Introduction: ecosystem services assessment - from science to practice

Conservation Campus: Tools and Techniques for undertaking and using Ecosystem Assessments

Organised by the Sub-Global Assessment Network (UNEP-WCMC). in collaboration with IUCN, WWF, TEEB and ESP
at IUCN WCC – Jeju, S.Korea , 11 Sept 2012

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For quality of life

Environmental Systems Analysis group

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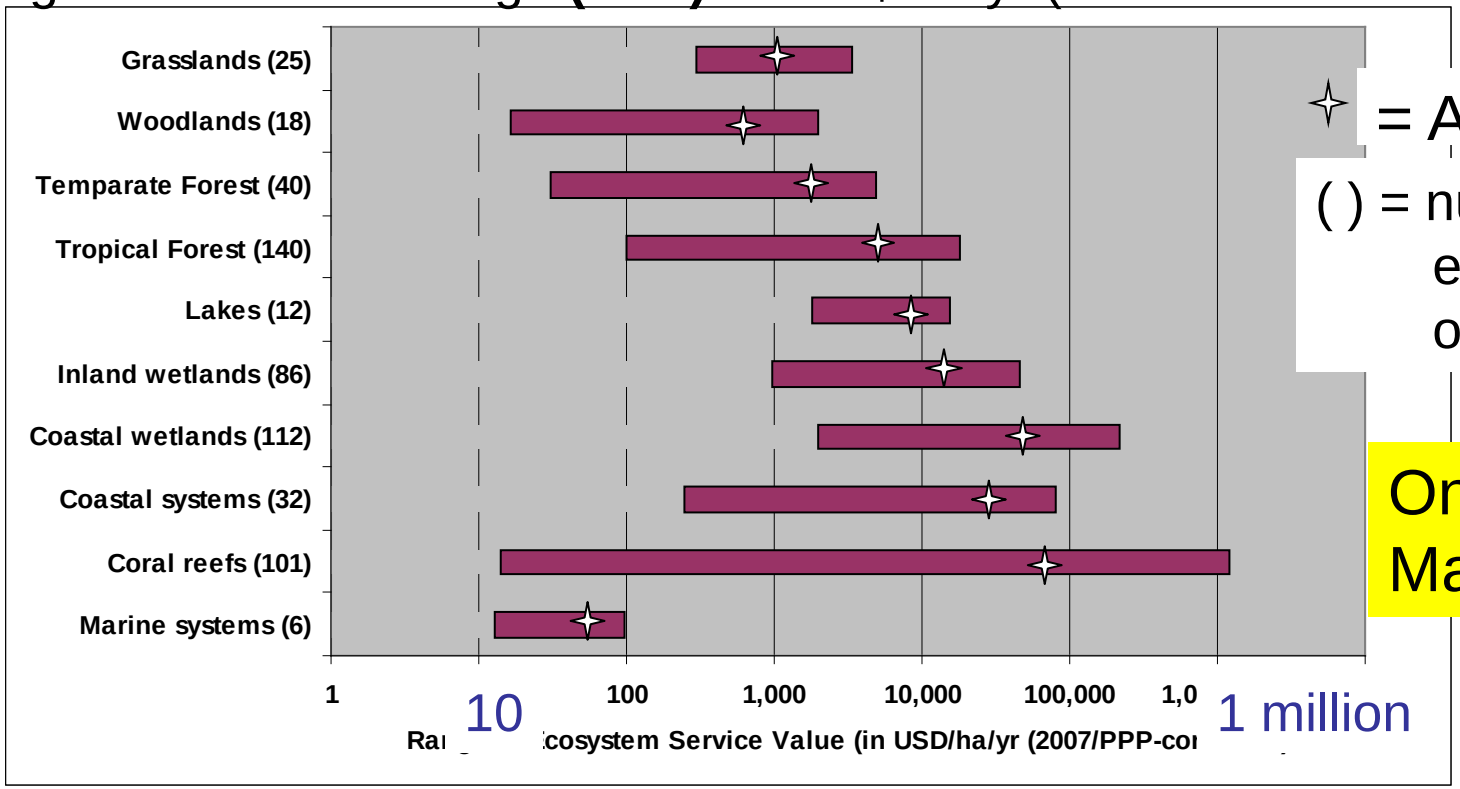
Lots of science (and policy) but does it work in practice?

The Economics of Ecosystems & Biodiversity

Log-scale of value range **(TEV)** in US$/ha/yr (2007 PPP corrected)



= Average value

( ) = number of used estimates (600 out of > 1300)

Only 25-30% Market values

TEV = based on max. sustainable use of all services of healthy system

Open ocean **49** US$/ha/yr [climate regulation and food (fishery)]

Mangroves **46,239** US$/ha/yr [water purification & nursery]

Coral Reefs **92,775** US$/ha/yr [tourism & storm protection]

Millennium Ecosystem Assessment

Trade-offs among management options

mangroves: 46.239 US$/ha/yr [waste treatment & nursery]

Mangrove Services:

- nursery and adult fishery habitat
- fuelwood & timber
- carbon sequestration
- traps sediment
- detoxifies pollutants
- protection from erosion & disaster

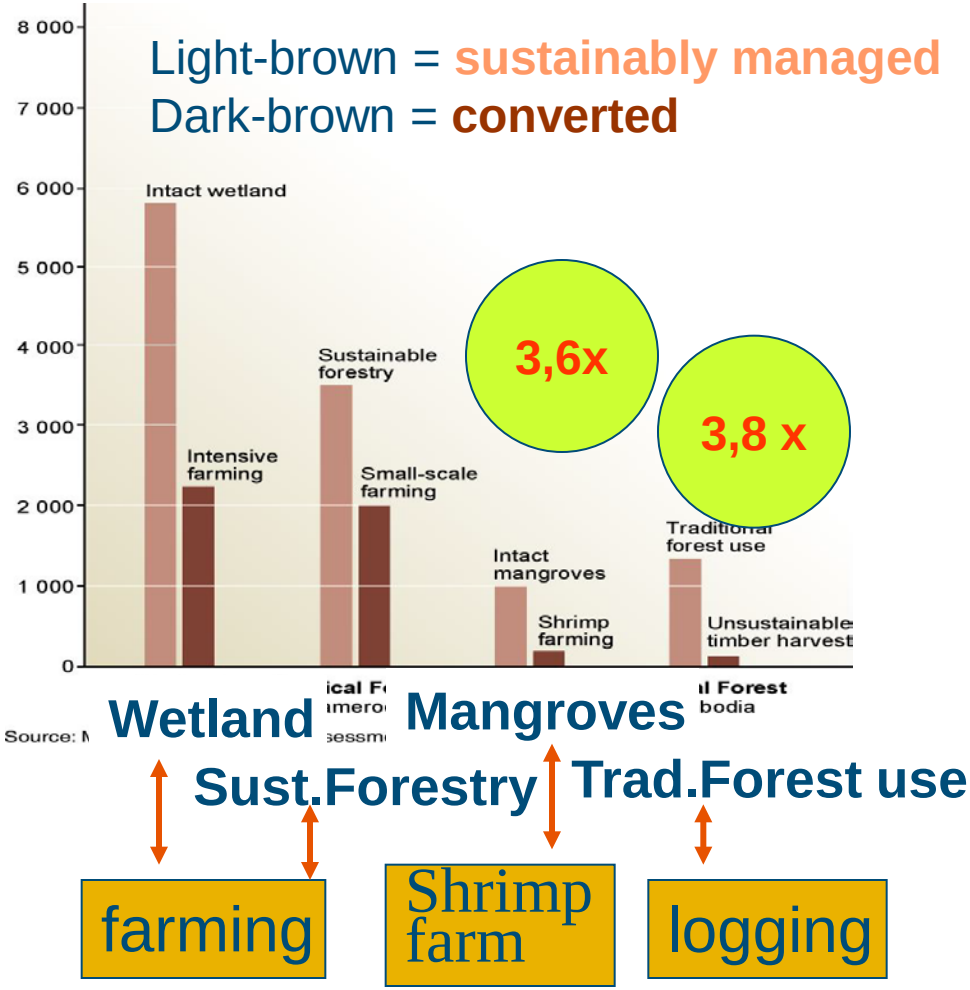
[redacted] shrimp

crops

NPV Mangrove Mexico ***600.000 US$/ha***
sold for recreational development
for ***1.000 US$/ha*** *(Nature, 2008)*

Conversion <-> sustainable management: “honest” CBA

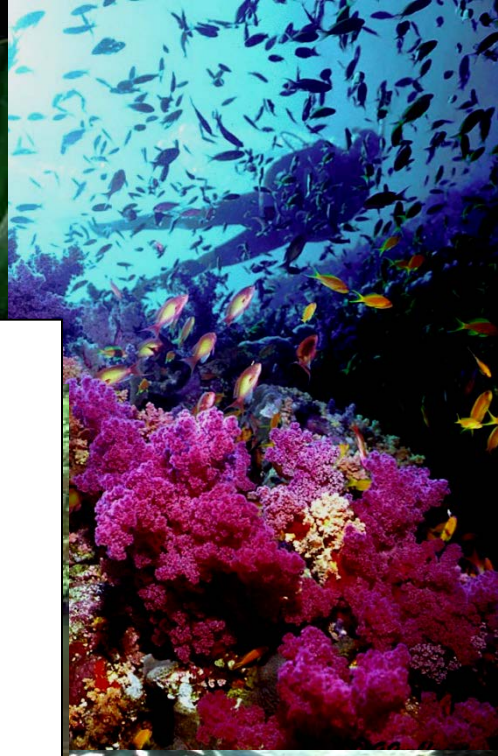
Net Present Value/ha



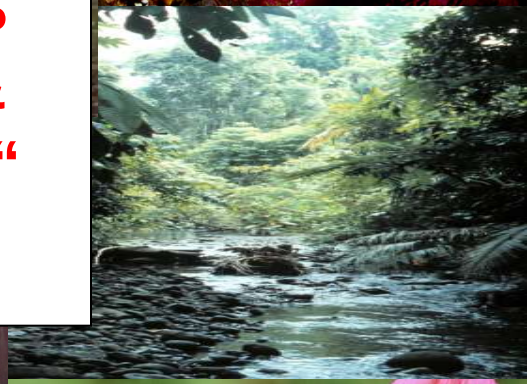
“The **total economic value** of managing ecosystems more sustainably is often higher than the value associated with conversion”

Balmford et al (2002, Science Vol 297) „Economic reasons for conserving wild nature“

Investing in nature (restoration) pays !



„Every dollar invested .... saves any-where between 7,5 and 200 US$ in damage & repair costs“
TheEconomist
(23 April 2005)



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