

MARKET AND INCENTIVE DESIGN

THE MARKETS FOR ECOSYSTEM SERVICES TEAM



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Structure

- **Economic approaches to behavioural change**
- **Market fundamentals**
- **Market-based instruments**
- **Where to next?**



Economic approaches to behavioural change

- **Facilitative measures**

- improve the flow of information and signals without providing direct payments

- **Incentive measures directly alter pay-offs**

- usually intended to substitute for missing monetary signals that are generated within markets for other goods and services.

- **Coercive measures enforce change via regulation**

- non-voluntary and are designed to compel management change using the coercive powers of government.



Economic approaches to behavioural change

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Examples

- **Facilitative measures**
 - Extension and information programs
 - Rangeland station farm-stay style tourism promotion
- **Incentive measures**
 - Stewardship payments / biodiversity auctions
 - Tax and subsidy measures
- **Coercive measures**
 - Maximum stocking rates
 - Require bore capping



In practice ...

- **Effective measures a mix of the three**
- **Mix depends on the characteristics of the biophysical and policy problem**
 - Nature of the market failures being faced – e.g. can we measure the desired biodiversity outcome
 - Costs of alternative approaches – including design, implementation and management
 - Comparative effectiveness in achieving desired outcomes.



MARKET FUNDAMENTALS



**ECOSYSTEM
SERVICES** PROJECT

Market fundamentals

- **Sellers / producers = landholders**
- **Buyers / users = product dependent**
 - For biodiversity most often community represented by government as buyer
 - Immediate difference from familiar markets
- **Ways to facilitate exchange**
 - Internet, brokers, auctions, negotiation, ...
- **Regulatory framework to protect participants**



What makes markets function

- **Markets are driven by differences between individuals**
 - Resources, cost structures, goals and tastes ...
- **Voluntary exchange between participants**
 - Both parties better off in a welfare sense
 - Generally (though not universally) based on money as a numeraire.



MARKET-BASED INSTRUMENTS



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What are market-based instruments?

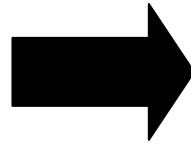
MBIs are:

- **Voluntary**
- **Based on exchange**
- **Generally use money as a numeraire**
- **Exchange places a price on the ecosystem service**
- **Price may differ based on the attributes that are important (e.g. species, size of population, location, surety of protection ...)**



Players, motivations and benefits

- **Government**
- **NGO's**
- **Private Sector**
- **Landholders**



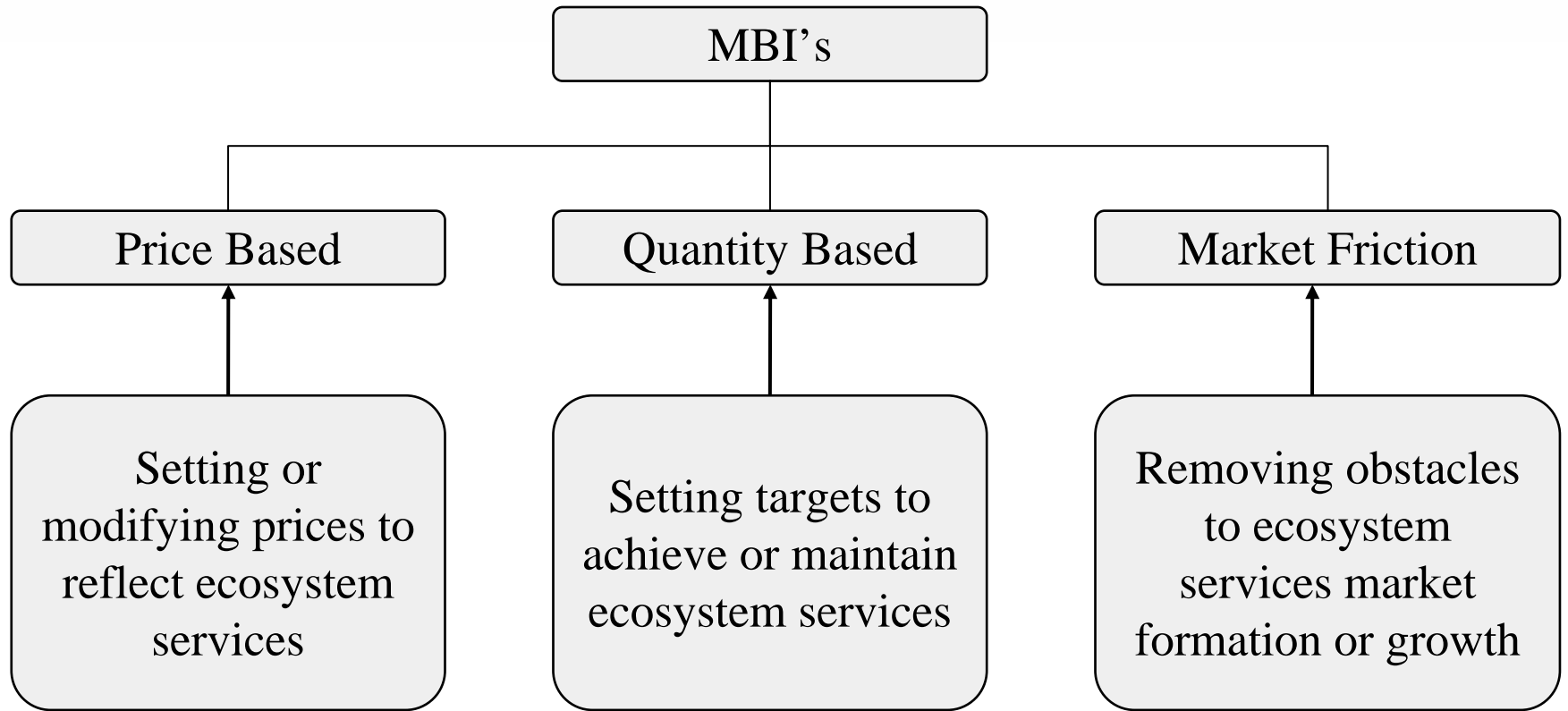
Process benefits –

- Flexibility in achieving outcomes
- Improved cost effectiveness
- Innovation in achieving outcomes
- Equity of access
- Broader stakeholder engagement

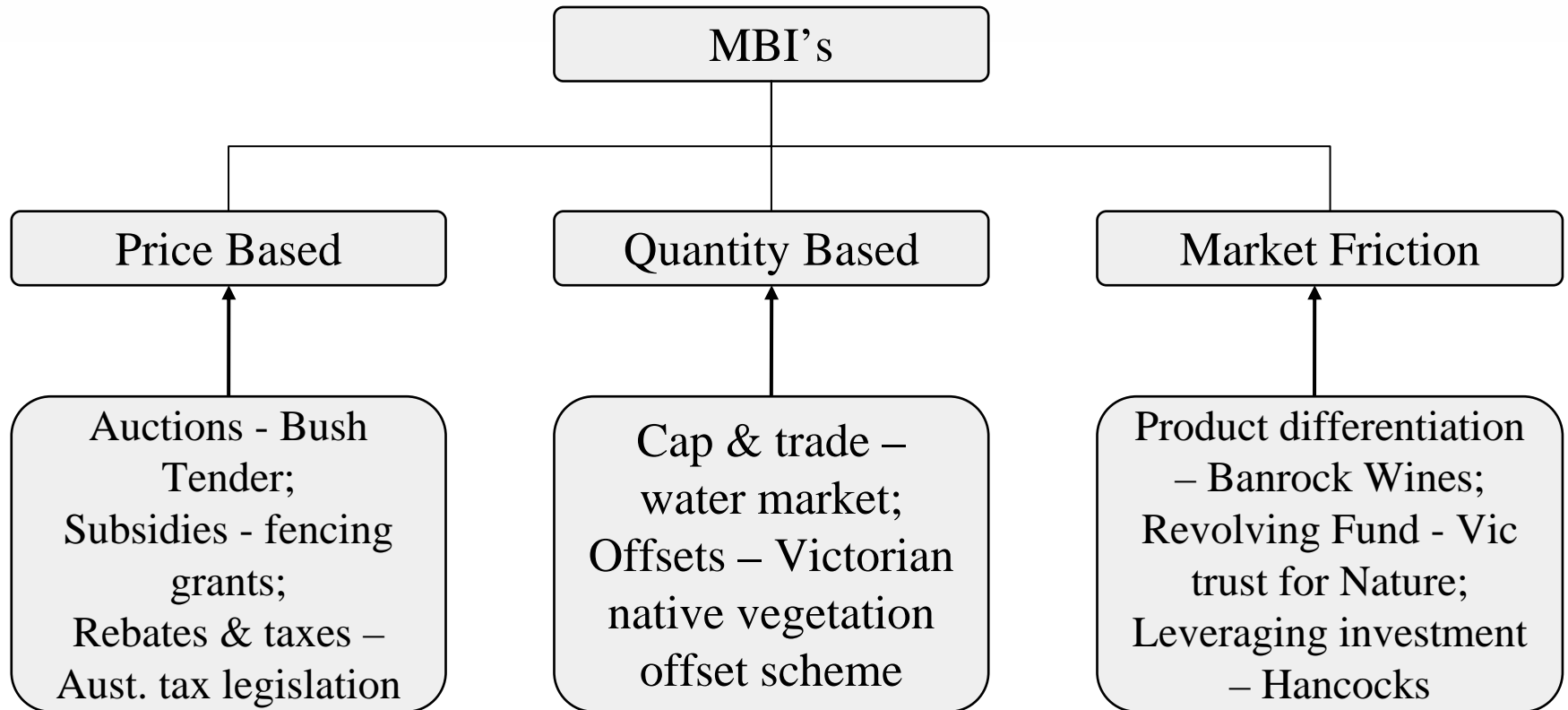
Outcome benefits –

- Increased returns on investment
- Potential for multiple outcomes (e.g. environment and reputation)
- New markets

Types of market-based instruments



Types of market-based instruments



Why markets?

- **Markets can be extremely cost effective ways of achieving change (i.e. efficient and foster innovation)**
- **Markets build positively on differences inherent in the community**
- **Well designed MBI's are outcome focussed**
- **Provide flexibility in achieving targets and goals (some change management more easily / cheaply than others)**
- **Potentially leverage new sources of investment**



Why markets?

- **Markets need to be well designed and monitored and will still have some flaws (e.g. perceived equity).**
- **Market design is issue dependent**
 - Alternative mechanisms have differing advantages and disadvantages
 - sometimes one mechanism is best for multiple outcomes, but not always
- **Markets are not always the best tool ...**



Thinking about appropriate mechanisms

**Owner variability
(in terms of costs)**

Homogeneous ← → Heterogeneous

Homogeneous



**Protection
variability**

Heterogeneous

Standard fixed price
contracts and payments
for specified outputs

Site-specific
management
agreements

Auctions
(variable payments
for homogeneous
products)

Site-specific
management
agreements and
payments



WHERE TO NEXT?



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Defining the problem ...

- **Need to better understand the nature of the problem**
 - **Relatively homogeneity of potential biodiversity conserved, potential for hot-spots, perverse outcomes etc.**
 - **Potential sources of rewards and how these can be worked into an incentive structure**
 - **Existing institutional structures – what do current arrangements and incentives mean on-ground?**
 - **Other important issues such as possible irreversibility of change, monitoring complexities and so on.**



A rewards approach ?

- Trade-off outcomes across multiple regions?
- What styles of rewards should be considered?
- E.g. a “fly-buys” market-like instrument approach?
 - 3rd party registration and management?
 - Quality and performance assurances?
 - Multiple redemption opportunities?
 - Private purchasers (effectively offsets)?



Overall framework

- some points to remember

- Communities are familiar with the current system.
- For any instrument to be effective the community must be comfortable in engaging and using the mechanism.
- **THIS MEANS INSTRUMENT CHOICE IS A GROUP DECISION!**
- The development and implementation of an integrated solution presents substantial challenges and changes in their approach to NRM.
- Each community will need to carefully consider the options available and will need lots of support and information from government and biophysical and social scientists.



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