



Northern Australia Land and Water Taskforce  
Office of Northern Australia  
GPO Box 594  
CANBERRA ACT 2601

16 September 2009

Dear Sir/Madam

The Environment Centre NT is the peak non-government environment organisation in the Northern Territory. We welcome the opportunity to participate in the discussion concerning the potential for new developments in northern Australia as part of our role in improving environmental protection and management in the north.

Below we provide comment on the issues that the Taskforce is seeking feedback on. Whilst we seek to address the topics outlined by the Taskforce, we are not willing to acquiescent to the inherent assumptions on which the Taskforce and the issues are framed without critical comment.

### **The Assumptions underlying the Taskforce**

There are a four key points to be made with regard to the inherent flaws underlying the Taskforce's scope and mandate.

#### ***Northern Australia is an ecological and social community, not an economic resource***

Northern Australia is characterised by a unique ecological-social-cultural context. This context is vastly different from southern Australia and it needs to be respected and kept at the forefront of our thinking, when generating ideas for future landscape and natural resource use.

#### ***What is the objective of "development in the North"?***

The entire premise of the Taskforce is to expand the existing paradigm of using natural resources to achieve economic growth from the south to the north, because the natural resource base in the south has largely been degraded beyond repair. We neither accept that such development should be expanded instead of rehabilitating and living within the limits of southern natural resources, nor that the north should be subject to the same failed paradigm.

No one questions that we need agriculture and mining. The question is: how can the goal of these industries be to continually grow through increased natural resource throughputs in a world of finite natural resources?

Southern resources were degraded because of a fundamental failure to recognise that natural capital is finite in the south and to ensure that development did not pass these inherent limits. Development occurred under a belief in economic growth – which is based upon an assumption that natural resources are capital which can be spent indefinitely to produce limitless wealth, rather than a finite asset base which can only produce a certain steady rate of wealth without being undermined.



This led to production of wealth over the last 100 years by rapidly depleting our finite assets rather than protecting them to produce steady wealth, (i.e. the Murray Darling), thus removing the basis for future generations and the environment to survive. In other words, there was no ability to achieve economic sustainability, because there was no acknowledgement that *economic* sustainability was fundamentally based upon *ecological* sustainability.

The same flawed growth paradigm currently operates throughout much of the world and it is becoming increasingly problematic. The world is running out of new areas of natural resources to consume as a growing number of regions become seriously degraded. This is not rhetoric; there is clear research-based evidence that we are pushing almost every limit of the Earth's natural resources. In this context, northern Australia is one of the last remaining areas in the world containing largely intact natural assets.

There is an inescapable conclusion emerging – that unending economic growth is inherently incapable of achieving sustainability. We highlight a recent report from Tim Jackson, the Economics Commissioner of the UK's Sustainable Development Commission<sup>1</sup>:

“Every society clings to a myth by which it lives. Ours is the myth of economic growth. For the last five decades the pursuit of growth has been the single most important policy goal across the world...

It's totally at odds with our scientific knowledge of the finite resource base and the fragile ecology on which we depend for survival. And it has already been accompanied by the degradation of an estimated 60% of the world's ecosystems.

For the most part, we avoid the stark reality of these numbers...

Questioning growth is deemed to be the act of lunatics, idealists and revolutionaries...

But question it we must. The myth of growth has failed us. It has failed the two billion people who still live on less than \$2 a day. It has failed the fragile ecological systems on which we depend for survival. It has failed, spectacularly, in its own terms, to provide economic stability and secure people's livelihoods.”

This quote holds much resonance for northern Australia. The growth formulae has initiated inappropriate, and ultimately, failed developments in places like the Tiwi Islands, rather than deliver steady and sustainable livelihood options. It has failed fragile ecosystems in places like the McArthur River region. In the Northern Territory, for example, there are no frameworks that prevent economic growth from undermining environmental integrity; even the most “progressive” framework (the *Water Act*) does not mandate water use to be constrained within ecological limits.

The Environment Centre NT believes that if we are truthfully seeking a sustainable future for northern Australia, new opportunities need to be based on an alternative to the standard unending ‘growth’ paradigm. Therefore, there is no need for this Taskforce to be looking at how to assist

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<sup>1</sup> Jackson T. (2009) *Prosperity without Growth? The transition to a sustainable economy*. Sustainable Development Commission, UK. URL: <http://www.sd-commission.org.uk/publications.php?id=914> p. 5



development in the north. Development is already proceeding at a rapid, unconstrained pace. Instead, the prevailing need is to look at how to tie this development to limits of our environment so that we live according to a new paradigm based on steady production of wealth.

### ***Water values cannot be addressed in a vacuum***

An exploration of new opportunities for northern Australia should not be predicated upon a narrow consideration of sustainable water use, leaving aside other critical factors including soil and land capability, climate, pests and disease, biodiversity conservation, transportation and infrastructural requirements, distance to markets, commodity price fluctuations, and the socio-cultural preferences and capabilities of northern Australian residents. Of course, sustainable water use must be achieved, but the discussion of new opportunities must be cast broadly from the outset. For too long we have based development plans on single issues or controlling the variability of a target resource over relatively narrow temporal and spatial scales. This narrow-minded planning and development approach often achieves 'sustainable' objectives by simply externalising unsustainable outcomes onto other environmental and social values.

We need to utilise the latest landscape, conservation and production science and sustainability indicator methodologies, which have progressed far beyond single-factor, single-resource management approaches and proposed many ideas for ecosystem-based management. This management approach is outlined below, but it is essentially about acknowledging all relevant ecological, social and economic values and considering the whole ecosystem, rather than focusing on a single issue or maximising use of a single resource, in isolation from everything else.

### ***The Taskforce should target new sustainable opportunities***

Northern Australia is endowed with tremendous natural resources, or 'natural capital', including internationally-significant tropical savanna, river, and marine ecosystems. These ecosystems provide key economic and social services. The region is also an important home for the world's oldest living culture, with Indigenous people continuing to live on and access Country and to maintain cultural ties to ancestral estates. For all residents of northern Australia, cultural values, including lifestyle values, are closely tied with natural capital. Thus, we need to pursue sustainable industries that protect ecosystem and cultural values as an asset from which to generate prosperity.

There is little need for government assistance to help existing large, traditional developments in the agribusiness and mining sectors, which are already occurring throughout northern Australia. We do not accept that a Government taskforce is needed to help BHP Billiton, Xstrata, Inpex and other large corporations. The Taskforce should use its resources to investigate opportunities arising out of ecosystem services and cultural values only.

Concomitantly, if ecosystem services are to provide the basis for 'development' it must be recognised that we are presently witnessing increasing degradation of northern Australia's asset base from which we can generate prosperity. This is evident in:

- alarming declines in native plant and animal species (particularly small mammals) in relatively intact savanna landscapes;
- an increasing prevalence of invasive organisms;



- soil erosion in areas cleared and developed for forestry; and
- over-extraction of groundwater resources.

Accordingly, ecosystem protection and rehabilitation strategies must be developed alongside new sustainable opportunities.

In sum, northern Australia is a unique, highly-complex social-ecological system and the challenges this region has faced, and will continue to face, are considerable. We are not saying that there are no further opportunities for expanding land and water resource use in the north. What we are saying is: proceed with utmost caution. In light of the above points we provide comment below on the three issues the Taskforce is seeking feedback on.

## **1. New opportunities for development in the north, based on sustainable water use (including non-consumptive uses)**

Based upon our discussion above, we attempt to answer the real crux of the question posed: how can sustainable development be achieved in the north?

### Principles for a Sustainable Economy

1. Integrate all development within strategic and systematic resource and land use planning at a bioregional scale, recognising that:
  - a. the maintenance of healthy ecosystems will provide the foundation for a sustainable environmental, economic and socio-cultural future;
  - b. to maintain healthy ecosystems, there needs to be strict limits placed on use and consumption of all natural resources (land, water, vegetation, minerals, fossil fuels, soil, biodiversity etc.) and of impacts on the environment (i.e. pollution, wastes and land clearing);
  - c. ad hoc, project-by-project development approaches are incapable of addressing the culmination of natural resource use and degradation above key limits and thresholds (i.e. cumulative impacts).
2. Follow an ecosystem-based management approach to formulate limits to development that maintain healthy ecosystems. This management approach is about<sup>2,3</sup>:
  - a. acknowledging ecological, social and economic values and considering the whole ecosystem, rather than focusing on a single issue or maximising use of a single resource, in isolation from everything else;
  - b. avoiding degradation of an ecosystem, and in particular, minimising the risk of irreversible change to natural assemblages of species and ecosystem processes;
  - c. considering ecological boundaries, not just political boundaries;
  - d. using relevant environmental quality indicators to monitor the health and status of an ecosystem;
  - e. generating knowledge of ecosystem processes so that we can understand the likely consequences of different human actions;
  - f. Engaging multiple stakeholders in a collaborative process to define problems and find solutions.

<sup>2</sup> [http://www.esm.ucsb.edu/academics/courses/200/Readings/7\\_Pikitch\\_et\\_al\\_2004%20.pdf](http://www.esm.ucsb.edu/academics/courses/200/Readings/7_Pikitch_et_al_2004%20.pdf)

<sup>3</sup> <http://www.ebmttools.org/>



3. Follow the precautionary principle in development planning and assessment, acknowledging, for example, that:
  - a. a degree of water 'redundancy' may be required so that ecological communities can cope in the face of system perturbations (e.g. climate change, pollutant discharge);
  - b. ecological communities might have water needs/requirements that we are yet to understand;
  - c. one development activity alone (e.g. establishment of a new mining venture) may not devastate northern Australia, but if it instigates, or occurs in concert with, a series of threatening processes (e.g. invasive organisms, land clearing, chemical spills/toxic leakages, and exchange rate and commodity market fluctuations), then a range of ecological, socio-cultural and economic values could be seriously degraded.
4. Base development assessments on full-cost accounting, factoring in:
  - a. the full range of relevant biodiversity, biocarbon/greenhouse gas emissions, water demand, soil erosion, weediness potential, cultural and socio-economic considerations;
  - b. the use of multi-criteria analysis approaches.
5. Consider climate change scenarios for all development planning and decision-making processes and consider climate change effects in relation to other threatening processes (examples listed above).

### Specific Opportunities for Building a Sustainable Economy

1. Direct long-term funding towards natural resource management jobs (e.g. Indigenous rangers) and land management activities that actively contribute to biodiversity conservation and natural resource stewardship and operate according to an adaptive management paradigm.
2. Establish an 'environmental protection' fund that receives contributions from companies seeking to offset the environmental impacts of high-value economic development. Money from the fund could be directed at protecting and/or rehabilitating high priority, heavily impacted areas (based on scientific evidence). It could also provide financial incentives to encourage land managers to adopt best practice resource management, particularly with respect to water use efficiency, soils and vegetation cover, fire, weeds and pest animals.
3. Establish agricultural systems based on a hierarchy of priorities, with preference given to crops that have low water-use requirements, are high-value (e.g. horticulture) and meet staple food needs, particularly for local and regional communities.
4. Support research positions that build valuable intellectual capital for northern Australia, and more broadly, for the global tropical savannas region – addressing ecological, economic, social and health issues.
5. Implement a carbon trading scheme that rewards the protection of native vegetation (quantity and quality) and the establishment of sound fire management regimes. Stewardship payments could be made available to landholders through a process of purchasing their carbon stocks in lieu of land clearing and land development. NCAS



modelling could be used to determine the amounts that need to be paid to landholders in different parts of northern Australia, depending on their environmental context and resource base.

6. Investigate renewable energy options that are particularly suited to northern Australia's climatic and environmental context and are economically and technologically feasible.
7. Promote novel cultural and ecotourism ventures.

## 2. The potential impacts of new developments

While northern Australia's rivers and landscapes might presently be in relatively good condition, particularly in comparison to southern Australia, we cannot assume that this will always be the case. Our precious natural assets face threats from the global demand for energy and minerals, which is driving exploration and development in sensitive river catchments. There is also an increasing focus on developing northern Australian catchments for broadscale agriculture as ongoing drought and changing climate patterns cripple primary production in the south.

The Environment Centre NT believes that without a strategic, overarching plan for natural resource management across northern Australia, individual developments may be given the tick of approval without a true appreciation of the cumulative impacts that could arise under a project-by-project development scenario. For example, as regrowth paddocks are re-cleared and new blocks are progressively cleared and opened up for agricultural and mining developments, targeted regions could suffer progressive habitat fragmentation. We are concerned that this fragmentation, interacting with other threatening processes such as climate change, inappropriate fire regimes, feral animals and weeds, could lead to significant, dramatic biodiversity losses. The current wave of small mammal extinctions across northern Australia may represent the tip of the iceberg.

Moreover, without clear objectives for natural resource management, supported by strong policies and legislation that place science-based caps on water extraction and land clearing, we have no guarantee that northern Australia's internationally-significant savanna landscapes will be protected from inappropriate developments and associated land degradation, soil and water pollution and biodiversity loss. In addition, landholders who may wish to pursue small-scale, high-value developments, have no clarity with regard to the types of activities that are permissible and ecologically- and socio-economically-sound. We reiterate the need for strategic and systematic resource and land use planning, ecosystem-based management and adoption of the precautionary principle. The priority must be to maintain both ecological and hydrological connectivity.

We also highlight that both catchment and river health in northern Australia will undoubtedly be influenced by future climate change, for example, through changes in regional patterns of rainfall and run-off, solar radiation and maximum/minimum temperatures. Any land clearing undertaken for new developments will directly contribute to climate change through its contribution to greenhouse gas emissions. It is also important to recognise that land clearing can impact on regional micro-climate, through the effect that vegetation removal has on evapotranspiration rates. Retaining vegetation in northern Australia will be critical for mitigating greenhouse gas emissions and promoting climate stability, and in turn, protecting catchment and river health. Another important consideration is that the fragmentation of native vegetation through land clearing will act to reduce landscape connectivity, which may, in turn, reduce the resilience of flora and fauna communities to climate change.



### 3. New governance and institutional arrangements for the effective management of water resources

There are three key points that we wish to emphasise in relation to this issue. Firstly, ecologically sustainable development in northern Australia will require that water resources are managed in an integrated fashion with other landscape resources, rather than independently, as we have discussed above. We can look to complex systems science and resilience analysis to source ideas for moving beyond single-factor, single-resource focused governance and institutional arrangements.

Secondly, we recommend the development of a multi-scale/nested governance and institutional model for northern Australia. Such a model should not be based primarily around the socio-political scales at which humans operate; it should also factor in the scales at which landscape processes and biota operate and avoid a series of parallel, uncoordinated institutions at any one scale. Essentially, strategic natural resource management and planning for the north should be undertaken across State and Territory boundaries by an overarching body with broad peak stakeholder representation, with detailed land use planning done by local stakeholder groups on an individual catchment basis. A multi-scale/nested model should promote best practice natural resource management on both private and public lands and commit resources to a comprehensive, integrated northern Australia monitoring system that reports on key ecological-, cultural- and economic-health indicators.

Thirdly, Indigenous communities need to be actively involved in the development of a sustainable economy in northern Australia. This can be achieved through:

- extensive consultation with Traditional Owners in the development of resource and landscape management plans, recognising that Indigenous people have sustainably managed northern Australian ecosystems for thousands of years;
- ensuring the protection of land rights and Native Title rights;
- supporting Indigenous aspirations for sustainable enterprise development; and
- establishing and funding Indigenous Ranger jobs.

We conclude by highlighting that an array of unique natural assets comprise the essence and lifeblood of the northern Australia region, giving rise to globally-significant ecological and cultural values. Importantly, northern Australia's natural assets are fundamental to Indigenous communities for their law and culture, provision of food and water, and opportunities for sustainable economic activity on the Indigenous estate. Thus, the land and water in northern Australia must not be viewed through the lens of big business, heavily-extractive developments and short-term economic gains that primarily satisfy big companies and their shareholders. We need to look at northern Australia through an inter-generational, inter-species lens, acknowledging that unending economic growth is but a myth and that we need to live and work within ecological limits if this unique region is to have any hope of a sustainable, resilient future.

Yours sincerely

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