



Emerging Environmental Markets Victoria – Australia

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Victoria – Biodiversity Policy

- ◆ *Native Vegetation Management Framework – A Framework for Action (2003)*
 - Established “*net gain*” as the primary goal
- ◆ Limited possibilities for gain from public land
- ◆ 70% of the Victorian land and water resources are in private ownership
- ◆ Private land is most likely source of “gain”
 - However, characterised by fragmented remnant native vegetation

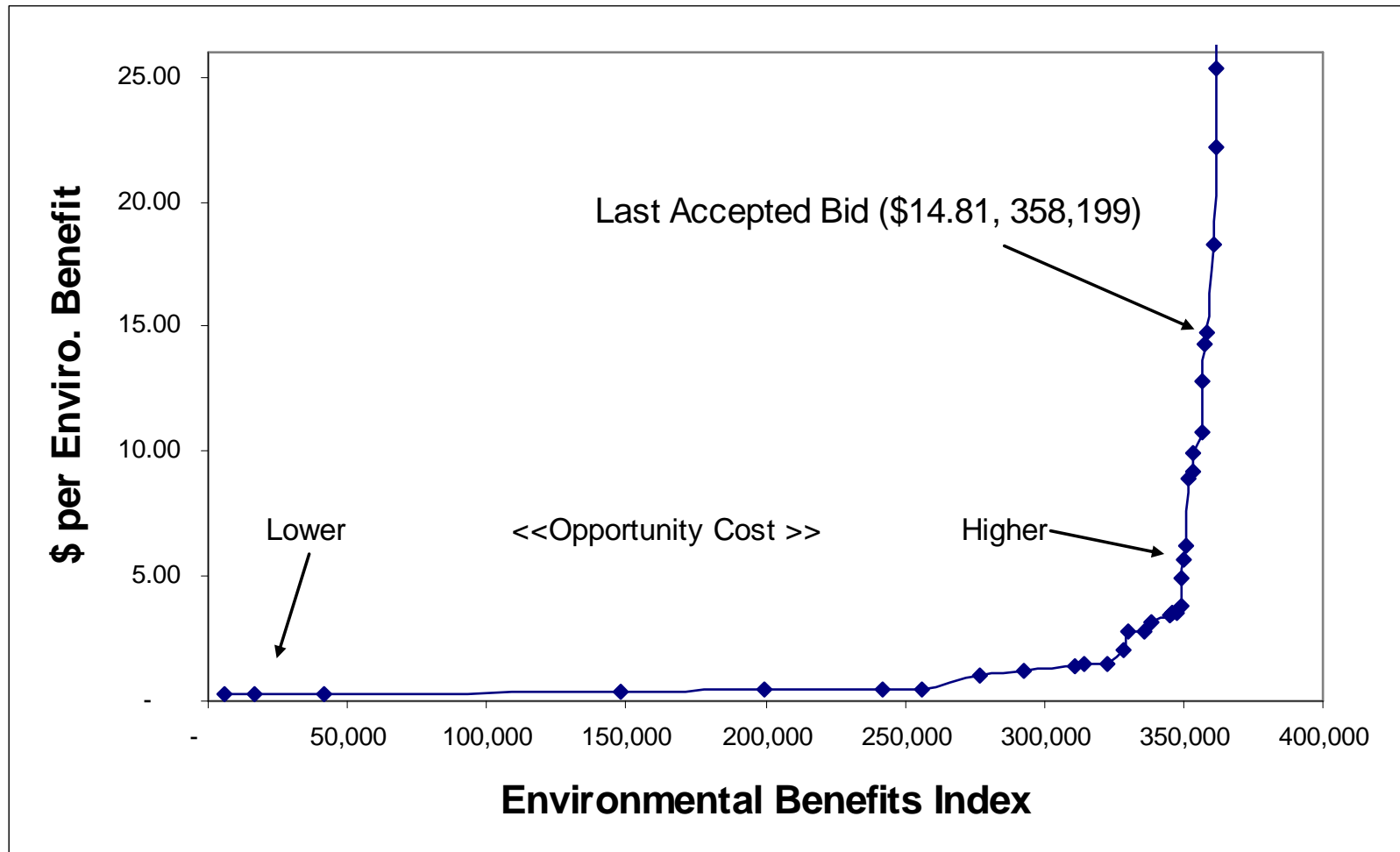
“Jumpstarting” Environmental Markets

- ◆ Can create new markets if:
 - Define property rights
 - Tradeable permits – Water (Australia), SO₂ (USA)
 - certification, enforceable.
 - Reveal asymmetric information (new mechanisms)
 - Reverse price auction – farmers costs
 - Reveal unknown information
 - Science – modelling framework
 - Metrics
- ◆ Understand how landholder actions either provide or consume ecosystem services.

Piloting (*jumpstarting*) Environmental Markets

- ◆ BushTender (*2001 – current*)
 - Single dimension (terrestrial biodiversity) auction created the supply side of the market
 - Demonstrated the capacity for cost savings
- ◆ Recognition there are linkages between environmental outcomes
 - Joint production (bundling)
- ◆ Avoidance of undesirable outcomes
 - Revegetation and water harvesting
- ◆ EcoTender (*2005 – current*)
 - auction for multiple environmental outcomes
 - terrestrial biodiversity, carbon, aquatic function, saline land

EcoTender: Supply Curve



Observations

- ◆ Lower cost per unit environmental outcomes (*Stoneham et al 2003*)
- ◆ Science and more science (*directed by the needs of policy*)
 - Joint production (73% of sites generate 2 or more environmental outcomes)
 - Site based metrics for investment (Erosion 17%, Recharge 27%)
- ◆ Landholders – day to day business transaction
- ◆ Government – accountable, transparent, cost effective

Observations

- ◆ The approach can be used to link emerging environmental markets with existing markets
 - Landholders are paid by a third party for carbon
 - They factor this additional income into their bid (lower!)

- ◆ Water Markets
 - Quality (New York, fishing, recreation)
 - Aquaculture >>>> Irrigation
 - Quantity (Irrigation)

Future

- ◆ Preferences
 - Willingness to pay (health, roads or the environment)
 - Diminishing returns (how much is enough, science?)
- ◆ Contracts
 - Permanency (*on title, property rights*)
 - Synergies (acting together, related outcomes)
 - Certification
- ◆ Offsets
 - Linking auctions to offsets
 - Auctions as mechanism to supply offsets
- ◆ Mechanism design
 - auctions, cap and trade, offsets