Trials of Market-based Incentives to Conserve Wildlife

George Wilson, Matt W Hayward, and Charlie Wilson
Outline of talk

• Mission / objective
  • Integrate private land more effectively with Biodiversity Strategies and goals of National Reserve Program.

• Principles
  • Proprietorship, price and subsidiarity

• Process
  • Trials to test if market-based incentives can remedy funding shortfalls

• Focus on iconic species under threat in Australia, and lesser extent New Zealand

• Draws on supporting information to a Conservation Letters paper *in press*
Extinction rates rising

• Nearly half world’s mammal extinctions in last 200 years have been in Australia (Johnson, 2006)
• Much of the damage is on private lands (Lindenmayer, 2007).
• Australia’s mammal status is worsening (Woinarski et al., 2014).
• Expenditure not meeting demand
• Less costly or cost neutral (or perhaps even profitable) institutional arrangements are needed
National Reserves: Biodiversity and species conservation strategies. Many reserves operate in isolation, funding is limited, and there are no incentives to engage in biodiversity and wildlife targets. Altruism alone contributes to limited habitat and species conservation. Higher value, more productive ecosystems are omitted.

Private Land: No incentives to engage in biodiversity & wildlife targets.

Biodiversity and species conservation strategies fail to meet most targets.

National Reserves: Some success for individual programs. Many reserves operate in isolation.
Relative contributions land area in biodiversity conservation and wildlife use

**Australia**
- Private lands • 1%
- Indigenous community-owned, jointly managed lands • 8%
- National parks and State-owned reserves • 8.5%

**Southern Africa**
- Private lands • 17%
- National and Provincial parks • 6%
Role of government in wildlife conservation

• Australia and New Zealand
  • Wildlife is owned by state
    • With some variations between states depending on conservation status of the animal
      • pseudo-ownership of wildlife by zoos and philanthropic orgs
      • companion animals (pets) in some States

• southern Africa
  • ownership and management can be transferred
    • to enable private sector and personal benefit
  • has lead to innovation, competition and positive outcomes
    (Child et al., 2012, Lindsey et al., 2013,)

• The Principles
  • Proprietorship, Subsidiarity, and Price
SANParks conducts auctions of surplus animals
Micro economic reform

• Enhanced innovation in the national economy
  • Economic liberalism and competition widely applied

• Micro economic reform has not been applied to management of wildlife
  • Still government dominated

Proposal
• Landholders who want to do, should be able to take up wildlife property rights
• Use market economics and investments to make a profit and help conserve wildlife off-reserves
Competition and devolved responsibility have been effective in case of private philanthropic organisations.

- Major contribution recently
  - new reserves
  - Breeding programs
  - Support for Indigenous communities
Proposed incentives

• Most landholders currently contributing to wildlife conservation
  • Altruistic, ideological and aesthetic reasons
    • “love, and fun”

• Would they allocate more if given a profit incentive?
  • “self interest / money”

• Proposing trials to test the question
  • Can the sale of live animals for assisted recolonisation be an conservation incentive?
Proposed process

Owner / breeders would be able to obtain a profit
On-selling animals to others who are similarly motivated by
- altruism, existence, observing
- wildlife tourism, and
- subsequent profit
(Principles could also apply to
- more common species such as kangaroos and emus, parrots and reptiles in more direct use of consumption and pet trade)
Potential species for the trial

- Locally abundant populations of charismatic species.
- Some are in wildlife enclosures managed by philanthropic organizations, zoos or similar

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Buyers include:
• Private landholders, corporations and community

Internet brings:
• buyers and sellers together,
• plus government agencies and investors.
Participants agree on prices, transfer of ownership and leases from government where relevant

Documentation includes:
• Management of predators,
• Breeding programs,
• Habitat management, and
• Assisted recolonisation techniques
Approval

Government
• Provides ‘leases to hold’
• Permits for movements
  • considers genetics issues
• Monitors trade
• Sets animal welfare codes

Investors and collaborators
• Approve expenditure
• Collaborators
  • private landholders
  • agricultural companies
  • community groups
  • Indigenous organisations
  • Government programs
• Investors include:
  • crowd funders
  • superannuation funds,
  • venture capitalists
Finance innovation

• Potential models
  • European Wildlife Bank (EWB)
    • created by Rewilding Europe
    • supported by the European Commission and other major funding partners.
    • Funding the restocking of original native herbivores to rewilding areas.
  • NatureVest
    • Seeks private capital to form ‘nature based assets’
    • Aims to deliver conservation results and financial returns for investors
• Australian Government Threatened Species Strategy
  • Action Plan 2015-16
    • $80m over 5 years
  • Threatened Species Commissioner
    • seeking collaboration

• NSW Saving our Species program
  • Reintroducing locally extinct mammal species to NSW National Parks
  • Supported by Australian Wildlife Conservancy (AWC) and
  • Wildlife Restoration and Management Partnership (WRAMP) led by the University of NSW.

• Mulligans Flat Woodland Sanctuary
  • restocking of threatened species
  • ACT Government and Australian National University
Other animal breeding and release programs philanthropic organisations

- All chronically under-resourced
- Could benefit from participation and direct investment in our proposal.
- Examples of potential collaborators
  - Foundation for National Parks and Wildlife
  - Foundation for Australia’s Most Endangered Species
  - Rewilding Australia, and
  - Australian Ecosystem Foundation
Potential criticism and risks for proposal

• “Invoking the market incentives is
  • Commodifying nature.
  • Expanding the economic paradigm that caused the
decline/demise of wildlife”

• “Un-ethical to allow financial benefit from
Australia's wildlife.”
  • Felt most strongly for charismatic and iconic species

• Cuteness and cuddliness generate strong emotions
  • Translate into political pressures that cloud ecological
    and economic decisions
Example for the trial - Koalas

- Koalas are under threat;
  - some inland populations reductions of >80% (Woinarski et al. 2014).

- Major issues
  - Preferred habitat under intense development pressures
  - Habitat fragmented
  - Population isolated

- Short fall in government and philanthropic funding
  - to address these issues
Assisted recolonisation
- centre-piece of reversing trend
  • Create self-funded surrogate corridors
  • Reduce genetic bottlenecks in isolated populations
  • Supported in Action Plan for Australian Mammals 2012 (Woinarski et al. 2014)
  • If trial successful, recolonisation to be part of much needed National Koala Recovery Plan
  • Landholders ready to help
    • Current policies perversely excludes them from participating
• Relocation from over-populated reserves in the south
To vacant habitat in the north

• Notwithstanding difficulties of crossing State borders

• Example of preferred koala habitat under intense development pressures

• Many altruistic landholders who would help if also had commercial incentive
Proposed trial would test

- Principles
  - Proprietorship
    - Leases,
    - Permits to hold
  - Subsidiarity
    - Devolved responsibility
    - Competition and innovation
  - Price
    - Markets
- Has expenditure on wildlife conservation increased?
- Has status improved over say 5 years?
Conclusion

• We are not advocating replacing ethical responsibility
• Nor proposing to privatise wildlife that is in the public domain
  • but creating incentives for the private sector
  • to protect more wildlife habitat and species
• Relying on the intrinsic value of wildlife is not working
  • Notwithstanding recent increases in expenditure
  • Scale of need far larger
• New models are urgently required to reverse extinction trends (Kareiva et al., 2012)
Conclusion

• Market-based incentives will not remedy
  • all shortfalls in government funding to conserve wildlife or
  • answer all biodiversity problems,

• Could provide funds to complement restoration and rehabilitation by
  • underfunded government agencies and philanthropic organisations.

• Wildlife management would become more open to
  • competition and private innovation

• A market for native wildlife would
  • increase the security of native species
  • reduce overcrowding and habitat destruction in locally overpopulated communities
  • integrate private land more effectively with Biodiversity and Species conservation Strategies and goals of National Reserve Program.
Conclusion

Additional landholders become involved, motivated by financial reward.

Revenue increases from leased wildlife to expand Government Programs.

Distribution and abundance of species increases.

Private lands link fragmented habitats.

Biodiversity and species conservation.

Private Land

National Reserves
Next steps

• Put proposal to governments
  • Ask for collaboration
  • Permits to keep or leases that will encourage investors

• Prepare articles to assess interest amongst
  • land holders
  • potential investors
  • philanthropic organisations

• Identify suppliers
  • Our list of potential species
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Proposed process

Supply
Animals from overabundant local populations of charismatic species
Planning and negotiation would be necessary to confirm availability as a source

Demand
Private landholders, community groups and corporate buyers motivated by altruism, financial gain, and aesthetic valuation

Market
Internet brings supply & demand participants together. The market includes entrepreneurs and philanthropists. They agree on ownership, transfer prices and leases from government.

Planning
Collaborators plan and cost control of predators, breeding, habitat management, and assisted recolonisation.
Costs also include economic and ecological monitoring.

Approval
Government regulates leases, monitors trade and sets animal welfare codes
Financiers approve expenditure