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Thank you for preparing the directions paper and the opportunity to comment.

We commend the department for allowing sufficient time for comment and for supporting the recent Water Forum in Alice Springs. This has allowed engaged stakeholders to compare experiences and share their ideas.

The authors of this submission

Jacqueline Arnold

Jacqueline was born in Alice Springs and intends to retire here regardless of the impacts of climate change. Jacqueline is a member of *Landcare Alice Springs*. Her work with Landcare has given her first-hand experience of the consequences of water resources legislation. Jacqueline is also a volunteer with *Arid Lands Environment Centre*. Jacqueline was a nominee for Central Australian Volunteer of the Year in 2021 for her work administering *Letters for the Environment Central Australia*. In this role Jacqueline has written numerous submissions on water extraction licences. This has given her first-hand experience in:

- How water resources are protected in Central Australia and the Barkly
- The challenges confronting stakeholders in making submissions on numerous water extraction licences
- The DEPWS' approach to responding to community stakeholders

Jorgen Doyle

Jorgen has lived in the arid lands for six years, moving to Alice Springs after completing a degree in geography and environmental studies. He now runs a small business propagating arid zone native seedlings undertaking regeneration work (removing exotic trees, buffel, and other grassland weeds, and replacing them with local natives). He has developed significant knowledge of arid zone ecology from a community of peers in Alice Springs. Through his regeneration work, Jorgen has seen firsthand the effects of aquifer overdraw on groundwater dependent ecosystems in the arid zone. Jorgen lives and operates his horticulture business from the Hele Crescent art and ecology precinct, a leading example of sustainable arid zone design and on-site water retention, providing social amenity and environmental refugia.

Jorgen is a member of the Central Australian Frack Free Alliance, and has written submissions regarding gas extraction in the Alice Springs water control district, the effects of fracking on the Gum Ridge Aquifer in the Beetaloo Basin and the endemic stygofauna present there, the NT offsets policy, and the NT Parks and Reserves Strategic Plan 5 year review.

We believe a strategic water plan, which picks up on the issues and gaps raised in this consultation, could substantially improve water security for ecosystems, cultural values and human consumptive use. However, ultimate success depends not only on identifying these issues, but on how they are addressed. At this stage we ***doubt many of the "possible pathways forward" could be implemented without:***

- ***comprehensive catchment wide water resources legislation***
- ***a drastic escalation in commitment across all relevant Government departments with decision making responsibilities that impinge on water resources outcomes.***

Our comments reflect our experience and therefore focus on protecting the environmental values of water. We also strongly support two-way understanding of water resources and recognition of Traditional Aboriginal custodians' rights to water resources, including the right to decide how these values are protected. We defer to those custodians to propose how they consider historic injustices should be redressed. Similarly, we think it is obvious all drinking water supplies should be suitable for that purpose and have not focused on this area.

Our major concerns:

1. The Strategic Water Plan purports to set an agenda until 2050, however the vision and content are limited and unsuitable for this time horizon because they:
    a. Focus on issues of the moment around addressing security of public drinking water supplies and minimising barriers to exploiting water resources for short-term economic recovery rather confronting the real challenges and anticipating the probable values of future generations, notably: severe climate change with its transformative global ecological and geopolitical consequences (e.g.https://www.smh.com.au/business/markets/billionaire-investor-jeremy-grantham-has-a-scarier-prediction-than-his-market-crash-call-20220127-p59rje.html); restorative justice for Aboriginal water custodians; and the Territory's environmental and cultural landscapes becoming increasingly rare and globally valued.
    b. Dwells on the limitations of the Water Act 1992 and how to fix its shortcomings, rather than how to build good contemporary legislation.
    c. Perpetuates problematic practices allowed under the Water Allocation Planning Framework.

    We recommend the starting point needs to be
        1. *A survey of the key influences and risks and opportunities for water resources over the next thirty years including impending global ecological emergency and geopolitical and economic drivers that will transform water resources management.*
        2. *A clear-eyed look at national best practice (see points 5 and 6) and acknowledgement that root and branch water resources reform is needed.*

2. The Productivity Commission's review of national water reform https://www.pc.gov.au/inquiries/completed/water-reform-2020/report is cited as a key reference. We strongly support fully adopting its recommendations. In its current form the Directions paper does not adequately pick up on the above review. We recommend the approach should more closely align with this document throughout but especially in the following areas:
    a. Urban water service - incorporate an integrated approach across water supply, wastewater and storm-water management (please refer to our comments on Direction 5 and the Productivity Commission's review of national water reform 2020 chapter 12).
    b. The approach to environmental management coverage must start with a whole of catchment approach including weeds, pastoral lands management and river and wetland health (please refer to our comments on Direction 7 and the Productivity Commission's

review of national water reform 2020 Chapter 8 especially pp 106-108 and Figure 8.3 - the integration of environmental and complementary waterway management)

c. Governance arrangements (please refer to our comments on Direction 1 and the Productivity Commission's review of national water reform 2020 chapter 4)
d. Cultural values and rights to water. (Please refer to our comments on Direction 6. We support greater influence in water landscapes, transforming foundations of governance and law to recognise Aboriginal rights to water, including accommodating cultural and ontological differences in understandings of water and rights to self-determination (this is largely reflected in Productivity Commission Review Figure 9.1)
e. The approach to water allocation planning – see points 7 & 8 below and detailed comments

3. The intent of the Water Directions paper can only be given effect through a comprehensive water resources act which:
    a. Covers the entire national water reform agenda
    b. Sets standards of achievement
    c. Obligates all departments with responsibilities for water resources outcomes
    d. Is catchment wide in scope
    e. Deals with water quality for environment, not just water for drinking

4. From our own experience, and from community discussion and responses at the Alice Springs Water Forum, there is a well-founded and alarming lack of trust in how water resources are managed in the Northern Territory. This is based on the Government and Department's track record across successive governments of unequal stakeholder inclusion, insufficient investment, poor decisions and anecdotal reports of subtle coercion of stakeholders. This trust deficit in water resources governance needs to be systemically addressed through comprehensive and prescriptive water resources legislation prescribing improved governance arrangements, including:
    a. Annual auditing of water resources management by a third party (e.g. The Ombudsman) enshrined in legislation evaluating whether:
        i. stakeholders felt included, listened to and able to comment freely
        ii. decisions reflected policy and legislation
    b. Legislated place and funding for water resources advocacy for environmental and cultural values of water. (This is needed to redress the market failing that industry receives a financial benefit from participating in decisions about water resources, but all other stakeholders participate at their own expense.)
    c. Information on the state of water resources
    d. An independent water regulator answerable to a public board or similar.
    e. Annual reporting of water resources and environmental conditions (for accountability and so stakeholders can give informed commentary and participate in discourse about water resources management).

5. It is naïve to expect good water outcomes without a whole of catchment approach both in rural and urban areas. Powerful integrated catchment management plans are needed. These need to be reflected and given effect through agricultural advice, clearing decisions and land use planning.

    From a *Landcare* point of view, it is extremely frustrating that efforts to rehabilitate sites near rivers are more or less pointless because of silt coming down rivers from cattle erosion, and weeds interfering with runoff and wiping out river vegetation. It is equally shameful that in urban areas of

Alice Springs the drainage systems are draining old waterholes, not replenishing them, while our suburbs are the most water thirsty in Australia. For these reasons, we consider this point crucial.

6. Further to 5, waterways and waterholes and cultural sites must be protected from livestock. This needs to happen in the arid zone urgently and needs to be legislated. Waterways and waterholes are already under immense strain from climate change without livestock and feral animals and are increasingly the only safety net for plants and animals during climate change driven droughts and heatwaves. The exclusion of stock from waterholes and waterways must be legislated and water use for commercial rural/pastoral activities must be licenced.

7. The NT Water Allocation Planning Framework is unacceptable and must be abandoned. It is scant on details, out of date, fails to consider cultural values, and is inconsistent with the Productivity Commission 2020 review (which urges precaution in the absence of information). It needs to be abandoned quickly as 72% of water (source Arid Lands Environment Centre) is allocated under the framework and it offers no security to the environment or water users.

   Its allowance of 20% of all the water in a catchment to be taken without detailed empirical studies being required or a water allocation plan being in place is **from another century.** We could not survive with 20% less water, so why should we expect an ecosystem to! In line with the Productivity Commission report (p70), a precautionary interim limit is needed without reasonable science. This should be a much lower fraction (no more than 5%) of the total resource. Beyond that, a water allocation plan is essential. It should be incumbent upon prospective users to signal future demand in a timely manner so that water plans can be prepared in time. Public water resources should not be jeopardised by companies' chaotic and short-term investment planning.

8. We are especially concerned about the framework's application in the arid zone because:
   a. The statement *"There will be no deleterious change in groundwater discharges to dependent ecosystems, and total extraction over a period of at least 100 years will not exceed 80 per cent of the total aquifer storage at start of extraction*", which allows widespread water mining, is outrageous. It:
      i. Misconstrues the NWI's very narrow guidance for what constitutes "non-renewable resources" as applying to all groundwater resources in the arid zone. The NWI policy guidelines state: https://webarchive.nla.gov.au/awa/20160105002803/http://www.coag.gov.au/node/461:
      "Non-renewable groundwater systems are those where recharge is significantly lower than that in the geological (historical) past or where groundwater aquifers have been cut off from recharge by geological events and have not been recharged for thousands, if not millions, of years."

      UNESCO (Foster 2006: p11) specifies annual rainfall less than 300mm as often a criterion for an aquifer to be considered non-renewable. This seems appropriate and this and the other criteria mentioned in this report should apply *https://unesdoc.unesco.org/ark:/48223/pf0000146997*

      We believe the descriptions of non-renewable resources in the above documents exclude most aquifers in the arid zone.

ii. Allows water resources to be permanently lost to water mining without a water allocation plan, in contradiction with the National Water Initiative expectation of *clear identification of the environmental, cultural and other public benefit outcomes to be met through planning processes*.

iii. Reflects a colonial (*aqua nullius*) attitude toward arid zone water resources by assuming water resources are more or less available for mining. Our water resources are an essential part of an already finely tuned and delicate landscape, which is reeling under the weight of climate change and pastoral activity. The starting assumption should be that water resources are always needed and precious, not that they are there for exploitation.

We believe that the exceptional case of mining the largely non-renewable Mereenie aquifer near Alice Springs for high value public drinking water supply, with relatively few known environmental consequences, under a water allocation plan is being used as a trojan horse to allow mining of renewable groundwater resources for horticulture on an industrial scale at great cost to the environment. It makes a mockery of over 60 000 years of sustainable management by Aboriginal people!

Given the scarcity of water in the arid zone, the threat of climate change, and that water resources were not mined by Traditional Owners, the Directions Paper should affirm:
Water mining is <u>not</u> permitted in the arid zone apart from the exceptional circumstances of a). meeting the essential needs of drinking water (excluding stock) or b). buffering ecosystem decline from climate change, when <u>all</u> of the following conditions are met:

1. ***Never without a water allocation plan***
2. ***They are non-renewable water resources (i.e. in areas receiving less than 300 mm of rainfall which are cut-off from recharge. (Renewable water resources should never be mined anywhere.)***
3. ***In conjunction with comprehensive water demand reduction***
4. ***The express approval of Traditional Aboriginal Custodians has been obtained.***

(The abovementioned exceptional circumstances must be enshrined in legislation)

b. It does not recognise the fundamental scarcity of water in arid areas by universally protecting groundwater dependent ecosystems and waterholes.
c. Does not adequately consider climate change resilience by safeguarding stored water resources and preserving these as ecosystem refuges.
d. Does not consider the ethics of taking water resources from future generations. This is especially concerning as we may well be the wealthiest generation the world will ever see given the massive challenges the Earth faces.
e. Allows a public good to be used for private benefit.
(Note from Jacqueline - during the Alice Springs water forums when the issue of water mining came up the DEPWS regional manager effectively influenced discussion with the repeated claim that 95-99% of water was set aside for environmental and cultural use. This is not in any policy or guideline as far as we are aware.)

9. Major inconsistencies between the DEPWS' characterisation of community priorities (focuses on economic exploitation) and community's own characterisation of its priorities (focused on preservation).

10. The directions paper is speculative, and overstates the economic opportunities associated with water resources for agriculture, especially in the arid zone. It cites no evidence of these benefits and it is unclear why it is overstated. Agriculture contributes only $627 million or (2.7%) from an $23 billion economy of which only a fraction is irrigated agriculture (very small in Central Australia) (https://economy.id.com.au/rda-northern-territory/value-add-by-industry?IndkeyNieir=23000&BMID=20). Other industry sectors which leverage from well managed water resources offer far more significant value to the Territory. For example tourism and hospitality, which generates $2.2 billion value added and is a large employer and benefits access to intact water resources.

11. The paper also ignores the many non-monetised water resources values (e.g. global sustainability, ecosystems and cultural values) which are compromised by intensive agriculture.

12. Investment in information. Annual state of water resources reporting is needed so we know how the water resources are going. Investment in information gathering should focus on aspects of water resources as public goods rather than in realising opportunities for private benefit.

    The paper talks about investment in information gathering to "de-risk" investment, and appears to treat water users as clients not licence applicants. We oppose public spending for private profit. We strongly believe that future generations will look darkly upon use of this sort of language as it implies far too intimate a relationship between regulator and regulated.

    We are also concerned that investment in "de-risking" creates an expectation around the outcomes of regulatory decisions within both industry and Government. Budget appropriation to the same department to both carry out investigations to "de-risk" industry water resource use in an area and to regulate the subsequent applications creates a problematic and unenviable bind if investigations prove less prospective than expected. Either the department must acknowledge the investment was a poor use of public funds, or make poor decisions to approve applications anyway. We believe this is a very strong argument for a separate regulatory authority with public oversight.

    We are also concerned that these investments and lax approval processes are primarily giving big business capital gains and benefit no-one else. For example Maryfield station was recently controversially granted a clearing permit for 4,544 hectares, and a licence to extract 3,392 megalitres of groundwater and subsequently listed the property for sale as a package with another lot for $150 million https://www.abc.net.au/news/rural/2020-11-23/maryfield-and-limbunya-cattle-stations-for-sale-nt/12904822.

13. Issues of detail against each of the ten recommendations.

14. We have significant doubts about the genuine separation of the Office of Water Security from the DEPWS and question the practicality of implementing the Strategic Water Plan via the Office of Water Security without substantial additional powers and backing within Government. This is needed to ensure the many department's involved in implementing the Directions play their part (see comments in table below).

15. A photo essay is provided below to illustrate some the serious problems and opportunities confronting water security in Central Australia.

PHOTO ESSAY

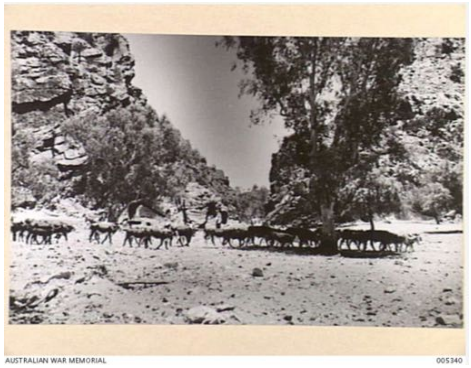
Rivers, water holes and wetlands

Emily Gap

1900 (stock already intruding but permanent water and water line visible)

https://en.wikipedia.org/wiki/Emily_Gap#/media/File:Emily_Gap.jpg

1939 – 1945 Stock intruding.



https://www.awm.gov.au/collection/C27152

2021. A River of sand. There is no longer permanent water - it has been filled up with sand due to the erosion from stock upstream and the invasion of couch and buffel grass.
Notes from Jacqueline:

> *When I was young there was always water here. We were told it was where the Yeperenye put its head down to drink. We were told that you could tell the water was permanent because of the reeds. Now there is no water, there are no reeds.*

Emily Gap September 2021

Irmangkara (Running Waters) (stock must urgently be excluded from waterholes and waterways, including, and most especially, during drought)

Lhere Mparntwe

Waterway interference from poorly designed river crossing. Sediment is trapped upstream of the waterway and gouging out of the river is occurring downstream of the culvert.

Caper bush smothered by buffel grass on the banks of the Lhere Mparntwe near Ross Hwy

No riparian vegetation just buffel, couch grass and sand on the (unstable) banks of Lhere Mparntwe

Ankerre Ankerre (Coolibah swamp)

06/02/22 Dry after heavy rain (dying trees and weeds). Due to drains bypassing stormwater / stopping inundation

Drain at Ankerre Ankerre - full of grease, litter and standing water - a potential source of mosquito borne disease. (Similar drains flow into the Lhere Mparntwe throughout Alice Springs)

Ilparpa Claypans

An extremely important ecological and cultural place on Alice Springs' doorstep. No government department seems to take responsibility for managing this area. It is being overrun by weeds and inappropriate and dangerous human activities such as illegal rubbish dumping, off-road driving and 'burnouts'.

Wasting valuable arid zone groundwater

Mereenie Aquifer - Rocky Hill Grapes mining groundwater and increasing the salt concentration in the groundwater left behind

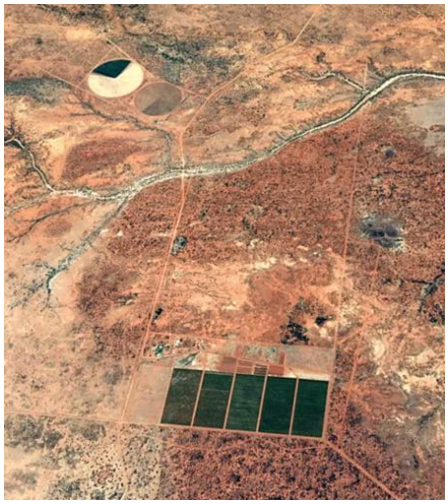


Image source: https://alicespringsnews.com.au/2016/03/05/the-battle-over-our-most-vital-resource/

Using a groundwater licence to grow buffel grass at the Territory Grape Farm near Ti Tree. Meanwhile, there is no water left for local Aboriginal people in the Aboriginal Water Reserve.

realestate.com

Urban design and planting

Desert friendly low water using streetscaping versus water hungry lawn - compare and contrast Hele Cres and Cromwell Drive

Huge stormwater drains like this run all through Alice Springs and are managed by DIPL. With some care and attention (legislated and funded) they could be living streams and still convey stormwater

Kilgariff - A new subdivision large, hot and uncomfortable blocks and poor stormwater management

Duplicated sports ovals in Alice Springs (Gillen) with opportunities for urban infill

Wastewater downcycling not re-use. Blatherskite Park irrigation immediately after rain - evidently sprinklers are continuing in order to dispose of recycled wastewater, leaving salt behind - not for irrigation (These irrigators run continuously during the day, every day).

Comments on Introduction

Page	Topic	Issue	Comment
1	Definition	"Water security is ensuring that our water is effectively managed and that its supply and use is reliable, resilient, efficient and environmentally sustainable. "	Environmental values of water lack emphasis.
3	Principles		These are very anthropocentric and Eurocentric. Any reform should be grounded in principles of water justice. This means that: · Traditional Owners, and their representative institutions, are centred in all decisions on management and use of water in the Northern Territory · Aboriginal and Torres Strait Islander understandings and conceptualisations of water (ontological differences), often expressed in terms of relationality and mutual dependence, are included in "two way" water resource management (Water colonialism and Indigenous water Justice in Southeastern Australia, Lana D. Hartwig a,b, Sue Jackson a,b, Francis Markham c and Natalie Osborne (https://research-repository.griffith.edu.au/bitstream/handle/10072/402086/Jackson460807Accepted.pdf?sequence=2) · The high ecological, cultural and social value of the Northern Territory's waterways are

Page	Topic	Issue	Comment
			recognised and protected · The non-humans that depend on water resources are entitled to have these needs met · Water is recognised as a valuable public good that should not be squandered · Community members who are affected by decisions about water are given a seat at the table · Industry representatives, who are by definition motivated by financial profit, not the public good, are **not** given a seat at the table · Future generations should inherit the same water resources as the present generation · Reform should also recognise that water resources and the plants and animals that depend on them can be expected to be under extreme stress from climate change, especially in arid zones.
3	Principles	"Water policy, management and planning decisions will consider long-term sustainability, intergenerational equity, and future risks and opportunities."	Requirements of future generations need to be given adequate weight. How will the interests of potentially thousands of future generations be balanced with the interests of the current and next generation? We're concerned that current policies and practices which allow mining of water resources and degradation of environments in practice do not do this. Non-human native animals and plants which depend on

Page	Topic	Issue	Comment
			water resources also have a legitimate claim to continued access.
4	Water in the Territory	Aspirations for a growing population and economy "Communities and industry need reliable, safe water…in order to…grow"	No evidence is provided for this statement and we do not support it. Constant growth is, by definition, unsustainable. There are reasonable alternatives https://steadystate.org/. These should at least be presented to the public as options. The Territory should not pursue growth via exploitation of water resources if it is going to degrade the environment. Note from Jacqueline: *I attended all the Alice Springs Water Forum workshops. While constant growth was presented as a given, at no point was economic growth identified by participants as a key priority.*
4	Water in the Territory	Paragraph 4: Support for industry	We agree that the appropriate way to support industry for the public good is "through robust water-related legislative and regulatory frameworks". However, we are concerned that in other sections of this Paper, industry support appears to be extended into inappropriate areas such as conducting investigative work. This could create an expectation of approval.
4	Water in the Territory	Territorians recognise the importance of water to the natural environment and the key role this plays in their lifestyle and	No evidence is provided for this statement and it was not reflected in the knowledge base demonstrated by the majority of attendees at the Alice Springs water forums.

Page	Topic	Issue	Comment
		why they live here	Note from Jacqueline: *In my experience, most people living in Central Australia do not have a basic understanding of ground or surface water, sustainable water use or the cultural importance of water.* *Though I have lived here most of my life, am generally inquisitive and a quick learner, and although I was educated here, until 2018 when I started to self-educate I had no idea – I literally thought groundwater was surface water (water on, not in the ground). I didn't realise that some permanent waterholes were permanent because of their relationship with groundwater. I didn't have a clue why so many waterholes were filling in with sediment. I received no education about Alice Springs' water supply at school.* *Most people I talk to do not think twice about the importance of water to the natural arid / semi-arid environment. They want to live as though they are in a high rainfall area, such as the one most non-Aboriginal people grew up in and will retire to. At least once a decade the issue of a recreational dam comes up. People seem to be completely resistant / oblivious / ignorant to seriously acknowledging and respecting the key role water in an arid region plays and adjusting their lifestyle accordingly.* *It's not just about taking water, it's about respecting*

Page	Topic	Issue	Comment
			water in general. Even long time 'locals' do not have much, if any idea about environmentally (and culturally) safe protocols around swimming in water holes. Note from Jacqueline: *I've been trying to find out more for over a year and all I've found is an old, hard copy advice sheet available on request at the Alice Springs Desert Park, from a few decades ago.*
5	Office of Water security	Creation of a separate Office of Water Security	We support the establishment of this role and agree that it must stand alone from the Department of Environment, Parks and Water Security. Note from Jacqueline: *This separation was unclear at the Alice Springs Water Forum as presentations on the Directions Paper were from the Director of Water Resources, who seemed deeply invested in defending current approaches. For example, during community group discussion at the 'governance table', she went so far as to interject during community discussion on the FAFM (Singleton) Licence to strongly suggest concerns under discussion were founded on biased media reporting. (This was particularly insulting given the enormous amount of personal resources many at the table had put into learning about this licence application from primary sources).* To elevate water resources and prosecute the case for Water Resources Legislation, we suggest the Office of Water

Page	Topic	Issue	Comment
			Security needs to be championed by the Chief Minister because: · There are compelling public policy arguments for strong water resources legislation and it is required under the National Water Initiative, however there is a small but influential group of stakeholders who will be opposed to this because they benefit from current arrangements albeit at costs to the public and the environment. · It demands combined action and support across several departments and Ministerial portfolios.

Detailed Comments on the Ten Directions

Page	Topic	Issue	Comment
5	Ten directions for 2050		The ten directions are quite comprehensive in scope. However their effect on water resources and delivery of water justice totally depends upon the detail and the settings. To effectively deliver its vision, it will require: 1. Commitment to implement 2. Leadership and vision. 3. Comprehensive and contemporary legislation, to be given effect with prescriptive expectations We are concerned these three requirements are not being demonstrated as: 1. The current Government seems to be fixated on

Page	Topic	Issue	Comment
			financial and population growth and is extremely pro-development. Its decision making seems to be based around its current (poor) balance sheet. 2. The increased focus on water security through the new portfolio of Minister for Water Security reflects a good intention, however there needs to be Ministerial interest and commitment to this portfolio. The current Minister for Water Security frequently appears to focus on her portfolio of Infrastructure (as demonstrated by the content across all her social media platforms). We suggest an annual formal statement to Parliament reporting on progress against targets is needed to inspire genuine interest and ideally bipartisan commitment. 3. The Government is turning a blind eye to the major issues of the day · The Government has encouraged land clearing through deregulation ('simplification' of the application process). The depth of decision making demonstrated in recent land clearing NoDs is shocking. This regulation is incompatible with carbon emissions reductions and water security (for details of the links between land clearing and water security please refer to Jacqui's submissions on land clearing applications) and existing

Page	Topic	Issue	Comment
			strain on biodiversity. · The Government has approved huge water licenses that are hugely unpopular, take water from future generations, and destroy refugia. 4. The Alice Springs Water Forum highlighted a manifest lack of trust in the Government in general, and the DEPWS in particular. This distrust seems to have been amplified by recent decisions, particularly the process and approval of the FAFM (Singleton) water licence. In our experience, this distrust is well founded – our concerns (and those of over 23 000 other community members) around this licence, raised time and time again, were dismissed without explanation by both the Director, Controller and Minister for Water Resources. While these attitudes remain in place we have no reason to be confident that the Government will implement this strategy in a way which comprehensively protects water resources and meets water justice principles.
6	Direction 1 Water governance is contemporary and coordinated.	Paragraph 1 "Modern institutions"	It is unclear what is meant by the term 'modern' institutions. The term modern has a very broad meaning (it can be used to describe many different concepts from Keynesian protectionism to capitalist entrepreneurialism). Within environmental policy in particular, modernism

Page	Topic	Issue	Comment
			usually means an over-reliance on technological solutions to complex non-technical problems – it is inherently optimistic about progress through new technology. It is the NT Government's job to be clear and transparent about what institutional frameworks and regulatory options it is offering the public.
		Paragraph 2 "Responsibility for water policy and legislation is shouldered by the Northern Territory Government, spread across a number of departments and entities, each with its own legislation, remit and accountable Minister. This is important to ensure critical responsibilities are met and remain independent of each other but may limit coordination and comprehensive forward planning on water"	This drastically overstates the current level of commitment across Government and hence underestimates the challenge. Throughout our submission, we argue that most of the problems (e.g. damage to waterways on pastoral lands, neglect of urban drains and subdivisions that do not make sense from a water security perspective) are caused by activities which are not covered by water legislation and policy. This means other departments lack the necessary legislative backing or resources to take heed of good water management principles. This should be resolved by: 1. Redrafting the water resources legislation to cover all water resources issues and prescribe standards to give legal backing for how to effectively manage our water resources 2. Ensuring that each departments' roles and responsibilities are described in legislation or regulations 3. Mandating and reporting the expectations and level of achievement for each department via a "Key performance indicator" in the budget and

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			"Agency budget statements".
6	Direction 1 Water governance is contemporary and coordinated.	Paragraph 3: "A first step towards improved water governance and better water security in the Northern Territory was the establishment of a Ministerial portfolio for Water Security and a new Office of Water Security"	We agree that the Office of Water Security is needed. It should be powerful and above the day-to-day water resources issues, able to challenge the status quo and departmental resistance and prosecute the Productivity Commission's recommendations, which are in the public interest, but will be opposed by individuals.
6	Direction 1 Water governance is contemporary and coordinated.	Page 6, Paragraph 5: Role of the Water Controller: "This arrangement and the perception of conflict between the two roles is managed through careful adherence to administrative law principles. However, there is an opportunity to more clearly split the role of Controller from the Department."	Recognition of the problem is supported, but the statement should go further - the idea of a 'Controller of Water Resources' seems: anachronistic; is unnecessary; introduces a problematic level of subjectivity; and has a chequered history. As the existence of the Water Controller is a product of the Water Act 1992, the role could be eliminated by replacing the Water Act. New water resources legislation should not include the notion of a "Controller of Water Resources". The Water Controller's functions should be delivered by an independent regulator with a public board whose members have no perceived or actual conflicts of interest that conflict with the public good (i.e. they do not stand to financially profit from water).
		Missing: · The role of community/boards	The FAFM (Singleton) appeal process highlighted issues related to transparency.

Page	Topic	Issue	Comment
		· Improvement of the appeals process	Changes must be made to: · Ensure community members, such as ourselves, who have demonstrated significant investment in the issue, can participate / be heard (recognised as aggrieved) · That the appeals process is open and transparent
7	Direction 1 possible paths forward	1. Clarify the roles and improve coordination of Northern Territory Government agencies in areas of policy, regulation and service provision.	This is currently very hazy and insufficient. Define and legislate the roles, expectations and standards of achievement. The expectation and level of achievement for each department should be documented and reported via a "Key performance indicator" in the budget and "Agency budget statements".
		2. Continue reforming the *Water Act 1992*4 to manage water resources in the Northern Territory effectively and efficiently, with success measured against the principles and proposed outcomes set out in the Northern Territory Strategic Water Plan.	We strongly oppose continued reform of the current Water Act. While the ten directions are comprehensive, the Water Act is extremely narrow. The current act must be replaced. Comprehensive, contemporary water resources legislation that covers all ten directions is needed. The Northern Territory Strategic Water Plan and the productivity commission's report are vastly different in scope to the Water Act 1992. The Water Act 1992 has some

Page	Topic	Issue	Comment
			problematic underpinnings (e.g. the Controller of Water Resources and the neglect of water dependent ecosystems and Aboriginal cultural values). The Water Act cannot limp along until 2050. We strongly support contemporary water resources legislation.
		3. Reform the economic regulatory framework for water supply and sewerage services to improve transparency and accountability of service providers, and serve the long term and evolving interests of customers and communities, including appropriate service level standards and customer protections.	No comment
		4. Consider a separate entity or person to perform some or all of the roles and functions of Controller of Water Resources under the Water Act, particularly the decisions related to access to water resources.	The idea of a 'Controller of Water Resources' seems anachronistic; is unnecessary; introduces a problematic level of subjectivity; and has a chequered history. As the existence of the Water Controller is a product of the Water Act 1992, the role could be eliminated by replacing the Water Act. New water resources legislation should not include the notion of a "Controller of Water Resources". We recommend the Controller of Water Resources' functions be delivered by an independent regulator with a public board whose members have no perceived or actual conflicts of interest that conflict with the public good (i.e. they do not stand to financially profit from water).

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		5. Continue to proactively participate in the national water reform agenda and associated partnerships to support good governance.	Agree. There should be more acknowledgement that in effect the Territory is falling short.
7-8	Direction 2 Drinking water is safe.		Agree. This should be prosecuted equally in cities, towns and remote communities. Safe water quality for the environment and other values is also fundamental to water justice. We are very concerned about environmental pollution going unchecked (e.g. the FAFM (Singleton) licence application did not consider salt pollution and its effects on groundwater dependent ecosystems). Will cotton farms be allowed to contaminate springs? What about chemical use in rural areas contaminating private water supplies? Updated water resources legislation needs to comprehensively deal with water quality for all purposes, including drinking water, water dependent ecosystems and cultural values. Integrated catchment management is needed to make sure land activities do not pollute groundwater. The Northern Territory Planning Scheme 2020 should only allow land uses that meet water quality and quantity targets and link with integrated catchment management plans. Clearly legislated water outcomes applied at a catchment scale are needed for this to happen.
8	Direction 2 pathways	1. Explore options for safeguarding public drinking water supplies, paying particular	This is insufficient and would not be acceptable in other communities. Regulations are needed to make sure any

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	forward	attention to the needs of remote Aboriginal communities.	water supplies are built to an acceptable standard.
		2. Invest in technologies and other innovations that will provide affordable solutions to drinking water quality issues.	No comment
		3. Involve the residents of remote communities in developing and implementing drinking water management plans that safeguard water quality and help build water knowledge.	Support in principle however "Involve" is insufficient. Standards of achievement for these plans must be set.
		4. In towns and communities not serviced by Power and Water Corporation or IES Pty Ltd, work with key stakeholders to improve drinking water quality management.	"Work with" is insufficient. Standards of achievement for these plans must be set and met.
		5. Ensure land use activities and practices in the recharge areas or catchments of public and community drinking water supplies protect water supplies from pollution.	Strongly agree but does not go far enough. Water source protection plans are needed and these need to be recognised in land use plans. The same approach is needed to protect water quality for environmental and cultural values.
		6. Continue to invest in science that helps understand the incidence and risks of water borne diseases and other water-quality related health risks in the Northern Territory.	Other systems of knowledge should also be given consideration and invested in (e.g. Traditional Aboriginal systems that help in understanding and managing water related health risks i.e. drinking from sources that should be protected / impact on other determinants of health).
8-10	Direction 3 Water use is	Manage demand	This is a major issue in Alice Springs and has manifestly failed as we benchmark poorly against comparable cities.

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	efficient and productive.		The suggestions on demand management largely put the responsibility on the consumer. We would like to see much stronger pressure on: i. Water suppliers (e.g. Power and Water Corporation) to implement demand management under its licence to operate ii. The Northern Territory Planning Commission at the approval stage to ensure it is planning for a sustainable water future by requiring best practice desert subdivision design which does not cause water use for irrigating lawn etc and makes the most of water captured on site. (As an example, we draw your attention to the successful desert design on Hele Crescent (at which Jorgen resides). Through thoughtful desert planting, good building design and water captured on site, we believe our street is operating within the 2GL limit we were told Alice Springs' water supply could sustainably deliver, as well as minimising energy, offering better social amenity and providing environmental refugia.) The goal of population growth does not seem compatible with the objective of managing demand. Why is it simply assumed that population growth is desirable? Planning and regulation of semi-rural areas and new estates does not appear to be congruent with this aim. It is concerning that NT Farmers, an Industry Association, is being tasked with educating farmers on water efficiency.

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			If this is the case then the education must be accredited and audited by the Government regulator. The fact that the NT Government is approving / encouraging a massive expansion of horticulture, especially applications to produce water intensive crops, while writing sections such as this one on demand management, is a good example of why our community has lost trust in this process. Asking us to water our gardens less is offensive, when not far away industry is approved to take 40 000 ML and a groundwater licence is being used by a member of the Pastoral Lands Board to irrigate buffel grass - a weed and low nutrition pasture grass. https://www.commercialrealestate.com.au/property/800-coppock-road-anmatjere-nt-0872-2016225171 .
		i) Water licences and trading	If licences are to allocate water in stages, the licence should be granted in stages. Investors need certainty. FAFM were open that they required the full 40 000ML a year for their project to be viable. It is risky to rely on FAFM and future governments to reduce this amount/ close up shop if the impact on GDEs is greater than anticipated, or other complications arise. Why is the taxpayer expected to fork out incentives for industry to limit the risks associated with their ventures and the volume of water licenced? Is this not a manifest failure to implement the precautionary principle?

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			We oppose longer licence terms for supporting agreed measures. This conflicts with the precautionary principle. Why do private companies profit from the trade of water given free under a licence, and communities, taxpayers and Traditional Owners, whose assets they are draining do not? Have we learnt nothing from the experiences of other regions?
		(iii) Value of water (problematic statement: Under the Water Act there is a right for landholders to access water for stock and domestic purposes, and there is no intention to change this right.	Why do landholders have the right to access water for stock? No industry should have inherent rights to water. This should have been explicitly raised by the Office of Water Security as a point for public discussion in this consultation. The fact that it wasn't, and that the Directions Paper includes the dictate "there is no intention to change this right", suggests either a lack of conviction from the Office of Water Security or undue industry influence on this process. The use of water for stock has led to completely unacceptable environmental and cultural impacts. The trashing of Irbmangkara (Running Waters) is just one of countless examples. The average cow drinks between 40 and 60 Litres per day https://futurebeef.com.au/knowledge-centre/water-requirements/ Pastoral land use is being intensified through increased land clearing. Clearly this intensification will have very large water use requirements that extend beyond some

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			previous (out of date) right to "stock watering". Water licencing must be required if clearing is permitted. Rules around mitigating the chronic water pollution effects of running cattle must also be considered. How long until our wild rivers turn green! If a price is set on water, it must include water used for stock and rural / remote pastoral property domestic use. All stock bores must have a tamper-proof meter attached and be monitored in the same way as municipal domestic meters. Water is inherently valuable. We are generally opposed to water mining. If special cases merit the mining of water, this must be done only with the express approval of Traditional Owners, and a royalty must be paid. It is unacceptable for water users to be gifted water simply because their proposals are otherwise economically unviable. *There must be a price on water.* We are opposed to long licences, especially because the Territory's resources are only newly defined and because water resource availability is uncertain due to the effects of climate change. We remain concerned by the risks of gaming water markets. For example, by allowing one licence holder to have a 40 GL licence when the resource is poorly defined, there is a very high chance that the licence holder could end up with most of the available water and then be in a position to name their price for the water. Alice Springs should be a world leader in sustainable water

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			use. *It won't happen overnight but we support the aspirational goal of bringing Alice Springs' annual water use down to as close as possible to the rate of aquifer replenishment (2 GL per year).*
10 -11	Direction 3 Possible pathways forward	1. Collaborate with industry to identify ways to significantly improve water efficiency, recycling and reuse, develop appropriate policy and establish demonstration sites with early adopters.	The need to consult with industry, along with other stakeholders, in a balanced, fair and transparent process is agreed, but it is the government's responsibility to develop policy, not industry.
		2. Learn from successful programs elsewhere to deliver effective incentives for water efficiency, leak minimisation and improved water literacy. Independently review water supply-side and demand-side management programs and develop a demand-side management strategy for the Territory.	Incentives and education cannot replace proper supply and demand side regulation.
		3. Examine water use by Government agencies (Territory, local and Commonwealth agencies based here) and demonstrate leadership in saving water through water conservation and efficiency measures.	Agree
		4. Continue reforms in water licensing that encourage productive and efficient water use. This may include reviewing guidelines for calculating crop water requirements.	Water licenses should not be issued for inefficient water use.
		5. Encourage water trading by identifying and addressing barriers, and streamlining	Partly agree – recognising opportunities to trade can encourage water efficiency, but environmental impacts of

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		administration.	trades need to be properly assessed.
		6. Investigate options for a water and sewerage services pricing framework that is reflective of the cost of providing the services, including a pricing framework for extraction licences applicable to the Northern Territory that will support water security.	Agree.
11 -12	Direction 4 Water supports jobs and economic growth.		This is poorly framed as it speculates, without evidence, that irrigated horticulture, cropping, and aquaculture will provide economic opportunity (not just private financial gain for the industry) and makes no comment about the lost opportunities associated with wild rivers and healthy environments. An independent (not conducted by anyone with perceived, or 'arms-length' vested financial interests) comprehensive economic evaluation must be conducted before such assertions are made. Economic value of irrigated agriculture to the GDP Territory-wide is small and would appear to be negligible in the arid zone. The directions paper is speculative and overstates the economic opportunities associated with water resources for agriculture, especially in the arid zone. It cites no evidence of these benefits and it is unclear to us why it is included. Agriculture contributes only $627 million (2.7%) to a $23 billion economy, of which only a fraction is irrigated agriculture (very small in Central Australia) (https://economy.id.com.au/rda-northern-territory/value-add-by-industry?IndkeyNieir=23000&BMID=20).

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			Other industry sectors which leverage from well managed water resources offer far more significant value to the Territory. For example, tourism and hospitality generates $2.2 billion value added. Employees in most other sectors value access to intact water resources. There is no basis for the claim that irrigated agriculture will generate a net increase in economic activity and employment in the Territory. The emphasis of this section should focus on the economic value of water resources in supporting environmental and cultural landscapes, tourism, fishing, the Territory 'clean and green' brand, genuine climate change resilience, and daily human needs for hydration. The liability to these economic uses posed by agriculture needs to be recognised. Our rivers are a last bastion for many globally iconic species such as the freshwater sawfish (pristis pristis). In the arid zone, the reliable groundwater of the Mereenie Formation aquifers keep water sources like Irbmangkara (Running Waters) flowing, and groundwater dependent ecosystems like those to be impacted by the Singleton proposal offer environmental refugia during the unprecedented, inevitable climate change driven heatwaves and droughts we face. At the Alice Springs Water Forum, it was clear that water for horticulture was not even close to making it onto the list of community priorities. It also presents a sovereign risk to drinking and environmental use of the same water by lowering water tables and contaminating desert

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			environments with salt. We are opposed to horticulture taking water that will not be replenished. This is philosophically unacceptable and goes against 60,000 years of prudent water management by traditional custodians, neglects future generations, and increases down-the-track exposure to the risks associated with climate change. With the exception of Aboriginal custodians, this generation of Territorians is potentially the most affluent the planet will know. There is no case for privileging our generation over future generations. We are also concerned about the cavalier public discourse around potential flood harvesting. The Directions Paper must affirm the overwhelming value and importance of functional ecosystems, including floodplains. We oppose floodplain harvesting. The NT has the opportunity to learn from other places (e.g. California, the High Plains, Kansas, Murray Darling Basin) which have effectively killed the goose that laid the golden eggs. The paper should emphasise the natural asset value of water resources and affirm the precautionary principle. This includes a more circumspect and evidence-based statement of economic possibilities that includes the hitherto externalised costs of pollution, land degradation and opportunity costs to future generations.
12-13	Direction 4	1. Audit expected water requirements for	Before this, an in situ audit of current and future

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	Pathways forward	economic development by region and industry to help define infrastructure and investment priorities.	environmental and cultural water requirements and values is necessary.
		2. Work with partners to improve the supply of water for industry development, including options for managed aquifer recharge, wastewater treatment and private supply cooperatives and services.	Ultimately the public interest must be paramount and protected by the Government.
		3. Continue work on developing options for investing in major water supply infrastructure to enable economic growth of the Darwin region.	The assumption that economic growth is in the best interests of the public has not been justified.
		4. Work with holders of Strategic Aboriginal Water Reserves to ensure this water is used to create jobs and economic growth by providing advice, business support, resources and incentives.	Disagree. The Government must be led by holders of Strategic Aboriginal Water Reserves to ensure this water is used in the way they see fit for communities to prosper. Support should be provided according to requests/ needs identified by holders.
		5. Accelerate a coordinated assessment and monitoring program to develop better base knowledge of our water resources to de-risk investment; and encourage sustainable development through co-location and shared infrastructure	Disagree. This posits a very narrow understanding of the many values of water resources, and shifts the risks and costs from private industry onto the public without any explicit value proposition put forward to justify this. The Government needs to focus on doing its job first, which is to comprehensively monitor water resources. Then we at least know what our water resources are and how they're going.
		6. Continue with policy and regulatory reforms to lengthen water licence tenures; invite	Disagree. We are fundamentally opposed to surface water harvesting in wild rivers. Their wildness is their value.

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		expressions-of-interest to encourage investment; and deliver a surface water harvesting policy.	It's also exasperating that this would be contemplated on a piecemeal basis via a policy without requiring a plan for the river in question, based on proper investigations, consultation with Traditional Owners, and public feedback. We are opposed to long licences, especially because the Territory's resources are only newly defined and because water resource availability is uncertain due to the effects of climate change. We remain concerned by the risks of gaming water markets. For example, by allowing one licence holder to have a 40 GL licence when the resource is poorly defined, there is a very high chance that the licence holder could end up with most of the available water and then be in a position to name their price for the water.
		7. Consider expanding the economic regulatory framework to include developer contributions and methodology for bulk water pricing in order to provide certainty to private sector investors.	Agree
13	Direction 5 Cities, towns and communities use the whole water cycle.		We support this principle This is a source of frustration in Alice Springs for land-carers. i. Why is the storm water resource managed in isolation? ii. Why do we get cookie cutter subdivisions that are inappropriate for this climate and demand high levels of water use? Why is the drainage system a source of weeds, pollution and mosquitoes, draining

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			ephemeral wetlands and sacred sites, rather than a source of biodiversity? Jacqueline's notes: *In my role with Alice Springs Landcare, it is frustrating to see areas like Charles Creek, Ankerre Ankerre and the Ilparpa claypans be suffocated because of interference to waterways, ad-hoc channelisation of the Lhere Mparntwe (Todd River) without any apparent science, redirection of storm water and weeds.* *During the water forum, it was clear that urban drains in Alice Springs are depriving wetlands and coolibah swamps of seasonal recharge, killing centuries-old and culturally significant coolabah (eucalyptus microtheca) trees, that this was done without the consent of Traditional Owners, and that this loss is deeply felt.* *The Lhere Mparntwe Management Strategy is celebrated as an instance of responsible partners coming together to do their bit. The management strategy appears to be reactively focussed on stopping river gums burning, and lacks a greater holistic approach. Meanwhile, the river is transitioning to a channel lacking riparian vegetation except where preserved by Landcare volunteers. The riverbanks increasingly resemble generic parkland, and are almost entirely lacking in place-based botanical and cultural specificities.* *These things all affect the water resource, yet there is minimal legislation and DEPWS is definitely hands off.* *During the Alice Springs water forum events, Mike Gillam*

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			presented on his work collecting and using water on-site and using smart desert design to make a habitable site with amenity values, low water use and high biodiversity values. He is a shining light of how to live in the desert. If all precincts within Alice Springs applied the same principles of harvesting and retaining rainwater, rather than shedding it, Alice Springs' water demand may well be less than the 2 GL we're told is available. Water reform needs to ensure that local governments and DIPL incorporate good water outcomes into their planning. All four approaches are somewhat supported (see comments in section below), however these are insufficient: 1. There needs to be strong regulation backed by legislation 2. All agencies' roles need to be clearly defined 3. Standards and approaches need to be included in legislation throughout the urban water cycle 4. Drainage service provision should be rated and this income re-invested in total water cycle management. Total water cycle should include subdivision lot sizes which minimise water demand. There is an excellent description of what is needed in the Productivity Commission's report. It highlights the need for: · Integrated management of water supply, with wastewater and stormwater embedded in urban water planning and management systems.

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			· Planning decisions that align with system objectives for levels of water security, service quality, the environment and urban amenity. · System objectives that are discovered through a transparent and consultative approach and approved by governments in line with customer and community preferences. · Urban water planning that connects water planning across different scales and with land-use planning. · All supply options to be considered and their relative merits subject to a rigorous, consistent, and transparent assessment of costs and benefits. · Roles and responsibilities in the planning and management process to be clearly assigned between relevant governments, utilities and other planning entities. · Governments to enable effective coordination between utilities, regulators, developers and land-use planners. *We strongly urge you to adopt the Productivity Commission's recommendations in full whilst ensuring the unique opportunities and challenges of the arid zone and Top End are accounted for.*

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14	Direction 5 pathways forward	1. Investigate opportunities for collaborative research and trials of integrated whole-of-water cycle water management in cities, towns and communities and into water-sensitive industrial project proposals across the Northern Territory.	We strongly support whole-of-water cycle management principles. However, industry should not be permitted to fund research, research or dictate research questions or methodologies. There are countless examples that highlight the dangers of this. It has proven time and time again to result in extreme bias and a focus on products and profit-driven solutions.
		2. Integrate whole-of-water cycle approaches into planning for identified priority population centres. This may include water sensitive designs, storm water management, recycled water and groundwater replenishment.	Requirements for catchments and waterways need to be included in water resources legislation to ensure departments take on their responsibilities. We support the cost of drainage improvements being partly born by landholders through Power and Water Corporation rates.
		3. Require water service providers to invest in water stewardship and conservation, and formalise a framework for establishing trigger points for declaring water restrictions.	Agree
		4. In addition to existing annual water quality reporting, ensure regular public reports on water security for identified priority population centres, including documenting reliability, sustainability, resilience to climate change and water efficiency achievements.	Agree. Water quality standards need to be legislated and catchment wide water protection planning put in place and recognised in land use planning.
14	Direction 6 Aboriginal		Prefer the wording 'Aboriginal connections to water are valued and preserved in accordance with custodians'

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	connections to water are valued.		wishes'. The Northern Territory should aspire to lead Australia in this. We strongly support the adoption of Traditional Owner and Land Councils' guidance on these details. We recognise the positive intent of this direction but at face value this does not go far enough in that: · Traditional Owners of the land also "own" the water. This entitlement/responsibility was never ceded and should be recognised. · Traditional Owners, and their representative institutions, must be centred in all decisions about management and use of water in the Northern Territory. · Aboriginal differences in understanding and conceptualisation of water (often in terms of relationality and mutual dependence) need to be accommodated in "two way" water resource management. (Refer: Water colonialism and Indigenous Water Justice in Southeastern Australia Lana D. Hartwig a,b, Sue Jackson a,b, Francis Markham c and Natalie Osborne (https://research-repository.griffith.edu.au/bitstream/handle/10072/402086/Jackson460807Accepted.pdf?sequence=2)

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			1. Cultural values relating to water are complex and diverse, and may vary significantly between Aboriginal and Torres Strait Islander peoples. But a common feature is that cultural values are inextricably linked to the environmental condition of Country. Given this, the most effective way of achieving cultural outcomes is by increasing the influence of Traditional Owners in the water management processes that most affect their Country. ***This emphasises the importance of catchment-wide water legislation if water resources management is going to protect Country in a way that could help with achieving cultural outcomes.*** The National Cultural Flows Research project introduces three legal and policy approaches to cultural flows: 1. Water rights – core of cultural flows: strengthening First Nations's control and decision making over surface and groundwater 2. More influence over water landscapes – influencing more broadly other water managers and uses, culture, heritage, ecology 3. Transfer Foundations- reform water policy and governance structures, including treaties, cultural rights, better recognition of First Nations' law and custom and tracking against international law. We support the Strategic Water Plan seeking to support Aboriginal rights to water at each of these levels.

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15	Direction 6 Pathways forward	1. Establish a forum for Aboriginal Territorians to provide advice on:	Agree – but not sufficient
		· policy, plans and actions that deliver benefits from Aboriginal rights and interests in water;	Agree – but not sufficient
		· meaningful engagement with Aboriginal Territorians; and	Agree
		· how to best incorporate traditional knowledge into water-related matters.	Agree
		2. Where water-dependent cultural values may be impacted by water management decisions, partner with Traditional Owners and their organisations to co-design methods to identify and prioritise them and determine their water requirements. Develop agreed guidelines for determining cultural water requirements in relevant plans and monitoring programs.	Agree. Cultural values are important and this work cannot be rushed. Where water-dependent cultural values are not sufficiently understood, they should not be put at risk by approving extraction proposals.
		3. Improve Aboriginal involvement in decision making, water investigations, water allocation planning and management. Support Aboriginal language groups to participate in Water Advisory Committees and Aboriginal Reference Groups.	Agree
		4. Create opportunities for Aboriginal people to be involved in managing water resources including through jobs and services provided by Aboriginal business and ranger groups.	Agree

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15 - 16	Direction 7 Water dependent environmental values are protected.	General	While the description of the issue is not wrong, the possible pathways are very weak and will not work if actions do not start at the top of the catchment. We note the Territory's track record is very poor, and water dependent environmental values are under threat. In recent times we have seen a callous disregard for water dependent ecosystems in extraction decisions. For example, the FAFM licence decision allows a 40-50km stretch of groundwater dependent ecosystems to be impacted. We are also seeing rapid degradation under the weight of more or less non-contributing pastoral leases running cattle in water holes and deliberately planting, spreading and growing weeds which change flow regimes. This is a great source of despair to the community and Traditional Owners. We consider: 1. Water dependent environmental values need to be protected in water resources legislation 2. This must recognise most problems start in the catchment 3. Other legislation – e.g. pastoral lands activities, land use planning, must consider the needs of environmental water values 4. "The river and wetland health module" in the Productivity Commission report diagram Fig 8.3 (Attached at the end of this table) is currently absent from water management in the Territory. It needs to be fully covered in water resources legislation 5. The Northern Territory Water allocation planning framework needs to be abandoned

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			6. Powerful community-led bodies should advise on the full range of catchment issues. These should be enshrined in legislation
15		Paragraph 2 "…Water-dependent ecosystems also underpin other important economic values, such as commercial and recreational fisheries, the Northern Territory's tourism sector, businesses related to recreational activities and the Territory lifestyle and identity, all critical to attracting people to live and work in the Northern Territory. In addition, water-dependant ecosystems provide amenity and food including traditional harvests, have cultural and spiritual values, and contribute to landscape function."	This statement also needs to be included in Direction 4. Art and health should be included as economic values underpinned by water dependent ecosystems.
16	Direction 7 Pathways forward	1. Clarify how environmental water requirements are met, and develop agreed guidelines for determining key environmental values and their water requirements.	Doesn't go far enough. Adopt National best practice and legislate
		2. Continue to develop better policy, legislation and regulations to ensure key water-dependent environmental values are protected, including through water allocation plans and licence conditions.	Agree. Comprehensive legislation needed, especially in the face of climate change
		3. Expand capacity to monitor and publicly report on the health of water-dependent	Agree

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		ecosystems to able to adjust actions to protect key values and demonstrate good management.	
		4. Investigate and better understand environmental values that depend on river to floodplain connections.	In Alice Springs, our waterways, claypans and swamps which are sacred sites are heavily degraded and under extreme pressure due to ignorant storm water management. In the Top End, our rare wild rivers are being encircled by the cotton industry and damaged by unscientific clearing applications for pastoral land intensification. Rather than investigate for the sake of exploitation, we should recognise and celebrate our complex and important rivers and floodplains, which are rare at a global scale. Legislate to stop diversion of water, development and interference of flows across floodplains and ensure they are fenced off from cattle.
		5. Develop water quality guidelines (non-drinking water) for high value and/or high-risk waterways and aquifers, and embed these in monitoring, management and reporting.	This should be legislated
16-17	Direction 8 Water science, knowledge, skills and innovation are enhanced.		This needs to go further. Comprehensive annual reporting on the state of the Territory's water resources is required. This should focus on reporting the state of water resources as a public good, not as an opportunity for private benefit.

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17	Direction 8 pathways forward	1. Enhance scientific monitoring, modelling and assessment of water resources to ensure allocations are based on a level of understanding related to risk, and identify triggers for further scientific investigation and adaptive management.	Agree. The Territory's wild rivers and natural ecosystems are special. We shouldn't gamble with our natural resources and a precautionary approach must be taken when there's not enough information
		2. Continue the Northern Territory's soil, water and biodiversity assessment program to support sustainable economic development.	Disagree. The contribution of agriculture to the Territory economy is negligible, and we suspect mostly from a few highly fertile areas close to Darwin and Katherine. There needs to be evidenced-based rigorous economic evaluation of the merit of this idea which incorporates all costs. We should not be taking the claims of industry lobby groups that economic development is sustainable at face value. This strikes us as enabling agriculture of marginal to negative value to wreak havoc on our true, and globally important environmental assets.
		3. Support priority research initiatives by, for example, proactively developing partnerships such as establishing a water research partnerships officer.	Agree if it is targeted.
		4. Increase private sector and industry contributions to water-related investigations through, for example, water extraction licence conditions or water pricing mechanisms.	Agree. The sector should pay for the true cost of water, ongoing management and investigation costs. It should be recognised that there are often externalised costs to the environment and future generations' access to water. In reality private sector contributions are a pittance by comparison to the true cost.

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			The costs of management should be extracted from the private sector. This should be done at a Territory-wide scale so no expectation of approval is set up by the payment
		5. Work with academic organisations such as Charles Darwin University to encourage post-graduate research on Territory water issues.	Agree
		6. Use appropriate digital platforms and forums to promote water related knowledge and management, and to make information more accessible to Territorians.	Agree
		7. Recognise and reward excellence in water innovation, knowledge sharing and research.	Agree
17 - 18	Direction 9 Territorians are engaged in water stewardship.		The priority for this agreed. We believe this needs to be supported by governance arrangements.
18	Direction 9 pathways forward	1. Develop a whole-of-government and community plan for Territorians to be leaders in water stewardship. Co-design regional water stewardship programs to respond to local needs.	Agree
		2. Better communicate water security and stewardship matters, for example by posting water security and stewardship news and linking this to peak body networks.	The department needs to start with the right intention about meaningful dialogical communication. Our experience is that the Department tends to silence disagreement to the extent that it blocked Jacqueline's ability to even view its Facebook site.

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		3. Improve the effectiveness of community engagement by improving access to water information, improving the clarity of information and by supporting community water literacy.	Agree
		4. Ensure engagement goals are clear by adopting the International Association for Public Participation's terms to either 'inform', 'consult', 'involve', 'collaborate' or 'empower'.	Agree
		5. Ensure Water Advisory Committees are well-informed, appropriately resourced and have a tenure aligned with the planning cycle.	This is a very limited ambition based on the limited current Water Act. In the Alice Springs Forums, it was clear that the water advisory committees need to be involved in demand management and could play a much greater role. We recommend legislated regional integrated catchment management groups with a much broader role, covering all aspects of water resources legislation. Potentially this could provide a legislative footing for implementation of Territory NRM's water resources programs. We would like these committees' functions significantly expanded to become integrated catchment management bodies with strong powers described in new water resources legislation.
19	Direction 10: Water resources management can adapt to change	Paragraph 3	This drastically understates the challenge and implications of climate change and other geopolitical threats. This should be Direction 1, not Direction 10, and should inform all other directions.

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			Climate change is an immediate and existential question. Our climate has changed and we are already struggling with its effects. Alice Springs and much of Australia endured its hottest and driest summers in 2019/20. The western central arid zones have been identified as already collapsing: https://theconversation.com/existential-threat-to-our-survival-see-the-19-australian-ecosystems-already-collapsing-154077. This, combined with continued population growth and material consumption, are seen by many observers as potential causes of drastic economic and ecological collapse and even wars fought over access to water resources. E.g. https://www.smh.com.au/business/markets/billionaire-investor-jeremy-grantham-has-a-scarier-prediction-than-his-market-crash-call-20220127-p59rje.html); It is not good enough to silo the effects of climate change into categories such as; "runoff, recharge, aquifer storage, evapotranspiration, waterway health, water quality and water demand". Cumulatively, these factors amount to ecosystems and societies strained to the point of collapse. Challenges such as these must be anticipated. We need to be "sandbagging" our ecosystems to prepare for climate change by protecting climate change refugia and being especially cautious with our ecosystems and biodiversity by ceasing to permit land clearing, protecting

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			floodplains, protecting groundwater dependent ecosystems, not mining future generations' water resources, and being cautious with water extraction. The Directions Paper must affirm these. The NTG is not adequately doing this, as evidenced in the failure to plan and respond satisfactorily to the recent (predicted) flood events across Central Australia and its persistent support of water-intensive gas extraction.
20	Direction 10 pathways forward	1. Undertake regular risk assessments across the Northern Territory to determine priorities for water resources planning and management, and publicly report on condition and trends.	Insufficient. This must prepare for seismic changes in climate and geopolitical and ecological drivers.
		2. Develop contingency plans for water scarcity situations and work to ensure water systems are resilient to unplanned events, including consideration of the impacts of climate change.	Agreed.
		3. Review water resource modelling, planning and licencing procedures to ensure climate change and other high risk scenarios are considered in decisions. This includes continuing to improve Annual Announced Allocation processes to meet water security	Insufficient. This needs to take into account ecosystems and biodiversity threats from climate change and proactively manage water resources to buffer ecosystems and biodiversity from the effects of climate change by protecting refugia, understanding urban settings as refugia and considering using stored groundwater to support ecosystems under threat.

Page	Topic	Issue	Comment
		objectives.	
		4. Improve interactions between the Water Act and the Planning Act, as well as associated regulations and processes, to support sustainable development and protect water-dependent environmental and cultural values.	Agreed
		5. Include greenhouse gas emissions when appraising investments in water infrastructure and use.	Agreed
		6. Determine how to best support water users, including licence holders, to prepare for and adapt to significant changes in water availability caused by flood, drought and climate change.	Agreed

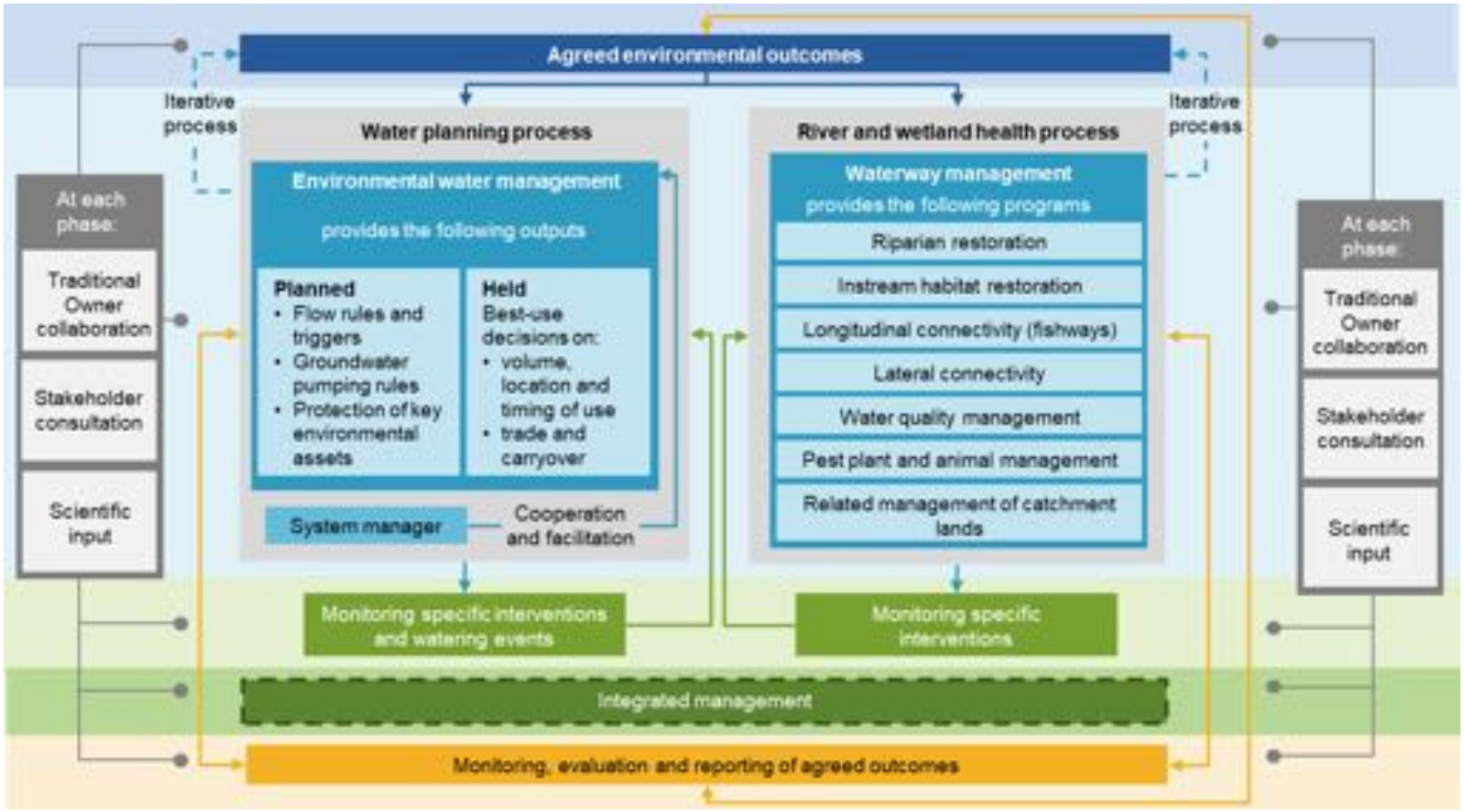
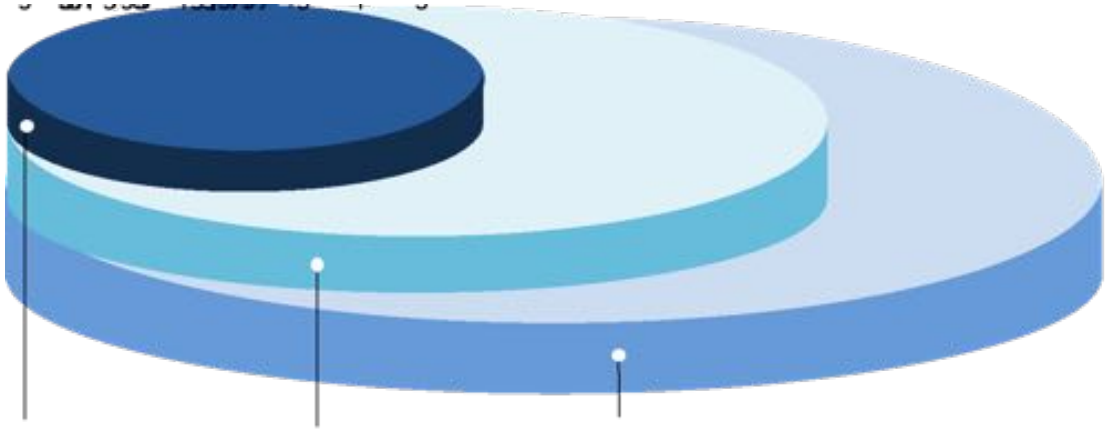


Figure 8.3 **The integration of environmental and complementary waterway management**
At the local level, to achieve agreed outcomes

Figure 9.1 **The National Cultural Flows Research Project framework introduced three legal and policy approaches to cultural flows**



Source: National Cultural Flows Research Project (2018).

9.3 Achieving cultural outcomes through enhancing the influence of Traditional Owners in water management

Cultural values relating to water are complex and diverse, and may vary significantly between Aboriginal and Torres Strait Islander peoples. But a common feature is that cultural values are inextricably linked to the environmental condition of Country. Given this, the most effective way of achieving cultural outcomes is through increasing the influence of Traditional Owners in the water management processes that most affect their Country. These include water planning where the trade-offs between social, economic, environmental and cultural outcomes are agreed, and environmental water management and natural resource management (NRM) in which on-ground action is taken to achieve agreed environmental outcomes. States and Territories can improve cultural outcomes through adjustments under the current water management arrangements, as well as through the development of a renewed NWI