# Australian Conservation Foundation Submission to Productivity Commission Issues Paper and Inquiry on Mineral and Energy Resource Exploration

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## Overview

This submission will focus on the following aspect of the Inquiry's Terms of Reference:

*The Commission is requested to outline high priority reform options to address non-financial barriers to exploration for mineral and energy resources in Australia. In order to achieve this, the Commission should:*

- *determine if there is evidence of unnecessary regulatory burden and if there is, make recommendations on how to reduce or eliminate these burdens;*

We wish to note at the outset that the Commission is being requested to advice on a matter which is highly subjective. Deciding what level of regulatory burden is necessary depends on value judgements on the worth of a wide range of matters. It is unrealistic to expect that the Commission to could come to an 'objective' view as to the respective value of the very different matters which are relevant to consideration. For example, it is difficult to weight the respective values of decreasing the risk of extinction of a species, or the worth of an old growth forest, as compared with the projected profits of a new development. Considering the 'cost-benefit' analysis is important, but inherently limited in its ability to find an objectively 'correct' answer to the questions posed to this Inquiry.

Within the limitations of the existing terms of reference, this submission will consider the international and national economic context of energy resource exploration, the need for effective environmental regulation, and specific issues relating to exploration for uranium, coal and gas resources. We will address specifically selected points and recommendations from the Draft Report.

## Introduction

As evidenced in the most recent State of the Environment Report [2011], the health of Australia's environment is regressing on virtually every indicator measured. The effects of climate change will intensify many of the stressors contributing to environmental decline. Leadership from the national government, and action at every level, is required to address these issues and return our environment to health. Our environmental laws need to be stronger, and better enforced. Any efforts to 'streamline' regulatory regimes for the benefit of business must also strengthen environmental protections, not reduce them. Ecologically sustainable development principles must be the basis of all regulatory reforms impacting on the natural environment, and in any case where the cost of regulatory burden on business is considered, the benefits provided by the regulation to the community and the environment should also be explicitly taken into account.

Focusing as this inquiry does on non-financial barriers to mineral and petroleum exploration ignores the most important economic and financial drivers of exploration. None of the evidence presented suggests a particularly worrying trend in greenfield exploration. Rather, contributing factors appear to be a combination of short-term cyclical issues and longer-term structural issues. Attributing any perceived decline in competiveness of mineral exploration to non-financial barriers would be an overreaction.

## Recommendations

### *ACF position on Draft PC Recommendations*

***Draft Recommendation 6.2***

The Australian Conservation Foundation does not support this recommendation. Commonwealth approval powers under the EPBC Act should never be devolved to the states under any circumstances. Assessment processes being devolved to the states may be acceptable under some circumstances, however, there are many factors which indicate that rushing to devolve significant proportions of environmental assessments under the EPBC Act under present circumstances would certainly lead to a lowering of environmental standards, and therefore, this agenda should not proceed until preconditions ensuring the maintenance of environmental standards have been met (detail below). ACF questions the assumptions of the Multiple Land Use Framework, especially as regard the ability of other users to concurrently or sequentially use land in conjunction with or after minerals extraction has occurred. In reality, a decision to allow mineral extraction is often a decision to 'write off' an area of land for other uses, often in effect permanently, and this should be acknowledged.

***Draft Recommendation 4.1***

The Australian Conservation Foundation does not support this recommendation. With regard to the declaration of new national parks, ACF believes that in practice this recommendation will make it more difficult to declare new national parks and conservation

reserves, due to the lack on investment in assessing and articulating environmental values, and an inherent bias in decision-making towards values which are easily monetised. (See ACF recommendation 5 below.)

With regard to consideration of access to declared national parks or conservation reserves for explorers, ACF maintains that access should never be permitted, for the good reason that extraction activity is not permitted in these areas which are permanently protected for conservation, and therefore there is no reason to explore.

***Draft Recommendation 3.5***

ACF does not in principle oppose targets for approval processes. However we note that in our experience it is frequently the case that delays are caused by poor preparation by proponents, for example, omitting required information, and not necessarily the fault of assessing agencies. We would support provision of better guidance for proponents to help them understand what information assessors require. We would be concerned if agencies were compelled to produce a body of evidence which appears to indicate that assessment requirements are excessively burdensome without clearly distinguishing faults of the assessment procedure from faults of proponent submissions.

**ACF Recommendations**

The Australian Conservation Foundation makes the following recommendations:

1) Some areas should be indefinitely excluded from exploration activities, particularly those that:
    a. have high conversation and biodiversity value, such as but not limited to, World and National Heritage Areas, National and State Parks, drinking water catchments, biodiversity corridors, and areas with threatened biodiversity;
    b. include productive agricultural land ;
    c. are culturally significant to Australian Torres Strait Islander and Aboriginal people, such as but not limited to lands that have pending Native Title claims; or
    d. are already assigned or near to urban and rural residential areas.
2) The precautionary principle ought to apply to exploration permits where there is a possibility of environmental damage.
3) Under no circumstances should the Commonwealth devolve decisions under the EPBC Act to the states.
4) Impacts on water systems such as aquifers, catchment basins, estuaries, water tributaries should be taken into account when any activities which may have such impacts are considered or evaluated.
5) Resources equivalent to the funding of Geosciences Australia should be made available to provide credible and comprehensive baseline information on high conservation areas in particular threatened species. This will remove the burden from companies to provide this information during the exploration stage.

6) In any case where the cost of regulatory burden on business is considered, the benefits provided by the regulation to the community and the environment should also be explicitly taken into account.
7) Regulations governing development approvals and assessments should require science and evidence based decisions.
8) Public information, consultation and third party rights should be maintained in all cases.
9) There should be comprehensive or bioregional strategic assessment of all exploration proposals in addition to case by case assessment.
10) Uranium mining and milling remain a designated nuclear action under the provisions of the Environmental Protection and Biological Diversity (EPBC) Act.
11) A dedicated independent Inquiry should be held into the domestic and international cost-benefit and compliance of Australia's uranium sector.

# 1. The Economic Context

Our analysis of the economic context of this issue is largely the same as that outlined in the Productivity Commission's Draft Report on Mineral and Energy Resource Exploration. Based on this analysis, we believe that it would be remiss to overly attribute declining competitiveness to the perception that Australia's regulatory regime is too complicated. More significant economic factors are at play and these ultimately determine competitiveness and profitability. We do however support increased transparency and reporting that will benefit all stakeholders.

### What drives competitiveness?

Australia's global competitiveness for exploration expenditure is determined by a number of factors. By far the most significant factors are financial and economic factors, including the degree of economic openness of a country. Ignoring global financial and economic determinants of exploration expenditure may result in weighting attribution of perceived issues unfairly on non-financial barriers. In simple terms, we will focus on precisely the variables that don't matter in terms of economics, but do matter at a local and national level in terms of due process.

For example, SCER (2010) highlights that:

> *We have traditionally regarded Canada as our principal competitor. Unfortunately for Australia, Canada has serious financing advantages. The Toronto Stock Exchange is the global centre of exploration capital raising and the United States is a major source of risk capital for Canadian juniors. Furthermore, both the Federal and Provincial governments provide tax incentives for explorers. For the cash-strapped junior exploration sector the advantages of this alone cannot be overstated.(p.2)*

A similar theme is acknowledged by the NSW Mineral Council's submission to the inquiry:

> *It should be noted that financial barriers, including company funding, commodity prices, administrative costs and taxes will always be greater for mineral explorers than non-financial barriers (p.5).*

### The importance of commodity-level analysis

To properly understand issues within the exploration sector, commodity-level analysis is necessary since that determines our competitive landscape vis-à-vis global supplies for minerals and energy resources. It is myopic to talk about 'minerals and energy' without looking at individual commodities.

**What factors determine the location (greenfields versus brownfields) and level of exploration activity?**

A range of factors determine the location and level of exploration activity. Broadly, these could be grouped into geological, economic, political and social.

In this submission we have not assessed these issues in detail, but we note that to undertake adequate analysis, all of these factors need to be understood to put Australia's role in the global resources industry into context.

SCER (2010) sees the reliance on brownfield expansion as a weakness in the long run, claiming that:

> *Clearly Australia needs to do better in attracting exploration investment, particularly for base and precious metals, to ensure that we have the inventory of producing mines for the longer term.*
> (p.7)

From an economic perspective, at least one potential (and rational) reason why Australia may have seen relatively greater increases in brownfield exploration compared to greenfield exploration reflects the mature nature of the industry. When prices begin to rise due to increased demand, the simplest way to capture profits is to expand capacity within or close to existing deposits and infrastructure.

It is entirely logical that Australia, with an established mining industry, should see greater increases in brownfield expansion during a commodity boom. That's just good business and based on the old truism of going after the 'low hanging fruit'.

This is acknowledged in the 2010 Policy Transition Group Report to the Australian Government on Minerals and Petroleum Exploration:

> *There would also appear to be some shift from greenfield exploration to brownfield as high commodity prices provide a strong incentive for miners to quickly expand production from current deposits. These are considered to be rational industry responses driven by market conditions.*
> *(p.9)*

Other sections of the report appears to support the idea that we should not be overly concerned about declining greenfield exploration.

Talking about minerals exploration, measured in terms of metres drilled for 2004 to 2009, brownfield exploration appears to have increased while greenfield exploration has decreased (p.12). However, measured through real exploration expenditure, 'the share accounted for by greenfield exploration has been steady at 40 per cent over the same period'. The report continues on the following page:

> *The fixed share of expenditure suggests that junior exploration companies have managed to maintain their share of capital raised, given most greenfield exploration is undertaken by junior companies while large companies perform most brownfield exploration. (p.13)*

By contrast, petroleum exploration is heavily weighted towards greenfield exploration. On the basis of this evidence, it is difficult to understand why there is such concern for a perceived underperforming exploration sector. By all accounts it appears to be following rational behaviour in response to market signals.

The Draft Report produced by the Productivity Commission refers to downward trends in the number of giant and major discoveries and rising costs in Australia. Schodde (2010)[1] claims that this is due to the existing 'search space' becoming depleted; an overemphasis on small discoveries by juniors who now account for a greater share of greenfield exploration, a decline in the resource base and the need to dig deeper (more costly) to find new deposits.

**What is the current level of expenditure in exploration?**

The Metals Economics Group (MEG) estimated that global exploration budgets for nonferrous minerals were $21.5 billion in 2012[2]. According to MEG, in this year Australia accounted for 13% of global nonferrous exploration expenditure. This figure is used to demonstrate a perceived weakness in Australia's exploration performance

[1] Schodde RC, "The Declining Discovery Rate – What is the Real Story?", Presentation to the AMIRA International's Exploration Managers Conference, Yarra Valley, Victoria, March 2010.
[2] MEG (2013) Worldwide Exploration Trends 2013: A special report from SNL Metals Economics Group for the PDAC International Convention.

However, the 2011-12 year was a year of record exploration expenditure for Australia. Geoscience Australia figures for 2011-12 reported total mineral exploration expenditure in Australia of $3.95 billion[3]. This includes coal and iron ore (ferrous minerals) and is an historic high. In the same year, the ABS (cat. 8412) reported onshore petroleum exploration expenditure of $0.9 billion and offshore exploration expenditure of $2.3 billion. Thus, total exploration expenditure in Australia in 2011-12 was in the order of $7.15 billion. Mineral prices have come down since then so exploration activity in that area has likely decreased since then.

### Why is Australia losing market share?

Australia has seen a significant increase in exploration expenditure since 1988 most of which has come from an increase in iron ore, coal and base metals. Gold, uranium and 'other' have also seen significant increases though their scale is less significant. In the case of gold this is because of already high exploration levels and in the case of uranium and 'other', it is due to a low starting base.

The PC Issues Paper, citing other sources, discusses the problem of exploration in terms of our declining percentage contribution in terms of global exploration expenditure. This This is a specious concern for a number of reasons.

### Understanding the competition

To really understand our competitive position for exploration in the global economy, we need to understand the dynamics of individual commodities. The Productivity Commission paper does not appear to do this as it is focused only on non-financial barriers.

Taking the four biggest commodities of recent years, gold, copper, iron ore and coal, we need to look to the economies we are competing against to truly understand our comparative advantage.

| **Commodity** | **Competing suppliers / exploration destinations** |
|---|---|
| Gold | Columbia, Ecuador, Central Africa, West Africa, China, Northern Ontario and Alaska/Yukon. |
| Copper | Latin America, PNG, Central Africa and China |

[3] Geoscience Australia (2013) Australian Mineral Exploration Review 2012.

| | |
|---|---|
| Iron ore | South Africa, India and Brazil |
| Coal | Indonesia, Mongolia, Vietnam and South Africa |

Source: Iron Ore and Coal from Geoscience Australia (2012) Uncovering Australia's mineral resource potential: Hidden treasures. Presented at China Mining 2012 by Andy Barnicoat; Copper and Gold from Schodde (2011) Recent trends in gold exploration: are we finding enough?, Schodde (2012) Recent trends in copper exploration: are we finding enough?

As the table above shows, many of the countries Australia is competing against have undertaken significant reforms in recent years from an economic base that was much less amenable to trade and investment. That is, they have 'opened' up to foreign investment and so, minerals exploration. Given their size and low entry barriers, it is reasonable to expect that they will receive a greater share of the total pool of global investment.

SCER continues*:*

> *In reality, every jurisdiction that permits/encourages mineral exploration is our competitor. A very effective competitor may be a country with raw and unrealised mineral potential that does nothing but open up to foreign investment in exploration. Since the barriers to entry and the barriers to exit are very low for exploration investment, such jurisdictions are very tempting if a company feels it may have a first-mover advantage.*

**Should we be concerned that Australia is losing market share?**

Australia is still receiving a big chunk of global exploration spending. Economic and financial drivers are the primary determinants of this. Many of our competitors for mineral exploration are in regions that have only recently 'opened up'. The potential for lower depth surface discoveries is potentially higher in such countries. Australia has a mature mining industry and has recently seen a rapid expansion in offshore petroleum exploration.

**Should we be concerned about inadequate exploration?**

In addition to concerns about declining global market share, that are most likely misplaced, the SCER (2012) suggests that Australia needs to attract higher levels of investment in exploration in order to maintain future supplies of minerals:

> *Clearly Australia needs to do better in attracting exploration investment, particularly for base and precious metals, to ensure that we have the inventory of producing mines for the longer term.*
> *(p.7)*

However the PTG (2010) report concluded that:

> *It is difficult to draw definitive conclusions as to whether the level of exploration in Australia is sufficient to ensure an adequate level of resource projects into the future. Australia's resource stocks across most commodities remain plentiful and overall*

*activity appears consistent with previous cycles in the industry.*
*(p.9)*

According to Schodde (2011)[4], 'To ensure no supply interruptions in the longer term the industry needs to be finding 2-3x as much metal as it currently mines'. He continues:

> *Ultimately the supply/demand problem will be solved through higher prices and/or improvements in mining & processing technologies (both of which allow the use of lower cut-off grades, and allow marginal projects to be developed).*

The last line in the quote above begins to explain why non-financial barriers may be seen as an important roadblock to the Australian industry. With an established industry, future exploration activities are likely to be undertaken in what were traditionally considered 'marginal' areas. Expansion of coal-seam gas exploration into what are traditionally farming areas provides anecdotal evidence of this. As the industry is increasingly looking at greenfields expansion into areas traditionally used for other purposes, removing non-financial barriers may be seen as a precursor to further development once economic conditions are favourable.

Industry attitudes towards regulations are inherently one-sided and predictable, as the PTG (2010) reported:

> *Several stakeholders noted other disincentives to exploration. These included complex environmental approval processes and fees, landholder consultation requirements, national parks and similar wilderness protection legislation, occupational health & safety legislation, strategic land cropping policies and inappropriate tenement conditions.*
> *(p.18)*

It is curious, though not surprising, to note that what would likely be seen as very valid concerns by many Australians are seen as 'disincentives to exploration' by the industry. It is important that public policy around mineral exploration and the wider minerals sector reflects the diversity of stakeholder interests and issues.

#### Do non-financial issues impose material costs on exploration companies?

Disregarding perceptions about the effectiveness and public support for the 'disincentives to exploration' listed above, it is worth asking whether or not such regulations are imposing

[4] Schodde, R. (2011) Recent trends in mineral extraction – are we finding enough? Presentation at RMG 8th Annual Mining and Exploration Investment Conference.

material costs on explorers. Material costs are defined as costs that might change an investment decision.

The Productivity Commission Issues Paper specifies several pertinent questions in this regard and we look forward to further information on this issue. Our experience has shown that perceived 'barriers' are largely immaterial and that commodity prices are the most significant determinants of exploration activity. Schodde (2011) demonstrates the clear correlation between exploration and commodity prices.

We are not aware of any comprehensive study of exploration companies that attempts to estimate the likely cost of non-financial barriers to the industry. Concern usually relates to either 'compliance' or 'delay' costs.

The Productivity Commission Issues Paper referring to the PTG (2010) report suggested that administration and compliance costs could account for up to 60 cents of every $1 raised. This figure is nearly certainly a massive overstatement of average costs. To selectively pick another figure, Dampier Gold, a gold exploration company, reported administrative costs that amounted to $1.8 million[5] or 29% of total costs - and this is all administrative costs, of which compliance with government regulations would contribute a smaller fraction. What's more, statements such as this ignore the reality that most explorers are by nature involved in administrative and compliance issues. They frequently end up not producing anything themselves, preferring to develop resources in partnership with a larger miner or to sell the resource entirely once it is proven.

Delay costs are similarly under-studied. Suggestions that delay=loss are typically overstated and ignore realities of exploration which by nature involves overcoming physical, economic and regulatory barriers in order to hopefully discover (or prove the potential of) new mineral deposits. In other words, that's the nature of the game.

[5] Dampier Gold (2012) Annual Report 2012, available online at: http://www.dampiergold.com/wp-content/uploads/2010/07/2012_Annual_Financial_Report_Dampier_Gold.pdf

### Final remarks regarding the economic context of the Inquiry

Given the above evidence, it is difficult to understand why non-financial barriers could be seen as a significant issue from an economic perspective. Data suggests that exploration activity in Australia has remained healthy and that expansion has typically been rational in terms of seeking out the most rapid and low-cost option for exploration in response to global commodity prices.

With the size of the global economy and the mostly undifferentiated nature of commodities, it is not surprising that other faster growing regions of the world have attracted higher exploration expenditure. This is due to a number of factors that appear to be under-researched in discussion on this topic to date. The only justification for an enquiry into non-financial barriers to exploration activities appears to be concerns about the replacement rate and maintaining adequate levels of exploration to avoid supply shortages. An inadequate case has been made that we should be concerned about this issue, or undervalue the wide range of other shareholders and issues in responding to this perceived concern.

Non-financial 'barriers', while frequently and vividly misappropriated by the terms 'red' and 'green' tape are generally highly valued safeguards to the non-mining community. Non-financial barriers provide important recognition and protection of Australia's unique natural and cultural estate whilst imposing minimal costs on exploration companies involved in activities that are inherently long-term in their impact. .

In summary:

- Exploration is highly cyclical and largely driven by commodity prices and the economics of the project.
- Exploration in Australia does not appear to be at any disadvantage vis-à-vis competitors that is within our ability to control.
- We are competing against lower cost and higher growth economies by virtue of the minerals we are endowed with.
- Exploration activities in Australia have been rational in terms of expanded brownfield exploration which is faster, cheaper and less risky than greenfield development.

- Greenfield expansion for minerals has remained steady in terms of expenditure and has increased significantly for petroleum.
- Non-financial barriers may be seen as a barrier to exploration for marginal deposits in areas where a non-mining land use already exists.

## 2. Environmental Regulation

### *Environmental Management*

**Recommendation 6.2 in the Draft Report should be altered. Approval decisions under the EPBC Act must be retained by the Commonwealth, and should never be devolved to the states.**

ACF does not support recommendation 6.2 in its current form. It is our view that the matters defined under the EPBC Act as being of national environmental significance are properly a matter for the Commonwealth Government, pertaining to the management of matters that constitute the national interest, and to the fulfilment of international obligations. The track record of state level environment decision making, and the existence of very real conflicts of interest, both political and financial, that can prevent state governments making proper arms-length decisions on development proposals further convince us that states will never be able to properly 'stand in the shoes' of the Commonwealth on these matters.

Therefore it is our view that approvals under the EPBC Act should never be the subject of bilateral agreements. Assessment bilateral agreements already exist as the Draft Report points out. Providing that the Commonwealth retains decision making power under the EPBC Act, increasing the use of these assessment bilateral agreements could lead to greater efficiency in assessments. However for this to occur without loss of environmental protection, clear, objective national standards must be in place, to ensure that all accredited processes at the state level meet minimum national standards.

Analysis by the Australian Network of Environment Defenders Offices indicates that at present, there is no state or territory with a regulatory regime which could meet minimum requirements under the EPBC Act. Therefore, as a first step toward increasing efficiency of assessment processes under the EPBC Act and reducing duplication, the Commonwealth should, via a transparent and consultative process, formalise and publish a uniform set of national standards with which any state processes must comply in order to be accredited by the Commonwealth. Then, as states improve their own regulatory regimes, more EPBC assessments may be done via bilateral agreements with the States. However, this is obviously not something achievable in a short time frame.

Furthermore, while it is certainly the case that development proposals which trigger the EPBC Act may also be regulated at the state level. However, although this subject has been extensively considered before parliamentary inquiries and other forums over the last twelve months, there has been no evidence provided to show that such duplication as exists is a major barrier to development activity.

While it is triggered rarely, the EPBC Act provides critical oversight that ensures development proposals which are found to have an impact on Matters of National Environmental Significance are properly assessed to ensure adequate environmental protection. Under no circumstances should the Commonwealth devolve decisions under the

EPBC Act to the states: the Act prescribes nine matters of national significance, which are the responsibility of the national government, and must never be devolved. Some of the key reasons for this imperative include the following:

***The States have limited capacity to take on delegated Commonwealth powers under the Act.***
The exercise of the Commonwealth powers under the Act is a matter requiring significant resourcing and expertise, which ACF believes State and Territory environment departments are unable to deliver at current levels of resourcing – particularly in states where these departments have had staffing and budget levels cut in recent years.

***States do not have the necessary legislative frameworks in place***
The Commonwealth can only delegate its powers under the Act if the States which are to exercise the powers have the legislative and regulatory frameworks in place to enable them to do so. In 2012 the Commonwealth Government released draft standards which it said states would be required to meet before any bilateral agreements could proceed. These standards reflect the minimum requirements of the EPBC Act – the bar could not legally be set lower. However, analysis by the Australian Network of Environment Defenders' Offices concluded that:

> *Based on our extensive analysis and interaction with planning and environmental laws in each jurisdiction, we submit that no state or territory planning or environmental laws currently meet the minimum requirements of the 106 elements outlined in the Draft Standards Framework, let alone the full suite of best practice standards that Australia should be striving to implement.*[6]

Creating the regulation and legislation necessary to enable states to meet the minimum standards required to exercise powers under the EPBC Act is necessarily a complicated long-term project, excluding the possibility of delegation in the near future.

***States are not responsible for international obligations***
The matters that our national environmental laws seek to protect reflect international obligations under treaties and agreements dealing with areas such as threatened species, migratory species, wetlands and world heritage areas. It makes sense for the Commonwealth to retain responsibility for these areas, or Australia may find itself being held to account for failure to meet international obligations which it has signed away to the states and can no longer control.

[6] Submission on Draft Environmental Standards to accredit State/Territory approval processes under the EPBC Act *ANEDO November 2012 p 3*

***State Governments do not answer to all of the Australian people on MNES within their borders***

Matters of National Environmental Significance (MNES) under the EPBC Act are exactly that – *nationally significant.* As a matter of logic, and accountability, the decision-maker in relation to these matters should be the government which is answerable to the people of Australia.

***States have particular conflicts of interest***

If the Commonwealth Government were to delegate its decision making powers under the Act, it would create a situation in which a state government could be the proponent, assessor, decision-maker, and compliance enforcer, of a development proposal which impacts a MNES. States are in fact frequently the proponents of actions referred to the Commonwealth Minister under the Act, and the conflict of interest inherent in this situation could not be clearer. However even in cases where the state is not the formal proponent, the financial benefits to the state which would flow from projects proposed, whether through royalties, investments or other means, and the political relationships involved, very frequently are sufficiently strong incentives that is still clearly impossible for a state to make a decision at arm's length.

A recent case in point has been highlighted for CSG assessments in Queensland whereby the office of the Coordinator General, which helps support development proposals in Queensland, is also responsible for assessing the impacts of the proposal, and which it is alleged by a whistle-blower on ABC Four Corners, sought to cut corners in the assessment.

***The States Track Record on Environmental Protection is uneven, and poor at times.***

Due in part to the conflicts of interest noted above the track record of States on protecting the environment gives no confidence that they would exercise additional powers responsibly.

In light of this context, we are troubled by the suggestion on p185 of the PC Draft Report, that in relation to the West Kimberly Region, *"it is questionable whether the (National Heritage, and therefore EPBC Act) listing will provide any additional environmental benefit"*. The natural values of the West Kimberly have passed stringent tests to qualify for the National Heritage List, and the fact that the area is large does nothing to diminish this fact – in fact, connectivity of this landscape is a key part of its high conservation value. It is not true that the West Kimberly would have the same natural values if it were peppered with mine sites or shale gas wells. The current West Australian Government has already demonstrated that it is subject to many of the issues listed above – as evidenced by the poorly administered process of assessment of the proposed development at James Price Point which was of benefit to neither the project proponent or the local community. It is the view of ACF that there is significant environmental benefit in providing oversight of Western Australian state government decisions about the development of the West Kimberly region, one that is shared by many environment stakeholders and community members in the state.

### Opportunities for efficiency

It is typical that regulatory regimes increase in complexity as arising issues are addressed by governments in a piece by piece process. Harmonisation of regulatory regimes can provide all stakeholders with greater certainty, clarity and improved outcomes for businesses, communities, and the natural environment. Therefore the ACF does not oppose efforts to reduce regulatory complexity so long as the following general principles are adhered to:

- In any case where the cost of regulatory burden on business is considered, the benefits provided by the regulation to the community and the environment should also be taken into account.
- Ecologically sustainable development principles must be the basis of all regulatory reforms impacting on the natural environment
- Regulations governing development approvals and assessments should require science and evidence based decisions
- Decisions must incorporate and reflect the precautionary principle
- Ensure that public information, consultation and third party rights are maintained in all cases.

We further note that social licence is a key part of the efficient operation of the minerals industry, both in relation to exploration and extraction. It is in nobodies interests to sacrifice proper process and standards.

### *Information Request – Strategic Assessments*

It is our view that strategic assessments could be a useful tool in improving environmental outcomes and delivering efficiency and certainty for all stakeholders. However strategic assessments should not be used as a 'blanket' approvals mechanism, but rather in addition to case-by-case assessments. The efficiency advantage is that projects falling within a strategic assessment will face briefer assessment processes, and better guidance about where and in what manner developments are likely to be permitted.

## *Land Access Issues*

ACF submits that it is essential, in the national interest, that some lands be indefinitely excluded from exploration activities – for the good reason that resource extraction will never be permitted there. National park lands, and other NRS properties, world heritage sites, and national heritage sites, all must go through rigorous assessment processes and meet demanding standards before being designated. If these protections are not permanent, they are useless.

Minerals extraction is not the only interest the Australian public hold – there are many competing interests to consider. National Parks, for example, cover some 4% of Australia's landmass. Exploration licences cover more than 50%. The tiny percentage of land set aside

for the protection of wilderness, biodiversity and natural systems, is a vital piece of our nation's efforts to manage our natural assets. These are the few places where Australia has chosen, for strategic reasons, to prioritise the environment: they should never be compromised.

**ACF does not support recommendation 4.1**
The process of minerals extraction is often extremely damaging, and the Multiple Land Use Framework assumptions that concurrent or sequential land use is possible in relation to land used for minerals extraction is extremely doubtful in many cases. Given the existence of thousands of 'orphan mines' around the country, the industry's commitment to rehabilitating land such that it is capable of sequential use is also doubtful, as are Government compliance and enforcement capabilities.

In relation to national parks or conservation reserves not yet declared, we object to the emphasis on minerals exploration. While we are good at articulating the value of minerals deposits, and spend thousands of public dollars on providing such information, we are less good at articulating and less committed to compiling information on our natural assets and ecosystem services. This recommendation would re-enforce an existing bias to value easily monetisable minerals deposits over competing assets that are less easy to monetise.

In relation to existing national parks, no exploration should be permitted, because no extraction will be permitted, making exploration is pointless.

## Proportionate Regulation

Dealing with uncertainty is a difficult area, and ACF agrees that decision making should be evidence based. However, especially in the case of CSG and other unconventional mining, given the current state of knowledge of the impact of CSG development on ground water and aquifers, the precautionary principle should be adhered to: any CSG exploration should be required to show beyond reasonable doubt that it will not have a significant environmental impact. In fact however, scientists report that many small, or pilot projects, do not have the baseline data to assure the public that they are safe to proceed. The Condamine river, which has recently begun bubbling gas, is a good example of an environmental impact that seems to be clearly linked to CSG development and exploration in the area, and may be the first indication of very serious environmental harm which could impact natural systems and agricultural land.

Given the long time frames over which ground water effects can become apparent, the difficulty of capturing cumulative impacts of small projects, and the potentially catastrophic impacts on large areas of land and water, regulatory regimes must be thorough and rigorous.

## Precompetitive Geoscience

Resources equivalent to the funding of Geosciences Australia should be made available to provide credible and comprehensive baseline information on high conservation areas in particular threatened species. This will remove the burden from companies to provide this information during the exploration stage.

## 3. Issues related to Uranium Exploration

Uranium exploration and mining remains a contested area of public policy: there is no clear and assured social license and high levels of community concern and public interest. In this context it is fully appropriate that there be an enhanced level of regulation and scrutiny to the sector. In this context ACF notes some of the observations made in a recent report by the Uranium Mining Implementation Committee – *Recommencement of uranium mining in Queensland: a best practise framework, March 2013* – that found (inter alia):

(i) that inherent (*best practise*) is community involvement and engagement – which are particularly critical to uranium mining activities – and a commitment to transparency and continuous improvement (p 2-35)

(ii) that best practise in Queensland necessitates addressing social license issues specific to uranium mining (p 2-36)

(iii) that best practise in relation to uranium mining encompasses more considerations and factors than other mining activities (p 2-36)

(iv) any uranium mining industry in Queensland will face a need to maintain its legitimacy and social acceptance (p. 2-38)

(v) the regulatory system needs to address additional challenges and requirements for uranium mining (p 2-40)

(vi) radiation protection and nuclear non-proliferation issues are almost unique to uranium mining and this has necessitated additional uranium specific safety, health and security approval processes (p. 3-2)

The uranium industry is already the beneficiary of extensive publicly funded support in the form of (i) exploration incentives and subsidies (eg/ PACE system in SA, Royalty for Regions allocations in WA), NT exploration support program etc and (ii) operational subsidy and support – esp. fuel tax credits (iii) rehabilitation and post closure clean up allocations – most notably the extensive Parks Australia mitigation and rehabilitation program addressing old uranium projects in the South Alligator Valley region of Kakadu and continuing federal allocations to advance rehabilitation works at the Rum Jungle site near Batchelor, south of Darwin and (iv) regulatory, information and administrative support via a range of state and federal agencies and actors including state and territory mine and resource departments, the Office of the Supervising Scientist, DFAT, Geo-Science Australia etc. Industry is a clear recipient and beneficiary of publicly funded assistance and this should be explicitly acknowledged and inform policy. It is completely consistent that as the uranium sector is supported by public funds it should also be publicly accountable.

Clear cases of poor industry practise re exploration and need for enhanced scrutiny and regulatory rigour – highlighted in case of Marathon Resources in the Arkaroola region of

northern South Australia where in 2008, Marathon Resources was caught illegally dumping thousands of uranium exploration drill samples and other material in the Mt Gee region of the Arkaroola Wilderness Sanctuary. Regulatory authorities did not uncover the illegal waste dumping − indeed it would never have been discovered if not for detective work by local residents. The Australian Uranium Association and the SA Chamber of Mines and Energy did not express any concern about Marathon's illegal waste dumping − but they complained long and loud when the SA Government eventually moved to protect the Arkaroola Wilderness Sanctuary from mining - the Mt Gee saga − and other examples - suggest the need for stronger regulation.

Currently, the Australian Uranium Association is actively lobbying for a reduction of environmental regulation and scrutiny under the Environmental Protection and Biodiversity Conservation Act. In partcular the AUA is seeking to get uranium mining removed as a 'trigger' activity that requires dedicated federal approval. This move is inconsistent with the widespread community concern and public interest in this industrial activity and should not be countenanced.

ACF maintains that, along with the retention of the existing EPBC trigger, there is also a strong case for a dedicated national inquiry into the domestic and international impacts, costs and benefits of Australia's uranium sector. Such scrutiny is particularly important in the post Fukushima landscape – a continuing nuclear crisis directly fuelled by Australian uranium.

The Australian Uranium Association's targeting of Victorian state legislation precluding uranium development in that state is inconsistent with a key objective of the Nuclear Activities (Prohibition) Act 1983 (Vic) which seeks (inter alia) to *protect the health, welfare and safety of the people of Victoria and to limit the deterioration of the environment in which they dwell by prohibiting the establishment of nuclear activities*. The AUA's move is also inconsistent with federal government policy which recognises that decisions regarding uranium mining require state government consent.

A 2003 report by a Senate References and Legislation Committee – *Regulating the Ranger, Jabiluka, Beverley and Honeymoon uranium mines* - found "a pattern of under-performance and non-compliance" in the uranium mining industry and concluded "that short-term considerations have been given greater weight than the potential for permanent damage to the environment". The report provides a compelling case for enhanced sector scrutiny and has a direct relevance to the current deliberations of the Productivity Commission and ACF commends it to the Commission's consideration.

Uranium is a unique mineral and uranium mining and processing poses significant challenges and risks, both now and long into the future. One particular area of concern is the long term management of hazardous uranium tailings. These tailings contain around 80% of the radioactivity of the original ore body and, post mining, are far more bio-available and mobile.

Uranium mine tailings pose a long term human and environmental hazard and an earlier Senate inquiry into the uranium sector *Uranium Mining and Milling in Australia - Report of the Senate Select Committee on Uranium Mining and Milling, May 1997* - viewed "tailings management as amongst the most serious challenges facing uranium miners and, indeed, the entire nuclear energy industry in the future. It will also continue to be a major preoccupation for regulators and scientists as well". This evidence based view differs greatly from the repeated assertions of the Australian uranium sector that 'mild radioactivity' is the only concern of the industry's operations.

Australia's longest running uranium mine, Energy Resources of Australia's Ranger mine in Kakadu, is required under the mandated Environmental Requirements to ensure that: (i) the tailings are physically isolated from the environment for at least 10,000 years, and (ii) any contaminants arising from the tailings will not result in any detrimental environmental impacts for at least 10,000 years. ACF doubts that the corporate and political capacity and longevity exists to meet these requirements but welcomes the recognition given to the seriousness and long term nature of the threats posed by uranium mining operations and views this as an industry benchmark. This ten thousand year standard should be required for operations at all current and any future uranium operations in any Australian jurisdiction.

There is a history of sub-standard mine rehabilitation in the Australian uranium sector and an urgent need to address the long-term impacts of the Australian uranium sector in a way that does not allow cost shifting from mining companies to the public purse.

One clear example can be seen in the case of Nabarlek a small high-grade deposit just inside Arnhem Land, 15 kilometres east of Gunbalanya (Oenpelli) in West Arnhem where mining operations by Queensland Mines Ltd. commenced in 1979. The Nabarlek ore body was mined over the dry season and 600,000 tonnes of average 2% grade ore stockpiled for treatment from 1980. Just over 10,000 tonnes of uranium oxide ($U_3O_8$) and sold to Japan, Finland and France between 1981 and 1988. The mining process generated around 2.3 million tonnes of waste and ceased operation in 1988. In August 2003 the operators of the closed Nabarlek uranium mine received 95% of the money previously held in a trust fund dedicated to pay for the clean-up and rehabilitation of the mine.

The decision to grant this money was made by officers in the former Northern Territory Department of Business, Industry and Resource Development (DBIRD). This action occurred without the knowledge or consent of the traditional Aboriginal owners, the Northern Land Council or the Supervising Scientists Division (SSD) – the Commonwealth agency charged with oversight of uranium mining operations in the Alligator Rivers region.

The return of the bond money was made despite there being no final agreed and approved mine closure plan and despite continuing and unresolved rehabilitation and mitigation efforts at the former mine site.

Further work is still required at Nabarlek and clearly much further work is needed on both a policy framework and practise to ensure that future generations of Australian citizens and taxpayers will not be left footing the environmental, social and financial bill.

**Recommendations:**

**(i) that uranium mining and milling remain a designated nuclear action under the provisions of the Environmental Protection and Biological Diversity (EPBC) Act**

**(ii) that a dedicated independent Inquiry be held into the domestic and international cost-benefit and compliance of Australia's uranium sector**

**(iii) that effective action be taken to advance the UN Secretary-General's call - made in the *United Nations system-wide study on the implications of the accident at the Fukushima Daiichi nuclear power plant* – September 2011 - for an in-depth assessment of the net cost impacts of mining fissionable material on local communities and ecosystems**

## 4. Issues related to coal and gas exploration and mining

The exploration particularly of fossil fuel and uranium poses a threat to the integrity of important areas including those with high conservation and biodiversity values, water systems, prime agricultural land, culturally significant Indigenous lands, and areas already designated for residential use, as well as the ecosystems, communities and businesses that rely on them.

The draft recommendation 4.1 on Land Access, states that "the Government should, when deciding to declare a new national park or conservation reserve, …use evidence-based analyses of the economic and social costs and benefits of alternative or shared land use, including exploration"

To reiterate a previous recommendation (#2 on Environmental Protection) it is essential, in the national interest, that some lands be indefinitely excluded from exploration activities – for the good reason that resource extraction will never be permitted there. If the protections provided to conservation areas, National Parks and Heritage Sites are not permanent, they are useless.

The Multiple Land-use Framework, which is the guiding principle behind this recommendation, also assumes that:

- the area in consideration is able to cater to multiple uses;
- that stakeholders who will use it at the same time are able to coexist effectively, or
- that the sectors that will use the area simultaneously and sequentially are able to work out an effective system wherein the area in consideration is still 'usable' after the first use is complete.

Based on this interpretation, ACF deems that the Framework is not applicable in evaluating if exploration should be allowed in areas with environmental and heritage value, whether a new or existing site. Historically, the mining activities can pose serious threats to existing land-use, and in many cases leaves land unfit for further use after its mining licenses expire.

It is also important to note that rehabilitation of land disturbed by mining does not ensure the restoration of land. A research study from Monash University in 2009 states that, as of 2003, only 36,952 hectares out of 165,040 hectares of disturbed land from mining in Western Australia has undergone preliminary rehabilitation. In Queensland, as of 1997, only 20,313 hectares out of 73,586 hectares of disturbed land from mining have undergone preliminary rehabilitation. In the case of existing coal mines at the Hunter Valley in NSW, as of 2005, the State Government expects final voids to cover 1,272 hectares worth of land[7]. Although the NSW State Government is optimistic in using these voids as potential water catchment areas,

[7] NSW Government – Department of Planning. Coal Mining Potential in the Upper Hunter Valley. 2005. http://www.planning.nsw.gov.au/regional/pdf/final-draft1_5.pdf

independent research shows that these voids can potentially become saline[8] and toxic lakes unless properly back-filled.

**Other factors that affect Australia's coal and gas industry**

There are factors that affect Australia's coal and gas industry which the Productivity Commission's issues paper and draft report did not explore. These can also affect the appetite of companies to pursue and invest in exploration in Australia.

**a. The dwindling demand and oversupply of coal in the next decade**

Reforming regulatory arrangements pertaining to exploration to increase the international competitiveness of the mining industry, in particular coal exports, disregards the analysis of the business and investment sectors around the globe that states that there will be an oversupply of coal in the next decade based on existing production capacity and proposed new and expansion projects.

Deutsche Bank has claimed that the rising production of coal and dwindling demand for it will create an oversupply in the coal market this decade. It also said that "these market conditions meant it saw Australian coal prices of $95 per tonne in 2015 and $101 per tonne in 2020. Australian coal prices for delivery next month are currently trading around $88 a tonne." Note that the surge of coal mine exploration proposals and applications for expansion happened in 2008 when the price of coal was above $174 per tonne.

The dwindling demand for coal is also a primary reason for the delay of the construction phase of related infrastructure such as ports and shipping terminals. The North Queensland Bulk Ports Corporation stated that the "Global demand for coal has slowed over the past year, thereby reducing the urgency to commence construction on the proposed Dudgeon Point coal terminals project.

**b. The Carbon Budget**

The world is currently on the path to 2-4°C of warming, the outcomes of which will be devastating for our environment and livelihoods. At 4°C of warming, Australia faces catastrophic environmental outcomes, losing approximately 40% of our natural species, and far exceeding the adaptive capacity of our land, freshwater, and coastal environments. It is not possible to invest to simply adapt to the consequences of 4°C of climate change. The cost of inaction would far exceed the cost of taking ambitious action from this Review and continuing out to 2050 and beyond.

In addition, failing to take strong climate action will create a carbon bubble in Australia's resource-intensive economy. The potential for (and significance of) the carbon bubble has been identified by many influential institutions including the International Energy Agency[9]

[8] Hancock, Gregory, et al. Long-term final void salinity prediction for a post-mining landscape in the Hunter Valley, New South Wales, Australia. 2005 http://nova.newcastle.edu.au/vital/access/manager/Repository/uon:205;jsessionid=5BBA3EC7C5DE0048D48F916E5C2495F5?exact=subject%3A%22lake%22

[9] International Energy Agency (2012), *World Energy Outlook 2012*.

many investment analysts (including Citigroup[10] and HSBC[11]) and the World Bank. Without strong action to guide the transition away from emissions-intensive resources, Australia faces economic turmoil in a low carbon economy, significantly increasing the cost of the transition.

Further exploration of fossil fuels, whether for domestic use or export, is inconsistent with policy and operational efforts to define a National Carbon Budget that gives an 80% chance of achieving a 1.5°C global limit on warming.

[10] RenewEconomy, *Dig, baby, dig! Citi says coal investments at risk.* Published 9 April 2013 http://reneweconomy.com.au/2013/dig- baby- dig- citi- says- coal- investments- at- risk- 20942

[11] Nick Robins quoted in Bill McKibben (2012), *Global Warming's Terrifying New Maths.* Published in Rolling Stone 19 July 2012. http://www.rollingstone.com/politics/news/global- warmings- terrifying- new- math- 20120719