

Valuing Australia's Natural Capital

WHAT SUPPORT IS NEEDED TO PROGRESS IMPLEMENTATION?

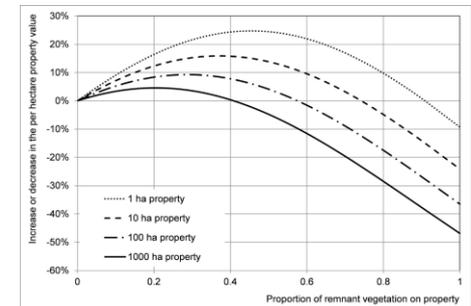
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Do we have the R&D in place to support the development and implementation of ecosystem services?

- Funding and pricing ecosystem services is not a new discussion
 - Science has struggled to agree on appropriate metrics
 - What is ecosystem health and sustainability?
 - It is not as simple as more trees and better soil
 - Banks and insurance want indicators of environmental credentials
 - Link between profitability and sustainability
 - Have to be in the black to be green?
 - 20% set aside land achieves a 4% capital premium
- Supply chain and multinationals want indicators of sustainability
 - Many are seeing **carbon** as a good indicator/credential
 - Plus there is an international driver – the Paris Agreement
 - And a potential reward mechanism – market carbon pricing





Carbon Neutral Agriculture

Supply chain responses to Paris Agreement

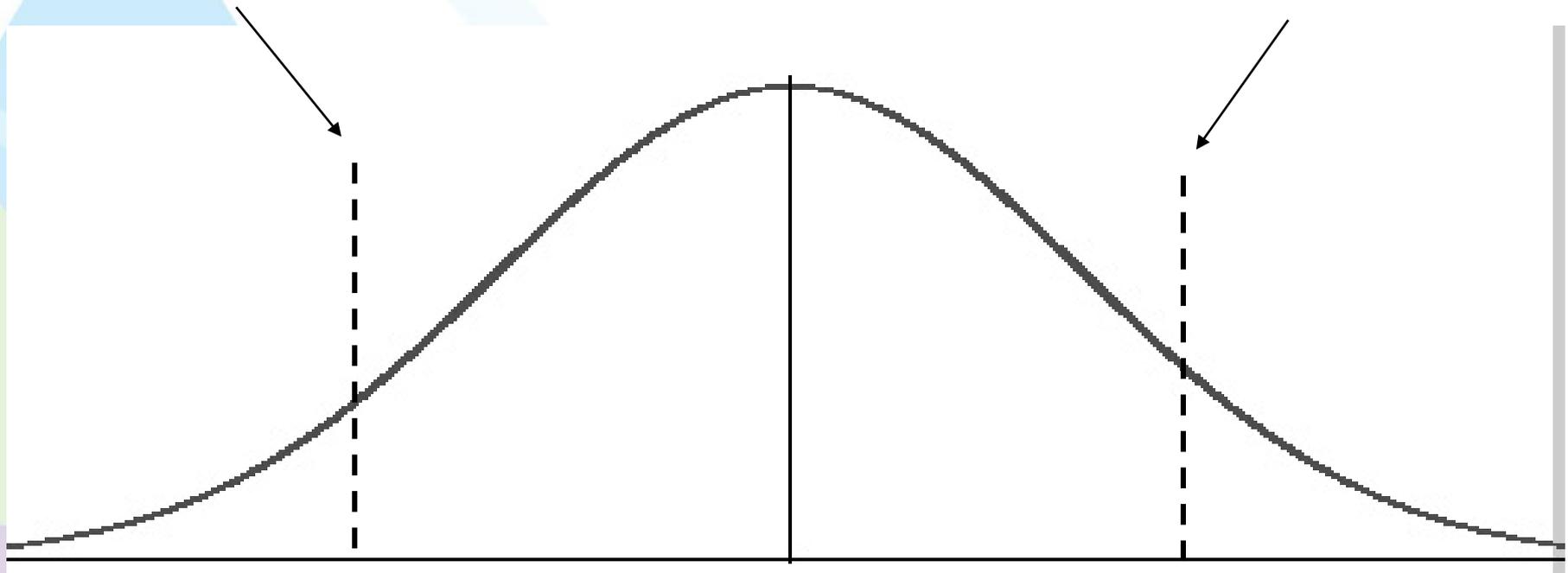
- Fonterra
 - Climate-neutral growth to 2030 for pre-farmgate emissions from a 2015 base year
- Unilever
 - Reducing the GHG impact of their products by 50% by 2030, compared to baseline of 2010
- Mondelez
 - Reduce absolute GHG from manufacturing 15%
 - 100% renewable energy
- Nestle
 - Zero environmental impact in our operations
- Mars
 - Reduce GHG across our value chain 27% by 2025 and 67% by 2050 (from 2015 levels)
- Kellogg Company
 - 65% reduction by 2050
 - 100% renewable energy
- Pfizer
 - 60 to 80% by 2050
- Wilmar international
 - 89.72% less GHG from 2013 to 2020
 - 100% renewable energy
- Olam
 - Reduce GHGs by 50% by 2030 both in our own operations and in our supply chain
 - By 2050, we aspire to be carbon positive in operations, requiring a 5% emissions reduction per year from 2031 – 2050
- All responding to the Paris 2050 neutral target
 - No indication of price premium for the ecosystem service
 - Of the 100 largest economies 69 are companies and 31 are countries
 - Government policy may now be less influential than market forces



Who will take the lead on advocacy for this whole-of-agriculture issue?

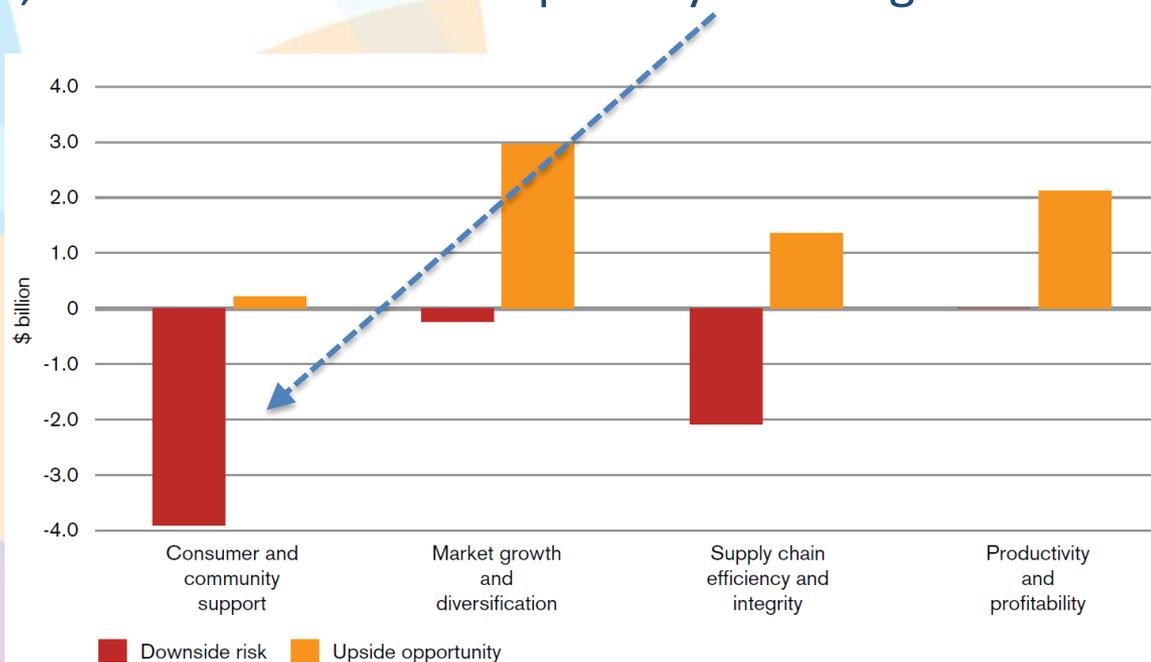
Where government policy typically operates – picking up the laggards

Where industry policy typically operates – leading the way for market differentiation



Industry will take the lead when they see market compliance or advantage
Of the 100 largest economies 69 are companies not countries

- Markets still do not really want to pay for ecosystem services
 - Organic produce still attracts some price premium
 - Currently a premium for Carbon Neutral food products
 - But could soon become market expectation
 - However, there could also be a penalty to losing consumer support!





Carbon Neutral Agriculture

First movers?

- Rapidly rising interest in Australia
 - Arcadian Organic & Natural's Meat Co's
 - 100% carbon neutral across its entire supply chain
 - Purchasing carbon credits
 - NAPCO
 - Five Founders beef brand – carbon neutral hoofprint
 - Purchasing carbon offsets
 - Flinders + Co Meats
 - Carbon neutral wholesale/distribution activities
 - Carbon neutral wine
 - Ross Hill, Cullen Wines, Tulloch Wine





Carbon Neutral Agriculture

First movers?

- Meat and Livestock Australia
 - Australian beef can be carbon neutral by 2030 (CN30)
 - *Given the right industry, R&D and policy settings*
- Mato Grosso do Sul (MS), Brazil
 - “MS carbon neutral” initiative
 - Including livestock
- Carbon neutral Brazilian Beef
- New Zealand
 - Proposed Zero Carbon Bill
 - Net zero by 2050 – long lived gasses
 - Methane target
 - 10% by 2030 and 24% - 47% by 2050
- IPCC report
 - Diet choice is part of the solution



Australian Beef
Sustainability
Framework





Do we have the R&D in place to support the development and implementation of ecosystem services?

- Using Carbon Neutral agriculture as an example of an ecosystem service:
 - My estimation
 - RDCs may only afford around 10-20% of the total R&D investment required to deliver options to meet this target
 - Research through RDCs has to demonstrate productivity gain as the primary focus
 - Carbon market payments seem to be the only way to sell the value-proposition
 - For example, carbon offsets under CSF/ERF/CFI



Can the required R&D and implementation be supported through the current funding structures and systems?

- R&D required to deliver ecosystems services e.g. carbon neutral agriculture
 - Current 1-3 year contract cycles are inappropriate
 - Ecosystems evidence is multi-decadal R&D timeframe challenge
 - e.g. Rumen and soil microbes took millions of years to evolve
 - **We cannot solve this in a traditional 3-year R&D paradigm**
 - Research continuity and security of tenure for R&D
 - Succession planning not in place in many institutions
 - Lack of security of tenure for new researchers
 - Lack of security of funding for investment in infrastructure
 - Lack of security in policy environment



Can the required R&D and implementation be supported through the current funding structures and systems?

- No one R&D investor can support the R&D required
 - Plus, no one R&D provider can support the R&D required
 - Critical mass is no longer available through any one provider
- This type of R&D requires
 - Long-term commitment from all partners
 - Larger collaborative consortia for the future
 - Commonwealth, states and research providers
 - Bring focus to public good aspects
 - R&D corporations
 - Ensure productivity and profitability
 - Philanthropy
 - Largely untapped in this area, but interested in sustainable food production
 - Industry/ agribusiness/ multinational
 - Australian R&D needs to see much more co-investment by big business



In Summary

- Do we have the R&D in place to support the development and implementation of ecosystem services?
- Can the required R&D and implementation be supported through the current funding structures and systems?
 - Nationally collaborative investment structures
 - Longer-term partnerships between
 - States, commonwealth, RDC, industry and philanthropy
 - Longer-term investment mechanisms
 - The type of R&D cannot be addressed in traditional 3-year paradigms
 - The quality of research and researcher needs longer-term security
 - Nationally collaborative R&D consortia
 - Loss of critical mass, lack of security of subject and tenure
- Who will take the lead on advocacy for this whole-of-agriculture issue?
 - Will need to be industry leading.