

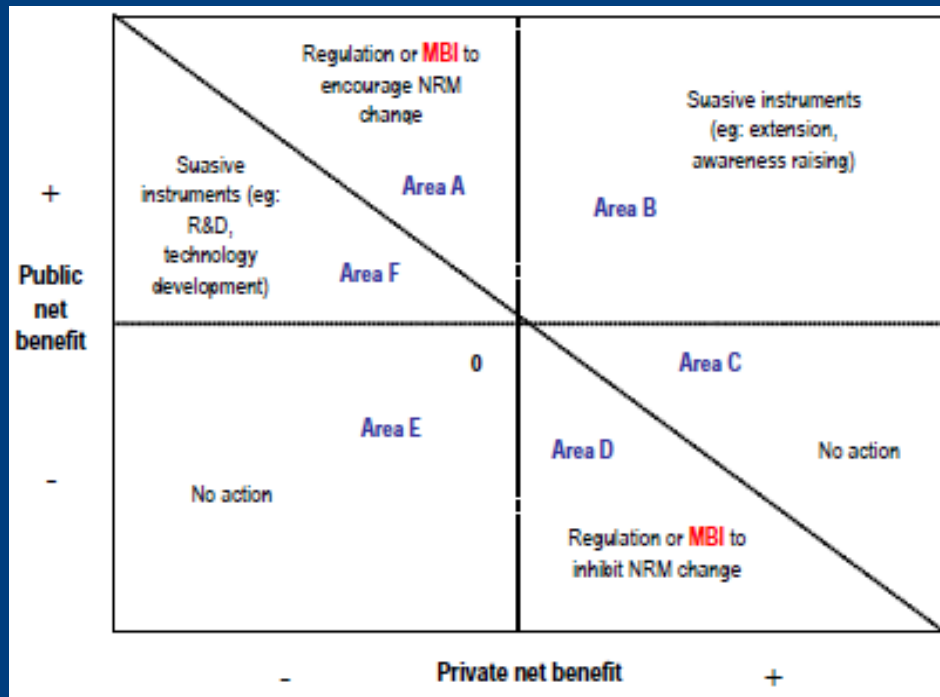


Industry &
Investment

Changing land management practices through the use of market-based instruments

Economic theory and MBIs

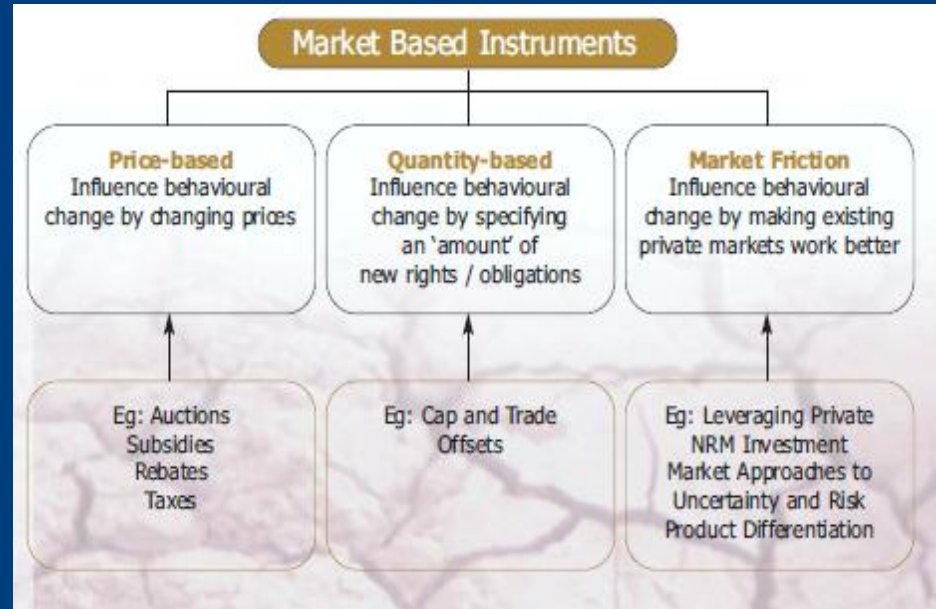
- Market failure
 - Markets are the prime means by which resources are allocated
 - But market failure is common in environmental areas
 - public goods and externalities
- Where MBI's fit in the policy mix



Source: Pannell's investment framework – adapted by BDA and CSIRO (2007)

Economic theory and MBIs

- Approaches to environmental problems
 - Regulatory
 - Suasive
 - MBIs



Source: National MBI Pilot Program

- Conditions where MBI's are likely to offer advantages
 - Heterogeneity in market participants
 - Differences in opportunity costs → gains from trade
 - Flexibility in responses to market signals
 - Scope for innovation

Lessons from Australia's MBI pilots/research

■ National MBI Pilot Program

– Key findings

- MBI's can deliver large cost savings
- good bio-physical modelling required
- monitoring and enforcement of landholders' actions important
- testing and adaptation of MBI design before implementation

■ Review of MBI's for soil carbon

– Many impediments to soil carbon markets

- costs of measuring and verifying soil carbon sequestration
- linking changes in practices with changes in soil carbon
- managing issues of permanence, additionally and leakage
- restrictions on landholders flexibility

Lessons from Australia's MBI pilots/research

- Further work
 - Experimental economics:
 - Test the significance of impediments to soil carbon markets
 - Assess potential solutions to handling sequestration uncertainty proposed by ACIL
 - Evaluate the efficiency of targeting soil carbon actions versus outcomes
 - MBI pilot in the Lachlan catchment

Carbon, water and biodiversity markets

- Increasing recognition that environmental outcomes are correlated
 - Revegetation may jointly sequester carbon, improve water quality and biodiversity and reduce salinity
 - Revegetation can also decrease streamflow, and reduce biodiversity (depending upon species planted)
- Carbon markets have the potential to have either complementary or adverse effects on other resources
- Unlike water and biodiversity, the economic value of removing one unit of carbon from the atmosphere is not location specific

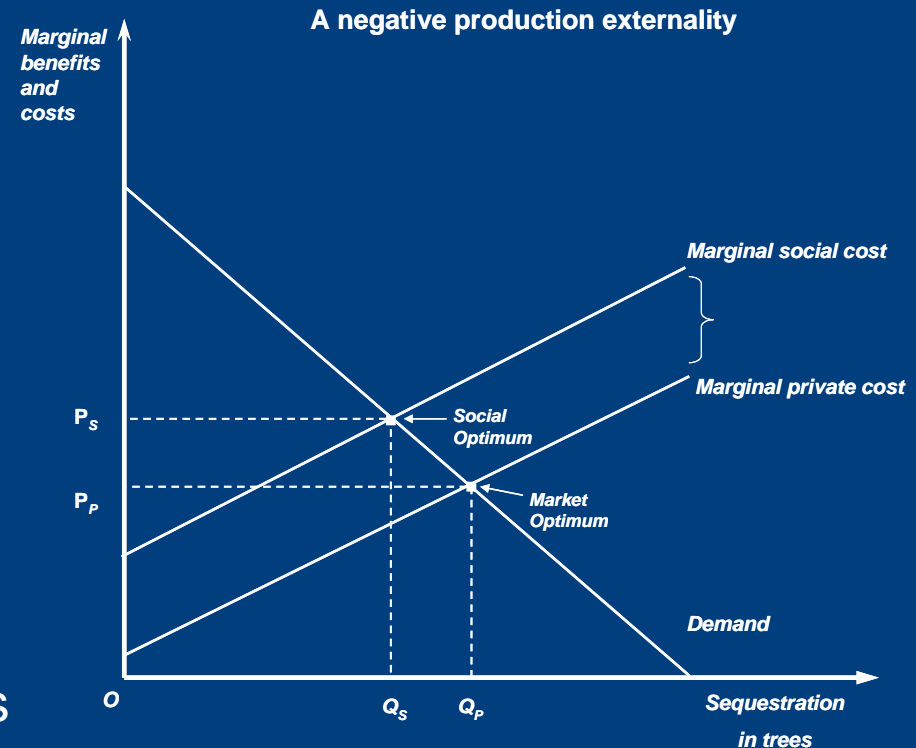


Chart - there is a divergence b/w the market and societal optimum because adverse effects on streamflow are not recognised in market transactions.