

## Connecting the champions of the Lake Eyre Basin rivers

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### Introduction

The free-flowing rivers of the Lake Eyre Basin mark the Basin as one of Australia's more important cultural and natural systems. It has outstanding environmental, cultural and economic value, supported by rivers, lakes and floodplains that fluctuate between highly unpredictable boom and bust cycles. Floods bring spectacular biological productivity to the rivers and their floodplains. Vast areas are inundated, becoming a magnet to millions of waterbirds, fish, frogs and invertebrates (Kingsford *et al.* 1999; Capon 2007; see Chapters 3 and 4). The conditions trigger a prolific germination of plant life, providing primary productivity (Capon and Brock 2006) on which wildlife and livestock (Phelps *et al.* 2007) depend. People too have relied on these extreme and sporadic events to replenish water resources and, for Aboriginal people, they nourish a deep history of stories and life centred on these great rivers for tens of thousands of years (see Chapters 8 and 9; Fig. 7.1). The rivers



**Fig. 7.1.** Aboriginal people were living on the Lake Eyre Basin rivers up to 50 000 years ago, with evidence of their ongoing connection to country clear everywhere, including these stone arrangements near Blackall in the Barcoo River catchment (photo, DATSIP Cultural Heritage Image Library).

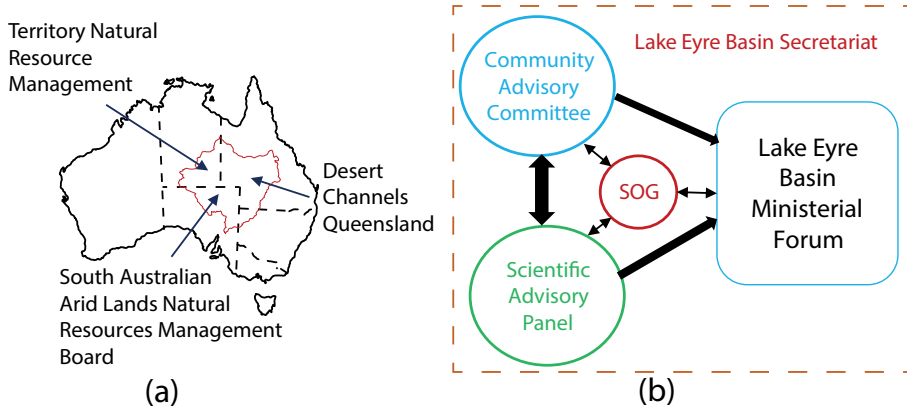
also sustain a highly profitable organic beef industry (see Chapters 10 and 11). The floods and the outback experience are also a strong generator of tourism income (Schmiechen 2004), as people flock to see the floodwaters that occasionally reach Kati Thanda-Lake Eyre (see Chapter 13). These interdependencies are reflected in strong partnerships forged to protect the rivers.

Strong formal and informal partnerships now exist among communities involved in the management of the Lake Eyre Basin rivers and their water. These alliances were primarily catalysed by a proposal to grow irrigated cotton on the Cooper Creek floodplain, near Windorah (see Chapter 17; Table 7.1). River champions emerged from all walks of life to express deep concern about this major water resource development. They were Traditional Owners, graziers, local, state and national government members, scientists and people involved in the tourism industry. Their view of the Basin and its rivers generally ignored state political boundaries, instead recognising and embracing the importance of the connectedness of this vast river system, from north-west Queensland and the Northern Territory to Kati Thanda-Lake Eyre in South Australia. Concern about the future of the river was borne of an understanding of this connectedness, but also for the potential impacts of water resource development on cultural and environmental values. As with many rivers across the world, development of upstream water resources has had major long-term impacts on downstream ecosystems and human communities (Lemly *et al.* 2000). Avoiding such impacts became a major community focus for the management and use of water resources in the Lake Eyre Basin, underpinned by a formal and informal network of partnerships.

In 2014, the Lake Eyre Basin Partnership formed as a loose community coalition, with three regional natural resource management groups across three jurisdictions at its core: Desert Channels Queensland, South Australian Arid Lands Natural Resources Management Board, and Territory Natural Resource Management (Fig. 7.2a). In this chapter, we trace the genesis of the different partnerships and their effectiveness, culminating in the winning of the Australian Riverprize in 2014 and the International Riverprize in 2015. For the first time in the 17 years of awarding the International Riverprize, judges decided to reward a community for effectively protecting, rather than rehabilitating a major river system – the Lake Eyre Basin, one of the world's greatest inland river regions.

### Challenges to sustainability – water access

Australia and many other parts of the world have generally had a strong drive to develop water resources for irrigated agriculture, rarely valuing water for the environment adequately (Gibbs 2006; Gibbs 2009). In the 1990s, integrated catchment planning was in its infancy in Australia and was poorly developed outside of highly managed systems such as the Murray–Darling Basin in south-east Australia. There was no equivalent model for managing a free-flowing river system the size of the Lake Eyre Basin. The results of scientific work about the long-term impacts of water resource developments around the world and particularly from the rivers of the Murray–Darling Basin were also rapidly accumulating. There was growing understanding of the global extremes of variability experienced by the Lake Eyre Basin rivers (Puckridge *et al.* 1998; Puckridge *et al.* 2000; McMahon *et al.* 2008a; McMahon *et al.* 2008b) and the incredible cultural, environmental and economic values that their water supported.



**Fig. 7.2.** Main formal partnerships within the Lake Eyre Basin, from 2000 onwards, supporting (a) natural resource management through the three regional bodies in the Northern Territory, Queensland and South Australia; (b) the Lake Eyre Basin Intergovernmental Agreement with two external bodies, the Community Advisory Committee and the Scientific Advisory Panel advising ministers in the Australian Government and the governments of the Northern Territory, Queensland and South Australia through a ministerial forum, supported by a senior officers group (SOG) from each government, chaired by the Australian Government. The natural resource management bodies recommend members from pastoral, Aboriginal and agricultural communities to the Community Advisory Committee. Arrows indicate formal and informal collaboration. Collaboration among the Community Advisory Committee, Scientific Advisory Panel and government officers delivers key outcomes for the sustainable management of the river basin.

A proposed water resource development at Currareva Waterhole on the Cooper Creek near Windorah in 1995 (Fig. 7.3) galvanised what was then disparate pastoral, conservation, government and scientific communities to protect the Lake Eyre Basin's magnificent rivers (Chapter 17; Table 7.1). It rapidly healed a schism created by the proposed World Heritage nomination of the South Australian part of the Lake Eyre Basin (Table 7.1), which sought global acknowledgement of the region's outstanding cultural and environmental values (Reid 1994; Morton *et al.* 1995), but which had failed to effectively engage regional communities. The proposed Currareva irrigation development, as it became known, was not the first development of the river, but it had the potential to expand into a large-scale irrigation enterprise, with devastating social and ecological consequences (Kingsford *et al.* 1998; see Chapter 17).

The community response saw the formation of the Cooper's Creek Protection Group in 1995 (see Chapter 17) to challenge the then Queensland Government's typical approach of developing water resources for irrigation without appropriate assessment of the potential impacts. The group, with conservationists and scientists, convened a scientific workshop in 1996 to look at the potential risks of major water resource development on the Lake Eyre Basin rivers and their significant natural and cultural values (Kingsford *et al.* 1998; Table 7.1). There were comparisons drawn to the neighbouring Murray–Darling Basin, with its degraded rivers and impacts on ecosystem services and livelihoods (Kingsford 2000; see Chapters 14–17). The workshop communicate was sent as an open letter to the Queensland Minister for Natural Resources, calling upon governments to reject large-scale irrigation proposals because of unacceptable risks to the environment, cultural resources and people of

**Table 7.1.** Important community events, development proposals and government legislation (1995–2016), with their timing, description and implications affecting decisions about the sustainability of the rivers of the Lake Eyre Basin.

Event	Date	Description	Implications
World Heritage Listing – recommendation	1985	Recommendation by the Australian Government to list the Lake Eyre Basin in South Australia on the World Heritage List	Strong reaction from pastoralists claiming that this would negatively affect their livelihoods and land values
Proposal to irrigate from Cooper Creek at Currareva, near Windorah	1995	A group of developers, the Currareva Partnership, proposed to divert water (42 000 ML per year) from Cooper Creek to large storages on the floodplain for large-scale irrigation. This development was initially supported by the Queensland Government of the time, which granted water licences.	There was widespread concern within a community which was well aware of the lessons learnt from large-scale irrigation in the neighbouring Murray–Darling Basin.
Birdsville meeting		Involved disparate communities, including pastoralists, Traditional Owners, conservationists, scientists and government officers	Formation of an overarching advisory group – the Lake Eyre Basin Steering Group with representatives from the Australian Government and governments of Queensland and South Australia
Cooper Creek Scientific Workshop	1996	In response to the Currareva proposal, the Cooper's Creek Protection Group, conservationists and scientists organised a workshop to discuss the merits and potential implications of such a development.	There was widespread coverage of the workshop in the media and the communique was provided to the Queensland Government. Strong partnerships were forged.
Lake Eyre Basin Heads of Agreement	1997	The Australian, Queensland and South Australian governments signed this agreement to focus their commitment on managing the Lake Eyre Basin as a unified, connected system.	This set up the Lake Eyre Basin Intergovernmental Agreement with commitments from the two states and the Australian Government to protect the rivers of the Lake Eyre Basin.
Draft Water Management Plan for Cooper Creek		This recommended an allocation of 22 500 ML per year from the Thomson and Barcoo Rivers.	This was strongly opposed by the local community, scientists and environmentalists.
Lake Eyre Basin Coordinating Group formed	1998	Establishment of a group to represent the community and provide advice for the management of the Lake Eyre Basin	Strong leadership with semi-autonomy for directing funds and investing in the Lake Eyre Basin

Launch of Cooper Creek and Georgina– Diamantina Catchment Management Plans	2000	Cooper Creek and Georgina–Diamantina catchment committees stretched across the entire catchment and were formed by the respective governments, community members, supported by some scientific input. They delivered plans which respected the connectedness of the Basin's rivers and communities.	These plans formed the basis for all subsequent objectives of planning, providing the essential catchment focus required for protection of the river flows.
Lake Eyre Basin Intergovernmental Agreement		Formally signed by the Australian, Queensland and South Australian governments with enacting legislation the following year. As required by the agreement, the Lake Eyre Basin Ministerial Forum, and advisory groups (Community Advisory Committee and Scientific Advisory Panel) were established.	This was the critical formal process by which the governments involved provided their policy support and subsequent funding for integrated management of the Lake Eyre Basin and its rivers.
Cooper Creek Water Resource Plan		This prohibited irrigation in the Cooper Creek catchment.	This represented a fundamental change in favour of protecting the natural flow regime of the rivers of the Lake Eyre Basin.
Lake Eyre Basin Biennial Conference	2002	The agreement stipulated the provision of a biennial conference involving community, industry, scientists, government ministers and officials. The inaugural event was held in Birdsville, Queensland.	Platform for respectful discussion, information exchange and recognition of community commitment. The events, subsequently held in 2004, 2006, 2008, 2010 and 2013, served to galvanise a unifying vision for the management of Lake Eyre Basin rivers and influence government investments in Lake Eyre Basin programs and projects.
Lake Eyre Basin Intergovernmental Agreement	2004	Signed by the Northern Territory Government	The three major jurisdictions and the Australian Government were now party to the agreement.
Lake Eyre Basin Aboriginal Forum		The Lake Eyre Basin Ministerial Forum commits to Aboriginal Forums in recognition of the connection of Aboriginal people with the Basin and the importance of advice from Aboriginal people on the management of the rivers and cultural values. The inaugural event was held near Alice Springs, Northern Territory.	Aboriginal people of the Basin have an opportunity to meet and discuss issues of concern about the natural and cultural management of the Basin and make recommendations to the Ministerial Forum. Subsequent forums were held in 2006, 2009 and 2011 at locations within the Basin.

Floodplain graziers conference	2008	The floodplain graziers organised a conference involving people making a living from livestock grazing on the rivers of the Lake Eyre Basin and also graziers from the Murray–Darling Basin, as well as scientists.	This was a pivotal conference in connecting the grazing communities of the Murray–Darling Basin and also the Lake Eyre Basin. It established lifelong friendships but, most importantly, people living on the rivers of the Lake Eyre Basin were able to understand one potential future and its effects from the experiences of graziers on the rivers of the Murray–Darling Basin.
Inaugural State of the Basin Report		Formal report on the environmental sustainability of the Lake Eyre Basin rivers, required every decade.	Provided an opportunity for governments and the community to focus on long-term sustainability of the Basin and impetus for investment in monitoring.
Lake Eyre Basin Wild Rivers Advisory Panel		Formed for consultation of Wild Rivers legislation in the Channel Country.	Stakeholders supported Wild Rivers declarations under this legislation.
Strategic Adaptive Management approach adopted by governments	2010	The governments of the Lake Eyre Basin formally endorsed the Strategic Adaptive Management approach for managing the Lake Eyre Basin rivers.	This provided critical institutional support to an innovative approach, still in its infancy, to natural resource management.
Rivers Assessment monitoring program commences	2011	Required to support State of the Basin reporting; provided a solid investment in collection of data, primarily by government agencies in the Lake Eyre Basin.	Opportunity to learn about the Basin and its environmental attributes, as well as potentially contributing to long-term trend analyses.
Wild Rivers declarations for Lake Eyre Basin rivers		The Queensland Labor Party introduced Wild Rivers legislation, resulting in the declaration of the Channel Country rivers in Queensland.	This legislation and its subsequent policies protected the flows and floodplains of the Lake Eyre Basin rivers, until it was revoked just a few years later.
Lake Eyre Basin Under the Spotlight Conference	2013	This public conference was held in Longreach to draw attention to the potential impacts of changes to policy and legislation affecting the Lake Eyre Basin rivers.	There was good publicity about the conference with pressure exerted on the Queensland Government. Many of the authors of chapters in this book presented their work at this conference.
Revocation of Wild Rivers legislation and Wild Rivers declarations of Lake Eyre Basin rivers in Queensland	2014	The Liberal National Party revoked the Wild Rivers legislation and Wild Rivers declarations, allowing for increased trade of sleeper irrigation licences, reducing protection of floodplains and promoting irrigation.	Currently, this policy and legislative framework remain in place, creating significant vulnerability and management challenges for the rivers and the floodplains of the Lake Eyre Basin.





**Fig. 7.3.** Currareva Waterhole on Cooper Creek, the location of a large-scale irrigation development proposal in 1995, requiring changes to the Queensland water resource plan (photo, A. Emmott).

the river system. Similar scientific resolutions, underpinned by consistent community concern and conviction, followed in later conferences (see Chapter 17).

In 1998, an incoming Queensland Labor Government abandoned the draft Cooper Creek water plan which would have established large-scale irrigation (see Chapter 17). The plan eventually gazetted became the first in Australia to prohibit large-scale water resource development. The accompanying dialogue among community members, scientists and government resulted in innovative and visionary governance arrangements, supported by representation and communication processes and scientific input, which focused on protecting the flows of the Lake Eyre Basin rivers. This collaborative and integrative approach to planning and governance defused conflict and built trust among community, government and scientific stakeholders. Known as the Lake Eyre Basin Intergovernmental Agreement, it marked a revolutionary shift in power and influence away from mainstream government decision-making to one of collaborative, Basin-wide decision-making that transcended jurisdictional borders, involved communities and was supported by scientific evidence. This governance model has since been applied by other organisations to areas such as the Murray–Darling Basin in Australia, a well-resourced and developed river system.

With Queensland legislation enabling a review of water plans every 10 years, community concern was once again mounting about the vulnerability of the rivers to water resource developments. Wild Rivers declarations for the Lake Eyre Basin rivers, including protection of floodplains, were announced in 2011 (see Chapters 20 and 21; Table 7.1). Ultimately, this did not adequately protect river flows, with the incoming Liberal National Party Government

of 2012 revoking Wild Rivers legislation to free up access to water by irrigators in the Queensland part of the Lake Eyre Basin, once again through explicit changes to the legislation in 2014 (Table 7.1).

### **Many partnerships – one vision**

Formal and informal partnerships have flourished in the Lake Eyre Basin and its rivers over nearly three decades. Trust, respect and shared passion for the protection of Lake Eyre Basin rivers have developed among the community members living and working in the Basin and the wider community, dedicated to building and sharing knowledge of the unique ‘boom’ and ‘bust’ systems of the Basin. In 1995, a pivotal public meeting in Birdsville (Fig. 7.4), a small outback town in the middle of the Lake Eyre Basin, brought together all community interests: pastoralists; conservationists; Indigenous representatives (from the Aboriginal and Torres Strait Islander Commission); representatives from local, state and Australian governments; mining and petroleum industries; and scientists (Table 7.1). There was substantial tension over competing visions for the Basin, driven by contrasting proposals to list part of the Lake Eyre Basin as a World Heritage site and develop irrigation on Cooper Creek. At the time, few people conceived of the Lake Eyre Basin rivers as a connected freshwater system. Even fewer identified the Lake Eyre Basin as a place where human communities were connected through their shared bonds with its rivers.

The Birdsville meeting was a formal catalyst for collaboration around the sustainable use and management of water across the Lake Eyre Basin. And it succeeded: the Lake Eyre Basin



**Fig. 7.4.** Famous Birdsville Hotel in the outback town of Birdsville, the location for many key meetings including one in 1995, triggering the start of long and enduring partnerships among Aboriginal people, conservationists, industry, scientists, landholders and government officers (photo, A. Emmott).



Steering Group was formed, with membership from the pastoral industry, the Queensland and South Australian governments, the Australian Government, conservation groups, mining and petroleum industries, Landcare groups, Aboriginal organisations, tourist operators and local government. The Steering Group, supported by governments, communicated the value of integrated planning, governance and advice, recommending the importance of investing in science and monitoring at an unprecedented scale across the entire river basin. It was guided by principles of inclusiveness, accountability, social equity and respect for diversity, fairness, transparency, and continuous learning. Seldom has such a model emerged across such a large part of the world. There were major logistical obstacles to cooperation, particularly the scheduling of meetings and communication across the vast expanse of the Lake Eyre Basin (over 1 million km<sup>2</sup> of sparsely populated catchment). The group established seven key principles for protecting the rivers: promotion of ecological and economic sustainability; development and communication of a shared, strategic vision; provision of a forum for Basin-wide issues; provision of a communication channel with governments; integration of priorities for action plans and funding; facilitation of knowledge flow and development; and application of social justice principles so that diverse views were respected and considered. All principles endure today, still fundamentally underpinning the success of the various and ever-evolving partnerships within the Lake Eyre Basin which seek to manage this complex socio-ecological system.

Community-based management committees for the Cooper Creek and Georgina–Diamantina catchments were constituted soon after the establishment of the Steering Group. Uniquely in Australia, these committees extended across the borders of Queensland and South Australia and included communities from both jurisdictions. The committees were supported by funding from the Australian Government’s Natural Heritage Trust and the South Australian and Queensland governments. The process dissipated upstream–downstream divides, as community members experienced the full course of the rivers through the eyes and knowledge of other community members and meetings throughout the catchment. Investment programs reflected this unifying ecological dimension, with programs such as invasive species control coordinated across jurisdictional borders. There was a common goal of protecting the river from potential threats, particularly water resource developments, invasive species (weeds and feral animals) and pollution. Communities worked hard to produce the catchment management plans launched in Birdsville in October 2000. Disappointingly, the subsequent funding model for natural resource management overlooked the opportunity for a genuine catchment-based approach in the Lake Eyre Basin by establishing jurisdiction-based regional bodies in South Australia, Queensland and the Northern Territory.

### **Government coordination, partnership and reporting**

In 1997, the Australian, Queensland and South Australian governments signed the Lake Eyre Basin Heads of Agreement – the initial policy instrument for collaboration by governments, scientists and all sectors of the community to identify mechanisms for achieving long-term, cross-border, sustainable management of the Lake Eyre Basin and its



**Fig. 7.5.** Government ministers and members of the Lake Eyre Basin Coordinating Group at the signing of the Lake Eyre Basin Intergovernmental Agreement in 2004, when the Northern Territory signed (photo, V. Norris).

rivers. This culminated in the signing of the Lake Eyre Basin Intergovernmental Agreement in 2000, focusing state, territory and federal governments on protecting its free-flowing rivers (Table 7.1). The Northern Territory subsequently signed the agreement in 2004 (Fig. 7.5). This framework provided the institutional governance for an already united community, and overarching arrangements to protect the Basin through partnerships with the community, industry, scientific and government people. The focus was on ‘water and related natural resources’, in particular the protection of natural variability in river flows, and, although not explicit, this also included flow volumes.

Ministers focused their agencies on implementing the agreement, establishing a Community Advisory Committee and Scientific Advisory Panel in 2001 to advise the Ministerial Forum (comprising a minister from each of the signatory governments; Fig. 7.2b). These advisory bodies engage with community-driven catchment groups and regional natural resource management organisations, and are supported by a secretariat based within the Australian Government (Fig. 7.2b). The Community Advisory Committee spans the entire Basin, and represents all interests. Cultural understanding and connection of Aboriginal people to the rivers was recognised as fundamentally important, eventually manifesting in increased representation by Traditional Owners on the Community Advisory Committee. This is underpinned by six fundamental operating principles, endorsed by Ministers in June 2004: sustained involvement of Aboriginal people; face-to-face contact; coordination; observation of local protocols; promotion of mutual learning; and provision of regular feedback through an



**Fig. 7.6.** Landholders, Traditional Owners, scientists, government officers and industry members at the 2013 Lake Eyre Basin Biennial Conference in Port Augusta (photo, M. Turner).

Aboriginal Forum. The Scientific Advisory Panel (Fig. 7.2b) provides scientific expertise on ecology, hydrology and socio-economics. Member scientists are often actively doing research in the Basin. The natural resource management bodies are also closely connected to this process, with several members on the Community Advisory Committee (Fig. 7.2a,b).

Critically, the agreement requires governments to meet regularly through a Ministerial Forum, involving relevant ministers from the Australian, Northern Territory, Queensland and South Australian governments (Fig. 7.2b). These forums provide the opportunity for candid interactions between governments, as well as a mechanism for leaders of the Community Advisory Committee and Scientific Advisory Panel to raise key issues. Biennial conferences are another requirement of the agreement, convened in different locations around the Basin until the most recent in Port Augusta in 2013 (Table 7.1, Fig. 7.6). These events brought together the general community, Traditional Owners, industry, scientists, government policy-makers, and managers to share current state of knowledge of the Basin, and nurture cross-sector and cross-border collaboration. As well, Lake Eyre Basin Aboriginal Forums, last held in 2011 (Table 7.1), were a pathway for Aboriginal people to provide strong input into the management of the Basin (see Chapter 8).

The agreement also made a commitment to science, through the Lake Eyre Basin Rivers Assessment and reporting on the state of the Lake Eyre Basin every 10 years (Table 7.1). This was in addition to the independent science carried out by researchers. The Rivers Assessment involved surveying biophysical processes and functions of the Lake Eyre Basin rivers, as well as identifying potential threats (e.g. invasive species). The first State of the Basin Report was for 2008 (Lake Eyre Basin Scientific Panel 2009), with the next assessment due in 2018. These reports and independent scientific research continue to generally support assessments that the Lake Eyre Basin and its rivers remain in excellent ecological condition. However, extinction of small to medium endemic mammals is widespread in the Lake Eyre Basin (Chapter 6). Also, exotic invasive species remain an ever present and serious problem (see Chapters 1 and 3).

## **Communication – wide and effective**

Three key principles continue to drive effective communication across the Lake Eyre Basin: maintenance of good stakeholder relationships; active fostering of shared responsibility; and acknowledgement that people and place are inseparable. The Lake Eyre Basin, like all large river basins in the world, has a diverse mix of communities with wide ranging values and aspirations. Effective communication needs to operate over more than 1500 km, where population density is only one person/20 km<sup>2</sup>. This remains a challenge.

The community and science advisory committees have met more than 30 times since the commencement of the Lake Eyre Basin Intergovernmental Agreement to discuss local and Basin-wide issues and provide recommendations to communities and governments. These regular, funded gatherings, open to interested observers, are touchstones of community 'reality check' and scientific rigour, providing forums for new ideas, problem solving and raising key issues requiring collaborative community and government attention. Meetings have typically been held in different locations around the Basin, allowing members to learn about and share in the challenges of managing such a large river system. However, uniting the community for the protection of one of the world's great river systems remains a complex and costly endeavour.

Over the decades, news of potential threats has been rapidly communicated throughout the community, and governments have been held to account for policies and legislation which did not reflect the broader community vision of river protection. There is particular vigilance about the potential impacts of water resource development on the rivers' precious resource, water. Any extraction has implications for downstream ecosystems and communities. Advisory groups have critically reviewed the water planning and protection measures of different states, consistently highlighting the values and importance of the rivers of the Lake Eyre Basin, and criticising the Liberal National Queensland Government (2012–15) for weakening river protections and promoting irrigation (see Chapters 17, 20 and 21; Table 7.1). The original scientific workshop in 1996 at Windorah and other key conferences have maintained strong pressure on governments, including the Windorah floodplain graziers conference in 2008 and the Lake Eyre Basin Under the Spotlight conference in Longreach in 2013 (Table 7.1). Diverse and effective communication, built on more than three decades of collaboration and trust, was essential for all processes. Communities of the Lake Eyre Basin have used these cohesive communication networks to actively influence government decisions and policies.

In 2000, the magnificent 'Heart of Australia' Lake Eyre Basin poster, with a map of the Basin and its people and environments, became the centrepiece of a carefully planned and well-executed awareness-raising program (<http://www.lakeeyrebasin.gov.au/resources/maps>). It created a powerful sense of place for people, conveying compelling messages about the Basin's unique landscape features, catchment connectivity, cultural assets, environmental values and land uses. Its publication signalled the start of broad, sustained, formal communication within and beyond the Basin, well supported by the Intergovernmental Agreement. The poster adorns nearly every roadhouse, pub or tourist information centre in the Basin, generating continual interest and conversation about the Basin and its people. The



popularity of the poster has seen it updated and reprinted twice since its first release. Many other communication initiatives have since served to increase community awareness of the unique values of the Basin. The *Lake Eyre Basin People and Passion* project includes evocative short films from the heart of Australia (<http://www.dcsolutions.org.au/showcase/#&panel1-1>), made possible by a collaboration between the Ministerial Forum's Community Advisory Committee, Desert Channels Queensland and Territory Natural Resource Management. The films feature over 20 distinctive characters of the Basin – pastoralists, botanists, Indigenous rangers, ecologists, Traditional Owners and tourism operators. Their inspiring stories tell of personal passion and drive to care for the Basin's rivers, wildlife and floodplains. As well, the Australian Broadcasting Corporation featured the floods of 2010–11 in a magnificent television documentary, followed by a book (Lockyer 2012) showcasing the Basin's people and communities, spectacular landscapes, desert wildlife and the often dramatic and unpredictable natural cycles of life in the Basin.

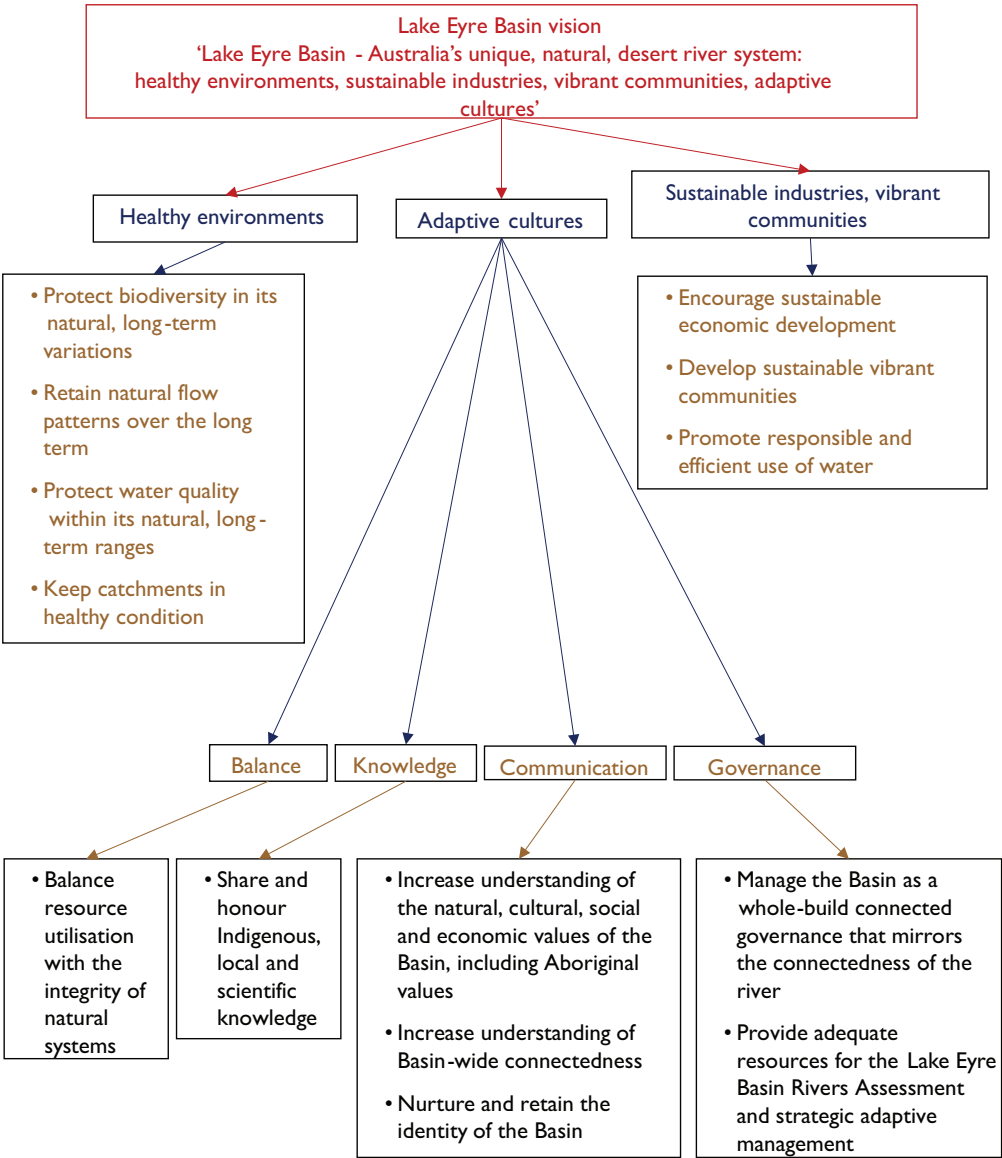
A poster titled *Lake Eyre Basin Aboriginal Way*, featuring images, maps and quotations about the enduring connection of Aboriginal people to the Basin and its rivers, was published in 2017. The culmination of extensive and respectful engagement of Aboriginal groups from across the Basin, this was arguably a ground-breaking communication project with few parallels in Australian catchment management.

### Championing future sustainability of the rivers

Scientific understanding about the ecological values of the river and the Basin has continued to increase, as has awareness of the impacts of water resource developments on communities and ecosystems in other inland river basins. Rigorous science over three decades has produced a deep understanding of the boom and bust cycles of the rivers, while the Lake Eyre Basin Rivers Assessment tracks the condition of the rivers. Regional bodies (Fig. 7.2a) have focused on land management programs, in particular the control of invasive species, as well as community education and engagement. There will be increasing pressure on governments and communities to develop the rivers of the Lake Eyre Basin (see Chapter 22), even if this is through indirect impacts such as mining exploration and development (see Chapter 19). The history of Lake Eyre Basin partnerships has taught us that government policies can easily change in favour of development, with individuals willing to promote such approaches (see Chapter 17). Policy settings and legislation in Queensland relating to water resource management are crucial, as this is where most of the river flows in the Lake Eyre Basin originate (see Chapter 20). Until clear legislative and policy frameworks are in place to protect the rivers, river flows will remain vulnerable to development.

At a local and basin scale, there is increasing impetus for focused monitoring, targeting objectives related to management. It is no longer sufficient to simply understand environmental values – our growing scientific knowledge must influence management. To this end, governments of the Lake Eyre Basin endorsed a new Strategic Adaptive Management framework for the rivers in 2010 (Table 7.1). This framework involves a rigorous process where values inform a vision which can then drive development of a hierarchy of objectives linked to monitoring and science (Fig. 7.7; Kingsford *et al.* 2011;





**Fig. 7.7.** Preliminary development of a Lake Eyre Basin vision driving broad objectives which can be further developed at the local scale with specific measureable objectives. Linked to monitoring and management, the objectives were developed through extensive consultation via the formal structures of the Lake Eyre Basin Intergovernmental Agreement process (Fig. 7.2b) (adapted from <http://www.lakeeyrebasin.gov.au/sitecollectionimages/resources/87758eea-58f4-40fd-a0c6-615a0319d385/files/leb-ministers-report-2013.pdf>).

Kingsford and Biggs 2012). It aims to provide explicit objectives at the fine scale, linked to a Basin-scale vision and informing on-ground management with continuous learning and scientific evidence. To our knowledge, implementation of this framework has never been attempted at the scale of an entire river basin elsewhere in the world. A small-scale trial of

this approach is underway in the Coongie Lakes region in South Australia, using funding from the International Riverprize.

Most importantly, the Strategic Adaptive Management approach engages stakeholders in management and the environmental indicators relevant to management, linked to an overarching vision. This provides the template for exploring trends in indicators and the potential need for management intervention, followed by assessment of management success. This critical framework began through the development of visions by different organisations within the community (e.g. catchment management committees and regional natural resource management bodies). The Community Advisory Panel and Scientific Advisory Panel then integrated these visions to develop a working vision for the entire Lake Eyre Basin, reflected in coarse-scale objectives (Fig. 7.7). The progressive implementation of Strategic Adaptive Management will be far reaching, linking visions and objectives to actual monitoring and management. It provides the opportunity for governments and communities to improve the value of their investments in the management and monitoring of Lake Eyre Basin rivers, and to report the outcome of management actions.

The vision (Fig. 7.7) formally recognises the uniqueness of the Lake Eyre Basin and its values. It specifies the free-flowing status of this natural desert river system. The social, economic and environmental dimensions are captured, recognising the industries and communities so important in sustaining a large and complex socio-ecological system. It also specifies what is critically important – Lake Eyre Basin rivers need to remain healthy. Industries need to respect this by ensuring they are sustainable. There is an increasing need to also understand the importance of ecosystem services delivered from natural cycles of the river system to the economy and to the social and cultural aspects of people's livelihoods. Equally important is a clear understanding of the potential costs of water resource developments on this unique environment and its people (see Chapter 18). And our communities need to maintain their vibrancy and ability to engage and interact in this harsh climate. The incredible natural variability of the Lake Eyre Basin and its rivers imposes adaptation on all pursuits, people and industries. 'Adaptive cultures' describes not only the willingness of the people of the Lake Eyre Basin to embrace change, but also the importance of effective partnerships and communication, and a commitment to adaptive management, where knowledge is underpinned by clear objectives and the best science.

## Conclusion

The story so far for the Lake Eyre Basin rivers and their communities is one of these communities driving the future. There have been challenges and failures, but the partnerships in the Lake Eyre Basin generally remain committed to the sustainability of the rivers. 'Prevention is better than a cure', in relation to the impact of water resource development, has been a strong and consistent theme of the last three decades of Lake Eyre Basin community partnerships.

Communities and their governments continue to articulate the importance of protecting the natural flows of rivers in the Lake Eyre Basin. Echoed in the Intergovernmental Agreement, this goal is reflected in relevant water plans and environmental protection measures from the Basin to the local scale, including in the Cooper Creek Water Resource

Plan, the Coongie Lakes Ramsar Management Plan, and the now revoked Wild Rivers legislation. Future sustainable management of the rivers of the Lake Eyre Basin remains fundamentally in the hands of the people who care about this unique environment – the Lake Eyre Basin champions – and in their ability to influence their governments to protect the unique cultural and environmental values of the region.

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