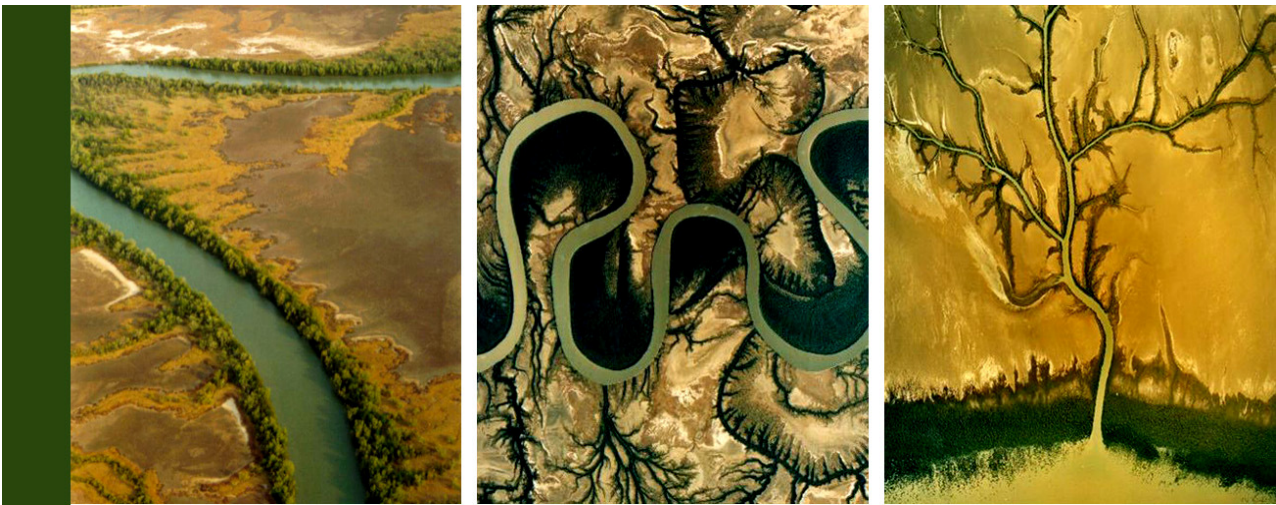


Draft Gulf Water Resource Plan

Queensland Environment Groups' Submission

December 2006



Executive Summary

The Gulf region is a vast, ancient landscape of tropical wetlands, woodlands and savannas, managed for millennia by its Traditional Owners. The health of the Gulf's rivers is the lifeblood for many existing communities and multi million dollar industries including fishing and tourism.

These wild rivers of the Gulf have largely been spared the destructive and costly impacts associated with land clearing and overdevelopment that have so affected southern Australia. As a framework for the sustainable management of water, the Gulf Water Resource Plan (WRP) should ensure these vital natural flows are sustained and the disasters of the south are not repeated in North Australia.

We commend the Government for rejecting the dams and other in-stream impoundments, which would have seriously altered the natural flows and healthy function of the Gulf's river systems. We also congratulate the Government for their holistic, 'single-resource' approach to surface water and groundwater management in the plan area.

Our groups contend, however, that the amount of new available water proposed in the draft WRP and endorsement of the expansion of irrigated agriculture encourages the type of unsustainable development that will adversely alter natural flows and degrade these important river systems. We are concerned the Government has not based their water allocations policy on sound environmental, economic and social grounds, but on highly speculative demands from consumptive water users on the Community Reference Panel.

We strongly encourage the Government to cap water entitlements and reserves at existing levels for all Gulf rivers. We also ask that the Government omit references to supporting growth in irrigated agriculture, and instead promote industries that are compatible with the natural functions of the Gulf's wild rivers, such as ecotourism and sustainable fisheries.

Below is a summary of our key recommendations. The '*Draft WRP Comments and Recommendations*' in this submission provide more detail to these points. The submission also includes recommendations for the Resource Operations Plan.

Queensland Environment Groups' Key Recommendations:

WRP Amendments:

- Omit clause supporting growth in irrigated agriculture (Section 9, part i)
- Cap water entitlements and water reserves at existing levels for the Flinders, Nicholson and Norman Rivers where existing allocations are not currently used.
- Cap water entitlements and water reserves at existing levels on the Gilbert and Leichhardt Rivers, and establish a trading system for the existing water-use zone
- Reduce reserve of 5 000 ML in Gregory subcatchment to 1 000 ML – consistent with other nominated Wild Rivers.
- Include a clause in the WRP that specifically rules out in-stream impoundments

Immediate Priorities:

- Amend the draft WRP to ensure the Flinders, Norman and Gilbert Rivers remain eligible for Wild River listings
- Review Government consultation process with Indigenous peoples and communities and undertake a comprehensive cultural survey of the plan area to identify cultural values in water as appropriate
- Make Overland Flow works Code Assessable Development under the *Integrated Planning Act 1997*
- Require *all* water entitlement holders to complete a Land and Water Management Plan

Contents

1 Preamble	4
2 Draft WRP Comments and Recommendations	4
2.1 Strategic and General Reserves	4
2.1.1 Flinders River	6
2.1.2 Gilbert River	7
2.1.3 Norman River	8
2.1.4 Nicholson River	8
2.1.5 Leichhardt River	8
2.1.6 Settlement Creek, Staaten River, Morning Inlet and Gregory River (Wild Rivers)	9
2.2 Consultation Process	9
2.2.1 General Concerns	9
2.2.2 Indigenous Representation	10
2.3 Wild Rivers	10
2.4 Overland Flow	11
2.5 Integration of Land and Water Management	11
2.6 No Dams Policy	12
2.7 Connected Water Resource Management	12
3 Resource Operations Plan Recommendations	12
4 References	13

*Queensland Environment Groups' Submission into the Draft Gulf Water Resource Plan
December 2006*

Developed by:

The Wilderness Society
 The Australian Conservation Foundation
 Queensland Conservation Council
 Cairns and Far North Environment Centre

1 Preamble

The Queensland Conservation Council (QCC) is the peak environmental organisation in Queensland, with over 70 member groups. In partnership with its members, QCC works to protect, conserve and sustain Queensland's natural environment. Established in 1969, QCC provides leadership on a wide range of environmental and conservation issues, at all levels of government and throughout the community. QCC's Rivers Project aims to promote ecologically sustainable river management, protect natural and wild rivers and to highlight the impacts of instream and off-stream structures and diversions.

ACF is a not-for-profit community organisation committed to inspiring people to achieve a healthy environment for all Australians. For 40 years we have been a strong voice for the environment, promoting solutions through research, consultation, education and partnerships. We work with the community, business and government to protect, restore and sustain our environment. The ACF Northern Australia Program (NAP) was established in 2003 and is based in Cairns. The NAP progresses culture and conservation outcomes through its work across the north, from Cape York Peninsula in the east to the Kimberley region in the west.

The Wilderness Society is a community-based environmental advocacy organisation whose mission is protecting, promoting and restoring wilderness and natural processes across Australia for the survival and ongoing evolution of life on Earth. TWS have led the campaign for the protection of Wild Rivers in Queensland. TWS have been involved with the Gulf Water Resource Planning process holding a seat on the Community Reference Panel as a conservation representative.

The Cairns and Far North Environment Centre Inc. (CAFNEC) is a not-for-profit organization that was formed in 1981 by concerned members of the Far North Queensland community seeking better protection for Far North Queensland's natural environment. CAFNEC's geographic range of interest stretches from Cardwell in the south to the Torres Straits in the north and the Gulf of Carpentaria in the west. This region includes three World Heritage areas including the Great Barrier Reef World Heritage Area and the Wet Tropics World Heritage Area.

Our groups support the recognition and expression of native title rights of indigenous Australians in natural resource management planning. We acknowledge the significant cultural rights, obligations and interests of Traditional Owners and Indigenous peoples in water.

2 Draft WRP Comments and Recommendations

2.1 Strategic and General Reserves

The Gulf region is a mosaic of nationally and internationally significant ecosystems. Its wild rivers, whose natural flows support these important ecosystems and many existing communities and industries, are among the healthiest remaining catchments in Australia, and indeed the world.

Aside from the dams in the upper reaches of the Leichhardt River, water development and alteration of natural flows in the Gulf region has been limited, helping maintain the natural integrity of the region. The amount of water currently set aside as entitlements totals 124 828 ML, with only 46% of this amount currently being used (DNRW 2006b; p.42).

The draft WRP, however, proposes new water reserves of 177 900 ML for the Gulf region. This effectively allows for a 146% increase in available water (current allocations are 124 828 ML), or a possible 530% increase in current water consumption.

Our groups strongly contend there is little justification for such a dramatic increase in available water. The heavy under-utilisation of existing water entitlements (further illustrated in *Table 1*) suggests there is little demand for an increase in water reserves and also indicates there are currently significant economic and ecological constraints on water intensive industries such as irrigated agriculture.

These constraints are outlined in the *Gulf and Mitchell agricultural land and water assessment report* (DNRW 2004) and the *Gulf draft water resource plan economic and social assessment report* (DNRW 2006b), which cite a lack of suitable soils near available water supplies, high risk salinity, distance to markets, poor roads and access to farm services, a lack of risk capital for development, severe climate, and highly variable flows as significant impediments to irrigation.

The Queensland Government is also obliged under the National Water Initiative (NWI) to ensure existing allocations are used before the release of unallocated water: 'If a release is justified, generally, it should occur *only* where alternative ways of meeting water demands, such as through water trading, *making use of the unused parts of existing entitlements* or by increasing water efficiency have been fully explored' (*Section 71, NWI 2004*, Italics added)

Government policy in the draft Water Resource Plan (WRP), however, does not match the realities of the Gulf region, the conclusions of the above Government reports or the NWI. As *Table 1* illustrates, new water reserves appear to have instead been based on the speculative demands from Community Reference Panel (CRP) members.

River System	Current Entitlements	% Currently Used	Probable Demands*	CRP Demands**	Draft WRP New Reserves	Total New Water Reserves	% Increase in available water
Gilbert	19 835 ML	35%	5 000 – 11 005 ML	27 200 – 87 200 ML	20 000 ML	38 970 ML	100%
Flinders	24 005 ML	40%	5035 – 28 535 ML	75 000 ML	102 500 ML	135 440 ML	427%
Leichardt	74 799 ML	50%	377 – 16 775 ML	17 000 ML	31 100 ML	116 910 ML	41%
Nicholson	4 030 ML	67%	315 – 3615 ML	27 000 ML	8 800 ML	22 210 ML	218%

Table 1: Current and future water use in the Gulf water planning area (key water-use rivers) Source: DNRW 2006b

*Additional water use demands stated in Economic and Social Assessment Reports (DNRW2006b)

**Demands flagged by water users in CRP meetings (DNRW2006b)

These large water reserves, if converted to entitlements and used for water intensive industries such as irrigated agriculture and mining, will significantly alter the natural flows and function of these free flowing rivers. Large-scale irrigation in particular will likely reduce wet season flows and increase dry season flows, causing major changes to natural riverine function. The use of fertilizers and pesticides in irrigation operations will also greatly increase the risk of river pollution, further threatening the health of downstream ecosystems and the availability of indigenous traditional resources, as well as potentially impacting on cultural values.

Our groups are concerned the Government has focused their environmental flows policy primarily on end-of-system mean annual discharge (MAD), rather than on a range of flow data (including median, low, high, and medium flows) and impacts on particular stream reaches. That is, the focus has been to ensure the end-of-system MAD for the *entire* Gulf of Carpentaria is kept below 1.5% of pre-development flows, rather than giving appropriate attention to the impact of water extraction on individual rivers or stream reaches.

The Flinders River is a good example of this flaw in the current policy approach. While the end-of-system MAD for the Gulf may be below 1.5% of pre-development flows under the proposed new reserves policy, at the Etta Plains gauging station near Richmond, flow reductions equate to

38% of 10% flows, 44% of 20% flows, 17% of median flows and 8% of mean annual flows (DNRW 2006e). So while the flows for the whole of the Gulf may remain near natural, the impacts on this particular reach of the Flinders River will be considerable. Local impacts have been largely ignored through this approach.

The *Ecological and geomorphological assessment for the Gulf and Mitchell draft water resource plans* (TAP) report also casts serious doubt on the Government's reliance on MAD: 'in semi-arid and arid landscapes, mean annual flow is a poor predictor of flow in any one year, and more than half of all years will have well below mean annual flows. ... The mean flow is strongly influenced by the rare but very large flow events' (p.246). The report goes on to say that 'water demands are likely to be small compared with average flows, but may be substantial compared with low flows, when both the ecosystem and stakeholder demands for the water are likely to be greatest' (p.247).

Herein lays one of our major contentions with the large water reserves approach of the Government. The rivers of the Gulf are highly variable tropical systems operating on a short sharp 'wet' and long 'dry'. All stages in the cycle of flows in these rivers are critical to the health and resilience of riverine, wetland and estuarine ecosystems, including dry season baseflows, on-set timing of initial wet seasons flows, overbank flood flows and peak flow events (to name a few). Extracting large amounts of water in these systems during any flow stage, particularly during the dry season, will disrupt the natural cycle and threaten the integrity of many water-dependent ecosystems.

Our groups therefore do not consider the proposed strategic and general reserves an entirely sustainable approach to water planning in the Gulf region. A truly sustainable water plan would recognise water is already being used by the environment, Indigenous peoples and existing communities and industries (including fishing and tourism). A sustainable water plan would protect the natural flows of rivers and the unique wilderness values and cultural heritage of the Gulf country.

Below are more detailed positions of our groups relating to particular rivers in the Gulf plan area.

Key Recommendation: Omit clause supporting growth in irrigated agriculture (Section 9, part i)

2.1.1 Flinders River

The Flinders River is the largest river basin in the Gulf planning area and as a free flowing natural river of high conservation significance deserves protection under Queensland's *Wild Rivers Act 2005*. Our groups strongly oppose the expansion of irrigated agriculture on this river and advocate a cap on existing water entitlements.

Currently 36 000 ML of water is allocated for the Flinders, of which 14 400 ML are unused as sleeper and dozer licenses. So while current entitlement usage is just 40%, the Government is advocating for a 427% increase in water development.

According to the *Gulf draft water resource plan overview report* (DNRW 2006a), the 102 500 ML of new water reserves for the Flinders is derived from community consultation, the *Gulf and Mitchell agricultural land and water assessment report* (DNRW+E 2004) and the *Gulf draft water resource plan economic and social assessment report* (DNRW 2006b).

Yet these two Government reports contradict such a significant increase in agricultural water use: the *Gulf draft water resource plan economic and social assessment report* suggests future demands for irrigation are likely to be constrained to 0 ML – 16 000 ML in the Flinders (p.41), while the *Gulf and Mitchell agricultural land and water assessment report* says that the soils around Richmond – the key area targeted for expansion of irrigation – 'have significant development limitations associated with high levels of salinity and sodicity' (p.6).

Our groups believe this second point is critical to water resource policy in the Gulf. Irrigated agriculture is simply not suited to the conditions of the Northern Australia, and poses too many environmental and economic risks. In the case of the Flinders River, the floodplain soils are saline and infertile, flows often drop to zero for 300-500 days continuously (Smith et.al 2005; p.190), and evaporation rates are among the highest in the country. Clearly these are not conditions conducive to a water and soil-intensive industry.

Irrigated agriculture on the Flinders and water extraction at the level proposed in the draft WRP, will seriously jeopardise the health and function of the river and the communities and industries that currently thrive on natural flows (such as fishing and tourism). Integrated Quantity and Quality Modeling (IQQM) indicates the upper reach of the Flinders targeted for development will be significantly affected, with flow reductions of 38% of 10% flows, 44% of 20% flows, 17% of median flows and 8% of mean annual flows (DNRW 2006e). Our groups are not confident this considerable reduction in flows could be offset by environmental conditions on licences through the Resource Operations Process.

Of particular note, the possible reduction in flows in the Flinders could impact on a number of endemic and rare fish species, including the newly described Papuan River Spat (*Clupeoides cf. papuensis*) and Tadpole Goby (*Chlamydogobius ranunculus*) (Hogan & Vallance 2005).

It is evident the Government has based their new water reserves policy not on the body of economic, social and environmental data produced for the WRP, but on the speculative demands of single CRP members (as clearly seen in *Table 1*). We strongly maintain that the health of the Flinders River should not be jeopardised to benefit the irrigation and mining industries, but should instead be protected for all Australians as a Wild River.

We also understand that previously the Flinders River was identified by the cotton industry for genetically modified cotton and trials had occurred in 2000, 2001 and 2002. We are concerned that the extra unallocated water in the Flinders system will send a message that this area is available for the growth of the cotton industry. The Federal Government has also been very keen to support the expansion of irrigated agriculture across the north and may take the increase in allocations as a suggestion that the Queensland Government also supports the Federal Government plans.

**Key Recommendation:
Cap water entitlements and reserves at existing levels on the Flinders Rivers**

2.1.2 Gilbert River

The Gilbert River is also in excellent ecological condition and is an integral part of the Gulf River systems. The Gilbert River bed sand's maintains water for vegetation which in turn supports a wide range of fauna and aquatic animals during the dry season. The Gilbert River should be considered for protection under the *Wild Rivers Act 2005*.

The Gilbert has been targeted for expansion in irrigated agriculture (Section 13, part i), with an increase of 20 000 ML in water reserves. Existing water entitlements, however, are heavily under-utilised. Currently 19 835 ML of water is allocated to water users with current licence usage at just 35%, including 5300ML as unused dozer and sleeper licences. Despite the underutilisation of already allocated water, the Government is advocating for a 100% increase in water development.

Most of the current agricultural activities on the Gilbert River are provided for by the water from the near-perennial hyporheic flows in bed sand aquifers. The 'hyporheic ecosystem' is the interface zone between stream beds subsurface sediment, where exchange of water encourages a niche environment, and vital refuge, for a range of aquatic species. These

ecosystems are poorly understood, and as the *Ecological and geomorphological assessment for the Gulf and Mitchell draft water resource plans* report indicates, could be directly impacted by growth in irrigated agriculture in the Gilbert (p.246).

The *Ecological and geomorphological assessment for the Gulf and Mitchell draft water resource plans* report also cautions further extraction of water from the Gilbert, on the basis that in the absence of adequate recharge salinity risks will increase, as will impacts on downstream ecosystems (p.206).

In order to maintain the natural integrity of the Gilbert River, including its hyporheic ecosystems, and downstream ecosystems, our groups advocate a local water trading system in the Gilbert *in place* of increased water reserves. Given that most of the consumptive water use in the Gilbert is confined to a small geographical area, it is feasible that the under-utilised entitlements (sleeper and dozers) are traded where new demand may occur. Any trading system, however, must have strict regulations and conditions to ensure the hyporheic ecosystem and other ecological functions are not greatly impacted.

Key recommendation:

Cap water entitlements and reserves at existing levels on the Gilbert River, and establish a trading system for the existing agricultural zone.

2.1.3 Norman River

The Norman River directly supports one of Australia's largest fisheries in the Gulf of Carpentaria. The Norman River deserves protection under the Wild Rivers Act to afford security to the existing multi-billion dollar fishing and tourism industry and to protect the ecological integrity into the future. .

Our groups contend there is little justification for the 5000 ML increase of water reserves in this catchment. According to the *Gulf draft water resource plan economic and social assessment report*, there are a meager 225 ML of probable additional demands for the Norman, with no CRP nominated demand (DNRW 2006b; p.42). We seriously question the process for developing this figure of 5000 ML given the clear lack of demand.

Key Recommendation: Cap water entitlements at existing levels on the Norman River

2.1.4 Nicholson River

The Nicholson River is part of the Gregory River system and the downstream section is to be protected under the official declaration of the Gregory River as a Wild River in early 2007. We support the nomination of the Nicholson River as a wild river to protect its ecological integrity and reflect the nature of these intertwining river systems.

The Nicholson has been targeted for expansion in irrigated agriculture (Section 13, part i), with an increase of 8800 ML in water reserves. Existing water entitlements, however, are under-utilised. Currently 4030 ML of water is allocated to water users, of which just 63% is currently used. The Government is therefore advocating for a 218% increase in water development when current use of allocation suggests there is little demand for growth.

There is little information to suggest the Nicholson River is appropriate for irrigated agriculture (the Nicholson does not feature in the *Gulf and Mitchell agricultural land and water assessment report*). Our groups strongly advocate a cap in water entitlements at existing levels on the Norman River.

Key Recommendation: Cap water entitlements at reserves existing levels on the Nicholson River

2.1.5 *Leichhardt River*

The Leichhardt River should be the focus of a river restoration program by the Government, as its upper reaches have been considerably degraded by the alteration of flows from the Julius Dam and Moondarra Dam near Mt Isa,

A key purpose of the draft WRP is 'to provide a framework for reversing, where practicable, degradation that has occurred in natural ecosystems' (Section 2, part d). One would expect the Leichhardt River below the dams, given its condition, would be the target for such a framework.

The draft WRP, however, does precisely the opposite – it provides a framework for the further exploitation of this river system by allowing for a new water reserve of 30 000 ML. According to the IQQM modeling, this could see, in total, a 36% decrease in mean annual flows and a 61% decrease in median annual flows (from pre-development flows), further degrading this stream reach. We strongly oppose this policy approach.

In order to begin reestablishing the natural integrity of the Leichhardt River and downstream ecosystems, our groups advocate a local water trading system *in place* of increased water reserves. Recent amendments to the *Water Act 2000* mean that water can be traded locally. Given that most of the consumptive water use in the Leichhardt is confined to a relatively small geographical area, it is feasible that the under-utilised entitlements (totaling 17 600 ML – DNRW 2006b; p.42) are traded where new demand may occur. Any trading system, however, must have strict regulations and conditions to ensure the ecological functions of the Leichhardt are not further impacted.

Our groups support the clauses in the draft WRP that specify the delivery of greater environmental flows through the improved operation of the dams (Section 44).

Key recommendations: Cap water entitlements and reserves at existing levels on the Leichhardt River, and establish a trading system for the existing water-use zone.

Undertake a restoration program on the upper reaches of the Leichhardt River.

2.1.6 *Settlement Creek, Staaten River, Morning Inlet and Gregory River (Wild Rivers)*

Settlement Creek, Staaten River, Morning Inlet and the Gregory River are Wild Rivers, of national and international conservation significance. Our groups strongly support the declaration of these rivers under the *Wild Rivers Act 2005*. We support the modest amount of water (1000 ML) for state purposes in these catchments.

We are concerned, however, at the larger amount of 5000 ML assigned to the Gregory River as a 'Strategic Reserve'. The Gregory River will officially be declared a Wild River in early 2007 and therefore should have the same allocation for state purposes as the other declared wild rivers.

Key Recommendation: Reduce the state water reserve in the Gregory to 1000 ML

2.2 Consultation Process

2.2.1 *General Concerns*

Community consultation is a vital component of water resource planning, helping to ensure community opinion and feedback into policy is integrated into the draft WRP.

Our groups maintain that there is much room for improvement in this process. In the Gulf CRP, stakeholder representation was weighted heavily in favor of consumptive water users. While conservation groups are legitimately viewed as a 'sector', we are effectively representing the integrity and health of 'the natural environment' and a whole spectrum of species without a

voice. This approach, therefore, risks marginalising 'the environment' as just another stakeholder, when a healthy environment and ecosystem resilience – as championed by our groups – in fact underpin a thriving community and economy.

We therefore encourage much greater conservation representation on future CRP's. A possible way to balance the CRP could be to have greater diversity of conservation sector interests by including regional, state and national groups (in this case CAFNEC, QCC, TWS and ACF).

It could also be said the Gulf country and the fate of its wild rivers, given their national significance, is of concern not just to 'consumptive and non-consumptive' water users, but all Australians. Greater weight must therefore be given to the national imperative of protecting our national heritage.

Key Recommendation: Increase conservation representation on future CRP's to better reflect the importance of a healthy environment in water resource planning and provide appropriate support to improve effectiveness of participation.

2.2.2 Indigenous Representation

Indigenous people have a long history of caring for Gulf country with strong spiritual and cultural connections with the land and water of the region. Significant areas of the Gulf country are subject to Native Title claims.

With such a strong connection to the water resources and important role in the health of this unique Gulf country, it is imperative that Indigenous people are extensively consulted over the draft WRP. We are concerned that Indigenous groups and communities have not been appropriately or sufficiently engaged in the consultation process, based on their absence in CRP meetings and the lack of discussion of Indigenous interests in these meetings.

We also contend that the failure to effectively engage Indigenous peoples has resulted in the lack of a comprehensive cultural inventory/study of the plan area making it difficult for the Government to protect the cultural values of the plan area, as outlined in the draft WRP (Section 13). We encourage the Government to conduct a comprehensive cultural inventory/study in partnership with Indigenous peoples from the Gulf to ensure important cultural values are not overlooked in future planning decisions.

Key Recommendation:

Review Government consultation process with Indigenous people and communities and undertake a comprehensive cultural survey of the plan area to identify cultural values in water and culturally significant sites, as appropriate.

2.3 Wild Rivers

A Wild River is a free flowing river. It is a river where the natural ecological, hydrological and geomorphic processes have not been altered by modern development, maintaining healthy ecosystems and the rivers important aesthetic, cultural, commercial, and recreational values.

Queensland's *Wild Rivers Act 2005* – the first of its type in Australia – sets out to preserve the natural values of wild rivers. So far, the Government has committed to protecting 19 Wild Rivers in Queensland, four of which are in the Gulf of Carpentaria: Settlement Creek, Staaten River, Morning Inlet and the Gregory River.

Our groups maintain that the Flinders, Gilbert, Nicholson and Norman Rivers, as free flowing, healthy rivers, are also worthy of Wild River listings under the *Wild Rivers Act 2005*. Each of these rivers are comparable with the ecological condition of the soon to be declared wild rivers of the Gregory, Morning Inlet, Staaten and Settlement creek.

We are greatly concerned the Government appears to be of the attitude that these rivers can be developed for agriculture and mining as a 'balance' to the (near official) declaration of the four Gulf Wild Rivers. We strongly oppose this approach.

Water planning should not be about 'balancing' the needs of every stakeholder that raises their hand for an allocation of water. Some interests, such as the irrigated agricultural industry, are simply incompatible with the healthy function of the Gulf country landscape. The approach should instead be to set ecosystem health and the integrity of wild rivers as a baseline, then look at the types of industries that are compatible with the long-term function of these rivers (for instance ecotourism or sustainable fisheries), ruling out the non-compatible interests. The result would be a truly sustainable water plan, with little risk of encouraging the damage and repair bill of much of our southern catchments.

Key Recommendation:

Amend the draft WRP to ensure the Flinders, Norman, Nicholson and Gilbert Rivers remain eligible for Wild River listings

2.4 Overland Flow (OLF)

Overland flow water is vital to feeding the vast floodplains of the Gulf country in the wet season, supporting sustainable industries such as tourism and fisheries, as well as food production for Traditional Owners.

Overland flow is also harvested by landholders for stock and domestic needs by constructing storages to capture flows. Current Government policy is to allow self-assessment of these storages for volumes below 250 ML (for 'any purpose').

Our groups contend this is too great an amount, with too few restrictions. The size of these storages indicates that they could potentially be used for irrigation and fodder crop production in the planning areas. Over the life of the planning scheme this has the potential to drive demand for this type of irrigation development and lead to an increase in the construction and use of OLF water storages. In addition, there is no limit on the number of storages that may be constructed in the plan area, providing a loophole for water users in areas where unallocated water has not been made available.

We therefore strongly encourage the Government to adopt a precautionary approach to OLF in the WRP. We strongly recommend any new OLF developments other than for stock and domestic water and of any size become Code Assessable Development under the *Integrated Planning Act 1997* and allow for these developments only where unallocated water is made available.

Key Recommendation:

Make OLF works (other than for stock and domestic purposes) Code Assessable Development under the *Integrated Planning Act 1997*

2.5 Integration of Land and Water Management

The draft WRP provides little integration between the allocation of water and the management of water and land use. Current Government policy is to separate water allocations from land management and require that land management is regulated through other mechanisms such as Land and Water Management Plans (LWMP's) or Water Use Plans.

There are no existing LWMP's in the Gulf Basin WRP and there are no Water Use Plans in Queensland. The implications of this planning gap are serious; poor land management can alter natural sediment fluxes, mobilise soil-based salts, and pollute waterways with harmful agricultural chemicals, jeopardising the health of riverine ecosystems.

There is therefore an urgent need to ensure LWMP's are compulsory for all consumptive water users. This should be combined with Government support and assistance for the development of these plans.

**Key Recommendation:
Require compulsory LWMP's in the plan area**

2.6 No Dams Policy

Dams and weirs are one of the greatest threats to the natural integrity of the Gulf's rivers and ecosystems. These types of in-stream impoundments inundate natural habitat, seriously hamper fish passage (and other aquatic fauna), greatly effect downstream flow and sediment patterns and impair the health of downstream riverine, wetland and estuarine ecosystems.

In the Gulf region, there are a number of sites that have been targeted by the mining and agricultural industries for dam and weir construction, in particular the Green Hills Dam on the Gilbert River and Mount Beckford and O'Connell Creek Dam. Our groups are strongly opposed to these impoundments.

Encouragingly, the draft WRP specifically rejects these destructive proposals. We commend the government for this decisive and important policy position. We do note, however, that the draft WRP contains no specific clauses ruling out in-stream impoundments in the Gulf plan area. Given the immense natural and heritage importance of the Gulf region and the significant threat posed by dams and weirs, we strongly encourage the Government to categorically prohibit in-stream impoundments.

**Key Recommendation:
Include a clause in the WRP that specifically rules out in-stream impoundments**

2.7 Connected Water Resource Management

Traditionally, surface water and groundwater have been viewed and managed as separate resources in Australia, with little regard for the interaction between these water sources.

There is a growing recognition in the science community and in Governments, however, that much of our surface and groundwater resources are in fact connected. That is, some streams and watercourses exchange waters with aquifers. Careful, holistic planning is required to ensure water extraction of surface water ecosystems does not adversely impact on groundwater-dependent ecosystems, and visa versa.

Connected water resource management is one of the primary objectives of the National Water Initiative (NWI): to 'recognise the connectivity between surface and groundwater resources and connected systems managed as a single resource' (NWI 2004, clause 23x). Our groups are encouraged by the Government's 'single-resource' approach in the draft WRP and the consistency with the NWI.

Under Best Practice water pricing and institutional arrangements section in the NWI ..."Any release of unallocated water should be managed in the context of encouraging the sustainable and efficient use of scarce water resources.□71. If a release is justified, generally, it should occur ONLY where alternative ways of meeting water demands, such as through water trading, making use of the unused parts of existing entitlements or by increasing water efficiency have been fully explored"

If a release is justified, generally, it should occur only where alternative ways of meeting water demands, such as through water trading, making use of the unused parts of existing entitlements or by increasing water efficiency have been fully explored.

3 Resource Operations Plan Recommendations

Our groups recommend the Government consult closely the *Ecological and geomorphological assessment for the Gulf and Mitchell draft water resource plans* to inform the Resource Operations Plans. The most important conditions on licences we see are:

- Use of the ‘multiple wetting approach’ (Smith et.al 2005; p.241-243) to ensure sufficient flows from the initial flood pulses are allowed through the system;
- Use of the ‘habitat diversity threshold approach’ (Smith et.al 2005; p.235-239) to ensure habitat at all stream levels (including overbank) is maintained;
- No allowance for extraction in dry months (when the integrity of water refugia (such as waterholes) is critical to the ongoing survival of a range of fauna and flora);
- No use for unallocated water for large scale irrigated agriculture
- Detailed local surveys and plans to ensure the licence is catered to the local conditions and ecological requirements

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