

Preserving Queensland's Wild Rivers

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Introduction

In 2004 the Queensland Government committed to preserving the state's remaining wild rivers. A wild river is one that still has all, or almost all, of its natural values intact. This is the most comprehensive river protection policy in Australia as it applies to whole river systems, including estuary (or terminal lake), main tributaries, any identified off-stream special features, and all lands in the catchment. Special features are those that significantly complement the river's natural values, such as wetlands, floodplains, etc.

To implement this policy, the Government passed the *Wild Rivers Act 2005* to declare wild rivers and to limit future development in declared catchments. This paper outlines the policy and implementation arrangements.

Policy objective

The policy aims to preserve river systems that have low levels of bio-physical disturbance in order to maintain their environmental, economic and social amenity. The main natural values of interest are hydrologic processes, geomorphic processes, riparian function, water quality and wildlife corridors. Preservation of these river systems will benefit current and future generations by supporting economic pursuits that rely on a 'clean and green' image (eg eco-tourism, meat export, commercial fishing), by underpinning healthy aquatic ecosystems (eg good water quality, habitat diversity, free migration), and by helping to maintain social amenity (eg recreation, cultural heritage, scientific reference, landscape aesthetics).

The focus of the policy is to prevent the future loss of these values that would result if further development were permitted without constraint. Hence, certain types of future development will be not permitted in certain circumstances, while others will be subject to stringent assessment criteria. Any future development would have to be sensitive to the identified natural values and not result in unacceptable loss of those values.

The policy does not seek to 'turn back the clock' on development in a wild river, recognising all authorised developments and rights existing at the time the wild river is declared. The policy is about preserving identified natural values into the future rather than recreating pre-European settlement conditions by removing existing developments. The policy does not seek to create catchment-scale national parks. The policy does not specifically require rehabilitation of wild rivers but does not prevent this from happening.

What is a wild river?

Naturalness

A wild river is defined as a river system that has all or almost all of its natural values intact, ie has not been significantly altered since European settlement. This is the main criterion for inclusion under the policy. Wild rivers will typically have high levels of naturalness, eg largely

unmodified hydrologic and geomorphic processes, good quality water, well functioning riparian zones, and continuous wildlife corridors. It is the *degree of naturalness* that will determine whether a river system should be nominated for wild river status.

Other specific values, such as scenic, recreation, cultural, heritage and biodiversity, will contribute to a wild river's attributes but are not in themselves the basis for designating a wild river. Equally a river system will not be designated as wild simply to address one of these ancillary values, eg protection of a threatened species. There are existing mechanisms, such as conservation plans, to address those needs.

These ancillary values may be specifically identified as special features and protected as part of the wild river. They could include areas of high biological diversity or richness (eg wetlands), rare or unique geomorphic areas (eg exceptional gorges), or specific natural features that are otherwise significant (eg fish habitat area).

Extent of a wild river

For the policy, the term "wild river" covers the main stream, its estuary (for coastal rivers, or terminal wetland), its major tributaries and any off-stream special features. Special features are those that significantly complement the river's natural values, such as wetlands, billabongs, floodplains, etc.

The extent of major tributaries and the location and extent of special features will be defined for each wild river to ensure the policy can be applied practically and with certainty. The upstream extent of the stream and its major tributaries would be determined using guiding principles based on drainage area, channel dimension, and key seasonal flow contribution. The extent and the location of the main stream, its major tributaries and special features is important as specific development prohibitions apply to these elements.

Normally a wild river declaration will cover the whole river system, ie from source to sea. Such a system is generally much easier to define and deal with as all of the river elements, including floodplain, estuary and catchment, are able to be managed holistically to preserve the natural values. In some circumstances, however, minor parts of a river system may have significant disturbance and need to be excluded from the wild river area. In these cases any loss of wildlife corridor values due to the possible isolation from the river's estuary would have to be recognised. Also there are cases where river systems cross State borders (eg Paroo) and so the whole system cannot be captured under the policy. Individual cases where less than the whole river system is proposed will be assessed on their merits.

Extent of a wild river catchment

The policy applies to the whole drainage area of the wild river, ie headwaters to estuary (or terminal lake). This is important as most of the policy's protection mechanisms relate to land-based activities that would affect the wild river's natural values. Also the policy regulates any groundwater aquifer that has a significant hydraulic connection to the surface flows in the wild river.

Powers to protect wild rivers

Legislation

To achieve the policy's objective, it is important that all development activities that could potentially degrade the natural values in a wild river are regulated and managed. The Wild Rivers Act achieves the policy objective by providing a public planning process to declare a wild river area as well as impose wild river requirements on future developments in the catchment, generally via existing approval processes in other Acts. For example, mining activity in a wild river will continue to be assessed under the *Environmental Protection Act 1994*, but also subject to wild river requirements added to that Act. This maintains existing administrative processes and minimises any new 'red tape'. Also compliance with permits will continue to be monitored by the agency or local government administering the approval process. Hence there are no new approval processes or 'wild river police' to implement the policy.

Wild river declarations

To relate the wild river legislative requirements to development activities on the ground, each wild river area will be declared under a statutory instrument called a declaration. This document outlines management areas within the catchment and details constraints for developments within each of these management areas. For example, the land within and immediately adjacent to a "wild river" is called a 'high preservation area' (HPA) and can be up to 1km wide each side of the river or special feature. Most types of development are not permitted in a HPA because disturbance in this area is likely to have significant and immediate impacts on the natural values.

Developments outside of a HPA are generally permitted, subject to wild river requirements, because they are well 'buffered' from the wild river. Other types of management area focus on minimising disruption to floodplain flows that are strongly linked to the river's natural values and on maintaining water levels in aquifers that provide important base flows in the wild river.

Also a declaration can set a limit on the amount of water that can be extracted from the system (streams, lakes, aquifers and overland flow) if no water resource plan exists for the catchment. If there is a water resource plan for the river system, it will deal with water allocation matters, rather than the declaration. However, the water resource plan cannot be inconsistent with the declaration or the objectives of the Wild Rivers Act.

Wild river code

Certain types of future development will be subject to stringent wild river requirements that 'lift the bar' to ensure the natural values are preserved. These requirements complement existing State natural resource management laws relating to land, water, vegetation, mining, fisheries, riverine protection, weeds and pests as well as local government development laws. As existing development approval processes are being used, relevant State agencies and local governments will apply the requirements, which are held in the *Wild Rivers Code*. For example, the code may require a proposed development to be located a minimum distance from a tributary stream in order to minimise the risk of water quality contamination. When the development is being assessed by the relevant agency, it will add the wild river requirement to the standard constraints or conditions on the approval.

Declaring a wild river

To declare a wild river, the State Government must use the formal public planning process outlined in the Act. A potential wild river could be brought to the Government's attention informally by agencies, community groups or individuals. However, an assessment of the 'naturalness' of a potential wild river for nomination purposes will generally not be intensive or quantitative given the paucity of reliable condition data at the catchment scale and the lack of clear benchmarks (condition at time of European settlement). Potential wild rivers will generally be in regions of the state that are largely undeveloped and have very little information available. The declaration stages are:

1. The Government publicly notifies the catchment community of its intention to declare the river as wild. This notification advertises the availability of a declaration proposal, outlines how members of the public can make a submission about the proposal, and imposes a moratorium to prevent any 'panic' development in the catchment while the matter is being considered. The declaration proposal details the basis for the nomination (including the identified natural values), the proposed management areas and the proposed wild river requirements. In effect it is a draft declaration. The moratorium applies to vegetation clearing, water resource development and mining activities.
2. The Government consults affected landholders and communities to ensure they understand the potential implications of a declaration. Some industry sectors may choose to be consulted through peak bodies. This process seeks to facilitate public submissions that are based on accurate information.
3. The Government makes a decision to proceed (or not proceed) with the declaration based on the submissions received and all available environmental, economic and social information. The decision is publicly advertised to formally end the process and to remove the moratorium. If the Government decides to proceed, the declaration will be formalised. Note the decision is not appealable and does not trigger compensation as existing permits and rights would not be adversely affected.

Amending or revoking a declaration

At any time the Government may propose to amend or revoke a declaration. In both cases, the above 3-stage process is used to ensure the community has a say in the proposal before the Government makes a decision. For example, the Government may seek to amend a declaration if it believes the declaration is inadequate to fully preserve the natural values of the wild river. Alternatively, it may seek to exclude part of a wild river area to allow a major development of state significance to proceed within the catchment.

Managing developments in a wild river

To achieve the policy's purpose of preserving a wild river's natural values, the Wild Rivers Act imposes restrictions on certain types of future development activity in the river and its catchment. Most types of activity are not permitted in HPAs. Outside HPAs, most are subject to wild river requirements that are imposed through the *Wild Rivers Code*. Each declaration will outline in more detail the types of activity, any assessment triggers, and the areas of restriction

for its wild river. All developments, authorities and rights existing at the time of declaration will be recognised and are not affected by these restrictions.

The Government recently announced its intention to amend the legislation to remove unintended and unreasonable constraints on essential services and certain types of low-impact development. The changes are mostly about mining, agriculture, urban infrastructure and quarrying. These changes, while yet to be enacted, have been incorporated into the following summary of wild river requirements.

The main types of new development affected by wild river requirements are:

Dams – new instream dams, weirs and barrages can be constructed outside, but not within, HPAs. Such structures can have a major impact on the hydrologic, geomorphic, water quality and wildlife corridor values. Off-stream dams, such as stock dams and gully dams, are generally permitted everywhere but will be subject to flood interference rules if being built in a floodplain management area.

Mining – new mineral exploration can be undertaken everywhere, but limited to low impact methods within HPAs, eg seismic, drilling, etc. New mining development can occur everywhere, but in a HPA it must be totally underground and at a depth set by an environmental impact study (EIS). Also, mining cannot occur in nominated secondary tributaries outside HPAs unless the resource is of state significance. Mining activities have the potential to substantially degrade geomorphic, water quality and wildlife corridor values.

In-stream activities – new de-snagging, stream realignment and dredging activities are generally not permitted in a HPA or in a nominated stream, unless part of an approved essential service, such as roads or navigation. These activities can adversely affect geomorphic, riparian, water quality and wildlife corridor values.

Levees – new levees along streams or across floodplains are generally not permitted in a floodplain management area. These works include diversion banks, ring tanks, drains and road embankments. They can significantly degrade hydrologic, geomorphic and water quality values. Works associated with linear infrastructure, such as roads and rail, will be permitted but must pass base flows through culverts. Also embankments can be constructed to protect urban communities from flooding.

Non-mining environmentally relevant activities – new ERAs of this type are generally not permitted in HPAs as they pose a major risk to water quality values. Of particular concern are feedlots, aquaculture facilities, pig farms, hen batteries, manufacturing plants, chemical storage, meatworks and waste disposal. However, ERAs considered essential for urban communities, eg motor mechanic and fuel storage, are permitted in designated urban areas. In addition, urban water and sewage treatment facilities can be built in a HPA outside a designated urban area, subject to wild river requirements.

Quarrying – new instream quarrying can be undertaken within HPAs and nominated streams, but only to obtain material for linear infrastructure. Extracting sand and gravel from streams can

significantly degrade geomorphic, water quality and wildlife corridor values. Associated activities, such as screening, can occur outside of streams, subject to wild river requirements.

Agriculture – new permanent agricultural areas, such as crop paddocks, orchards and market gardens, can be established outside, but not within, HPAs. Such areas and associated operations can pose a major risk to hydrologic, geomorphic, water quality and riparian values. Areas established for non-invasive fodder crops are not subject to any wild river requirements, whereas all other situations are. Temporary pasture improvement, using low disturbance techniques such as seeders and drills, is permitted in HPAs to allow pastoralists to increase ground cover. Pondered pastures will be permitted provided certain invasive species are not used and the ponds are limited in size if built within a floodplain management area.

Access to or interference with several types of resource is also limited in a wild river area. These include:

Water – if there is no water resource plan in place for the wild river area, the declaration can set limits on total water rights. Limits will not apply to stock and domestic supplies. These limits will apply to water in streams and lakes but may also include overland flow water and sub-artesian aquifer water. Underground water will only be included in the limits if the aquifer provides important base flows to the river system. The declaration may also reserve certain quantities of water allocation for specific uses, eg town water supply. To maintain the hydrologic and water quality values of the river system, the total rights will be limited to a very small proportion of total available water, in the order of 1% of mean annual flow.

Quarry material – establishment of new riverine quarry material sources in the wild river area will be limited to the construction and maintenance of linear infrastructure such as roads, railways, pipelines, etc. Existing sources of material for other purposes, such as concrete batching and general fill, can continue to be used but not expanded for these purposes. New quarry material sources in estuaries will not be permitted. Limiting the extraction of riverine quarry material will help to maintain the geomorphic and wildlife values.

Native vegetation – for the purpose of vegetation management, HPAs will be treated as areas of high conservation value, restricting the purposes for which woody vegetation can be cleared. These purposes include building infrastructure (cottages, sheds, fences, tracks), maintaining safety (firebreaks), managing weeds and pests (access, collateral damage), maintaining natural grasslands (clear encroachment) and maintaining existing agricultural areas (clear regrowth). Clearing for other purposes, such as thinning vegetation and providing fodder, are not permitted. Limiting vegetation clearing in HPAs will help to maintain the water quality, hydrologic, geomorphic, wildlife corridor and riparian values.

Assessing and reporting the performance of wild rivers

The Government will assess the performance of each wild river declaration every five years. The assessment will determine if the restrictions and limitations outlined in the declaration are effective in achieving the policy's purpose. The key indicators will be the condition of the river's natural values as well as social and economic impacts of the 'rules' on affected landholders. Data for the assessment will be sourced from a range of monitoring programs being undertaken by Government agencies and other natural resource management bodies in the wild river

catchment. A public report will be released and may recommend any changes to the declaration required to achieve the policy's purpose.

Implementation

The Government has identified 19 potential wild rivers, mostly located in Cape York Peninsula and around the Gulf of Carpentaria. The Government has committed to assess each of these river systems and, if suitable, nominate them for declaration.

At the time of writing (August 2006), the Government has nominated six wild river areas for declaration. These are the Settlement, Gregory, Morning Inlet and Staaten river systems in the Gulf as well as the river systems of Hinchinbrook and Fraser Islands on the State's east coast. The river systems in the Gulf have mining and agriculture development interests, whereas the islands are mostly conservation areas. The Government has undertaken extensive consultation with potentially affected landholders, miners, communities and industries over nine months to arrive at proposals for each river system that balance conservation and economic interests. The Government has recently announced its intention to declare these six river systems as soon as the proposals can be finalised.

The Government has also indicated its intention to defer wild river nominations in Cape York until those affected communities have been consulted. These predominantly indigenous communities need assistance to understand the benefits and impacts of a declaration. By limiting development activity within HPAs, a declaration should help to protect existing indigenous cultural heritage sites. Also the wild river requirements will not limit traditional and customary activities, such as camping, fishing, hunting, gathering, and ceremonies, as they are not development activities. However, a declaration may constrain economic opportunity for these and other communities in a wild river area. Even so, it should be noted that these river systems tend to be in areas of low historic development and generally have low development pressure.

Conclusion

The major strength of the policy is its simplicity. This is achieved by being focused on naturalness, having only one 'class' of wild river and applying the policy to whole river systems. The lack of complexity will increase its chances of successful implementation and acceptance by catchment communities. Despite its simplicity, it covers a wide range of riverine and terrestrial issues, making it the most comprehensive river protection policy in Australia.

The selection of a river system as a wild river is predominantly a political decision rather than a technical one. This is not to downplay the importance of scientific input to such decisions but rather recognition of the current lack of ecosystem knowledge and the paucity of information available at catchment scale in remote regions needed to provide definitive, credible inputs. Also it recognises the relative importance of social and economic considerations in current natural resource management decision-making processes. Once our knowledge base is adequate, it will be possible to have more prescriptive criteria and clearer development constraints.

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