

Delivering priorities for the Gippsland Lakes through partnerships

Sean Phillipson¹

1. East Gippsland Catchment Management Authority, 574 Main St Bairnsdale Victoria, 3875. Email: sphillipson@egcma.com.au

Key Points

- The task to manage and improve the health of the Gippsland Lakes system is significant, and is influenced by multiple land and environmental managers with varying roles and objectives.
- A clear strategic plan, specific governance arrangements, and a partnership driven approach are important in developing landscape scale natural resource management programs.
- These three components have been essential in supporting agencies, non-government organisations and community in the successful delivery of programs and projects across the Gippsland Lakes.

Abstract

The Gippsland Lakes system is one of the largest coastal lagoon systems in south eastern Australia with a catchment including close to 10% of the State of Victoria, and is listed under the Ramsar Convention on Wetlands of International Importance. The lakes support a wide range of important ecological, social and economic values and are influenced by a large and complex catchment. The impacts of climate change, river regulation, activities within the catchment and a permanent entrance opening all influence the health and resilience of the lakes and the values they support.

The scale and complexity of the Gippsland Lakes system; with multiple land and environmental managers with varying roles and objectives, means the task to manage and improve this natural system is significant. A consolidated approach between responsible agencies, managers and community has been developed to provide clear priorities for actions to implement.

Informed by the collaborative process of the development of the most recent Gippsland Lakes Ramsar Site Management Plan, and guided by the objectives of the Gippsland Lakes Coordinating Committee, over 37 partners from community and agencies are now contributing to on ground efforts to improve the health of the Gippsland Lakes landscape. Traditional Owners are actively involved in joint managed land, and hundreds of other land owners have voluntarily changed management practices.

Past and current case studies are used to demonstrate the benefits of a truly collaborative and coordinated approach to the implementation of environmental works, highlighting the successes and challenges of implementing this approach.

Keywords

Gippsland Lakes, partnerships, integrated catchment management

Introduction

The Gippsland Lakes are a series of coastal lagoons and fringing wetlands in south-eastern Australia extending from Sale Common to Lakes Entrance covering an area of approximately 60,000 hectares . They receive water from five major river systems and are connected to the Southern Ocean by a narrow, artificially maintained channel at Lakes Entrance.

The lakes support a diversity of wetland types and are of high conservation value, being listed as a wetland of international importance under the Ramsar Convention. The ecological values of the site include extensive seagrass beds, a variety of fringing vegetation types, habitat for resident and migratory waterbirds, diverse and abundant fish, and support for other threatened species, including one of only two known populations of the

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rare Burrnan dolphin. The lakes are central to the tourism for the region, also supporting commercial and recreational fisheries, and have outstanding Aboriginal and European cultural values.

The main lakes and the fringing wetlands are in a transition that has been occurring for over 100 years with changes in land use in the catchment, and the establishment of towns and urban development around the Lakes. Into the future, change is likely to increase with an increasing population and climate change predicted to alter the system further. The Gippsland Lakes will continue to adapt to the changing conditions and, with concerted and coordinated management efforts, key values can be maintained and new values are likely to emerge.

Catchment context

The Gippsland Lakes extend around 85 kilometres south east along the coast from the town of Lakes Entrance in East Gippsland, and has a catchment that drains approximately ten percent of the state of Victoria. The Gippsland Lakes Ramsar site extends from Sale Common east to Lake Tyers covering an area of approximately 60 000 hectares (EGCMA, 2015) (Figure1). The lakes comprise a series of coastal lagoons formed behind a barrier dune system, however, the ocean beaches and dunes of the Gippsland Coast are outside the Ramsar site boundary (BMT WBM, 2010).



Figure 1. Location of the Gippsland Lakes, including the Gippsland Lakes Ramsar site boundary.

The Gippsland Lakes receive freshwater inflows from seven major river systems, with an artificially maintained channel at Lakes Entrance, constructed in 1889, connecting the system to the the Southern Ocean (Bass Strait) (Tilleard et al., 2009). Prior to 1889 the Gippsland Lakes was periodically connected to the Southern Ocean and active commercial shipping was in place (EGCMA, 2015).

The major waterbodies comprising the Gippsland Lakes are Lake Wellington, Lake Victoria and Lake King, which are all large and shallow and occur along a salinity gradient (EGCMA, 2015). Lake Reeve is a narrow, shallow water body lying along the coastal dune barrier and is usually dry, except for times of high rainfall (Webster et al. 2001) and salinity is generally classified as hypersaline (Tilleard et al., 2009). A number of important wetlands fringe the main lakes and these range from fresh (Sale Common and Macleod Morass), through brackish to hypersaline.

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The catchment contains a number of major towns and associated urban centres; extensive coal mining and power generation in the west and the Latrobe Valley industrial development area. The catchment is predominantly forested (65 percent), but also includes large areas of dryland pasture (25 percent) (EGCMA, 2015). There is significantly more development, industry and intensive land use in the west catchment than the east (Grayson, 2006).

Management of a complex site

The scale and complexity of the Gippsland Lakes system, means the task to manage and improve this natural system is significant. Multiple land, waterway, and other environmental managers have jurisdictions that cover the lakes system, and all have varying roles, responsibilities, and objectives.

An example of the challenges such a complex management landscape presents is provided by the location of the Gippsland Lakes Ramsar site boundary. The Gippsland Lakes Ramsar Site was listed in 1982, and the boundary most likely established on the basis of land tenure and management responsibilities (EGCMA, 2015). This reliance on land tenure to define management boundaries has meant that a number of important wetlands are only partially within the Ramsar site. A particularly obvious instance of this is Lake Coleman, which is essentially bisected by the Ramsar site boundary (Figure 2), however, there are a number of other examples where the boundary cuts through fringing wetlands (EGCMA, 2015).

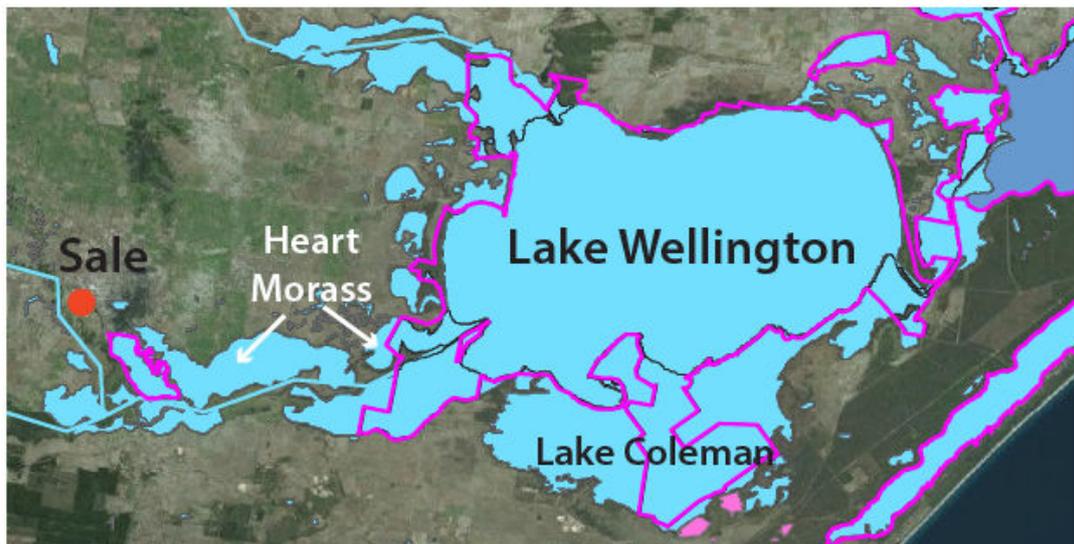


Figure 2. Ramsar site boundary around Lake Wellington, illustrating the portion of Lake Coleman and Heart Morass that lie outside the site boundary. Blue is mapped wetland areas, pink line is the Ramsar site boundary (EGCMA, 2015).

In some other instances, due to the impacts of climate change and reduced freshwater inflows to the lakes, it is likely that a number of values for which the site is listed under the Ramsar convention, now only rarely occur within the site boundary, and in some cases not at all. This is particularly relevant for freshwater dependent species like the Growling Grass Frog (*Litoria raniformis*), for which the largest known populations around the lakes exist outside the Ramsar site boundary (Martin Potts, pers. comms).

In order to provide clear priorities for actions to implement across such a large and complex site, a consolidated approach between responsible agencies, managers and community is required. In terms of a strategic planning framework to guide this approach, the recently developed Gippsland Lakes Ramsar Site Management Plan, adopts a more holistic approach whereby all of the fringing wetlands and estuarine reaches of the inflowing rivers have been included in the management planning process.

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Key components: a strategic plan, clear governance, and a partnership approach

In order to develop an effective planning management and implementation framework for a catchment and system with complexities like the Gippsland Lakes, three components in the development of a successful program framework have been critical:

- A **strategic plan** that provides specific guidance on real priorities and is supported by those parties who will be responsible for the implementation of key strategies;
- **Clear governance arrangements** that enable land and waterway managers to act according to their roles and responsibilities, but also provide opportunities to work together in a collaborative way to achieve common priorities; and
- A **truly partnership driven approach** to the implementation of on ground programs and projects, including the collaborative development of targeted programs to address stated priorities, and delivery partners truly seeking to involve others to achieve better project outcomes.

The following case studies provide examples of how each of the above components have assisted in planning for, supporting, and delivering meaningful and effective environmental outcomes for the Gippsland Lakes.

Case Study 1: Development of the Gippsland Lakes Ramsar Site Management Plan

Released in 2015, the primary purpose of the Gippsland Lakes Ramsar Site Management Plan was to help maintain the ecological character of the site and promote wise use of the Gippsland Lakes. That is, the site is not managed for conservation only, but sustainable use is encouraged and supported.

The Gippsland Lakes Ramsar Site supports a number of ecological, socio-economic and cultural values. The plan adopted the principle that by maintaining or improving ecological character, the other values associated with the Ramsar site will also be conserved, within the concept of wise use (EGCMA, 2015).

The guiding principles for the development of the plan were: stakeholder involvement; implementing an evidence-based approach; using the precautionary principle; building on existing activities; and taking an adaptive management approach (EGCMA, 2015).

The Gippsland Lakes Ramsar Site Management Plan was developed through a comprehensive consultative process involving a large number of stakeholders with an interest in the Gippsland Lakes. Table 1 outlines the process undertaken to develop the plan. A key point to note is that a wide range of stakeholders were afforded multiple opportunities across the development of the plan to provide feedback and ensure relevant data and information was considered and included. Whilst this approach is not uncommon or unique for plans of this nature, success cannot always be assessed until the plan is being implemented.

The Gippsland Lakes Ramsar Site Management Plan now provides clear guidance on the priority actions to maintain many of the important values of the lakes and their fringing wetlands. The plan is widely accepted land and waterway managers as the key guiding document for targeting on ground works across the lakes and its catchment, and has been used to target recent investment and develop targeted programs to improve the health of the lakes.

The success of the plan can largely be attributed to the involvement of relevant stakeholders in its development, the clear and agreed assignment of roles and responsibilities within the plan, and now the willingness of regional partners to implement strategies for which they are responsible.

Table 1. Summary of stakeholder engagement activities associated with the development of the Gippsland Lakes Ramsar Site Management Plan (EGCMA, 2016)

| Task | Approach | Stakeholder involvement | Outputs |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Prioritisation approach | Develop draft criteria for the prioritisation of values and threats Preliminary identification of values and threats | Workshop with Project Steering Committee to review approach and criteria; identify values and threats | Agreed prioritisation method and list of values and threats to be considered |

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| Task | Approach | Stakeholder involvement | Outputs |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Data collation | Collation of relevant data and information on values, condition and threats to inform risk assessment and prioritisation | Unpublished data / information from Project Steering Committee and Technical Advisory Group | Summary of values and condition mapped to mega-habitats |
| Risk assessment | Draft risk assessment using impact pathways approach | Workshop with Project Steering Committee and Technical Advisory Group to review risk assessment and identify critical knowledge gaps Individual input from scientific experts from research organisations. Community update on the Gippsland Lakes E-Engagement website. | Finalised risk assessment Critical knowledge gaps |
| Prioritisation | Preliminary prioritisation of values and threats | Workshop with Project Steering Committee and Technical Advisory Group: review risk assessment Individual input from scientific experts from research organisations Community update on the Gippsland Lakes E-Engagement website. | Priority values and threats for the management plan |
| Review | Review of achievements under the current management plan | Stakeholder interviews and input through the Project Steering Committee and Technical Advisory Group | Summary of achievements |
| Resource condition targets, strategic actions and monitoring needs | Draft realistic resource condition targets for priority values / locations. Draft approach to prioritising strategic actions | Workshop(s) with steering committee and Technical Advisory Group members to: <ul style="list-style-type: none"> • Review resource condition targets • Identify strategic actions and monitoring requirements. • Identifying existing relevant activities. • Determine timelines and responsibilities Meeting with indigenous groups to identify relevant actions and strategies. | Final resource condition targets, strategic actions and monitoring needs |
| Reporting | Draft two report formats: <ul style="list-style-type: none"> • Gippsland Lakes Ramsar Site Management Plan • Summary document | Draft reports circulated to Project Steering Committee for review and comment. | Final draft reports for public consultation |
| Public consultation | Briefings with relevant agencies Open House events in Sale and Bairnsdale Individual briefings on request Launch of draft / final plans | Draft reports available for agency and community review. Feedback from broad range of stakeholders. Common and shared understanding of management responsibilities | Final reports |

Case Study 2: A coordinated approach to planning and delivery

Management of the Gippsland Lakes involves agencies working together to achieve positive outcomes for the environment and the community. In order to help deliver real outcomes, specific governance arrangements have been put in place to help guide management activity. Two key groups, the Gippsland Lakes Coordinating Committee; and the Gippsland Lakes Delivery Managers Group help fund, coordinate, plan, and implement programs of work to improve the health of the Gippsland Lakes and its catchment.

The **Gippsland Lakes Coordinating Committee (GLCC)** was established with a specific focus on improving the environmental condition of the Gippsland Lakes, working collaboratively with the West and East

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Gippsland CMA's. The committee includes five community representatives, including Traditional Owners, and also includes five members who represent Victorian public sector agencies with land and waterway management responsibilities.

The GLCC has four main objectives:

- Maintain or improve the health of the Gippsland Lakes.
- Foster cooperation and coordination between agencies and organisations with an interest in the health of the Gippsland Lakes.
- Promote awareness of and participation by communities in the management of the Gippsland Lakes.
- Maximise outcomes through leveraging investments.

The **Gippsland Lakes Delivery Managers group (GLDM)** provides recommendations to the GLCC on practical issues related to the management of the lakes and its catchment. The group consists of members from the East and West Gippsland Catchment Management Authorities, the Gunaikurnai Land and Waters Aboriginal Corporation, Parks Victoria, the Department of Environmental, Land, Water and Planning, and local government.

The GLCC Delivery Managers work collaboratively to lead the integration and implementation of Gippsland Lakes Program. Key functions of the group include:

- Identifying opportunities to collaborate and/or integrate projects
- Seek best practice for on ground implementation including applying current research
- Providing a platform for regular structured networking and communication to and from member organisations
- Tracking current project progress and contributing to program level reporting
- Engaging and communicating consistent messages with the broader community through their member organisations

Working in conjunction, these two groups, with representative from all key stakeholders involved in the management of the lakes, provide an opportunity for the development of a truly collaborative approach to environmental management on a landscape scale.

Through these clear governance arrangements, evidence based recommendations on the allocation of specific funding priorities for the Gippsland Lakes have been made; and these forums have fostered collaboration with (and between) other parties with interests in the Gippsland Lakes region, to enable better coordination of environmental management of the lakes (Figure 3).



Figure 3. The wide range of partners directly involved in 16 on ground projects currently being delivered around the Gippsland Lakes.

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Case Study 3: The Gippsland Lakes Wetlands Project, delivering priorities on the ground through a partnership approach.

The Gippsland Lakes has over 30,000 ha of fringing wetlands. These wetlands provide critical habitat for wildlife, including feeding grounds for internationally significant migratory shorebirds. The Gippsland Lakes is a complex ecological system and its management involves an equally complex and diverse range of organisations, each with their own expertise and responsibilities. The broad range of issues influencing the health of the lakes and the surrounding wetlands requires that a collaboration of multiple partners work together to achieve the best possible outcomes for the environment.

The Gippsland Lakes Wetlands Project, managed by Greening Australia Gippsland, is one of the many projects underway to improve the health of the Gippsland Lakes. The project represents an excellent example of delivery on ground works in priority areas utilising the skills and expertise of local experts in their fields, brought together in a collaborative forum to deliver common objectives.

The project has established demonstration work sites across over 100ha of wetlands across both East and West Gippsland, on the lower Tambo and Lower Avon Rivers. This project has brought together critical industry expertise in management of the lakes including: the Department of Environmental, Land, Water and Planning implementing priority actions for management of threatened species; Birdlife east Gippsland and Birdlife Australia undertaking observations of our important bird populations; on ground water management techniques and works informed by Catchment Management Authorities; Trust for Nature facilitating long term conservation commitments on private land; and the Gunaikurnai Land and waters Aboriginal Corporation working to the revegetate Gippsland Lakes country.

Additionally, expertise from Greening Australia and the Arthur Rylah Institute, have developed and implemented new innovative wetland prioritisation techniques across the fringing habitats of the Gippsland lakes. This approach has helped to identify and prioritise, through modelling based on species distribution, connectivity modelling, and options for future management, critical freshwater wetland habitats now and under the impacts of climate change.

This collaborative approach to project delivery provides a successful example of how delivering a project using the skills and experience of partner organizations can generate more successful outcomes. Often organisations attempt to deliver components of projects outside their 'core roles and responsibilities' which can sometime lead to less desirable outcomes. Through developing and fostering relationships over time with partner organisations, the benefits of this true partnership can be utilised in collaborative projects like the Gippsland Lakes Wetlands Project.

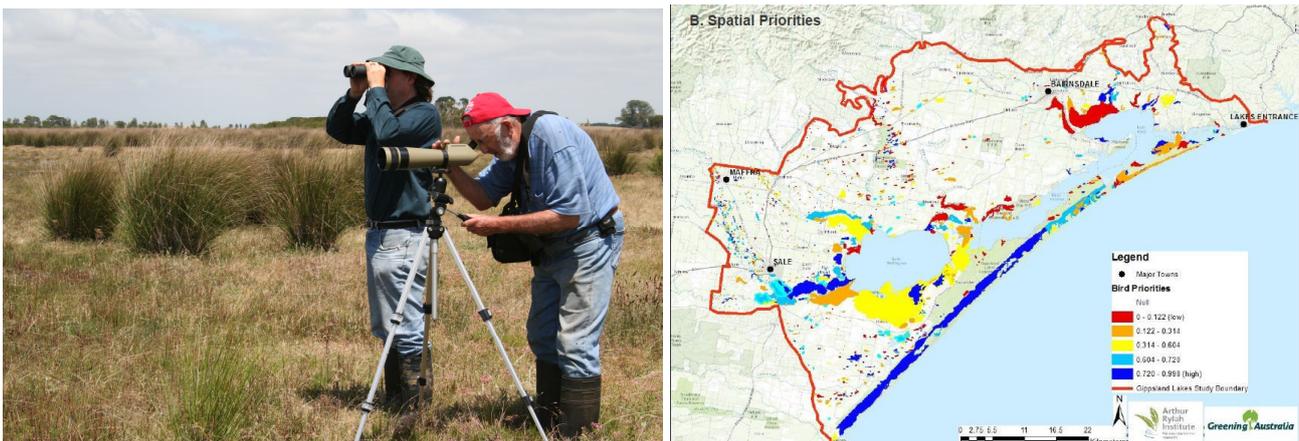


Figure 4. Greening Australia Gippsland staff member monitoring bird population with Birdlife east Gippsland (left); Example of spatial prioritization mapping outputs for the Gippsland Lakes showing spatial priorities for specific management actions (right).

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Conclusions

The Gippsland Lakes system is a large coastal lagoon systems in south eastern Australia, with significant areas listed under the Ramsar Convention on Wetlands of International Importance. The lakes support important ecological, social and economic values and are influenced by a large and complex catchment.

The task to manage and improve the natural systems of the Gippsland Lakes system is significant, and is influenced by multiple land and environmental managers with varying roles and objectives. A consolidated approach between responsible agencies, managers and community has been developed to provide clear priorities for actions to implement.

In order to develop an effective planning management and implementation framework for the Gippsland Lakes, three components in the development of a successful program framework have been critical: the development and support of a guiding strategic plan; clear governance arrangements that enable land and waterway managers to act according to their roles and responsibilities; and support for a truly partnership driven approach to the implementation of on ground programs and projects.

The integration of these three components has been essentially in supporting agencies, non-government organisations and community in the successful delivery of programs and projects across the Gippsland Lakes.

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