

CULTURAL FLOWS

A GUIDE FOR FIRST NATIONS



NATIONAL
CULTURAL FLOWS
RESEARCH PROJECT



This guide has been prepared by the Cultural Flows Planning and Research Committee as part of the National Cultural Flows Research Project, developed by and for First Nations with the aim of helping to embed First Nations' water allocations in Australia's water management framework. Funding for the Research Project has been generously provided by the Murray Darling Basin Authority, the Commonwealth Environmental Water Office, the National Water Initiative, and the Department of Families, Housing, Community Services and Indigenous Affairs. Adapted from report authored by Dr John Mackenzie, Dr Rhonda Butcher, Dr Chris Gippel, Peter Cottingham, Rowena Brown, Klynton Wanganeen, Thomas Kloeden and Tamarind Meara.

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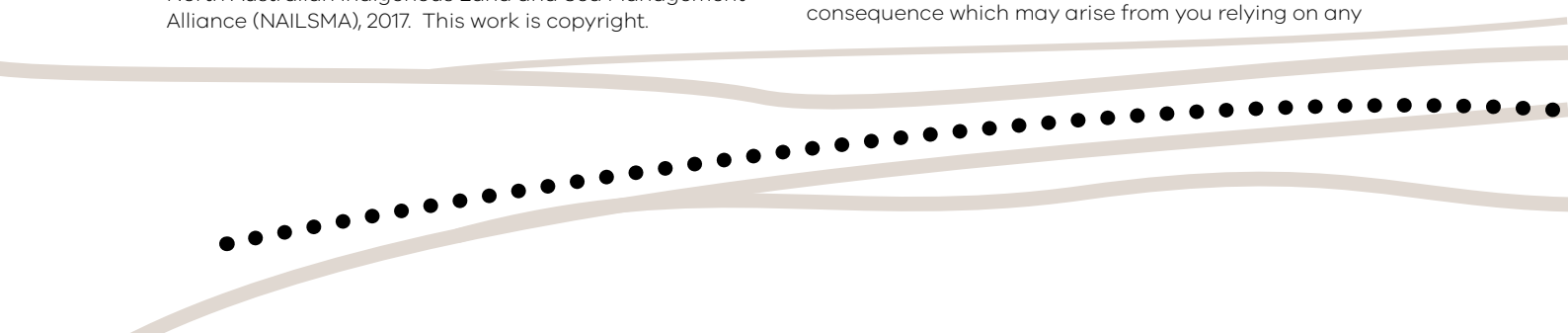
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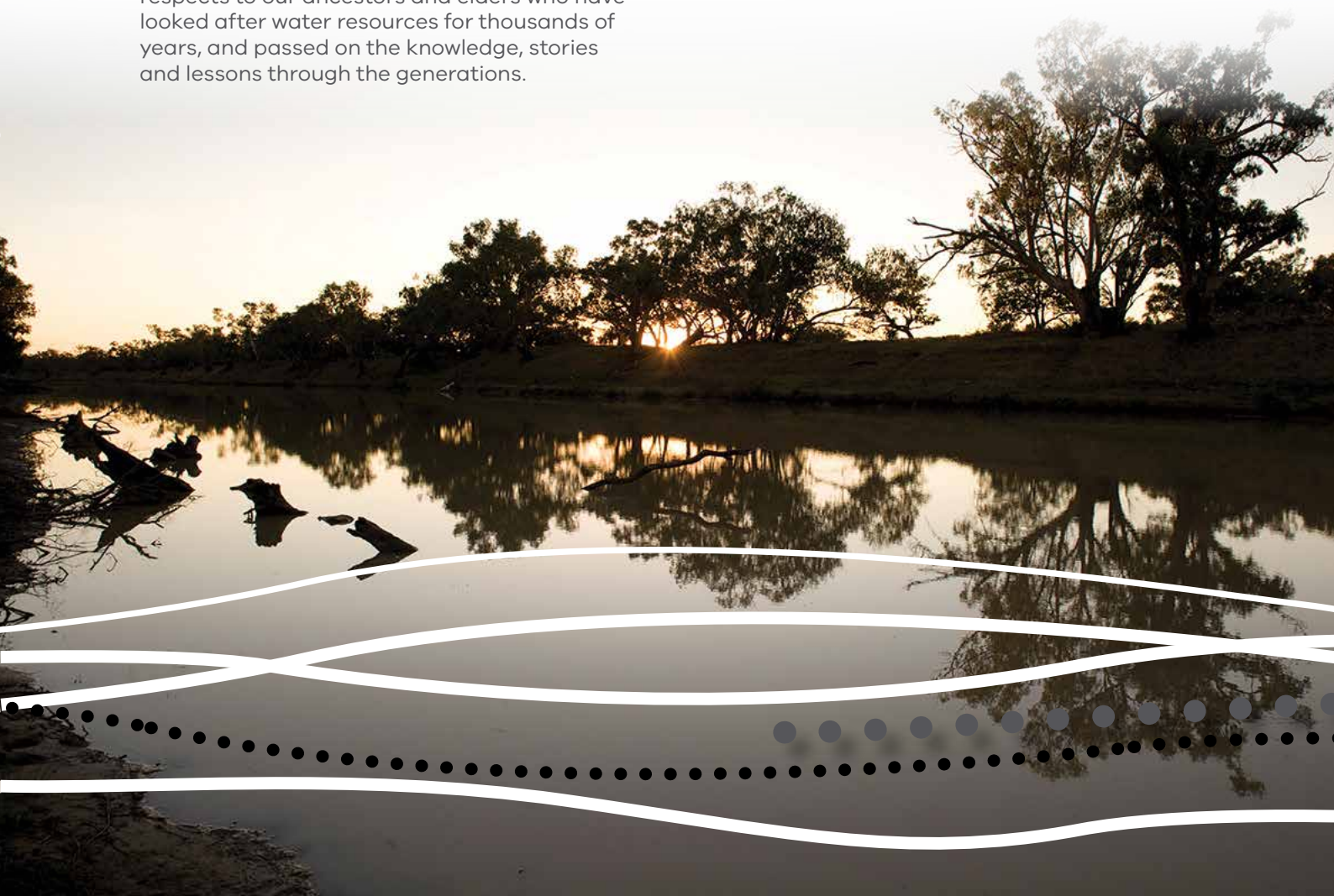
For First Nations People, water is a sacred source of life. The natural flow of water sustains aquatic ecosystems that are central to our spirituality, our social and cultural economy and wellbeing. The rivers are the veins of Country, carrying water to sustain all parts of our sacred landscape. The wetlands are the kidneys, filtering the water as it passes through the land.

First Nations' people have a moral obligation to care for water resources, as part of their commitment to looking after Country. These obligations connect across communities and language groups, extending to downstream communities, throughout catchments and over connected aquifer and groundwater systems.

We acknowledge all of the Traditional Owners across Australia who care for these waterways that sustain our Country. We pay deepest respects to our ancestors and elders who have looked after water resources for thousands of years, and passed on the knowledge, stories and lessons through the generations.

We acknowledge the nations of Murray Lower Darling Rivers Indigenous Nations and Northern Basin Aboriginal Nations who continue to fight for their inherent right to water, and who had a pivotal role in creating and directing the National Cultural Flows Research Project.

We gratefully acknowledge the Murrawarri and Nari Nari nations, who worked tirelessly as part of the research team to develop this cultural flows approach.



Cultural flows

Water is not just a commodity to be amassed and distributed in a rational way to mouths, crops, grasses and industry. Water is spirit. It is a living being that is connected to the creation and lives of ancestral beings.

Its very movement, its eddies and criss-crossing currents and its great over-flowing floods are transformative energy. To live next to a water course that is thousands of years old and to meditate on its primordial flow is to feel an energy force that is timeless and beyond this world. First Nations people have always known that the state of the great circulatory system of water is a reflection of our own physical health, which is inherently linked to the health of the spirit.

For tens of thousands of years, First Nations people have been stewards of waterways, managing these sensitive ecological systems through drought and flood. Each First Nation has always had a cultural obligation to look after water and share it in a pure state down the river complex, and has done so using ceremony and the deep knowledge passed down through the generations. This process of water management, which provided for the needs of all people, was disrupted by colonisation, where the use and extraction of water was valued above the integrity of the natural system. Damage has now been done to the delicate balance of the rivers, aquifers, soaks, swamps and wetlands that have been the spirit and life centre for First Nations, and the means to fulfil their cultural obligations have been taken away.

The pursuit of cultural flows is a way of reconnecting First Nations people with their cultural right to manage water systems in a holistic, spiritual and sustainable way. Cultural flows are:

...“water entitlements that are legally and beneficially owned by the Indigenous Nations of a sufficient and adequate quantity and quality to improve the spiritual, cultural, environmental, social and economic conditions of those Nations. This is our inherent right.”

Echuca Declaration, 2010

Making sure that every First Nation around the country has access to cultural flows is an important step in achieving water rights for First Nations people and bringing back life and spirit to Australia’s damaged landscapes.



About this guide

This *Cultural Flows guide* was developed as part of the National Cultural Flows Research Project. It contributes to the range of tools that are available to First Nations across Australia to help secure and manage cultural flows.

The guide outlines a method for nations to describe and measure First Nations' cultural water uses and values, and then calculate how much water is needed to protect those values. As well as helping to secure an First Nations' water allocation, this guide can also be used to bring the community together to share stories, knowledge and ideas about water and culture.

The guide was developed by research teams at two case study locations – Gooraman Swamp and Toogimbie IPA Wetlands. Researchers from the Murrawarri and Nari Nari nations worked with ecological, hydrological and social science experts to develop this step-by-step approach that can be used by all First Nations to calculate cultural flow needs. The guide was developed in the Murray-Darling Basin, but the steps can be applied anywhere in Australia. The steps in this guide outline a comprehensive cultural flow assessment. It may be possible to shorten the process as you gain more practice.

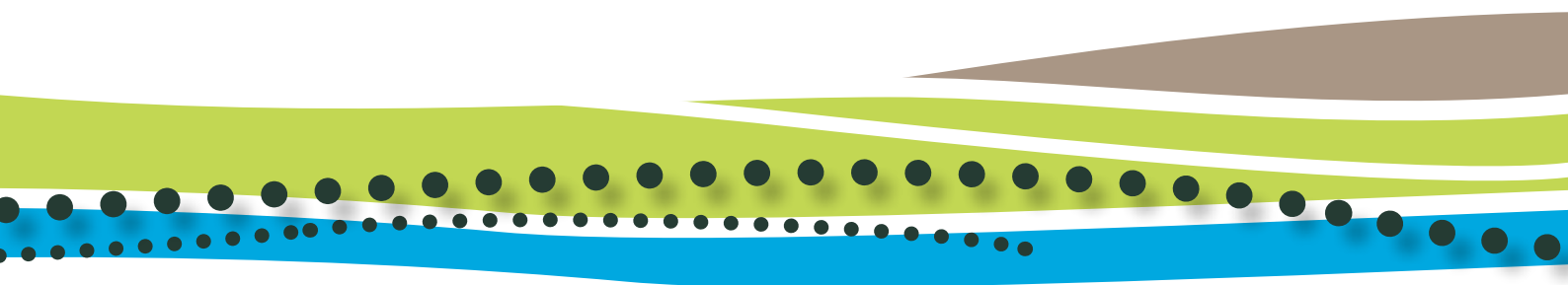
How to use this document

The guide describes ten steps that First Nations nations can work through to calculate water needs and then monitor the outcomes of their cultural flow.

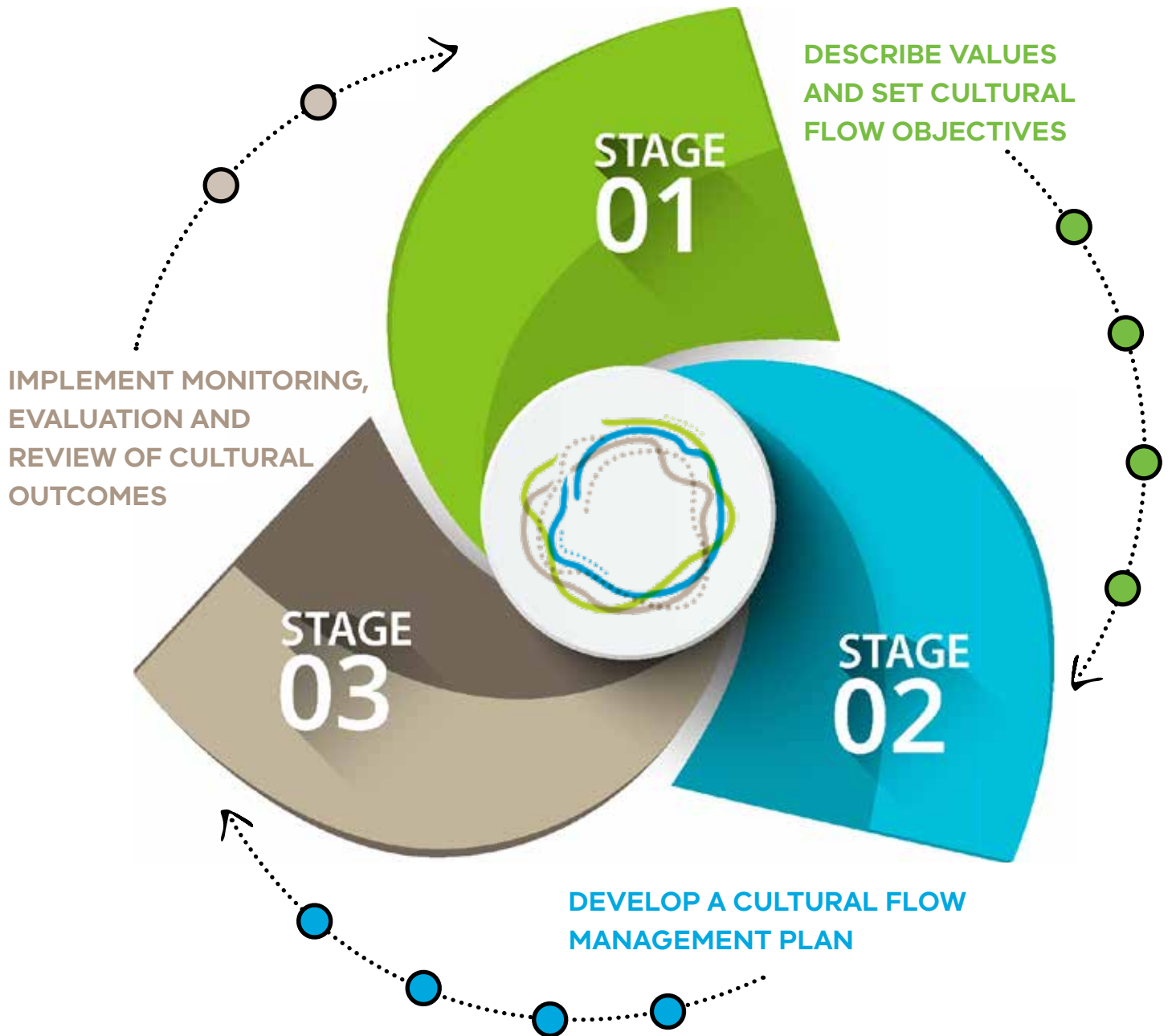
It is a community-led process, and relies on nation members coming together to discuss values, needs and aspirations. It uses an *adaptive management* approach, where you can learn from doing and improve things for next time.

A range of skills and knowledge are needed to do a cultural flow assessment using this approach – the mix of skills will depend on where you want to do the watering. Expertise that is needed might include traditional Aboriginal knowledge, cultural heritage, community facilitation, aquatic ecology, hydrology, mapping and project management. In some cases, the nation will already have these skills, and sometimes it will be necessary to bring in experts from outside. The time and cost required to do a cultural flow assessment will depend on the location, size and complexity of the watering place.

This *guide for community* presents a summary of the key steps for a cultural flow assessment. It provides general instructions for the nation water manager who will be leading the cultural flow assessment project. It should be used together with the guide for water managers, which provides more of the technical detail about what each step involves, and includes links to extra information and resources that can help along the way.



CULTURAL FLOWS ASSESSMENT





DESCRIBE VALUES AND SET CULTURAL FLOW OBJECTIVES

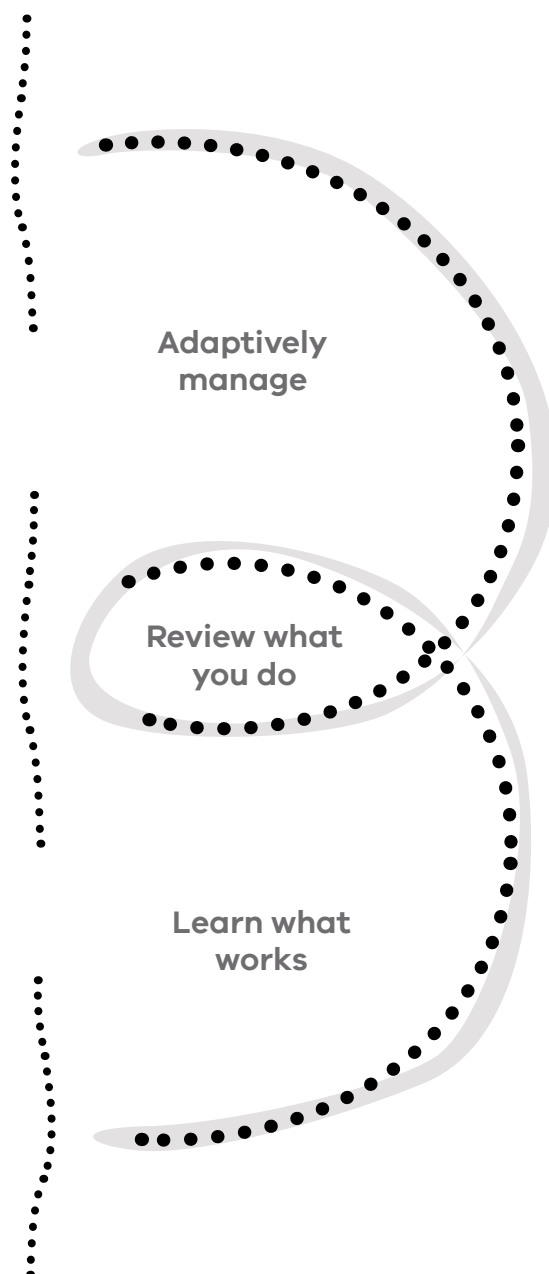
- STEP 1 Getting started
- STEP 2 Identify values
- STEP 3 Build a conceptual model
- STEP 4 Set objectives

DEVELOP A CULTURAL FLOW MANAGEMENT PLAN

- STEP 5 Summarise the cultural character
- STEP 6 Confirm conceptual relationship
- STEP 7 Determine water requirements
- STEP 8 Prepare A cultural flows management plan

IMPLEMENT MONITORING, EVALUATION AND REVIEW OF OUTCOMES

- STEP 9 Select what to measure
- STEP 10 Collect and analyse data, evaluate and review outcomes



STAGE 01

DESCRIBE VALUES AND SET CULTURAL FLOW OBJECTIVES

The focus of this stage is to identify and prioritise the economic, cultural and ecological values that the nation has for water.

The information will help you set short, medium and long term objectives and describe your overall vision for cultural flows on Country.

To begin a cultural flow assessment process you will need to appoint a dedicated project manager who can run the day-to-day activities and keep track of where things are up to. It may also be useful to nominate a liaison person who can be responsible for communicating. Making sure First Nations people are involved throughout the process is critical.

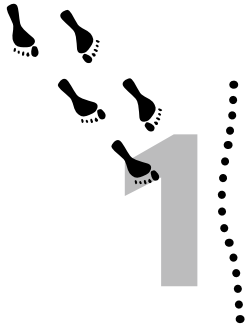
You might like to establish a working group who can provide oversight of the process and identify who else will need to be involved in the cultural flow assessment. The oversight group would be responsible for:

- deciding where the watering place should be
- planning how everyone will work together
- gathering information about local water stories, historical cultural values and current practices
- describing the aspirations and objectives for water on Country.

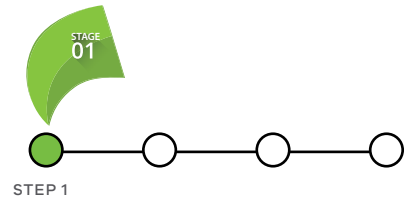
Once the watering place is agreed on and the oversight group is in place, it is time to gather data. This involves collecting both Western Science data and Traditional Aboriginal Knowledge, which can be brought together to describe the cultural, ecological and physical character of the chosen watering place – painting a picture of the values of the watering place and how those values relate to each other. The value may be spiritual, cultural, social, economic, ecological, geomorphological (landform) and hydrological (related to the water cycle and its individual components). You will then need to talk about what would need to be done to protect, restore or enhance those values, and how water can help with that.

Working with community knowledge holders, the next step is to develop draft objectives for what you want to achieve in your watering place. Because you may not be able to get all of the water that you need, it can be useful to prioritise the objectives so you can be clear about which ones are the most important.

At the end of Stage 1, you should end up with an established oversight group, all the existing information about the chosen watering place brought together and a set of draft objectives and outcomes for your intended cultural flow.



GETTING STARTED



AIM

Get the people and information together that you will need to do your cultural flow assessment.

ACTIVITIES

SET UP A WORKING GROUP, involving members of the nation who want to be involved in the project. They should include people with cultural, social or ecological interests and may be Traditional Owners or authorised knowledge holders nominated by the nation. You will need to agree on how the group will work together and confirm the Free, Prior and Informed Consent of all participants. The first job of this group is to decide where the watering place will be – this can be a difficult decision, and there are a number of tools available to help with this process (including the Aboriginal Waterways Assessment Program).

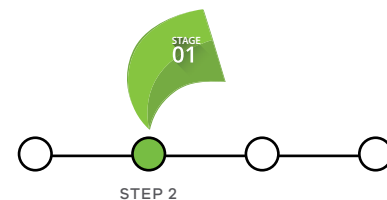
APPOINT A KEY NATION CONTACT to be the main point of contact between the nation members, the Working Group, waterway managers and other partners. This person will have responsibility for making sure the community are kept informed about the process, and for bringing everyone together for the activities.

GATHER ANY BACKGROUND INFORMATION about the watering place. This might include reports, plans, documented Traditional Aboriginal Knowledge, surveys, maps, water models or other supporting research data.

IDENTIFY OTHER EXPERTS YOU MIGHT NEED to involve in the project, keeping in mind that the process of doing the assessment might be a good opportunity for nation members to learn new skills and knowledge.

BY THE END OF THIS STEP YOU SHOULD HAVE COMPLETED...

- an engagement plan describing who will be involved in the project, including the Key Nation Contact and members of the Working Group, how they will work together and how information will be communicated information to the community
- signed Free, Prior and Informed Consent forms for all participants
- a description of the chosen watering place, including its boundaries and an explanation of why it was chosen.
- gathering of information about the watering place and a map of its boundary



AIM

Identify the cultural values for your chosen watering place and decide what you want a cultural flow to achieve in that place.

ACTIVITIES

IDENTIFY ALL OF THE VALUES AND INTERESTS AT THE CHOSEN PLACE.

You might involve the Working Group, Key Nation Contact, other nation representatives and identified experts to make sure the full range of values are considered. First Nations' water values and interests are diverse and may include all of the ways in which First Nations people use the water resource, how it sustains culturally important places and practices, how it is shaped by beliefs, and how water is needed for wellbeing, identity, livelihoods, quality of life and social cohesion. All values should be captured, including mythological, traditional, historical, contemporary and aspirational. There are many methods for identifying nation values, including interviews, focus groups, surveys and data analysis, and tools such as the Aboriginal Waterways Assessment may be useful. The list of values will be used later to determine the objectives for the cultural flow.


DOCUMENT THE METHODS YOU USED

to identify the values. It is important to be transparent about how the information is gathered and how decisions are made about what is important to the community. The findings should be checked by all of the people who contributed to the process to make sure they agree with how their information was used.

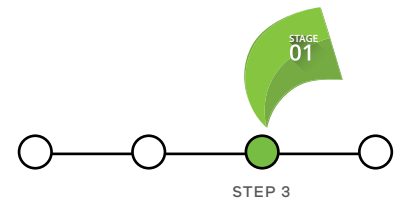
DRAFT AN INITIAL SET OF ASPIRATIONS that describe what you would like to see happen at the watering place. These should be based on the values that you identified, and should also consider the current environmental and social trends, and how the land use, economy, people and environment are changing in the area.

BY THE END OF THIS STEP YOU SHOULD HAVE COMPLETED...

- a list of all of the values and interests related to water management at the chosen watering place
- documentation describing the methods you used to identify your values, and any knowledge gaps
- a draft list of your nation's aspirations for cultural flows.



3 BUILD A CONCEPTUAL MODEL



AIM

Develop a conceptual model that illustrates all of the cultural values that depend on water.

ACTIVITIES

REFINE ANY EXISTING CONCEPTUAL MODELS
if they already exist. These may provide a good starting point that you can adapt to suit the purpose of your cultural flow needs.

AGREE ON WHAT THE MODEL WILL LOOK LIKE.
In consultation with the Working Group, decide what kind of model will be most appropriate and accessible for your nation. It is important that the model is presented in a way that will be clear to the people who will be involved in the cultural flow assessment.

DEVELOP YOUR OWN CONCEPTUAL MODEL
that shows what you think will happen to the community's values if a cultural flow is applied. Conceptual models are best developed by looking at the cultural character and ecological attributes of the place that are relevant to cultural values, and consider how they interact with the watering place. The key to a good conceptual model is to focus on the aspects of most interest and to represent the watering place as simply as possible. It doesn't have to contain every aspect.

BY THE END OF THIS STEP YOU SHOULD HAVE COMPLETED...

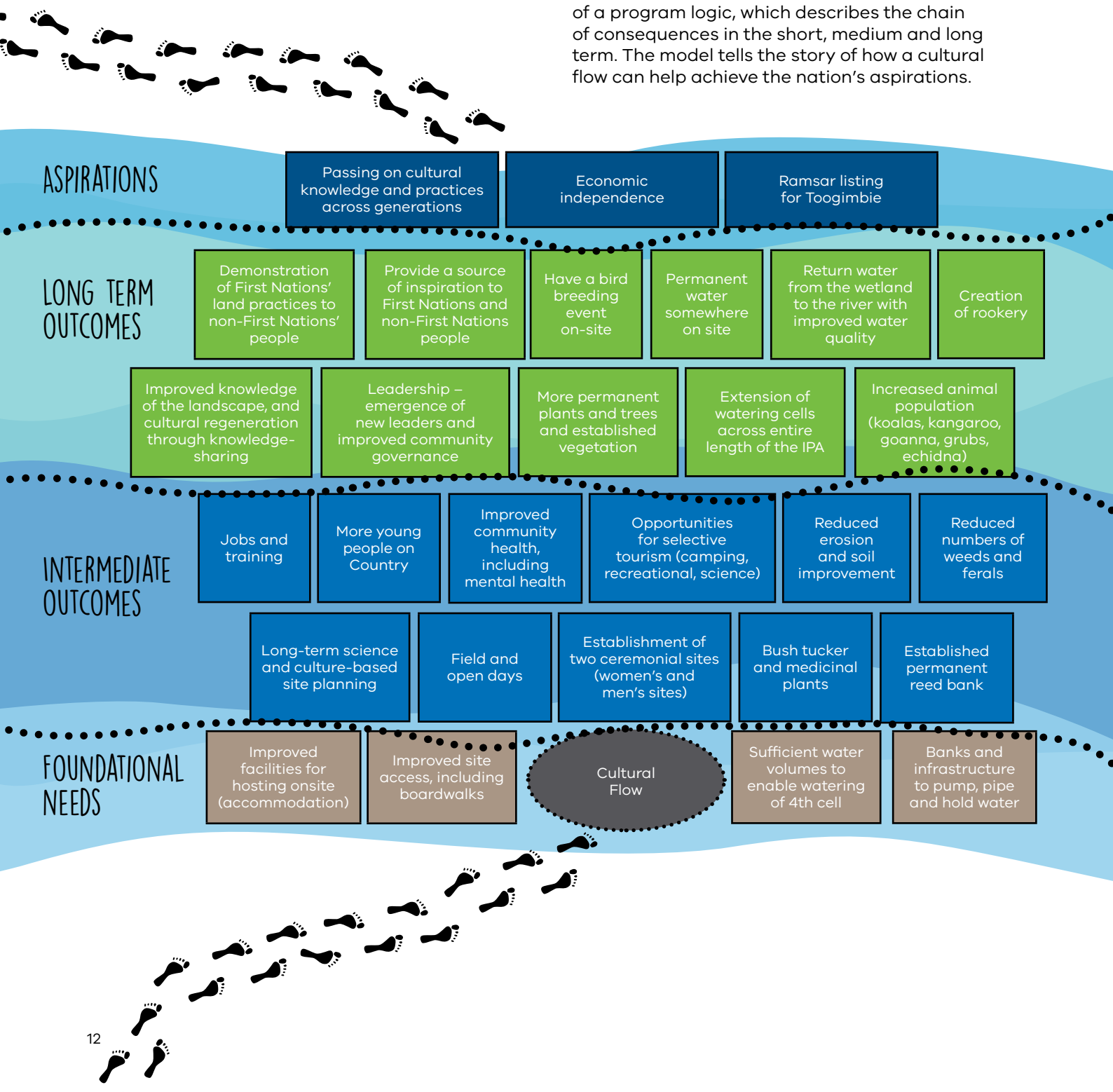
- a conceptual model that shows the agreed values and aspirations for the cultural flow, and how a cultural flow is likely to affect them.

WHAT IS A CONCEPTUAL MODEL?

Conceptual models are widely used tools that can show how we understand systems - for cultural flows, they can show the relationships between cultural values and the aspects of the environment that are influenced by water. They can be shown in different ways, such as mind-maps, process diagrams, logic and 'program logic' models, hierarchies, flow charts, tree diagrams and web diagrams. Models can include narrative and story-telling, art works, performance, mapping and language.

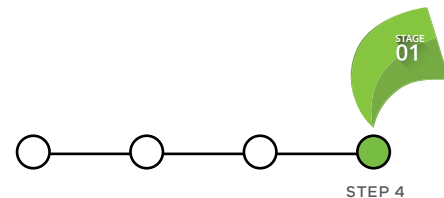
The main purpose for building a conceptual model in a cultural flow assessment is to establish a shared understanding of how water, and access to water, is likely to impact on the First Nations' values, associated with a place. The conceptual model will need to be refined over time to show how cultural and ecological values respond to cultural flows.

In the National Cultural Flows Research Project, conceptual models were presented in the form of a program logic, which describes the chain of consequences in the short, medium and long term. The model tells the story of how a cultural flow can help achieve the nation's aspirations.



4

SET OBJECTIVES



AIM

Develop, confirm and prioritise the nation's objectives for a cultural flow.

ACTIVITIES

WRITE DOWN ALL OF THE POSSIBLE OBJECTIVES FOR CULTURAL WATER that the nation might like to see at the watering place. They should relate to the values identified in the earlier steps, and link with how the nation wishes to manage the water, and how that management can help to achieve the aspirations.

CHOOSE THE HANDFUL OF OBJECTIVES that are most critical for achieving your nation's aspirations for managing cultural water, and also identify which ones are desirable but not absolutely essential. The Working Group should participate in the process of choosing which objectives to use in the cultural flow assessment. It is best to have a small set of well-crafted objectives rather than try to develop objectives for every one of the community's aspirations. Remember - delivering water for one objective may still provide benefits for other values.

GET AGREEMENT ON THE FINAL OBJECTIVES by the Working Group and make sure they are described in a S.M.A.R.T. way, to ensure they are feasible and realistic. These final objectives will help you determine what water is required for the watering place.

BY THE END OF THIS STEP YOU SHOULD HAVE COMPLETED...

- a documented set of cultural flow objectives that have been confirmed by the Working Group
- an explanation of why those objectives were chosen, and any other information that can help with future refinement of the objectives.

S.M.A.R.T. OBJECTIVES

It is important to describe objectives in a way that makes it easy to measure whether they are being achieved. S.M.A.R.T stands for:

SPECIFIC – clear and explicit, avoiding general statements wherever possible

MEASURABLE – with elements that will be possible to monitor

ACHIEVABLE – something that can be realistically achieved

RELEVANT – making sure they relate to your aspirations

TIME BOUND – so you know when you can expect to achieve it

SMART objectives can be developed by answering a series of questions such as:

- What do you want the cultural flow to achieve?
- Where do you want the outcome to be achieved?
- What will you measure to see if you achieved the outcome?
- When will you measure the outcome?



STAGE 02

DEVELOP A CULTURAL FLOW MANAGEMENT PLAN

This stage takes you through the process of preparing a Cultural Flow Management Plan for your watering place. The Cultural Flow Management Plan describes the characteristics of the watering place, confirms how the water and cultural values relate to each other and describes what watering will be needed to achieve your chosen objectives. Linked to your agreed objectives and outcomes expected from a cultural flow, the Cultural Flow Management Plan may also include information about:

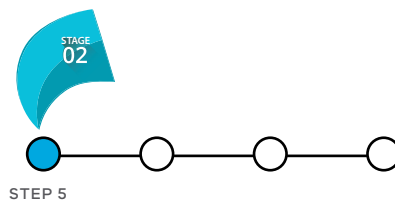
- the need to make water available for specific uses,
- conditions on how much water can be used and when,
- using the water to enhance environmental flows, and/or
- rules for how water can be traded.

There is often a lot of uncertainty about future water availability, climate change or how the environment will respond to water, so planners often need to take a risk-based approach to water management. They include ways to change or update the plan if it isn't working, or is having unexpected results. Your Cultural Flow Management Plan should look at the possible risks (such as drought or flooding) that might affect your desired outcomes and identify how these would be managed at your watering place if they occurred. The Plan should also include processes to monitor the volume of water arriving at the watering place.

At the end of **STAGE 2**, your Cultural Flow Management Plan should be finalised, incorporating the values of the watering place, cultural flow objectives and expected outcomes of the cultural flow that were described in Stage 1. The Cultural Flow Management Plan will be the key document that explains why water is needed, where it's intended to go, how much water is needed and what it will achieve.

5

SUMMARISE THE CHARACTER OF THE WATERING PLACE



AIM

Describe all of the aspects of the watering place including its physical, cultural and spiritual characteristics.

ACTIVITIES

PREPARE A CULTURAL AND ECOLOGICAL CHARACTER DESCRIPTION for the watering place. This should summarise both the Traditional Aboriginal Knowledge and Western Science understanding, focusing on the water dependent components, processes, functions and services that might be affected by a change in the water regime. It should include:

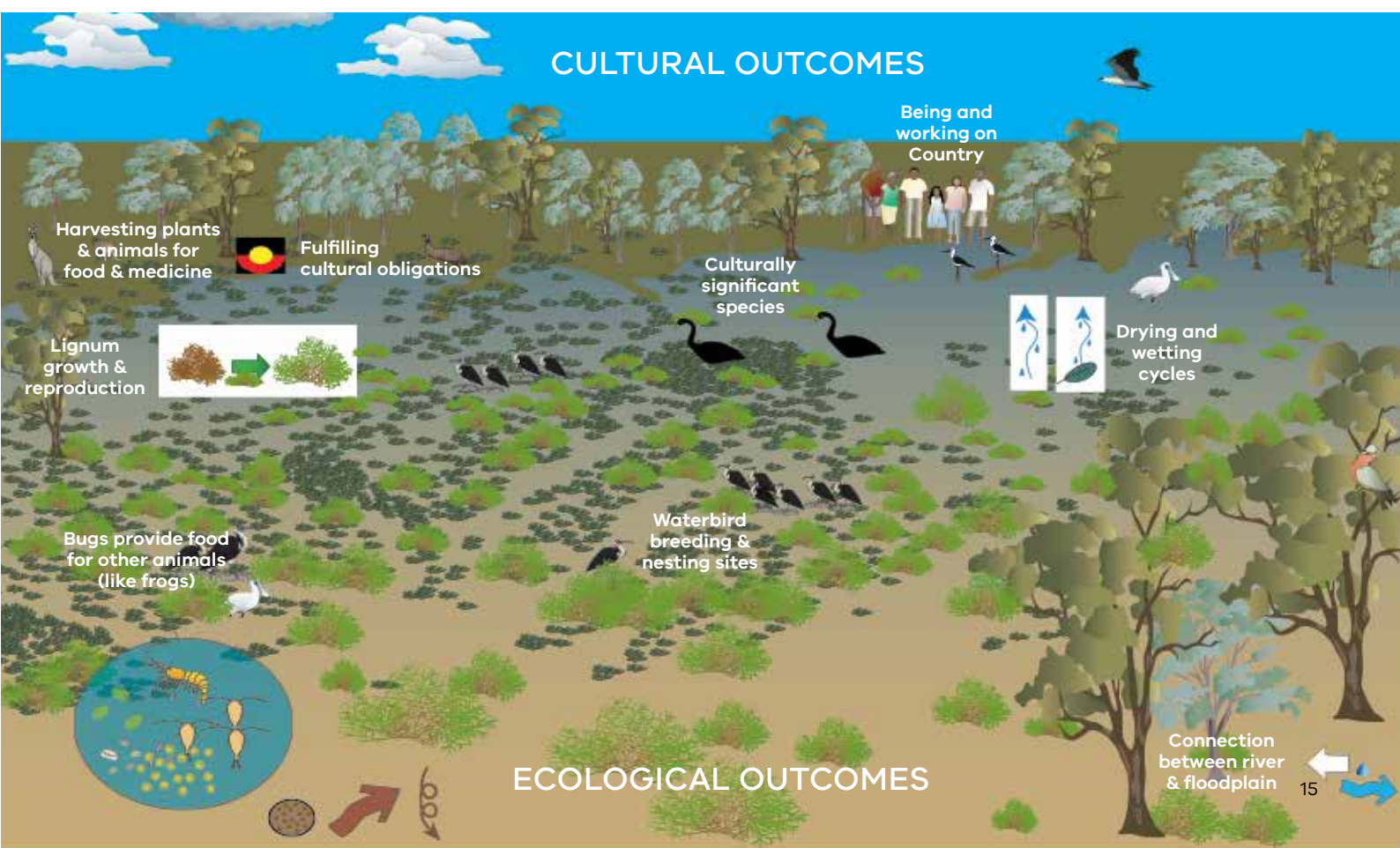
- an overview of the catchment and river system
- a description of the watering place (including boundaries)
- Traditional Aboriginal Knowledge that is known about the place that is appropriate to share
- the known ecological values
- threats to the cultural character

- information about the ecosystem (types, components, processes, functions and services)
- character conceptual models that show the relationships between values and threats.

BY THE END OF THIS STEP YOU SHOULD HAVE COMPLETED...

- a summary of the cultural and ecological character description for the watering place that can be included in the Cultural Flow Management Plan
- character conceptual models.

CULTURAL OUTCOMES

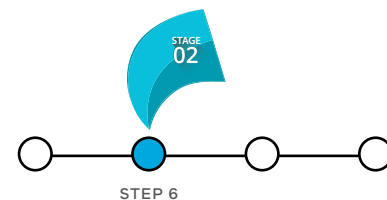


ECOLOGICAL OUTCOMES



6

CONFIRM CONCEPTUAL RELATIONSHIPS



AIM

Confirm the relationships between cultural values, aspirations, objectives and water requirements.

ACTIVITIES

UPDATE THE CONCEPTUAL MODEL that was developed in Step 3. This is an opportunity to build in the cultural, social and environmental information that was gathered in the later steps and provide a more detailed picture of the relationships between water resources, community values and the natural system. The updated model will describe how the characteristics of the watering place are likely to interact and respond to different watering options, providing a stronger basis for decision-making, communication and predicting water management outcomes. There are a range of tools available to support this type of integrated assessment – the results from this step should be detailed enough so that you can describe the impacts of different water regimes.

IDENTIFY THE KNOWN OR POTENTIAL RISKS to achieving your watering objectives to be considered in the water management planning process.

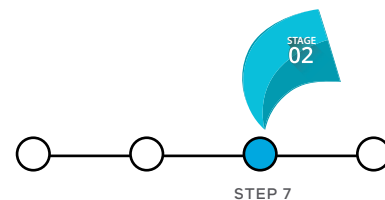
DEVELOP A SUPPORTING STORY that describes your understanding of how the values, aspirations, objectives and water requirements relate to each other. The narrative helps to explain how the relationships in the conceptual model work.

BY THE END OF THIS STEP YOU SHOULD HAVE COMPLETED...

- an updated conceptual model which provides more technical detail about how different watering options might affect the watering place
- a description of the known or potential risks to achieving the watering objectives
- a narrative that supports the conceptual understanding of the relationship between values, aspirations, objectives and water requirements.



SPECIFY WATER REQUIREMENTS IN DETAIL



AIM

Determine the specific water requirements that will achieve your agreed cultural flow objectives.

ACTIVITIES

DESCRIBE THE OBJECTIVES IN TERMS OF WATER REQUIREMENTS. The cultural flow objectives that were previously documented now need to be expressed in a way that describes exactly when and where the water is needed and how long it should stay there.

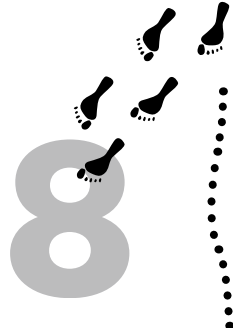
CALCULATE HOW MUCH WATER IS NEEDED. This is done using hydrological and hydraulic models, like the ones used for all water management in Australia. For example, water agencies use hydrological models, together with monitoring data, to understand how much water is available for sharing throughout the catchment and to predict how much in coming seasons. To do the modelling, you will need information about how water naturally flows to the place, which may already be available or it might need to be collected or modelled. Satellite imagery can also be useful to understand the land shape, climate and water pathways. In most cases, data can be downloaded for free but there is a lot of technical work that will need to be done to understand the hydrology of the watering place. If no-one in your nation already has water modelling expertise, you will likely need to seek assistance. Sometimes water resource management agencies might be able to help, and sometimes hydrological and hydraulic models might already exist that watering place. Even so, it is unlikely that existing models created for another purpose will exactly suit your cultural flow assessment needs, so they might still need updating.

DETERMINE HOW THE WATER WILL BE DELIVERED. The modelling will also be able to show the different ways that water can be delivered to the watering place, such as through pumping or flooding. Different delivery options will probably require quite different amounts of water, and it is important to discuss all of the risks and benefits of the different approaches to find the one that suits your nation.

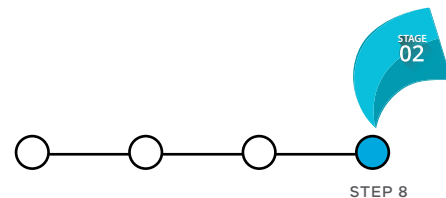
AGREE ON HOW MUCH WATER WILL BE REQUIRED to achieve your objectives. Looking at the watering options that the modelling has shown, you can consult with the Working Group to make some decisions about how much water the nation is deciding to seek.

BY THE END OF THIS STEP YOU SHOULD HAVE COMPLETED...

- a detailed modelling report for the watering place that includes all of the measurements for watering requirements
- hydrological and hydraulic models for the watering place that other people can use, even if they are not experts
- a comprehensive technical report about how the model was developed.



PREPARE A CULTURAL FLOW MANAGEMENT PLAN



AIM

Write a Cultural Flow Management Plan that contains all of the information about the desired cultural flow - objectives how much water will be required, where the water will come from, how it will arrive, where it is needed and how it will be managed.

ACTIVITIES

ENGAGE WITH WATER AUTHORITIES AND AGENCIES IN YOUR AREA. Before preparing your plan, you will probably have to talk to other agencies, especially if the water that you will be using will be held far upstream, or if other agencies have a role in allocating or releasing water. Decision-making processes for water management are different in each state or territory, and for different ways, so it's worthwhile talking early so you can build the right steps into your Cultural Flow Management Plan.

CONSIDER THE RISKS and think about what you could do to prevent them happening, or what you might do to manage them if they do occur.

WRITE THE CULTURAL FLOW MANAGEMENT PLAN using all of the relevant information from the previous steps. The Plan should include:

- a background description of the watering place
- an overview of the catchment or river system
- a summary of cultural and environmental values
- clear objectives for the cultural flow
- a description for how water will get to the place and be managed there. This should include information about costs and constraints
- a summary of stakeholders and how they have been engaged
- a risk assessment, with a description of how you will avoid them or manage them if they arise
- how the arrival and use of water will be monitored.

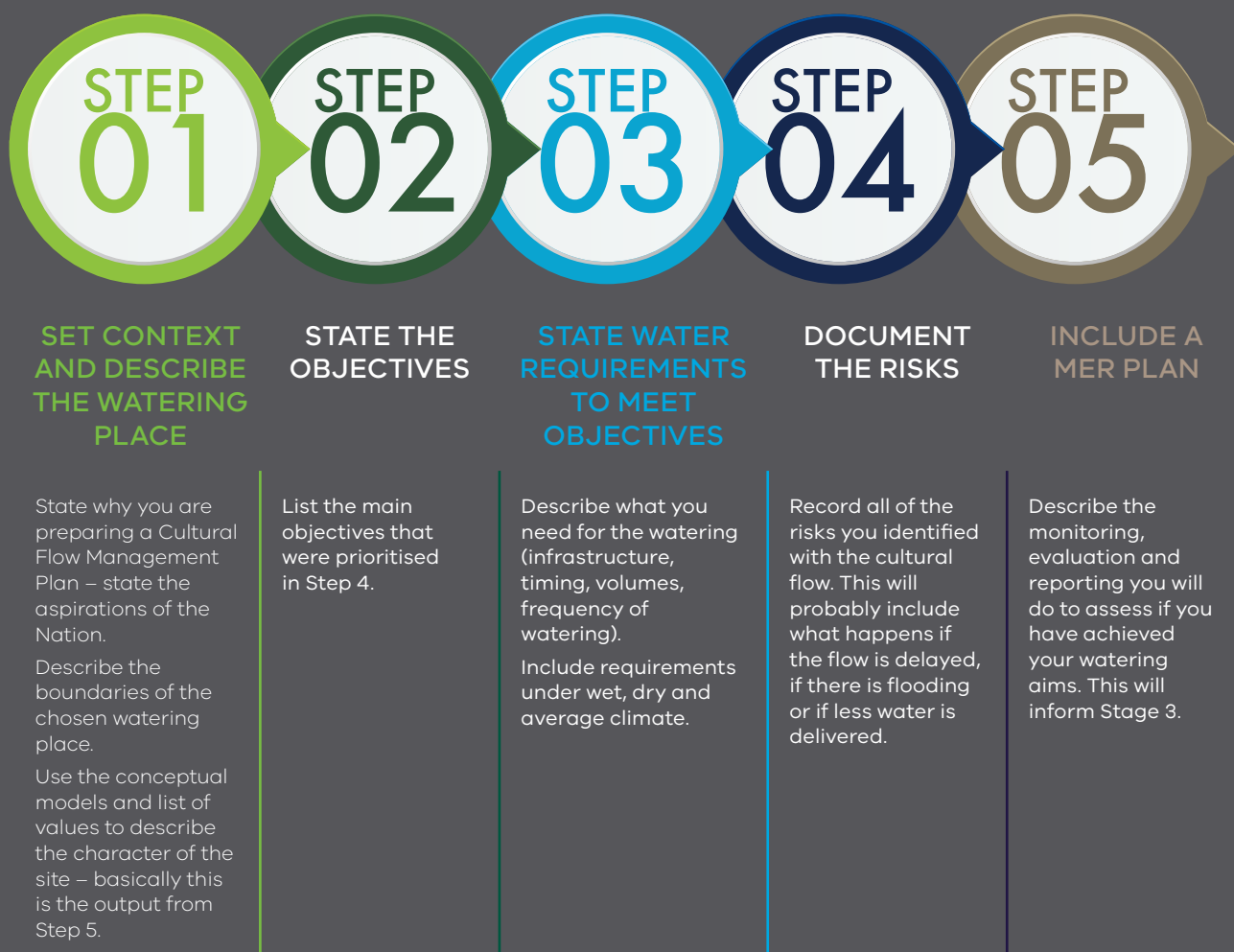
BY THE END OF THIS STEP YOU SHOULD HAVE COMPLETED...

- a Cultural Flow Management Plan that describes how you will manage and deliver the cultural flow and what it aims to achieve.

CULTURAL FLOW MANAGEMENT PLAN WRITING STEPS

The Cultural Flow Management Plan will be the key document that describes how your cultural flow will be implemented and managed.

Underpinning the Cultural Flow Management Plan will be an understanding of how the water will be delivered, who will be involved and what stakeholders need to be engaged.





STAGE 03

IMPLEMENT THE MONITORING, EVALUATION AND REVIEW OF OUTCOMES

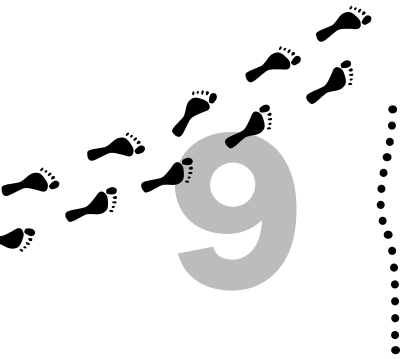


The final stage of the National Cultural Flows Framework focuses on developing a monitoring and evaluation plan so you can assess how effective your cultural flow was in achieving your agreed objectives. Importantly, you can use this stage to learn about what works and what doesn't, so you can do things better in future.

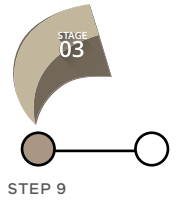
As well as showing the effectiveness of your cultural flow monitoring can also show if you are getting multiple benefits from your water, which may make it more likely that you get more water allocation in the future.

To monitor effectively you first need to plan what you are going to measure. This should relate to your S.M.A.R.T. objectives, and build on the brief monitoring information you included in your Cultural Flow Management Plan. If you are successful in getting a cultural flow allocation and the water is delivered, you can implement your monitoring plan when the water arrives. Depending on the skills held by your nation and the available budget and time, you may be able to do all of the monitoring yourselves or you might need to seek some extra expertise in the design or implementation.

At the end of **STAGE 3**, you should have developed your monitoring and evaluation plan and, if you received water, have a report that describes the results of your monitoring activities. You will have an evaluation that includes recommendations for how to improve your future water management activities to make sure you achieve your water aspirations. The time required to complete Stage 3 will depend on the objectives for the cultural flow – sometimes the monitoring and reporting phase can take several years.



DESIGN YOUR MONITORING AND EVALUATION AND COLLECT THE DATA



AIM

Design and implement a monitoring and evaluation program that helps you to assess whether your cultural flow has achieved the outcomes you hoped. This will include choosing the best indicators to use and analysing the data that you gather.

ACTIVITIES

DEVELOP YOUR MONITORING AND EVALUATION PROGRAM that includes appropriate indicators that relate directly to your chosen objectives. This needs to be done long before any water arrives at the watering place. There are many guides available to help with the design of monitoring and evaluation programs, and other nations who have developed their own cultural flow monitoring plans may be able to help. To begin with, it is useful to start with objectives and what you hope to achieve with the cultural flow, and then choose some indicators that will help tell you if you are achieving them. For each indicator, you need to describe what you're going to measure, when, where and how often you will do it. Your monitoring and evaluation plan should:

- summarise of the values, objectives and outcomes that you expect from the cultural flow
- describe how the objectives and the chosen indicators link
- describe the methods you will use to monitor and collect data
- outline the study design (how, where, when and how often monitoring will occur)
- highlight how the data will be stored and managed
- describe how the data will be analysed.

DO THE MONITORING, if you have secured a cultural flow allocation. You may need to do monitoring before the water arrives, during the watering event and then at different times after the cultural flow. This will allow you to see how the indicators change over time. Your monitoring and evaluation plan will describe exactly when the monitoring needs to happen. It is also important to record any challenges or issues that come up during the field work – it may be possible to modify the study design before the cultural flow arrives, or at least it will help you next time.

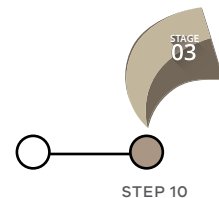
ANALYSE THE DATA THAT YOU HAVE COLLECTED so that you can use it to draw some conclusions about the effectiveness of your cultural flow. Some kinds of analysis will be straightforward and others might need specific technical expertise.

BY THE END OF THIS STEP YOU SHOULD HAVE COMPLETED...

- a monitoring and evaluation plan for the watering place
- monitoring activities (if you received a cultural flow) and have the monitoring data from before and after the flow
- analysis of the data, ready to feed into the reporting step.



REVIEW, REPORT AND IMPROVE



AIM

Evaluate the outcomes of the cultural flow and report the findings of the cultural flow assessment.

ACTIVITIES

EVALUATE THE OUTCOMES OF THE CULTURAL FLOW. You may like to do this in discussion with the Working Group, particular knowledge holders and any individuals who are impacted by the cultural flow. It may also be useful to involve an independent third party.

The evaluation should focus on comparing the results of the cultural flow with the objectives and aspirations that were identified earlier in the planning stages.

The evaluation should consider:

- the process – how effective and efficient was the planning and level of community involvement? Were the principles and protocols followed?
- the outcomes – what was achieved and how did this compare to the original objectives?
- the impact – what changes to human wellbeing and ecosystem health have occurred as a result of the cultural flow?

REPORT THE FINDINGS OF THE CULTURAL FLOW ASSESSMENT, making sure that the findings are backed up by the data. It is important to make sure you communicate the findings in a way that is appropriate for the audience you are presenting it to.

PROVIDE RECOMMENDATIONS ABOUT POSSIBLE IMPROVEMENTS to the monitoring and evaluation program. The recommendations might also include changes to the original objectives if they were found to not be feasible or completely appropriate. The knowledge and insights gained through this evaluation step will help to improve the on-ground management of your cultural flow as well as future cultural flow assessments.

BY THE END OF THIS STEP YOU SHOULD HAVE COMPLETED...

- a report outlining the outcomes of the cultural flow at your watering place, the analysis of the collected data and the findings of the cultural flow assessment. The report should include an assessment of whether your stated cultural flow objectives have been met and whether any changes to in future water management might be required.
- updated conceptual models based on new things you have learned about how cultural flows affect your watering place.

KEY DEFINITIONS

In the National Cultural Flows Research Project, the following definitions were adopted:

Authorised Knowledge Holder

A person, normally a Traditional Owner, who has been provided cultural and/or traditional knowledge of a particular place or thing through customary law and is recognised by the Traditional Owner community to have the authority to speak on or share that particular knowledge where appropriate.

Cultural flows

Water entitlements that are legally and beneficially owned by Indigenous Nations, of a sufficient and adequate quantity and quality to improve the spiritual, cultural, environmental, social and economic conditions of those Indigenous Nations. This is our inherent right.

This is the definition developed by MLDRIN in 2007 and updated by NBAN in 2010.

Cultural flow management

Cultural flow management requires the establishment of relationships between First Nations and a range of organisations including waterway managers (e.g. Catchment Management Authorities, Natural Resource Management groups and Boards), storage managers (water corporations), local land managers and technical experts. Cultural flow management incorporates the identification of eligible watering places, prioritising which places receive water, overseeing the delivery of cultural water, and reporting on the outcomes.

Traditional Aboriginal Knowledge

TAK includes the cultural traditions, values, beliefs, and worldviews of First Nations peoples as distinguished from Western scientific knowledge. Traditional Knowledge is based on direct experience, testing, observation of patterns over long periods of time, and teachings and recording in the collective memory through oral tradition, storytelling, ceremonies and songs. It is a holistic and inclusive form of knowledge.

Watering place

The physical location (site) to receive the cultural flow within Country. Within the context of this guide, the watering place is a specific location within Country which has connections to, and importance for, contributing to water-related cultural values. It may be a single aquatic ecosystem or a complex of ecosystems and or locations, noting that First Nations people do not partition Country in the same way as Western Science tends to.

Western science

The systematic study of the nature and behaviour of the material and physical universe originating in European enlightenment. This system of knowledge is based on repeated observation, experiment, and measurement, and the formulation of laws to describe these facts in general terms.





Cultural flows are water entitlements that are legally and beneficially owned by the Indigenous Nations of a sufficient and adequate quantity and quality to improve the spiritual, cultural, environmental, social and economic conditions of those Nations. This is our inherent right.

Echuca Declaration, 2010

