



NETBIOME-CSA

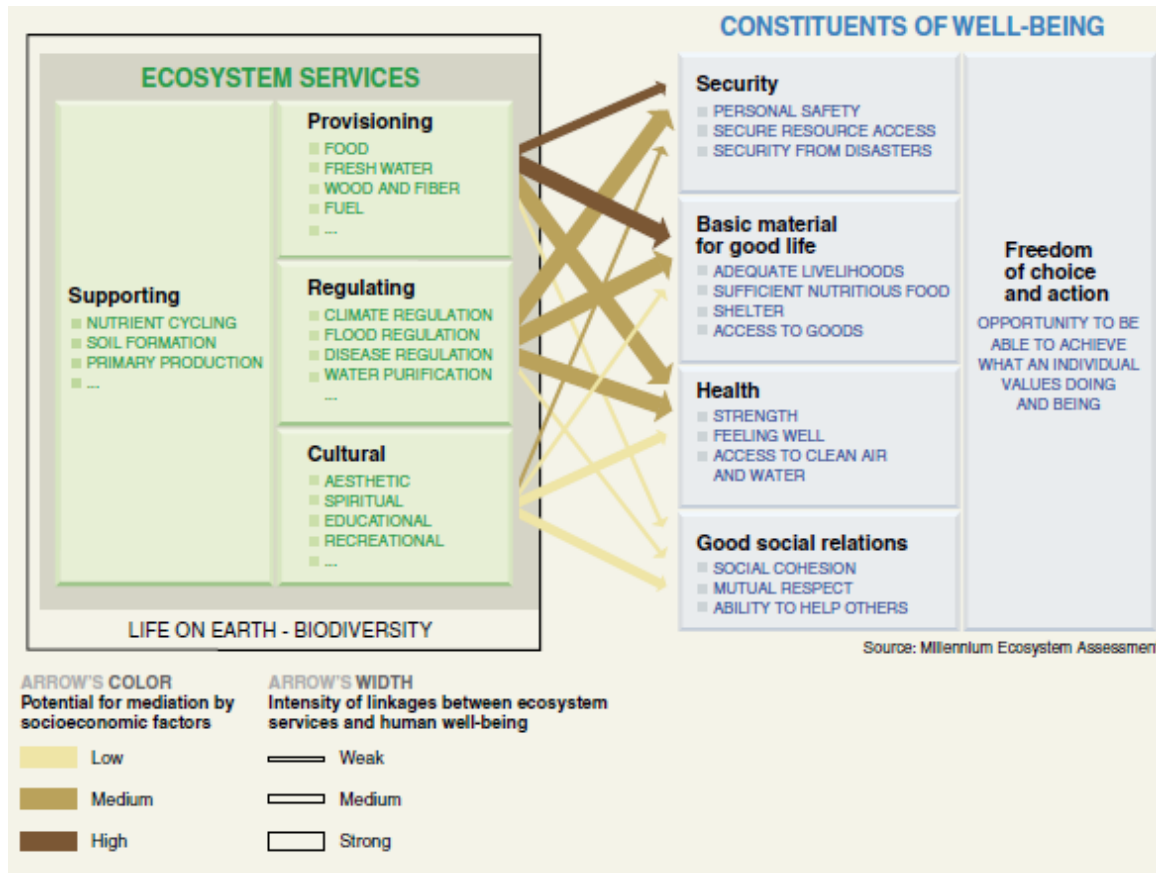
STRENGTHENING EUROPEAN RESEARCH COOPERATION FOR SMART
AND SUSTAINABLE MANAGEMENT OF TROPICAL AND SUBTROPICAL BIODIVERSITY
IN OUTERMOST REGIONS AND OVERSEAS COUNTRIES AND TERRITORIES

Evidence on the economic value of biodiversity and ecosystem services in ORs & OCTs



Ministerie van Economische Zaken,
Landbouw en Innovatie

The ecosystem services approach



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Millennium Ecosystem Assessment (2005)

The concept of economic valuation

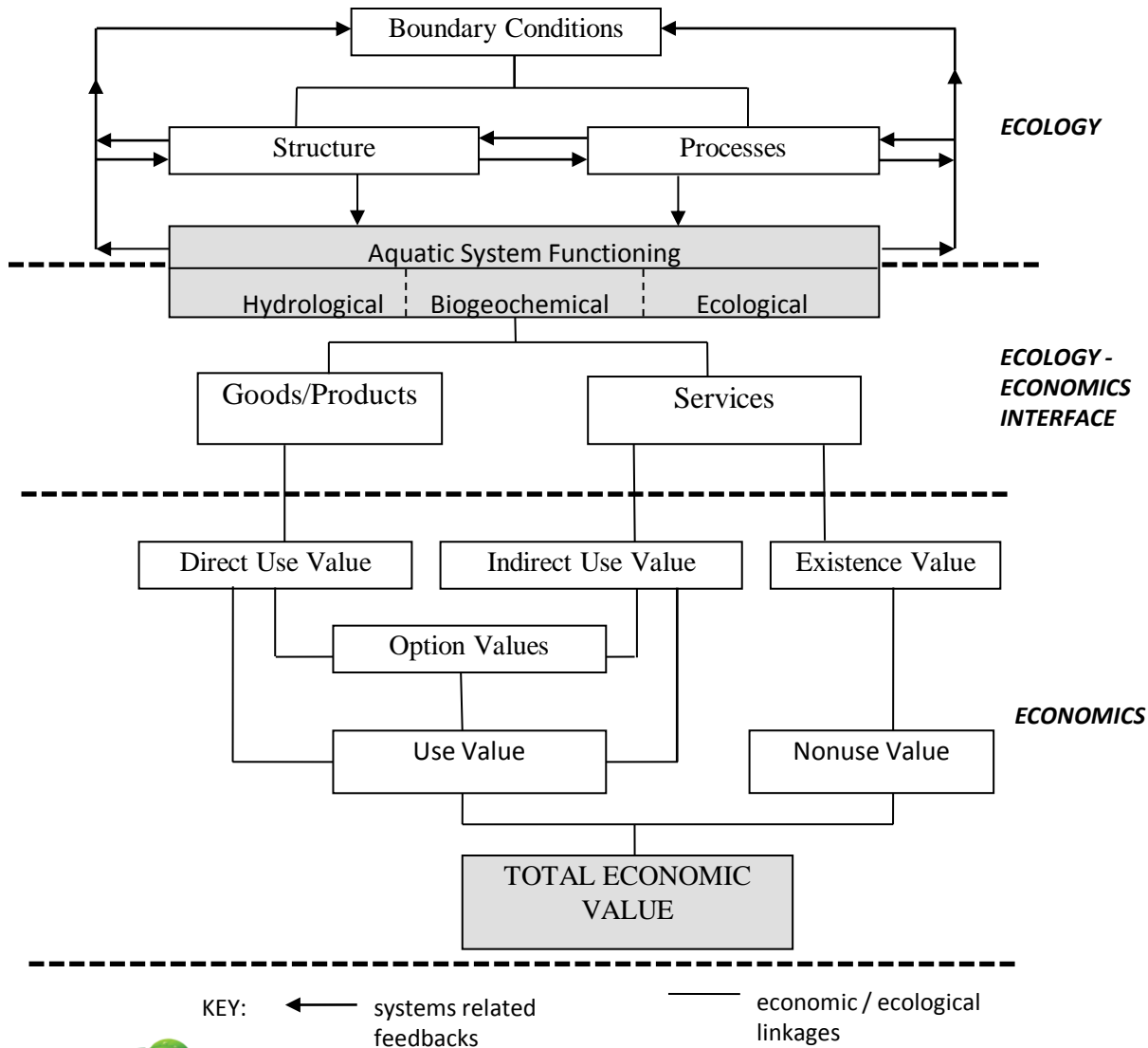
Assumption: natural ecosystems supply benefits to human society (ecosystem services)

Cost-benefit analysis (CBA) in environmental policy-making

- Introduction or reform of government policies
- Implementation of investment projects
- Justification of opportunity costs associated with nature protection

Awareness raising (cost of policy inaction)





An ecosystem's Total Economic Value (TEV)

Adapted from Turner et al. (2000)

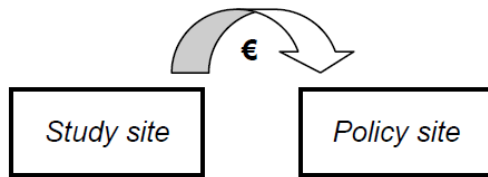
Valuation approaches

Approach		Method	Value
Market valuation	Price-based	Market prices	Direct and indirect use
	Cost-based	Avoided cost	Direct and indirect use
		Replacement cost	Direct and indirect use
		Mitigation / Restoration cost	Direct and indirect use
	Production-based	Production function approach	Indirect use
Factor Income		Indirect use	
Revealed preference		Travel cost method	Direct (indirect) use
		Hedonic pricing	Direct and indirect use
Stated preference		Contingent Valuation	Use and non-use
		Choice modelling/ Conjoint Analysis	Use and non-use
		Contingent ranking	Use and non-use
		Deliberative group valuation	Use and non-use

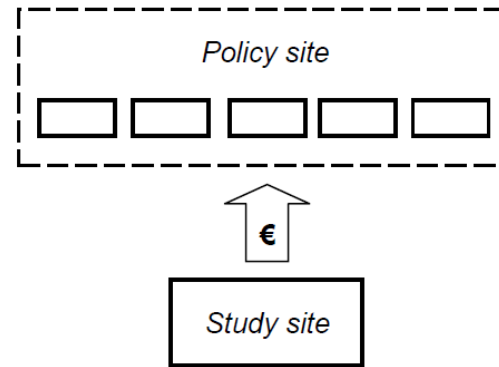
TEEB (2010)



Valuation approaches II



Benefit Transfer



Scaling up

Review of valuation literature

Literature review focused on ORs and OCTs, but other relevant locations were also taken into account

Existing databases were consulted, e.g. TEEB, EVRI, AgEcon

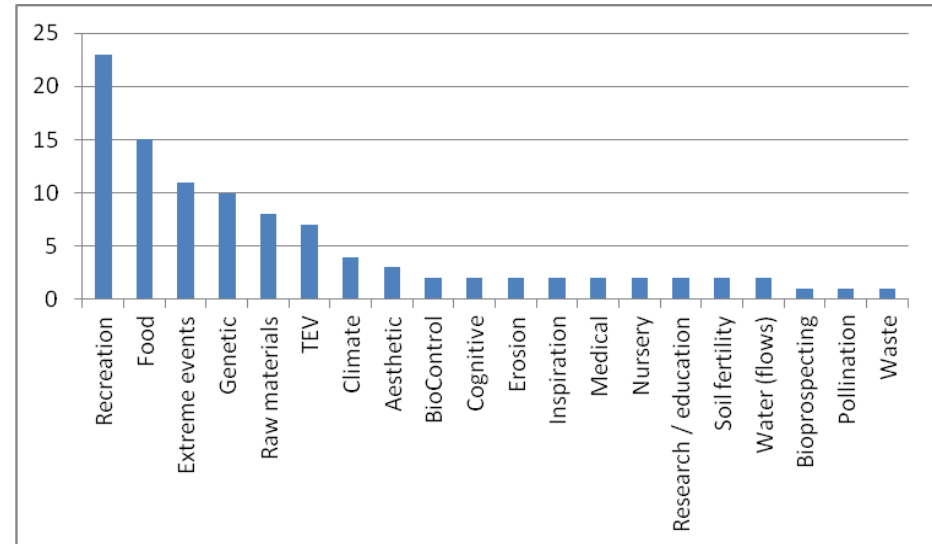
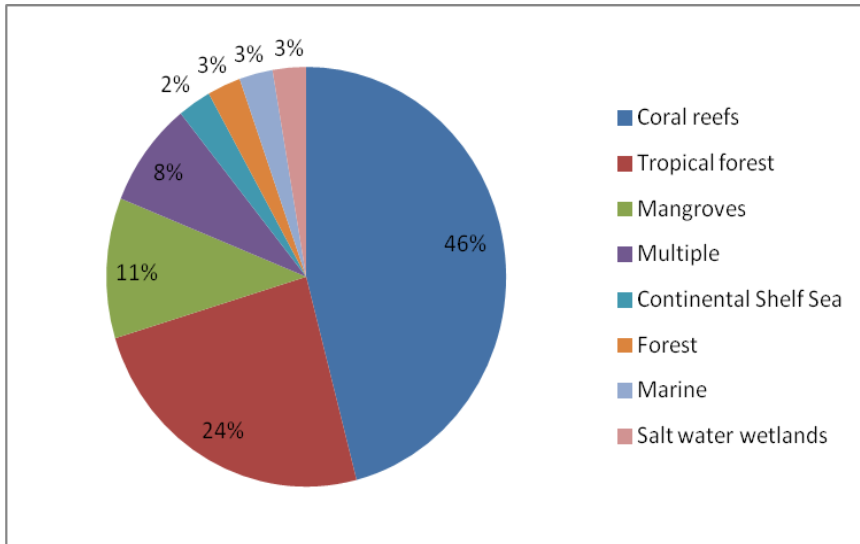
39 valuation studies identified, containing a total of 109 individual ecosystem service valuations

- Spread over different locations and ecosystems
- Values not necessarily reported in a uniform format (€/ha/year, €/household/year, €/visit)
- Wide ranges of values for specific ecosystem services

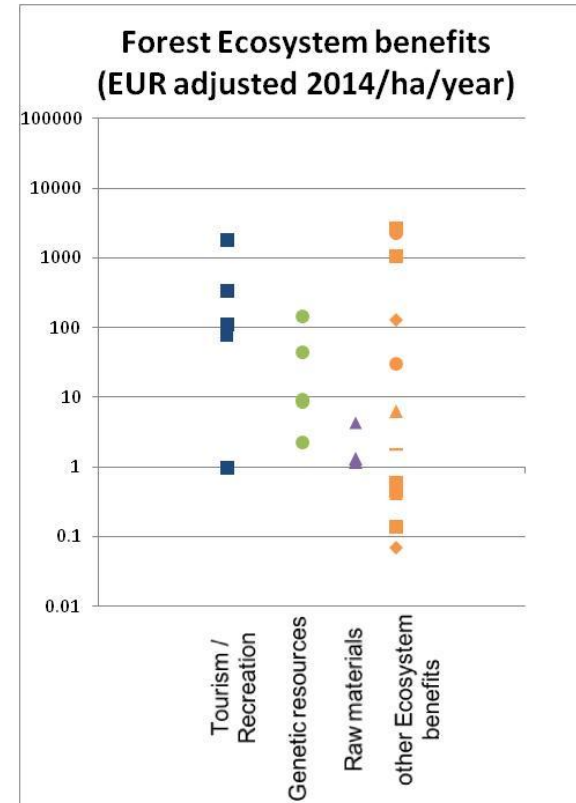
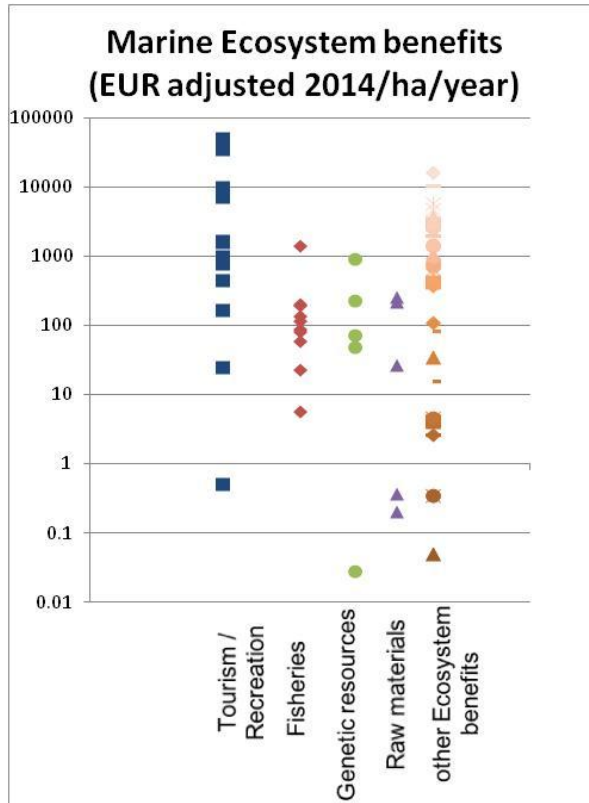
Literature was compiled in a comprehensive database (to be updated throughout the project), allowing for – limited – statistical analysis of the values



Overview of results



Analysis of values



Uptake of results?

General observation: limited uptake of valuation results by policy-makers (world-wide)

Reasons include general skepticism towards economic valuation, lack of trust in underlying methodologies, low relevance of cost-benefit analysis in the policy process, complexity of political agendas.

Best-practice example identified: Set of valuation studies carried out in Bonaire, Dutch Caribbean

- Studies commissioned by the Ministry of Economic Affairs (MinEZ) as part of the national TEEB programme
- “What's Bonaire Nature Worth” project carried out by the Institute for Environmental Studies (IVM) and their partners
- Distinctive feature: stakeholder were involved throughout the whole process, which ensured acceptability of the results
- Impact observed: additional funding for nature protection in the Dutch Caribbean, construction of a waste-water treatment plant in order to protect the local coral reef
- Further valuation studies are planned



Take-home messages

- Reasonable amount of valuation data from ORs and OCTs available
- Economic valuations can potentially play a critical role in political decision-making
- Uptake of results primarily depends on the involvement of stakeholders in the process (“user-driven research”)
- ‘Windows of opportunity’ are relevant
- Coordination of ongoing and planned research efforts could create synergies



Literature cited

- Millennium Ecosystem Assessment (2005). Ecosystems and Human Well-being: Synthesis. Island Press, Washington, DC.
- TEEB (2010). The Economics of Ecosystems and Biodiversity: Ecological and Economic Foundations. Edited by Pushpam Kumar. Earthscan, London and Washington.
- Turner, R.K. et al (2000). Ecological-economic analysis of wetlands: scientific integration for management and policy. Ecological Economics 35 (2000), pp. 7-23.



Thank you very much!

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