minister who appeared to be responsive to water-related issues and initiatives – provided they focused on community outcomes. This had been signaled by the Minister’s initiation of a new Water Plan for Victoria⁴.
- through hard work and a variety of collaborative approaches, DELWP Catchments Branch had strengthened its working relationship with CMAs, thereby allowing a much more collaborative approach to the planning and writing of the business case.
- the Branch had a dynamic, experienced and high-performing team in place to support the “long game” of writing the business case.

⁴ <http://delwp.vic.gov.au/water/a-new-water-plan-for-victoria>

To capitalize on this opportunity in the 2015-16 business case process, the Branch sought to achieve four goals:

1. Substantially improve the economic data and arguments presented for justifying the funding of WHEW programs. Good general data and evidence existed for the environmental arguments, but a quality Australian-based economic model was not readily available.
2. Improve the data and evidence provided around the employment benefits of WHEW programs (as a key sub-element of the economic arguments).
3. Develop a stronger argument for the value of an integrated WHEW program, especially with regard to the integration of on ground works and environmental water. Previous business cases had tended to focus on either element, and overlooked the value of integration.
4. Be clearer about the long term nature of environmental restoration programs. The longest funding timeframe available is generally four years, and as a result previous business cases had tended to shy away from a narrative that put four years of funding in the context of a 30-year restoration effort.

To achieve these goals, DELWP Catchments Branch recognized that the development of the business case would take a year or more, rather than the three or four months usually allocated to the process. This was especially relevant for the involvement of the key stakeholders in CMAs, the waterway managers, who needed extended time to ensure collaboration was effective.

Achieving the four goals

Improved economic valuation approaches

In 2013, DELWP implemented a change in the standards for describing outputs – the goods and services purchased/delivered under environmental programs. Previously, an overly complex array of outputs had been available in relevant systems, which had made statewide reporting cumbersome. This change reduced the standard outputs to a set of easily understood and described things: fence, revegetation, fishway, crossing, environmental water, weed control, monitoring structure, plan, publication, engagement event, and so on.

This change enabled CMAs and other partner agencies to more clearly define the type and level of outputs they could deliver under a given waterway restoration project, and also enabled clear targets to be set in both statewide and regional waterway strategies. In turn, these targets were clearly aligned to longer term outcomes in program logic under the Victorian Waterway Management Strategy (VWMS) to show the benefits of WHEW programs⁵. The process to develop this set of outputs took approximately four years of patient work and collaboration.

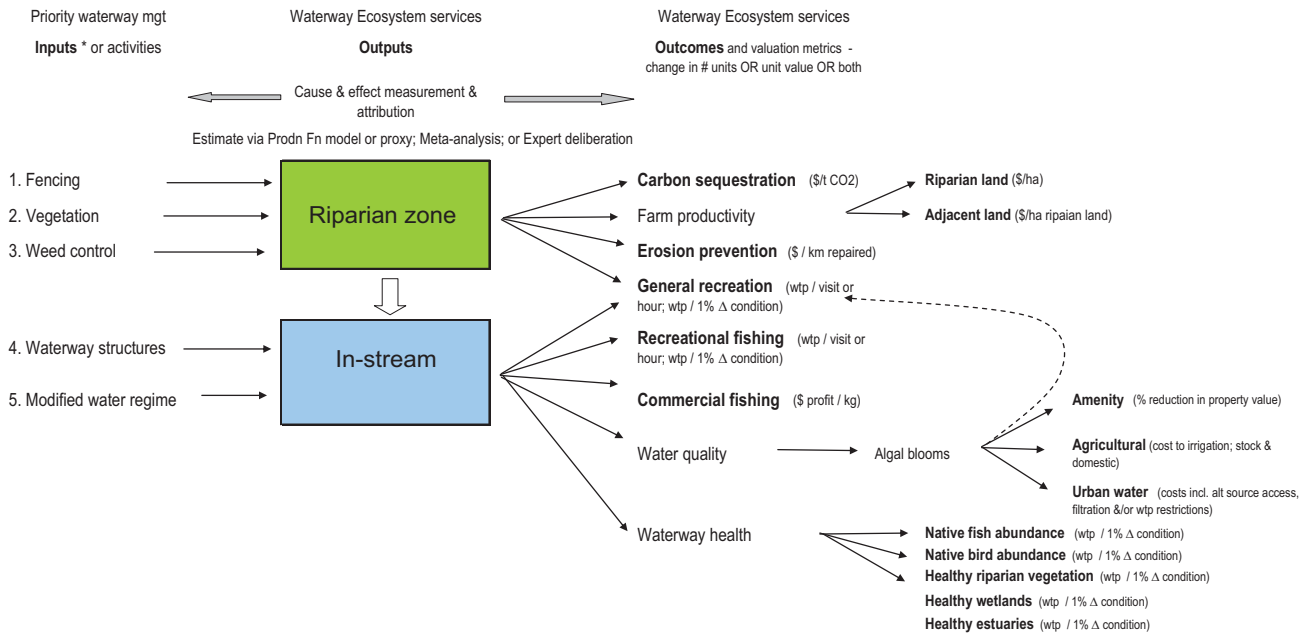
Early in 2015, Catchments Branch took a further step in the use of these standard outputs. An independent investigation was commissioned into how the benefits of delivering five of the key standard outputs (fencing, vegetation, weed control, waterway structures, modified water regime (aka environmental flows)) could be economically valued in Victorian WHEW programs⁶. The research built a benefit valuation framework for how

⁵ Victorian Waterway Management Strategy, Section 3.8, Victorian Government, 2013, <http://www.depi.vic.gov.au/water/rivers-estuaries-and-wetlands/strategy-and-planning>

⁶ Collins, D, et al, Valuing the benefits of Victorian waterway management, August 2015, unpublished study for Victorian Government

this could be done within an ecosystem services methodology, and used previous examples to build up a range of valuations for different activities. The work was largely theoretical and exploratory; a key finding was the high level of complexity and variability involved in determining the economic benefit value of a particular set of works in a given context at a given site. Nonetheless the work clearly demonstrated the soundness of the approach, and the pathway for including such valuations in a business case or other funding application.

Figure 3.1: Overview of conceptual framework



* These mgt inputs are described in Intrinsic Scope 2015, which in turn are based on linkages identified in the conceptual framework behind the AVIRA database and risk assessment tool

Fence (1.9). The length of fences installed, replaced, modified, removed or maintained. An area does not have to be fully surrounded by fencing if it effectively reduces disturbance to waterway.

Vegetation (2.1). The area vegetation has been established (eg. revegetation, buffers), modified (eg. supplementary planting) or maintained (eg. thinning, slashing or mulching). The output covers native and non-native species.

Weed Control (2.2). The area where weeds were controlled by removing or restricting them.

Waterway Structure (1.5). The number of structures installed, replaced, modified, removed or maintained, including carp screen, chute, fish barrier, fishway, flow regulator, groyne, large wood, outlet, rock seeding, sill, pile or pile field.

Water Regime (3.3). The number of sites where the water regime has been changed through de-ivery or dewatering

Figure 4. Benefit valuation pathways (from Collins et al, 2015)

Almost in parallel with this research, Catchments Branch commissioned a set of specific valuation case studies of five selected recent WHEW projects across Victoria⁷:

1. Water regime (1): Merbein Brickworks (Mallee CMA)
2. Water regime (2): Glenelg and Wimmera Rivers (Glenelg Hopkins and Wimmera CMAs)
3. Waterway structures: Campaspe River - Echuca (North Central CMA)
4. Revegetation/fencing/weed control (1): Gippsland Lakes (West and East Gippsland CMAs)
5. Revegetation/fencing/weed control (2): Thomson River (West Gippsland CMA)

The aim of this work was to gather as much data as possible about each project from a wide variety of sources, including community perception and anecdotes, and build a “bottom up” valuation using an ecosystem services methodology. Measurements and findings were presented in a series of infographics which were potentially suitable for presentation back to communities through public channels.

⁷ Boyd, T, CMA Case study infographics, 2015, unpublished study for Victorian Government

8ASM Full Paper

Tate, L. – Securing funds for waterway investment

While the two pieces of work did not directly align, both were based on an ecosystem services methodology. It became clear that the “top down” theory of the standard outputs-based valuation approach could potentially meet the “bottom up” approach of the project-based valuations. When considered together, the two pieces could be seen as a proof of concept of a new way to estimate and demonstrate the economic value of a set of WHEW projects.

This work provided a powerful basis from which to outline the calculated value of the programs described in the 2015-16 business case. Perhaps most importantly, it informed significant components of the detailed cost benefit analysis (CBA) that is required in the DTF IMS business case template. This was a major step forward from previous WHEW business cases, which had not had a robust enough economic methodology to support a fully developed CBA, and had instead relied on the inferior method of a multi criteria analysis (a weighted options ranking with limited underpinning economic data).

Catchments Branch continues to build on this work, with the next step in such economic valuations currently under development.

Improved employment data

Previous WHEW business cases had made general claims about the employment of CMA staff and local contractors to deliver programs, but had not supported this with historical data or authoritative research. It was an important but relatively straightforward effort to gather historical employment data from CMA programs over recent years, and extrapolate this forward based on certain levels of investment.

Australian estimates of an "employment multiplier" (the flow on jobs that WHEW programs support in communities) was harder to establish. Recent published research from the USA⁸ of budget information from state and federal programs that fund ecological restoration was used. This research showed that:

- natural restoration jobs have an employment multiplier (the number of jobs supported by every restoration job) of between 1.48 and 3.8 (compared to U.S. national figures for oil and gas (3.0), crop agriculture (2.33) and livestock (3.34)), and
- restoration projects “have particularly localized benefits, which can be attributed to the tendency for projects to employ regional labor and materials”.

In relation to this second point, the nature and quality of jobs was also emphasised, as it can be easy to assume that works programs predominantly employ unskilled labour. However, in order to deliver the type of program envisaged in an integrated and cost-effective fashion, the nature of work required is expected to not only include construction and labour staff, but also:

- project managers
- environmental planners
- ecologists and related environmental scientists
- waterway specialists including geomorphologists and hydrologists
- community engagement facilitators
- team leaders

⁸ BenDor T, et al, *Defining and evaluating the ecological restoration economy*, Journal of Restoration Ecology, Vol 23, April 2015

- financial managers.

Stronger and clearer arguments regarding program integration

Governments seem to love program integration, although it is perhaps not always clear to government (or communities) what this might mean, or how it might look when implemented. On the other hand, CMAs have been delivering highly successful integrated programs for years – combining multiple fund sources and linking multiple partners with high community involvement and technical skill over long timeframes to achieve quite amazing outcomes. These outcomes have frequently been realized at both the site-specific and landscape-scale levels.

However, the challenge for Catchments Branch was to describe this work within the confined language and structure of the business case template. The economic valuation work described above had shown that it was difficult to derive a consistent valuation metric for even just one standard output, much less an integrated set. The team made a decision to base the integration argument on focused case study material, again seeking to strike a balance between the high level theoretical economic arguments and the tangible achievements of the WHEW program. The existing close working relationship with CMA waterway managers facilitated the production of a number of very high quality case studies, including the one below:

<p>Latrobe River, Gippsland, south-east Victoria</p>	<p>270 km long, from Mt Baw Baw plateau to Gippsland Lakes near Sale.</p> <p>Named in 1841, in honour of Charles La Trobe, Lieutenant Governor of the Port Phillip District.</p> <p>66% of streams assessed in the Latrobe basin in DELWP’s 2010 Index of Stream Condition (ISC) were not in “good” or “excellent” condition.</p>
<p>Top five economic contributions to the economy of Gippsland.</p>	<ul style="list-style-type: none"> • Water source for power industry, domestic supply and agriculture; • waste water dilution from power industry and Macalister Irrigation District; • fertile floodplains for agriculture; • major freshwater source for the Gippsland Lakes which underpins major Victorian recreation/tourism destination; • recreational destination in its own right (upper and lower reaches and popular places like Blue Rock Reservoir and Lake Narracan).
<p>History of key waterway health changes</p>	<ul style="list-style-type: none"> • from 1930 to 1970, an estimated 66 - 77 river bends were removed by constructing “meander cut offs” to straighten the river • river straightening was a component of the catchment-wide effort to drain the entire lower floodplain area from Yallourn North to Sale, to access large areas for food and fibre production • the river receives waste water from major Latrobe valley coal mining and power generation facilities
<p>Impacts of these changes</p>	<p>Straightening the river and draining the floodplain has permanently and drastically altered the hydrological regime of an area larger than the Melbourne metropolitan area. The key effect has been shortening of the river by 22km, major and sustained erosion of the river and its tributaries over many decades, and major flooding.</p> <p>As a result, the Latrobe River is the dominant contributor of suspended sediment (41% of the total of 251,000 Tonnes per year) and phosphorus (43% of the total of 330 T/yr.) to the Gippsland Lakes. It also contributes 28% of nitrogen delivery (of the total of 2,400 T/yr.).</p> <p>Increases in sediment, phosphorus and nitrogen in the Gippsland Lakes greatly increase the frequency and duration of blue-green algae blooms, which can effectively shut down the tourist industry in the area for weeks.</p> <p>The economic impact of a blue-green algae bloom in the Gippsland Lakes in late December 2007, that continued into 2008, was over \$18.2 million⁵</p>
<p>Cost of remediation</p>	<p>Reinstating meander cut-offs in the Latrobe river reduces the speed of erosion and hence sediment delivered to the Gippsland Lakes.</p> <p>As well as downstream value, new meanders also provide regional habitat for a variety of endangered fish species which have been all but lost from the Latrobe river.</p> <p>A single meander cut-off was reinstated in a government-funded project in 2013-14, at a cost of \$150,000. The project required sophisticated hydrological, geomorphological and ecological design skills.</p>
<p>Environmental success of remediation</p>	<p>During the autumn of 2015, a release of environmental water from Blue Rock Reservoir was made into the river, including the newly reinstated meander cut-off. As a direct result of the combination of the on ground works and environmental water release, the nationally vulnerable Australian grayling (fish) has been confirmed to be present in the Latrobe River. This is the first time in 20 years that these fish have been confirmed in the river.</p> <p>The reinstated meander re-connected flow to the original gravelly riverbed that has long since disappeared from the main channel of the river due to erosion resulting from river straightening. These gravels are important to fish and macroinvertebrate populations that use them as foraging and spawning habitat.</p> <p>This discovery demonstrates that Australian grayling are still present in the Latrobe River, and that they can successfully spawn during planned environmental water releases.</p>

Other environmental values	The Gippsland Lakes is an internationally listed Ramsar site, with hundreds of documented environmental values. For example, in 2011, a new species of dolphin (<i>Tursiops australis</i>) was confirmed as living only in Port Phillip Bay and the Gippsland Lakes. This is only the third species of dolphin in the world ⁹ . The small population in the Gippsland Lakes is threatened by tourism activities and water quality, and is now listed as “threatened” under Victoria’s <i>Flora and Fauna Guarantee Act</i> .
----------------------------	--

In addition to quality case study material, the new Victorian Waterway Management Strategy (VWMS) and nine regional Waterway Strategies had also significantly evolved what could be called the “integration narrative”¹⁰. Although this wasn’t hard evidence, it provided the vital policy basis for emphasizing the intent and capability of the sector to deliver integrated programs. Furthermore, as this policy intent was linked to arguments of efficient prioritization of works and hence value for money, it provided further support for the improved economic valuation approaches.

The case was developed with the following structure:

- Refreshed and recently approved state and regional strategies have measurable targets for achieving WHEW outcomes
- These strategies focus on areas of high environmental and community priorities, in order to deliver best value for money and integrated outcomes
- The works planned are integrated both in the landscape and in time, to ensure efficient delivery and lowest risk
- New methods for economic valuation of the planned works to deliver the targets support a strong cost benefit analysis

Long term nature of waterway restoration programs

Good quality data and research regarding the need for “staying the distance” in natural resource restoration programs is widely available. However, the key question about this topic that had haunted previous Victorian waterway business cases was quite simply “How much longer is this distance?” This was what DTF wanted to know – how many more kilometres of riparian fencing, how many more hectares of weed control, how many more programs of community consultation? In short, how many more millions of dollars before the whole job is done?

For many environmental programs, these types of questions are very difficult to answer, or even estimate. So many variables – hydrology, climate change, natural disasters, community awareness and behavior change, unit costs of rock, government appetite for compliance activities, long term potential success of a carp virus – contribute to make a decade-level financial estimate of the statewide WHEW program almost meaningless. Yet at the same time, with increasing media scrutiny on the allocation of taxpayer funds, it is not unreasonable for DTF to require at least an expectation to be set around the length of any program.

Catchments Branch needed a model on which to properly base this section of the business case narrative. Fortunately, during 2014, a preliminary version of such a model had been developed in East Gippsland CMA. Following the input of further expertise from waterway health professionals, the Rivers2040 model was first

⁹ Kate Charlton-Robb, Conservation geneticist and dolphin researcher, Monash University <http://theconversation.com/small-and-isolated-dolphin-populations-are-under-threat-32507>

¹⁰ See for example, Section 3.7 of VWMS, which notes that regional Waterway Strategies will “be holistic and integrate onground works with environmental water management.”

presented by Dr Jane Doolan and Rebecca Hemming at the International RiverSymposium in Brisbane in September 2015.¹¹

The model provides a simple, flexible and accessible way of describing the trajectory of waterway restoration within a reach or catchment. Within this, it provides a generalized picture of the quantity and timing of the investment required to achieve long term outcomes.

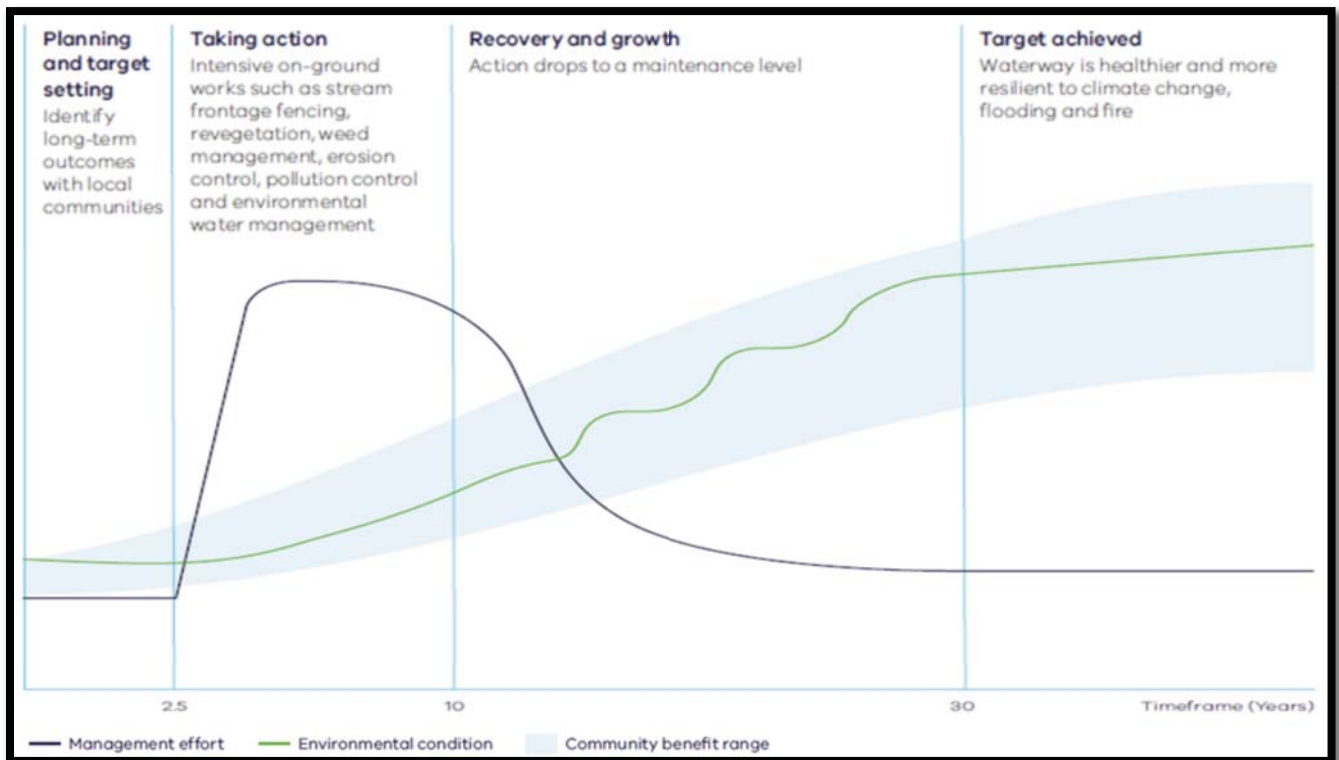


Figure 5. The four phases of the Rivers 2040 framework

Within the DTF IMS business case template, the Rivers 2040 model was further strengthened by “wrapping” it in past and future contextual material. For historical context, a three paragraph layman’s outline of 150 years of Victorian waterway degradation was provided, starting with the gold rush of the 1850s, leading on through floodplain clearing and drainage, and touching on specific elements such as the impacts of large scale power generation in the Latrobe and Snowy systems. For future context, recent Victorian and Australian Bureau of Statistics data regarding Victoria’s predicted agricultural sector growth (all predicated on the assumption of a continuing quality water supply) was presented.¹²

Finally, these long-game arguments were underscored with specific case study material around the economic impacts of degraded waterway health. Through a range of studies over the previous six years¹³, a data set of

¹¹ <http://riversymposium.com/wp-content/uploads/2015/10/Jane-Doolan.compressed.pdf>

¹² 2014-15 Victorian Food and Fibre Export Performance Report, <http://www.vic.gov.au/news/2014-15-victorian-food-and-fibre-export-performance-report.html>, and ABS, Media Release, 29 May 2015, Water use on Australian farms remains at high levels.

¹³ Connolly, B and Hylands, P, Economic Impact of the 2008 Blue Green Algal Bloom on the Gippsland Tourism Industry – Report, Nexus Consulting, 2009, and Nexus Strategy Group (2010) Rowing Facilities in East Gippsland Strategic justification for infrastructure investment, East Gippsland Shire Council, and

tourism risks and impacts in the Gippsland Lakes region caused by blue green algae outbreaks was compiled and outlined.

The finalised narrative to justify the long-term size and nature of the Victorian WHEW program followed these lines:

- The very broad scale and scope of current waterway degradation has taken over 150 years to come about.
- Large scale WHEW restoration programs have only been in place for around 15 years, and only in a limited number of catchments.
- Data and evidence from these large scale programs shows that improvements in waterway health can be achieved, but take sustained investment over several decades. The Rivers2040 model outlines this.
- Victoria’s dependence on quality water for continued economic growth is increasing.
- Without sustained investment in WHEW programs, increased frequency and scale of economic impacts are likely.
- Delays in investment mean increased costs of remediation later.

The writing process

The DTF business case process and template requires the assimilation of a wide variety of material, including:

- technical cost benefit analysis data (often developed by consulting economists)
- interpretation and application of government policy and strategy
- ILM and program logic/outcomes information, usually from workshops facilitated by consultants
- Detailed data from previous implementations (in the WHEW case, this comprised multiple lines of evidence from CMA programs)
- Program-level risk, governance and probity information
- Scientific and economic research data

Ensuring these disparate sources of information are woven into a clear and compelling narrative is a major task of the business case writing process. A common criticism from DTF of business cases is that they read as though they have been written by a committee – too bland, too rambling, too “bitsy”. Importantly, if the narrative does not “flow”, it may struggle to gain traction “up the line”. It takes a lot of time in discussion and drafting between the writers and departmental executives to ensure they are confident and comfortable in promoting and defending the business case up to Ministerial level.

A simple example of the importance of getting the language right concerns the program integration argument discussed above. In Victoria, waterways programs are delivered through a “regionally-devolved” model by the nine regional CMAs. This is a great strength of the program – each region can adapt the program to suit

AECOM Australia Pty Ltd. 2014. The economic value of boating and marine industries associated with the use of the Gippsland Lakes. Report prepared for the Recreational Boating industry of Victoria.
http://www.gippslandports.vic.gov.au/pdfs/reports/gippslandport_34.pdf

8ASM Full Paper

Tate, L. – Securing funds for waterway investment

the culture and needs of its own communities and biophysical landscapes – but also presents the challenge of establishing consistency of approach and language when “speaking up the line” to central government agencies and Ministers. The role of the business case writers as filter and homogenizer of language cannot be understated here. Writers must translate and interpret the text and data that CMAs, consulting economists and other contributors provide, to ensure terminology and phrasing have the right overall style and meet the expected standard.

Catchments Branch identified two simple factors for achieving the desired quality of integration of narrative and style:

- Keep the writing team small
- Give them twice as much time as anyone thinks they need

Conclusions

As with any project, defining key goals was an important early step for achieving improvements in the 2015-16 WHEW business case. Using these goals to focus effort on the approaches discussed above has proved very successful. Approximately \$50 million per annum over four years has been allocated to the program, which is the largest allocation for these types of programs in Victoria. Considering the overall gloomy economic forecasts of Victoria’s future economic performance, this is a very significant “win” for the environment.

An additional benefit has been the improvement in relationships between DELWP and CMAs, due to the close collaboration in the business case development process. CMA waterway managers now have a far stronger understanding of the importance of this process, the crucial value of quality data and evidence that can support a case, and the operational constraints and expectations that the process places on both DELWP and CMAs.

Although the writing of the next business case is about three years away, Catchments Branch has already begun planning its approach, including the key improvements that will be sought in 2020.