MARY RIVER CATCHMENT COORDINATING COMMITTEE

INTEGRATED CATCHMENT MANAGEMENT

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*Winners of the 2004 National Rivercare Award*

**30th July 2007**

EIS Project Manager – Northern Pipeline Inter-connector
Major Projects Division
Department of Infrastructure
PO Box 15009
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***By email in the first instance***

## Northern Pipeline Interconnector: Stage 1 – Landers Chute to Morayfield.

## Comments from the Mary River Catchment Coordination Association to the Office of the Coordinator General on the Environmental Impact Statement.

This submission has been prepared by the Mary River Catchment Coordination Association Inc. (MRCCA) in accordance with the procedure for public comment under the State Development and Public Works Organization Act. It refers to technical information in our earlier submission on the draft Terms of Reference for the EIS (10 May 2007), and needs to be read in conjunction with the previous document.

The MRCCA requests that our comments receive careful consideration by the Coordinator General.

**The MRCCA**

The Mary River Catchment Coordination Association (MRCCA) is a not for profit community organisation formed in 1993 as a representative body of community, industry and government interests involved in natural resource management in the Mary River Catchment. The MRCCA is composed of 21 interest sectors from across the Mary River Catchment.

In 1997, the Queensland Government endorsed the Mary Catchment Strategy, prepared by the MRCCA. The Strategy provides strategic direction to improve the sustainability of the Mary River Catchment. As a result of this Strategy, over $10 million of water quality and biodiversity improvement projects have been implemented throughout the catchment, attracting over 4000 volunteers and generating a four-fold in-kind contribution from landholders, local government, industry, landcare, and the wider community.

In recognition of these activities, the MRCCA won the Queensland Rivercare Award in 1999 and in 2003, also winning the Queensland Catchment – Landcare Award and in 2003. In 2000, the MRCCA prepared "Mary River & Tributaries Rehabilitation Plan", which was Australia's first whole of catchment rehabilitation plan. In 2004, the MRCCA won the coveted National Rivercare Award for the implementation of this plan.

The MRCCA expects to maintain an ongoing role throughout the preparation of the EIS. The group seeks to be recognised as a stakeholder throughout the process.

*The MRCCC gratefully acknowledges the support of*
*the Caloundra, Cooloola, Kilkivan, Maroochy, Maryborough, Noosa, Tiaro and Woocoo Shires,*
*the Burnett Mary Regional Group, the National Landcare Programme, the Australian Government Water Fund,*
*the Department of Agriculture, Fisheries and Forestry, the Gambling Community Benefit Fund,*
*the Australian Government Envirofund, Toshiba Pty. Ltd. and Powerlink.*

***DONATIONS TO THE MARY CATCHMENT PUBLIC FUND ARE TAX DEDUCTIBLE***

## 1. Scope & Background of comments

The MRCCA's comments are mainly limited to impacts on the wider catchment of the Mary River, and lack of comment on impacts outside this geographic area reflects the role of our Association rather than agreement with the contents of the EIS with regard to these impacts.

After reviewing the draft Environmental Impact Statement (EIS) the MRCCA has some concerns about the comprehensiveness of the EIS. The MRCCA believes that some key considerations need to be addressed in the EIS to ensure a full assessment of the impact of the proposal.

The MRCCA is concerned that the EIS does not address (or even mention) the impact of taking the full entitlement of water from Baroon Pocket Dam and its devastating impact to the Obi Obi Creek downstream, and the EPBC Act's "*Matters of National Environmental Significance*" i.e. the *endangered Mary River Cod* & *vulnerable Australian Lungfish*.

The "Narrows" or Obi Obi Gorge (downstream of Baroon Pocket Dam spillway) is identified in the Mary River Cod Recovery Plan (endorsed by the Qld Government & the Federal Government) as a critical habitat area for the endangered Mary River Cod. This area has been granted special status under the Fisheries Act whereby fishing, and in particular, fishing for Mary River Cod is not allowed. A self-sustaining population of Cod exists in this critical habitat, of which the community is particularly proud. This is possibly one of only three habitats in Australia where a self-sustaining population of the endangered Mary River Cod currently exists. As a consequence of its high environmental values, the EPA nominated the Narrows section of Obi Obi Gorge as a 'high environmental value" area.

## 2. Main concerns

We have eight main concerns with the EIS as it stands.

### 2.1. Exclusion of consideration of downstream impacts.

The Terms of Reference (ToR) for the Environmental Impact Statement of the NPI specifically state in Section 3.12 (page 37) "*in addition, the cumulative impacts that could occur as a consequence of the Project in conjunction with the development of the other proposals that are currently under study should be considered….*".

The EIS specifically excludes consideration of any environmental impacts on Obi Obi Creek (see Section 3.12 "Cumulative Impacts" section of the EIS [page 3-120]) – the very location in which the greatest environmental impacts resulting from this project will occur. A substantial amount of literature predicts the devastating impact of taking the full allocation from Baroon Pocket Dam.

In particular the Mary Basin Water Resource Plan (Technical Assessment Panel composed of eminent scientists in their respective fields) findings that taking the full entitlement of water from Baroon Pocket Dam would result in *"substantially greater reductions in minor and moderate floods in Obi Obi Creek downstream of Baroon Pocket Dam than in the current situation"* and the *"1.5 year Annual Recurrence Interval would be reduced to 7% compared with the current situation of 61%"* (page 79 of the Mary Basin Draft Water resource plan – Environmental Flow Assessment Framework & Scenario Implications report). These impacts of increased extraction of water from Obi Obi Creek, although allowable under an existing water licence, will occur as a direct consequence of this project.

Further (page 82) - *"The greater reduction in minor flood flows (e.g. 1.5 year ARI) would reduce triggers for movement and opportunities for fish to access lateral habitat areas"*.

A summary of these likely impacts was produced by the State Government's Technical Advisory Panel for the Water Resource Plan for the Mary Basin, and excerpts from this document were reproduced in our submission on the Terms of Reference for the EIS.

The major impact is likely to arise from the reduction in flushing flows that will occur as a result of abstracting the full allocation from Baroon Pocket Dam. This allocation was calculated with the level of

scientific knowledge that was current at the time of the dam's construction with very little concern for downstream environmental flows.

The current level of abstraction (22GL/year) has already significantly degraded the ecological values of Obi Obi Creek. The pipeline will facilitate a rapid increase in abstraction to around 34GL/year. Even though a release of 2GL/year to downstream irrigators will be maintained, the extra extraction will result in a decreased frequency and volume of spills from the dam, which play an important role in maintaining downstream ecosystems. This effect is shown in the graphs in appendix A which are reproduced from the River Process study prepared for the Department of Natural Resources and Mines in 2004.

The MRCCA recommends that the Section 3.12 "Cumulative Impacts" section be reviewed to include the findings of the TAP (as described above), and include the full impact of the NPI – in particular the effect of 'taking the water" from the sub-catchment, the Mary River and the aquatic ecosystems that are totally dependent upon this water flowing down Obi Obi Creek. A full description of these impacts should be clearly stated in the EIS, along with the explanation that they are permitted under a current State Government licence (which is about to be re-written). Without this, the EIS does not 'stand alone' as a document stating the full expected impacts of the proposal, as specifically required under the Terms of Reference.

## 2.2 Compatibility with National, State and Local Policies and Strategies

We believe that the EIS does not address a specific requirement of the ToR, (Part B section 1.3.1), namely a description of "*The Project's compatibility with the National Water Initiative, Government Ecologically Sustainable Development policy, Queensland Natural Resources (Water) Policy and Water Resource Plans, National Strategy on Conservation of Australia's Biological Diversity; with water reform under the National Competition Policy; and any other relevant policy.*"

A summary of the sections of these documents that apply to this project is included section 3 of this submission.

The MRCCA contends that specific local policy and planning strategies developed in conjunction with the State and Federal governments should also be included in the assessment of this project and the associated removal of water from the Mary Catchment that it facilitates. This is suggested in the ToR: "*Environmental protection objectives may be derived from legislative and planning requirements which apply to the proposal including Australian Government strategies, State planning policies, local authority strategic plans, environmental protection policies under the Environmental Protection Act 1994 (EP Act), any catchment management plans prepared by local water authorities or land care groups in support of the South East Queensland Region of Councils 2021 Strategy and any threatened species recovery plans. Special attention should be given to those mitigation strategies designed to protect the values of any sensitive areas and any identified ecosystems of high conservation value within the area of possible proposal impact.*"

Specific provisions in recognized local plans and strategies that apply to the impacts of this proposal are summarized in section 4 of this submission.

## 2.3 Environmental Management Plan (EMP) for managing the spread of weeds and disease.

An EMP for managing the risks of spreading weeds and disease is specified in the EIS and the MRCCA would like to emphasise the importance of this particular EMP. It is crucial that the full and specific risks are identified and that a plan is firmly in place before any likelihood of transport of genetic material along the corridor occurs. Because of the possible sensitivity and likely future scientific importance of Regional Endangered Ecosystems contacted by the pipeline, (such as RE12.3.1), the spread of potential pathogens along the route needs to be tightly controlled. In addition, the risk of spreading soil and water-borne pathogens with potential impacts on future horticultural activities along the route also needs to be carefully managed.

The other concern of the MRCCA is the risk of the spread of aquatic weeds between the storages and streams in contact with the pipeline. The economic and ecological consequences of the spread of weeds such as Salvinia, Water hyacinth, Cabomba and Egeria (which are all present in water bodies in contact with the pipeline) are large, and the risk of such spread occurring needs to be tightly controlled.

### 2.4 Impact to EPBC Act "Matters of National Significance" from the NPI

Section 3.3.1.1 (Part B – pg. 22) of the ToR states "*the EIS should address matters of National Significance, identified under the EPBC Act*". Paragraph 3, pg.22 of Section 3.3.1.1 of the ToR states "*the proximity of the Project elements to any of these areas (habitat of MNES) should be identified and mapped*".

However the EIS does not identify any EPBC Act "Matters of National Environmental Significance" pertaining to Obi Obi Creek in section 3.3.1.1 although it is well documented that the Obi Obi Creek downstream of Baroon Pocket Dam contains several species of MNES.

Stage 1 of the NPI intends to almost double the amount of water currently abstracted from Baroon Pocket Dam (Obi Obi Creek), with major predicted impacts on the flow regime, riparian, in-stream and aquatic habitats by scientific experts commissioned by the State Government. Obi Obi Creek is habitat for a number of MNES scheduled under the EPBC Act. The MNES reliant upon the Obi Obi Creek are the endangered Mary River Cod, the vulnerable Australian Lungfish and a host of threatened stream-frogs, as outlined in the SEQ Streamfrog Recovery Plan. In 1972 the Gastric Brooding Frog, a new frog species to science, was discovered at Picnic Creek, within very close proximity to the Obi Obi Gorge. In 1979 the Gastric Brooding Frog disappeared.

On page 82 of the Mary Basin WRP Environmental Flow Assessment Framework and Scenario Implications report, the Technical Assessment Panel predicted the following effect to the ecosystem of Obi Obi Creek: *"a large decrease in mean and median annual flow may represent a net loss of aquatic habitat for fish and other biota. Similarly frogs and turtles would be similarly affected as fish communities."*

As a consequence of the predicted impact to the fish community of Obi Obi Creek, as described above by the TAP, the most severe risk of the NPI is to the survival of the critically endangered Mary River Cod in Obi Obi Creek.

The MRCCA recommends that EPBC Act MNES affected by abstracting the full allocation from Baroon Pocket Dam be included in section 3.3.1.1.

### 2.5 Recognition of the High Ecological Value status of Obi Obi Gorge

Due to the particularly high ecological values found in the Obi Obi Gorge vicinity the area has been declared National Park. Recently, as part of the WRP process, the EPA declared the Obi Obi Gorge an area of "high ecological values (HEV)" nominating the threatening processes 'water resource development'.

MRCCA recommends that the EIS recognises the HEV status of Obi Obi Gorge in section 3.3.1.1 of the EIS.

### 2.6 Cost – Benefits of the NPI

Section 1.3.2 (Part B) of the ToR on page 10, states "*the economic costs and benefits to businesses and the wider community. Analysis should be conducted at local and regional levels*".

Section 1.3.2 (Part B) of the EIS contains only 5 paragraphs and does not even mention any project costs. The cost and benefit section of the EIS is totally inadequate at present.

MRCCA recommends that SRWP prepare a 'proper' cost-benefit analysis of this project, which contains methodology to assess the ecological costs of the whole project.

### 2.7 Cumulative Impacts of NPI Stage 1 & the proposed Traveston Crossing Dam

A significant omission from Section 3.12 (pg. 3 – 120) of the "Cumulative Impacts" is the interaction of NPI Stage 1 with the proposed Traveston Crossing Dam on flows in the Mary River and into the estuary at Hervey Bay (a Ramsar listed wetland). Page 79 of the 'Mary WRP Environmental Flow Assessment Framework and Scenario Implications report' states that by abstracting the full entitlement of Baroon Pocket Dam *'residual effects would persist in the Mary River below the Obi Obi Creek confluence where there would be greater reduction of freshes and floods than the current situation'*.

It is imperative that the cumulative impacts of the operation of Stage 1 & 2 of the NPI and Traveston Crossing Dam be taken into account in the EIS for each project. For example if flow implications of the operation of Stage 1 of the NPI has severe impacts on Obi Obi Creek and Stage 2 of the NPI has severe impacts on Six Mile Creek this has substantial impact to the endangered Mary River Cod population. If the Traveston Crossing Dam proceeds this would remove most of the remaining existing breeding habitat in the main trunk, as well as impose a major barrier to migration in response to flow alteration and climate change. It is quite conceivable that this would ensure extinction of the species in the wild. Similar concerns apply to other threatened species.

The cumulative impact of NPI Stage 1 & 2, the Traveston Crossing Dam and the Mary River Barrage could very easily result in catastrophic changes to the ecology of the entire Mary River Catchment.

### 2.8 Assessment of climate change on Baroon Pocket Dam yields

Section 3.5.2 (Part B) explains that SEQ has experienced more significant drying trends than other areas of the state. It also explains that the project site receives less rainfall and hotter temperatures than 50 years ago, however there does not appear to be any modelling for yields under further climate changes (i.e. reduced rainfall and higher temperatures).

It is assumed that Baroon Pocket Dam can consistently supply upwards of 34,000 megalitres per year (as per the current iROL) as a premise to justify the construction of the NPI Stage 1. The MRCCA questions whether this assumption is based on historic rainfall/runoff patterns, and not on possible future rainfall/runoff patterns under climate change scenarios.

As a consequence of the predicted effects of climate change on reducing rainfall and run-off, MRCCA recommends that an assessment of the predicted yields from Obi Obi Creek catchment above Baroon Pocket Dam under a variety of climate change scenarios be performed. This modelling would determine if the 34,000 megalitre (full) allocation is achievable (for the purposes of the NPI Stage 1 project and the downstream aquatic ecosystems) over the longer term considering possible reduced yields under climate change scenarios.

## 3. Relevant National and State Policies

The level of extraction of water occurring via this pipeline needs to be assessed against the following sections of these documents specifically mentioned in the terms of reference.

### National Water Initiative

The proposed extraction of water via this pipeline should be assessed against the following objectives listed in section 23 of the NWI:

- iii) *statutory provision for environmental and other public benefit outcomes, and improved environmental management practices;*
- *iv) complete the return of all currently overallocated or overused systems to environmentally-sustainable levels of extraction;*

There is considerable scientific evidence that the level of extraction allowed for in the water allocation from Baroon Pocket Dam is not environmentally sustainable within the definitions contained in the NWI. This evidence is summarised and conclusions clearly stated in the "Environmental Flow

Framework and Scenario Implications Report" written in the preparation of the Mary Basin Water Resource Plan.

Under upcoming new infrastructure arrangements and associated licences relating to the management of Baroon Pocket Dam, and under the Resource Operations Plan for the Mary River currently being written, an opportunity exists for the State Government to comply with the objectives of the NWI and ensure that the new licensing conditions for the operation of Baroon Pocket Dam provide for *improved* environmental management practices in the operation of the storage, rather than merely maintaining (or winding back) existing licence conditions for environmental flows. Merely maintaining existing licence conditions, when combined with the full utilisation of the existing allocation facilitated by the pipeline, will result in major new impacts on the significant environmental values of Obi Obi Creek.

**Mary Basin Water Resource Plan**

There are no specific environmental flow objectives written into the Mary Basin Water Resource Plan for Obi Obi Creek or the section of the Mary immediately downstream of the Obi Obi confluence with the Mary. However, section 13 of the legislation contains specific ecological outcomes for those sections of the catchment which will be impacted by the extraction of water via the NPI:

> *13. Ecological outcomes for particular parts of the plan area*
>
> *(b) for the Mary River, upstream of the Mary River barrage pondage—*
>
> *(i) to minimise changes to the low flow regime of the river; and*
>
> *(ii) to minimise changes to the hydraulic habitat requirements of species such as the Mary River cod, the Mary River turtle and lungfish;*
>
> *(e) for Obi Obi Creek, in the Obi Obi Creek Gorge area —*
>
> *(i) to minimise changes to the hydraulic habitat requirements of existing ecological assets in the area;*

**National Strategy on Conservation of Australia's Biological Diversity**

The full impacts of the project need to be compared to the following objectives of this National Strategy. Their relevance to the full impacts of extraction of water via the NPI is briefly noted.

**Objective 1.4** *Establish and manage a comprehensive, adequate and representative system of protected areas covering Australia's biological diversity.* Obi Obi Creek directly downstream of Baroon Pocket is a protected area (National Parks and Forest Reserve). Severe environmental impact on this portion of the stream is not in accordance with this objective.

**Objective 1.6** *Ensure the maintenance of, and where necessary strengthen, existing arrangements to conserve Australia's native wildlife.* A number of existing arrangements exist to protect wildlife that would have their objectives compromised by the taking the full allocation of water from Obi Obi Creek. These include the Mary River and Tributaries Rehabilitation Plan, the Lower Obi Obi Creek Rehabilitation Management Plan, the Mary River Cod Recovery Plan and the SE Qld Stream Frog Recovery Plan.

**Objective 1.7** *Enable Australia's species and ecological communities threatened with extinction to survive and thrive in their natural habitats and to retain their genetic diversity and potential for evolutionary development, and prevent additional species and ecological communities from becoming threatened.* It is not in accordance with this objective to deliberately weaken the provision of a satisfactory total flow regime for listed endangered species such as the Mary River Cod and the endangered stream frogs in Obi Obi Creek.

**Objective 2.5** *Manage water resources in accordance with biological diversity conservation objectives and to satisfy economic, social and community needs.* The extraction of water via this pipeline is much more likely to rapidly decrease biodiversity downstream of Baroon Pocket Dam rather than conserve it.

**Objective 3.1** *Monitor, regulate and minimise processes and categories of activities that have or are likely to have significant adverse impacts on the conservation of biological diversity and be able to respond appropriately to emergency situations.* There needs to be a comprehensive monitoring and documentation of downstream impacts on biodiversity from this project, and a provision built in to effectively modify operating practices when critical situations arise.

**Objective 3.8** *Ensure that the potential impacts of any projects, programs and policies on biological diversity are assessed and reflected in planning processes, with a view to minimising or avoiding such impacts.* The potential downstream impacts of this proposal on biological diversity are already well documented and highly predictable, and every effort should be made to minimize these impacts when formulating the operating rules for extracting this water via the NPI.

**4. Relevant Management Plans**

There are a number of specific stream and species management plans that are directly applicable to this proposal. Actions and outcomes outlined in these plans that are relevant to the impacts of the NPI project Stage 1 are listed below.

**4.1 Mary River Catchment Management Strategy:**

*Action 2.1 - Finalise and implement Cod Recovery Plan and Tortoise Recovery Plan*

*Action 2.4 - The licenses for Lake MacDonald, Baroon Pocket and Borumba Dams be amended to allow for environmental flow releases (particularly Lake MacDonald for Cod habitat).*

**4.2 Mary River and Tributaries Rehabilitation Plan:**

**Strategy FB**

Return critical elements of natural flow regime, by modifying flow releases, or modifying channel to produce desired flows. Action 1. Implement the Water Resources Plan and assess all applications for new allocation against it *or appropriate analysis.*

**Strategy FG**

Cod Habitat; Encourage the retention of habitat potentially suitable for Mary River Cod. Action 1. Implement Cod Recovery Plan.

**Strategy G2**

Water Planning. Minimise inter-basin transfers of water by taking long-term approach of facilitating good Local Government Planning that acknowledges the goals of this plan. Action1. Participate actively in Water Resource Planning process.

**Reach–specific actions outlined in the Rehabilitation Plan**

**PRIORITY 1 – UNPROTECTED REACHES OF REGIONAL CONSERVATION SIGNIFICANCE. –**

Obi Obi Reach 3 SF protected area. – reclaim

**Problems**

4. Large hydrologic impact below dams, may threaten remnant cod populations.

5. Low DO possibly linked to abstraction during late summer.

6. Minor nutrient enrichment

**Goals/objectives**

5. Development of Environmental Flow Strategies on all dams and major weirs commenced by 2001 and implemented by 2004.

6. Water quality in terms of physico-chemical parameters and biological indicators to meet relevant standards for unimpacted streams by the year 2011 ( eg. SIGNAL score =>6), with gradual improvements recorded every two years. Turbidity increases in first flush after storms to increase less than 10%.

**PRIORITY 4– IMPROVING LINKING/CLOSE REACHES AND ISOLATED ISLANDS WITH HIGH RECOVERY POTENTIAL** Linking reaches include those linking good tributary cod habitat to the river for migration)

**Goals/objectives**

7. Water quality in terms of physico-chemical parameters and biological indicators to meet relevant standards for streams with minor impacts by the year 2011 ( eg. SIGNAL score =>5), with gradual improvements recorded every two years.

**Lower Obi Obi Creek Rehabilitation Management Plan:**

**Strategy F1** Environmental flow release from Baroon Pocket Dam.

Given that Obi Obi Creek is an important system for Mary River Cod, the management of flow should be a high priority. The Dam has reduced the quantity of flow in the Creek and altered the timing of flows. The temperature of water released from th Dam may also be a significant management issue.

**Mary River Cod Research and Recovery Plan**

**Action 2.5.** Develop guidelines for flow releases below impoundments to ensure maintenance of aquatic habitats for Mary River cod, and seek their implementation.

[The timing of this action should be integrated with Water Resources timetable for the construction of proposed new impoundments on the Mary River.] Specific guidelines for environmental flows to maintain habitats for Mary River cod have not been developed. However, DPI Fisheries provides input into the development of flow release regimes based on available information. The known requirements of the Mary River cod and other aquatic species are given high priority in these considerations.

**Recovery plan for stream frogs of south-east Queensland**

Recovery Action 4. Protect populations and manage habitat

The vast majority of known populations of the giant barred-frog in south-east Queensland occur along narrow remnant riparian vegetation on private lands. Long term conservation of the giant barred-frog in Queensland is dependent upon the maintenance of water quality and flow regimes, and on the protection and enhancement of riparian vegetation on these lands. Threats to water quality and altered flow regimes arise from adjacent and upstream land uses (e.g. housing development, stock grazing, clearing, agriculture, forestry practices). Extraction of water is also a potential threat. Remnant vegetation is threatened by clearing, disturbance from stock and weed invasion.

**5. Future actions**

There is very little doubt that taking the full currently licensed allocation of water from Baroon Pocket Dam via the NPI will cause significant damage to the existing ecological values of Obi Obi Creek, particularly in the Gorge area downstream of the dam. It will also have significant impacts on the lower Obi Obi Creek and the main trunk of the Mary for some distance downstream.

It is the responsibility of the State Government, in accordance with the Federal and State Government policies and management plans referred to in this submission to make every effort to minimize the extent of this damage by putting in place the most highly effective and stringent operating procedures for the extraction of water via this pipeline. There is a prime opportunity for this to take place during the formulation of the Resource Operations Plan for the Mary Basin and the consequent re-writing of the operating licences for all existing water infrastructure in the Mary Basin.

It is also important to evaluate this project in its full context as a part of a suite of major proposals which will greatly alter the level and pattern of water abstraction from the Mary River Catchment should they proceed. These proposals include the NPI stage 1 and stage 2, the further raising of Borumba Dam, the proposal for a dam at Traveston Crossing (stage 1 and stage 2), and pipelines connecting these storages to allow the removal of this water to other storages outside the catchment via the NPI. It is imperative that the cumulative impacts of all these projects be fully considered in the future assessment for each of these intrinsically connected proposals.