

The Social and Environmental Dimensions of Carbon Farming (Sequestration- and Turnover)

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Outback Carbon



Discuss

- Why do the rangelands need carbon farming?
- Some History
- Social co-benefits of carbon farming at a property and regional scale
- Environmental co-benefits of carbon farming at a property and regional scale

Why ?

- Rehabilitate large areas of the WA pastoral estate that are degraded - poor condition, at limited cost to the WA taxpayer.
- Diversify the economic base of the WA Rangelands.
- Provide income to support rangeland communities and the broader economy.
- Build regional knowledge, skills and expertise in rangeland restoration that can be commercially exported to similar regions around the world.
- Restored and more robust ecosystems with enhanced carbon stores, are likely to be more resistance to desertification, species loss and resilient in the face of climate change. (Outback Ecology 2012 for URS 2013)

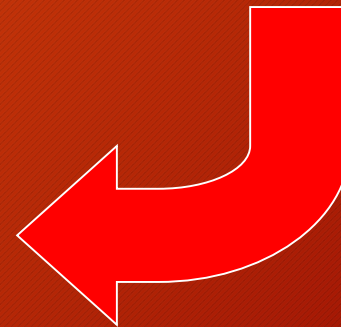
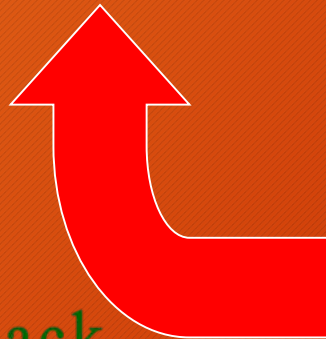
Why ?

- Attract capital and physical infrastructure into WA Rangelands that can support other complimentary industries.
- Provide employment and training opportunities, particularly for Indigenous communities that are geographically isolated and have limited commercial opportunities.
- Restored rangeland condition may enhance the aesthetic appeal and tourism potential of some key rangeland assets
- Restored rangeland condition will enhance and facilitate biodiversity and protect those assets - and assist in slowing species loss. (Outback Ecology 2012 For URS)

Risk Considered - Comment

- The study considered that the impacts of the CFI on the WA Rangelands will be generally positive.
- The scheme had undergone an exhaustive consultation process with both industry and key government departments (in Aust)
- Based on other voluntary and international offset schemes that have been operating for some time.
- Adverse consequences of the CFI can be effectively managed by the State Government using its existing statutory powers
- Likely to be very limited downside risk involved in the Carbon Farming Initiative(CFI)
- **Stage 3:** Pass legislation that allows pastoral leases to be converted into the new form of tenure of a 'Rangeland Lease' that allows carbon based offset projects to occur without the requirement for any other approvals. (Outback Ecology 2012 for URS)

Complete the cycle of capital



Social History

- Lacy Family have been surviving in these environments since 1870's (like many others)
- There have been walk-offs and struggle
- Over stress sensitive systems (place unrealistic demands on arid ecosystems) - lose productivity - collapse
- By 1950-60 learning to live within means
- Price takers - with limited scope to diversify /supplement income
- Degraded systems - can plateau down (and recover) but to a less productive stage - as nutrients and water lost

Banded Landscape - degraded to the East
Write a description for your map.

Legend

- PTY LTD
- West Windmil ..East

West Pin (Windmill) ..East

2016 Banked 2005
Write a description for your map.

Legend

- PTY LTD
- West Windmil ..East

Google earth
made 9/2016 Earth/Steve

Treatment 12 (or more) years EC



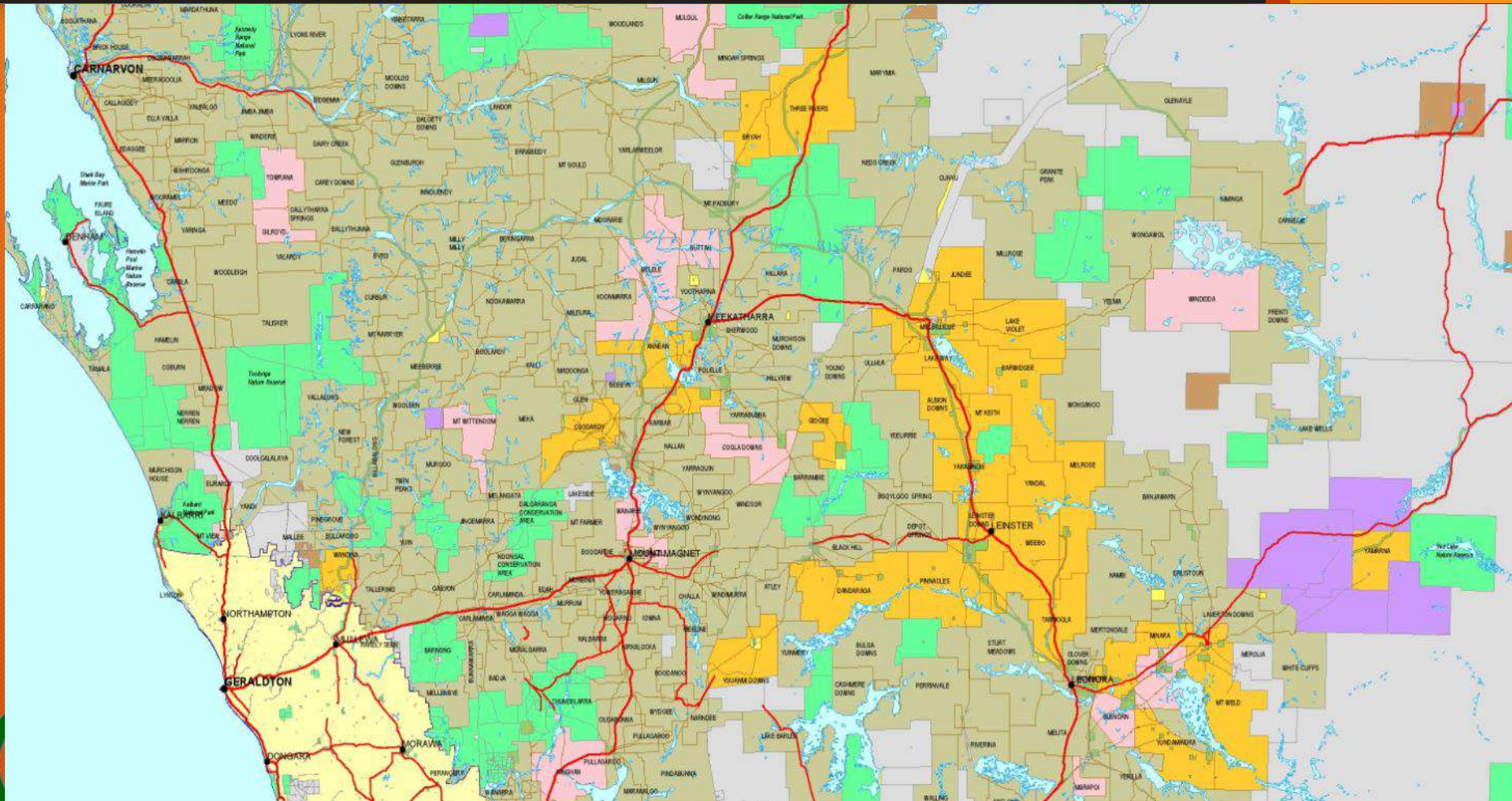
Social Co - Benefits

- Sustainable communities require a robust economic base and carbon based enterprises in the WA Rangelands have the potential to attract significant amounts of capital into the regions and compliment existing industries. (RFR).
- A carbon industry in Australia's rangelands could generate more than \$1.64 billion per year for a period of at least 30 years and WA could capture a significant share of this income (36. CCP 2010)
- can provide significant employment opportunities, particularly in remote areas where participation in the mainstream economy is typically very low and there is a strong culture of welfare-dependency;
- A carbon industry in Australia's rangelands could offset approximately 25% of Australia's total annual emissions and thereby mitigate the adverse consequences of climate change (37. CCP 2010)

Fragmented tenure - 2008

WESTERN AUSTRALIA LAND TENURE

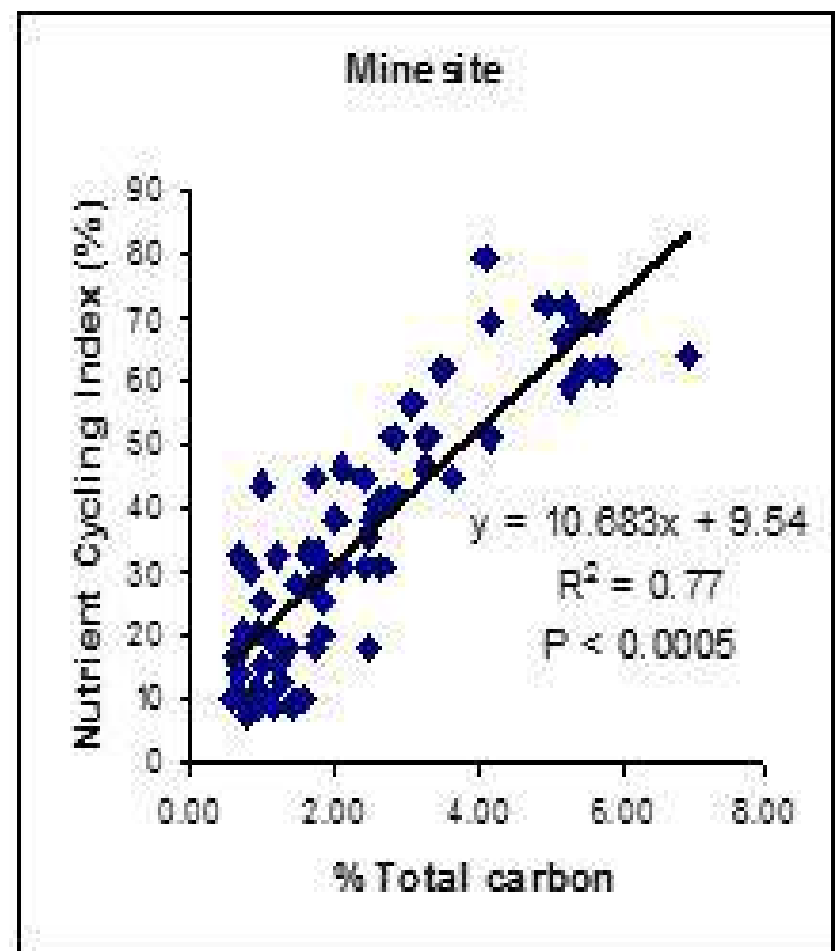
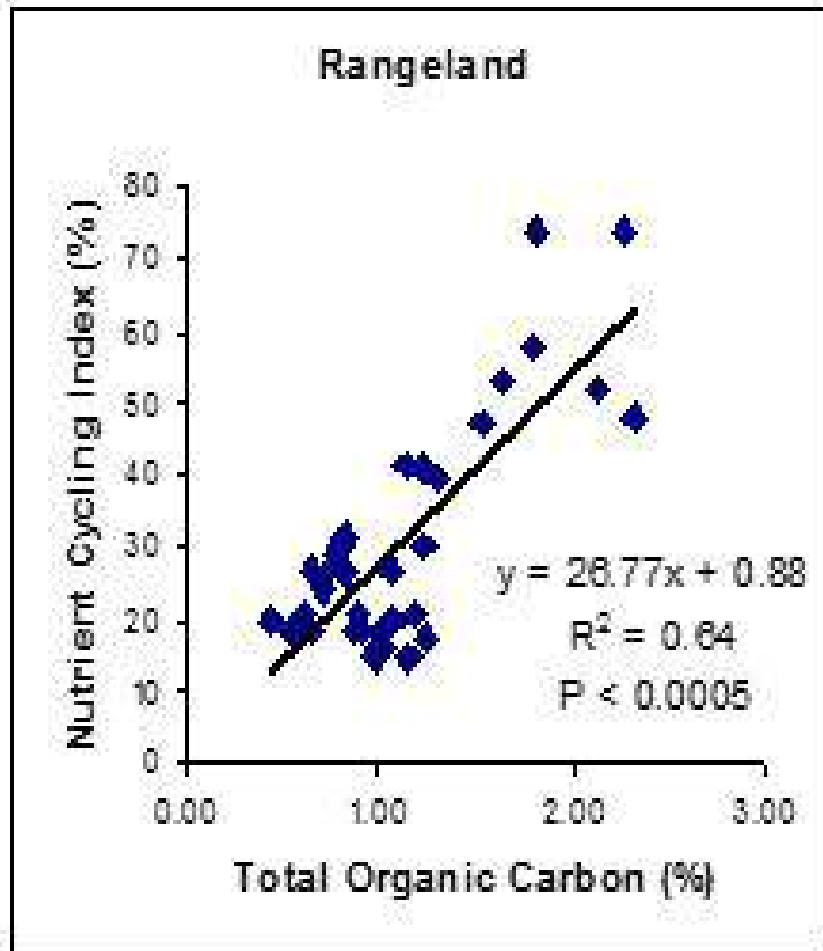
- Pastoral Lease
- General & Special Lease
- Commonwealth Land
- Pastoral Lease owned by mining company
- Indigenous Reserve
- Pastoral Lease owned by indigenous interests
- Department of Environment and Conservation Estate
- Vacant Crown Land



Rangelands Stakeholder base has changed.

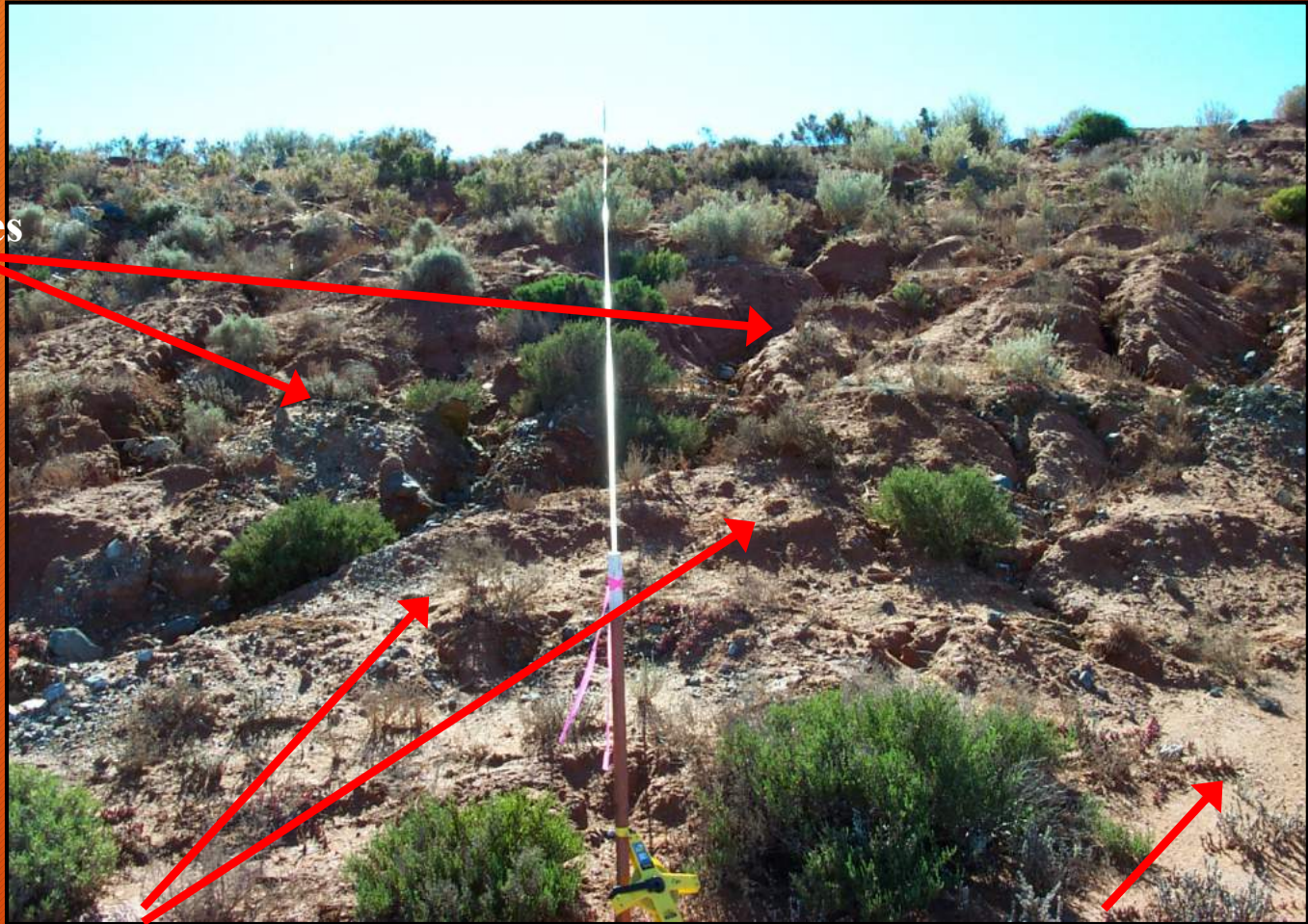
- Purpose - Direction - many different values
- Indigenous communities,
- People who have purchased leases for lifestyle or philanthropic purposes
- Conservation based State Government agencies or non-government organisations - AWC- BH
- Carbon Value - has been lost - but now has Value
- Functional Ecosystems - Resilient - Productive
- Core Community is still Pastoral Enterprises - who can diversify to carbon sequestration - if the State supplies the framework.

Functional Systems Tongway/Hindly/ 2004.



Dysfunctional System

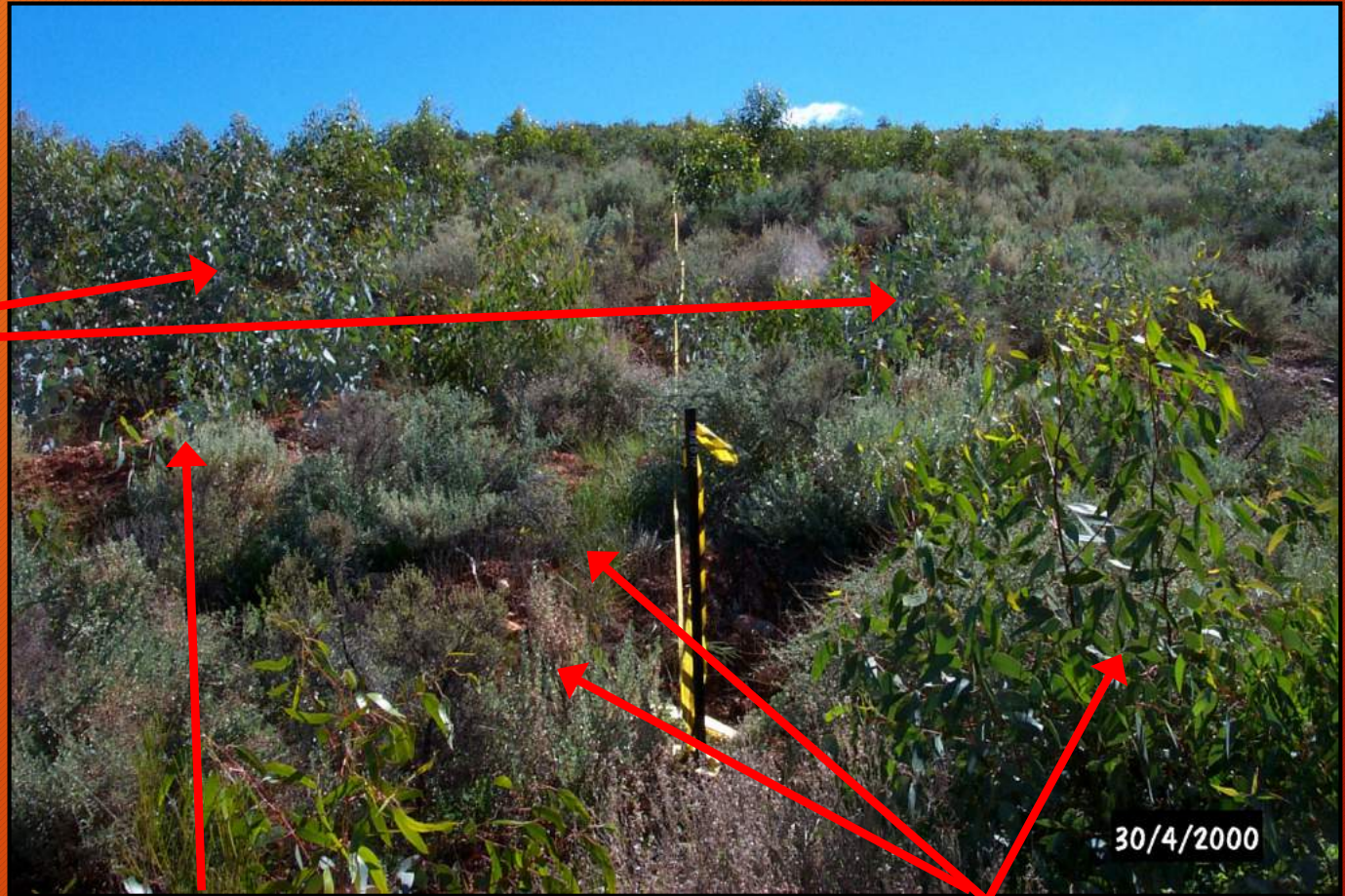
Rills and Gullies
(erosion)



Bare Patches
(sparse vegetation)

Sediment Deposition
(soil loss)

Highly Functional System



**Vegetated Patches
(dense vegetation)**

**Troughs
(collection zones
and regulating features)**

**High species diversity
(increased resilience)**

Social - Co benefits

- Carbon reduction is paramount, but a rich offset ‘story’ that adds other social, environmental and/or economic ‘co-benefits’ is also seen to be important for many buyers participating in the voluntary offset market (Hogarth, 2008; Bayon *et al.* 2009)
- For some remote indigenous communities this maybe an opportunity for them to become a part of the mainstream economy e.g. genuine employment, utilisation of their traditional knowledge to manage country, improved self-worth, health and general wellbeing. (CCP 2010)

Liabilities to Assets

November
2002



February
2007



Stuart Meadows Project

Environmental benefits

- Development of a carbon industry in the WA Rangelands could contribute to the fulfilment of recommendations of the Northern Australia Land and Water Taskforce.
- Carbon has proven to be an effective market based instrument which can catalyse a shift in management practices and promote ecologically sustainable development
 - (Commonwealth Government, 2009, p. 4).

Thanks for your attention

Thank you to the Pew Trust for organising this Conference and this opportunity

We, perhaps, are the first generation of future eaters who have looked over our shoulder at the past, but we have done so quite late in the process of environmental destruction. If we can change our ways before we have consumed all of the future that we are capable of, then we will have achieved something very precious” (Future Eaters. Flannery, 1994).