



Valuing ecosystems and biodiversity in relation to collective action

Erik Gómez-Baggethun

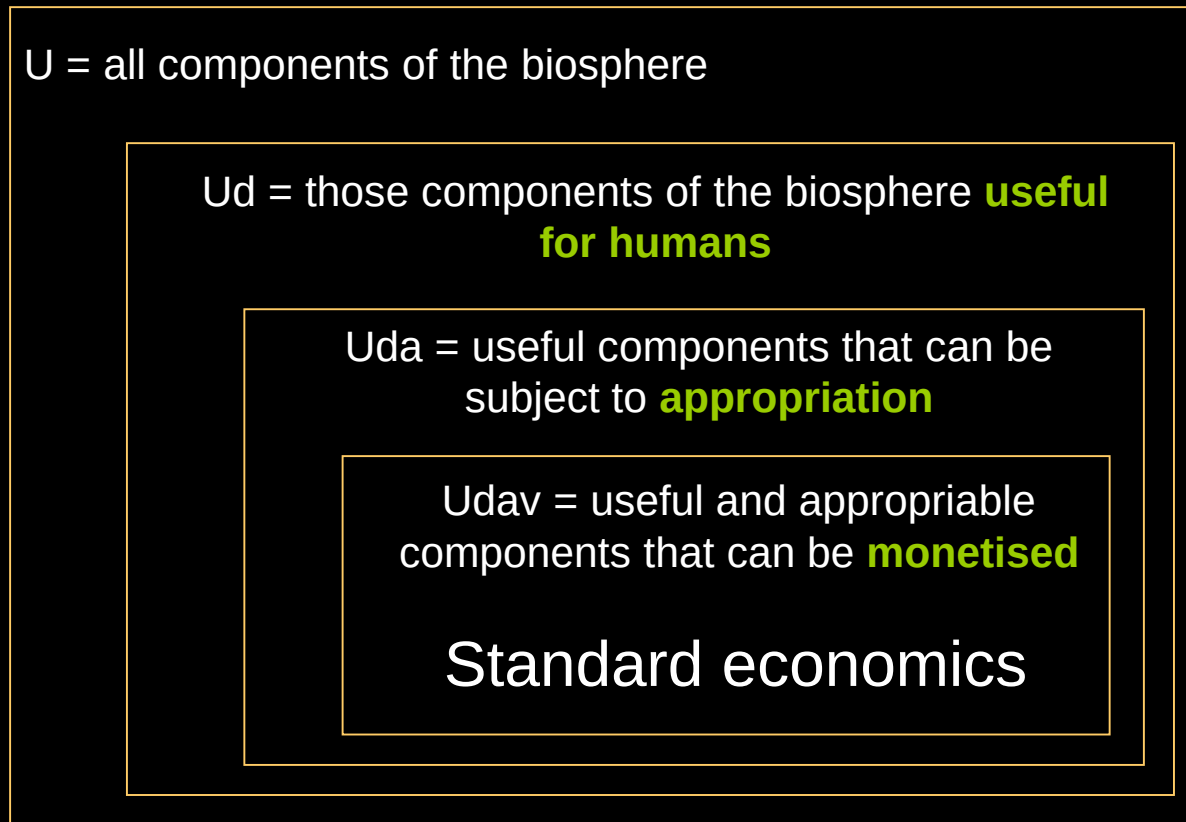
Norwegian Institute of Nature Research - NINA
Environmental Change Institute, University of Oxford



Dialogue Workshop on Assessment of Collective Action of Indigenous Peoples and Local Communities in
Biodiversity Conservation and Resource Mobilization, 11-13 June 2015, Panajachel, Guatemala

Why valuing nature?

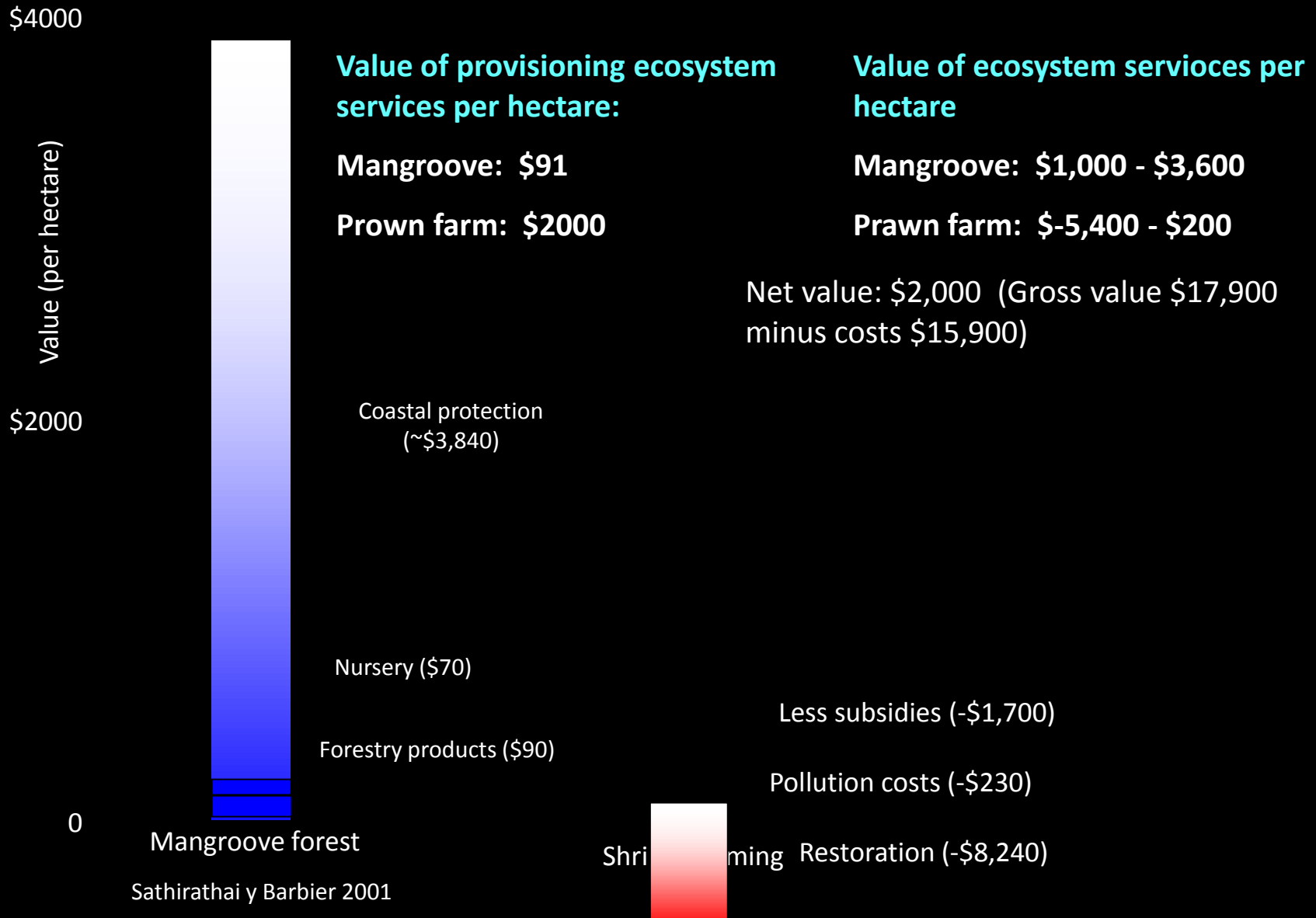
The scope of conventional economic analysis: the COMMODITY



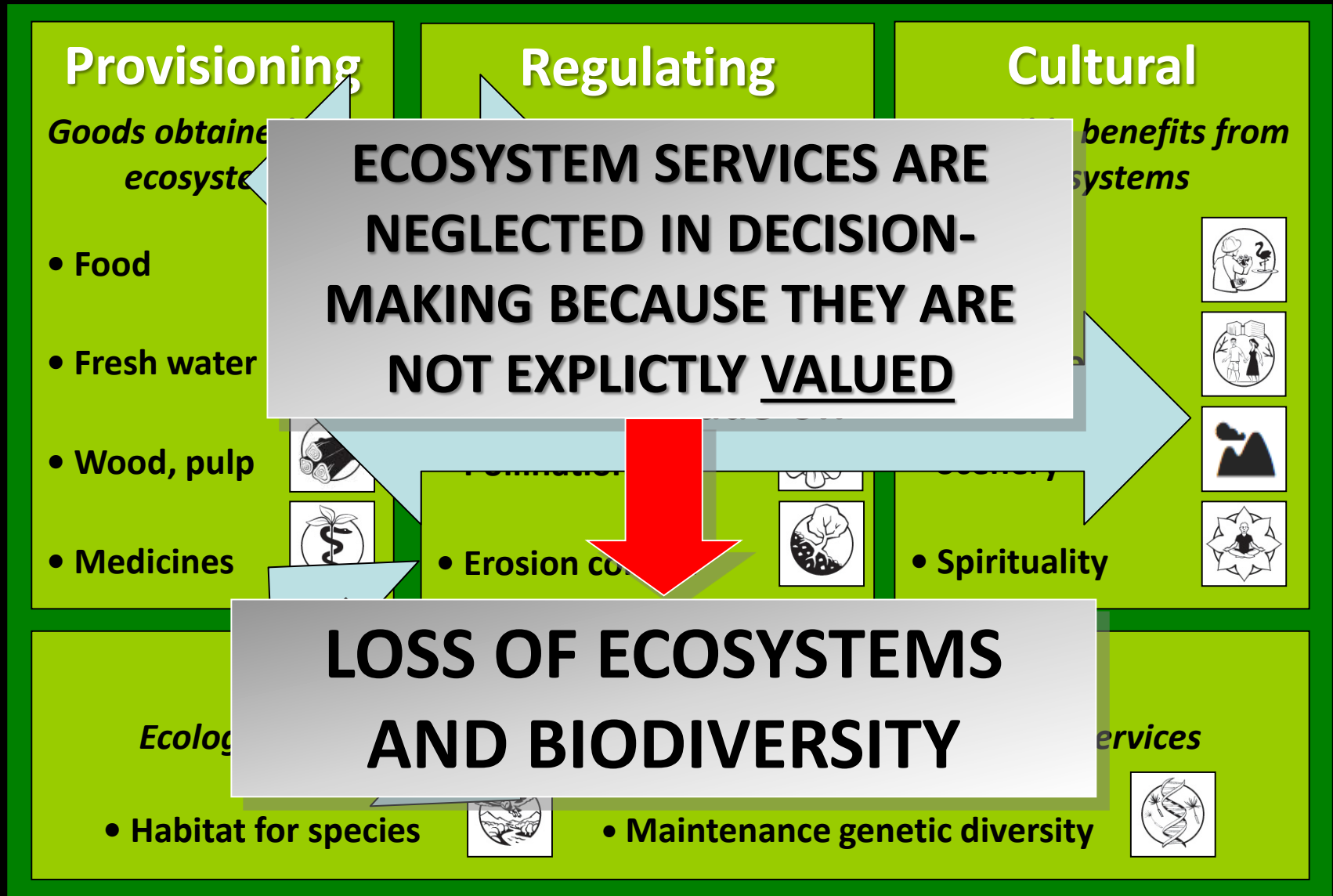
Conventional economics leaves most **ecosystem services** outside its scope of analysis

Proposed solution: get the prices right and set up economic instruments

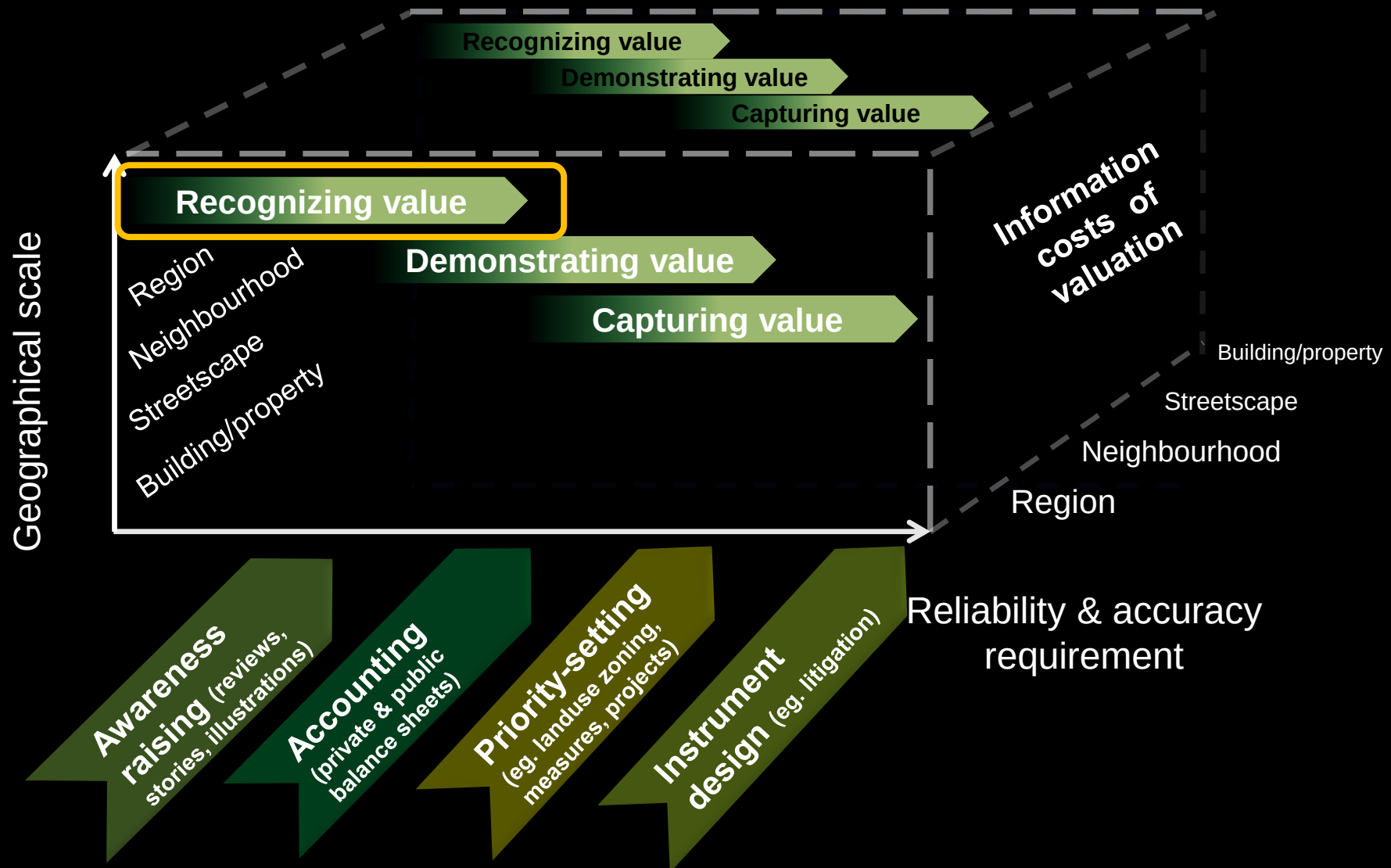
Why valuing nature?



Why valuing nature?



Recognizing the values of nature

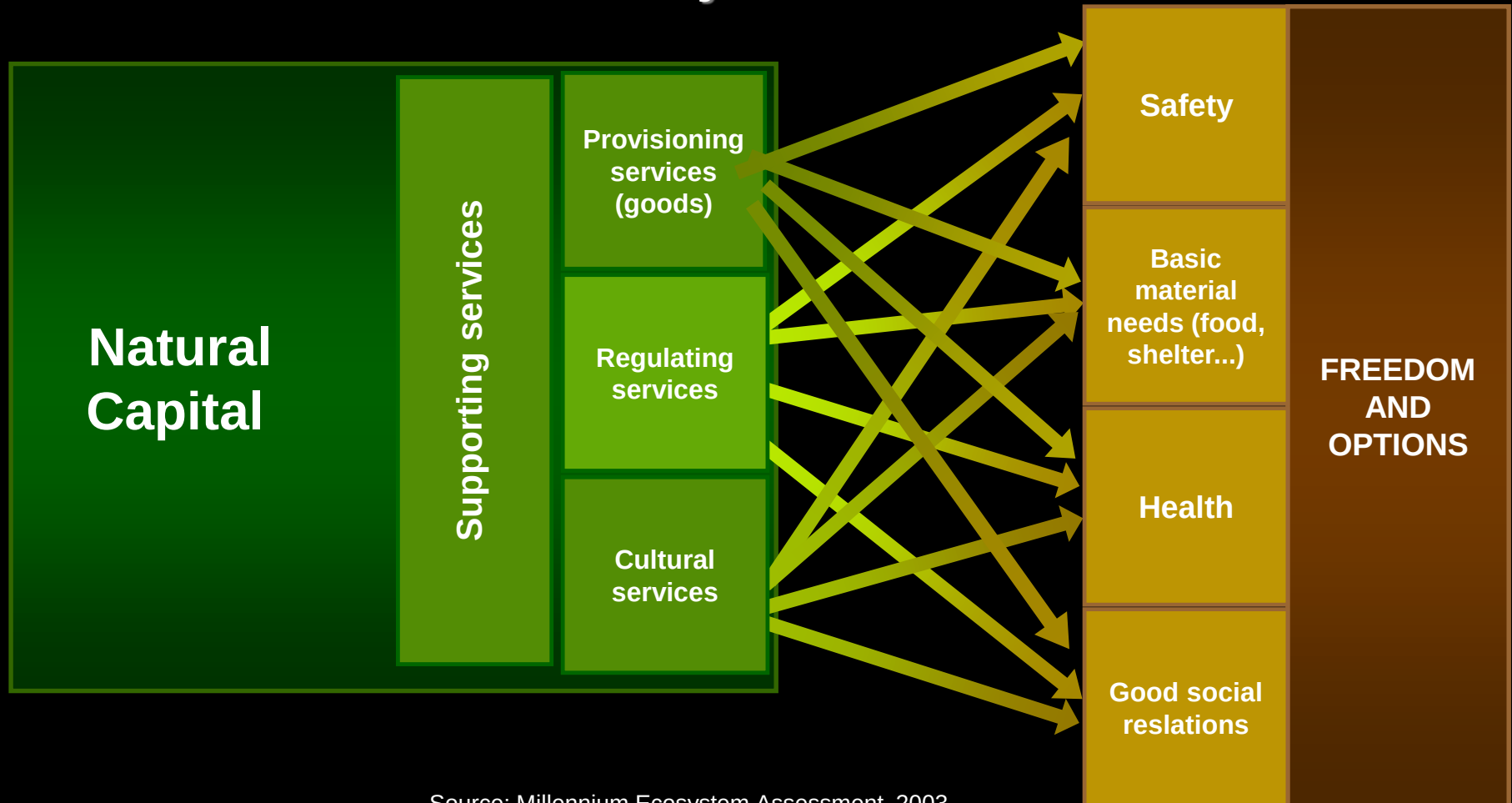


Recognizing the values of nature

Recognizing value

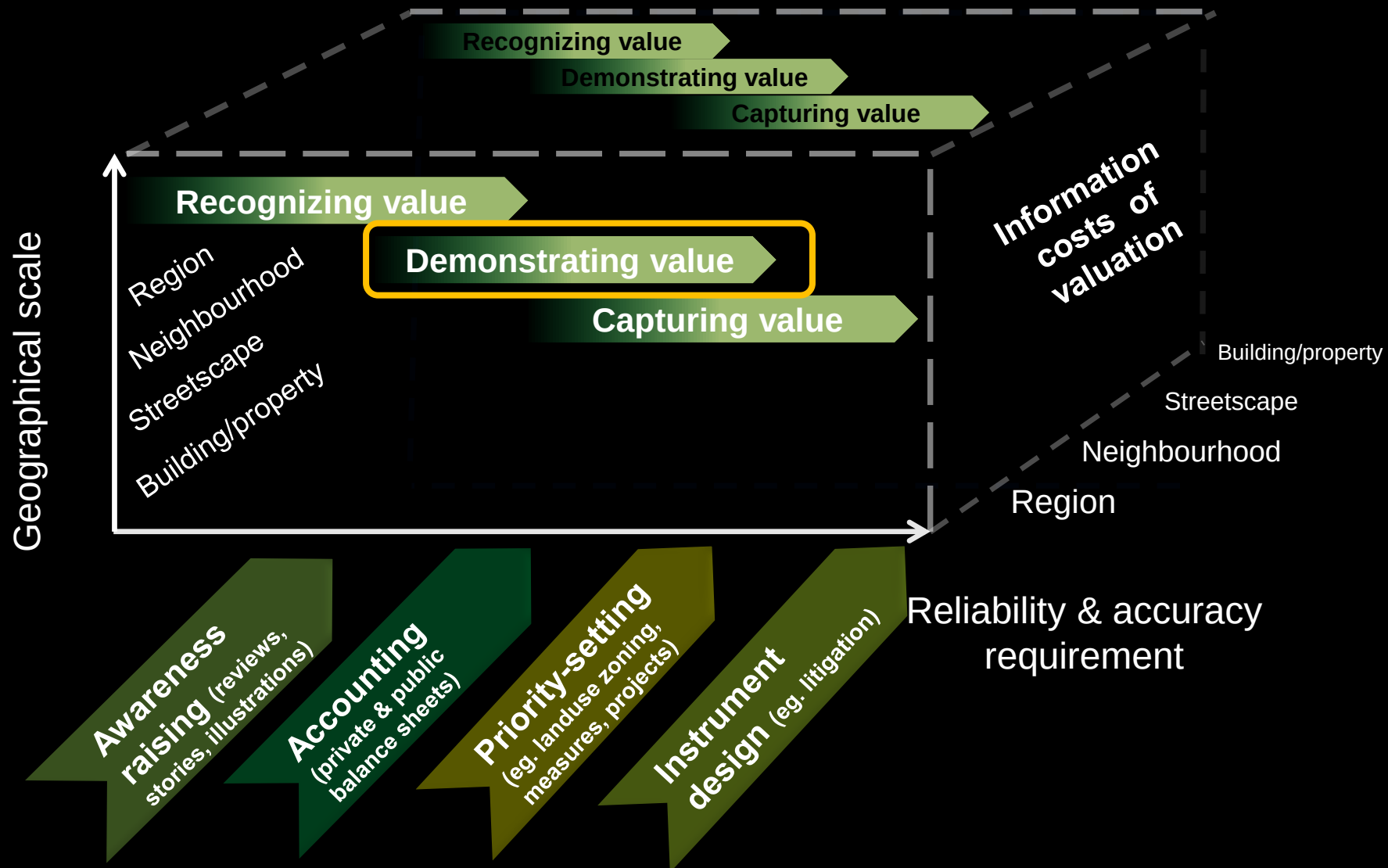
ECOSYSTEM SERVICES:

'benefits human obtain from ecosystems'



Source: Millennium Ecosystem Assessment, 2003

Demonstrating the values of nature



Demonstrating the values of nature

Demonstrating value

The Economics of Ecosystems & Biodiversity (TEEB)



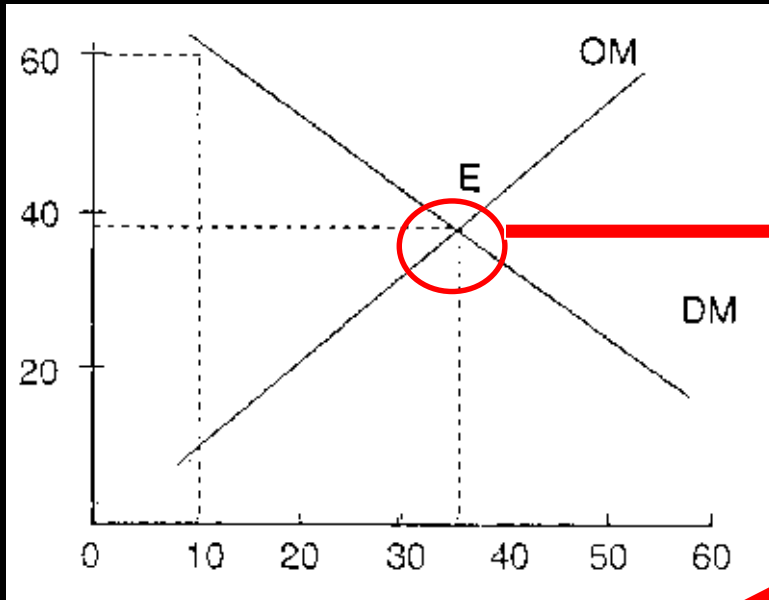
“Potsdam Initiative – Biological Diversity 2010”

**Assessment of economic costs of inaction in relation to
global biodiversity loss**

*Global study on the economic benefits of biodiversity and
ecosystem services and the costs derived from their loss*

Demonstrating the values of nature

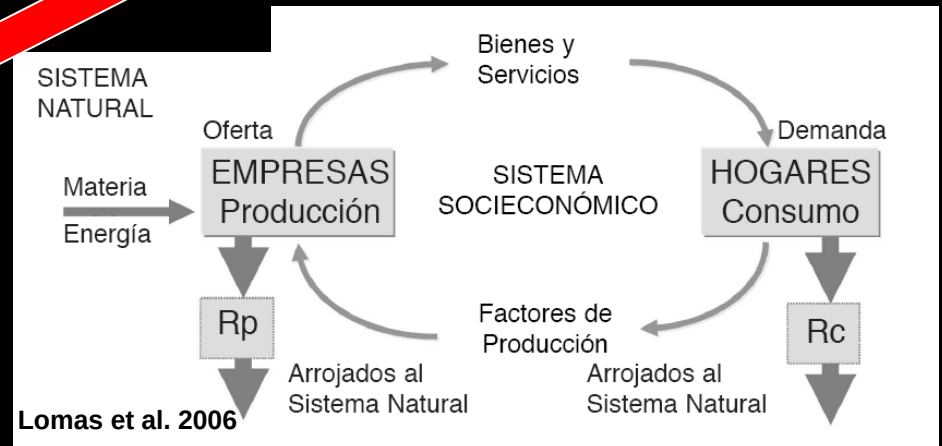
Demonstrating value



**PRICE AS THE BEST
INDICATOR OF MARKET
VALUE**

**BUT... MOST ECOSYSTEM
SERVICES LACK MARKETS
AND HAVE NO PRICE**

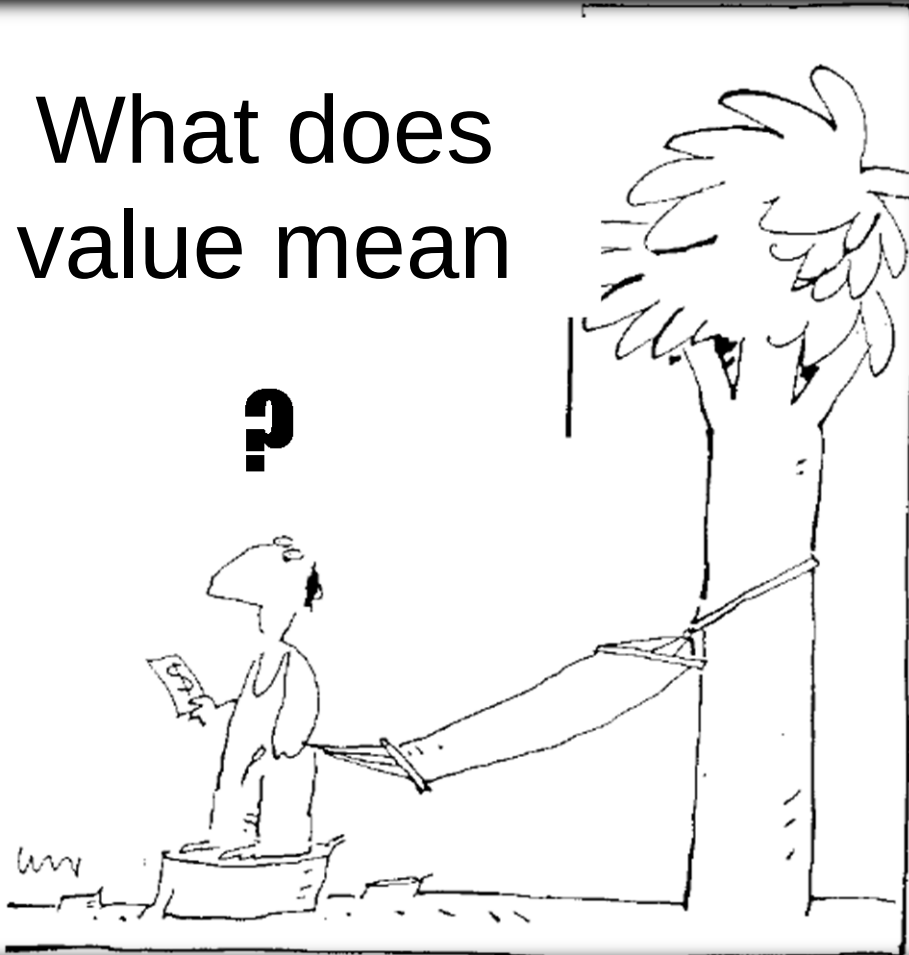
**DOES THIS MEAN
THAT THEY DO NOT
HAVE VALUE?**



Demonstrating the values of nature

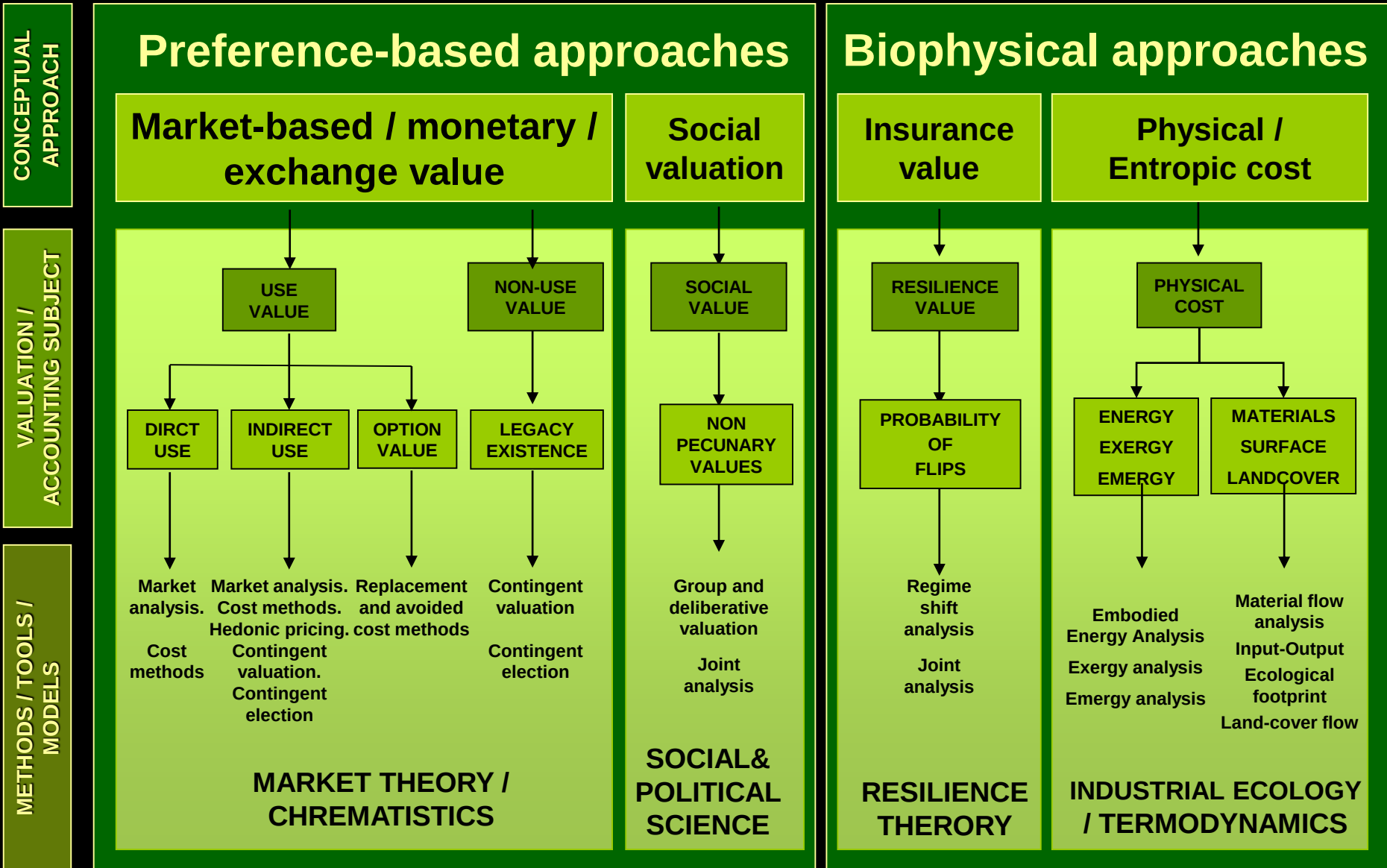
What does
value mean

?



- Within the discourse about ES ‘value’ is easily misread as merely denoting monetary value
- Oxford Dictionary defines ‘value’ as “*the regard that something is held to deserve; the importance, worth, or usefulness of something*”. “[one’s judgment of what is important in life”].
- Values not only derived from preferences but also from principles and convictions
- Valuation is about eliciting the importance of things: multiple valuation languages needed

Demonstrating the values of nature



Biophysical assessment

Valuation based on human principles & preferences

Non-monetary
valuation

BIODIVERSITY ASSESSMENT

Mapping, Measurement & Modelling

Indicator development

Species richness, rarity, diversity, and
vulnerability assessment

ECOLOGICAL IMPACT METHODS

Embodied Energy/Exergy/Energy analysis

Ecological / water / carbon footprint

Human appropriation of NPP

Input-output analysis

OPINION-BASED METHODS

Group and deliberative valuation

Q-Methodology, Mental models

Preference ranking

NETWORK ANALYSIS

Social network analysis

DISCOURSE ANALYSIS

Literature, photo, media interpretation

DIRECT MARKET VALUATION

Market analysis

Production function

INDIRECT MARKET VALUATION

Replacement, restoration, avoided cost

Hedonic pricing

Travel cost method

SIMULATED MARKET VALUATION

Contingent valuation,

Choice modelling

Monetary
valuation

Ecological values

Biophysical
and energy
values

Resilience
insurance
value

Ecosystem
quality
values

Sociocultural values

Symbolic,
aesthetic
values

Environmental
justice
Ethical values

Relational
and place
values

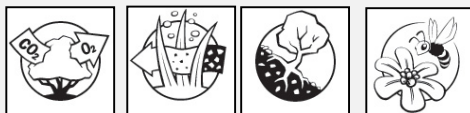
Economic values

Direct
use
values

Indirect
use
values

Non
use
values

Regulating services



Cultural services



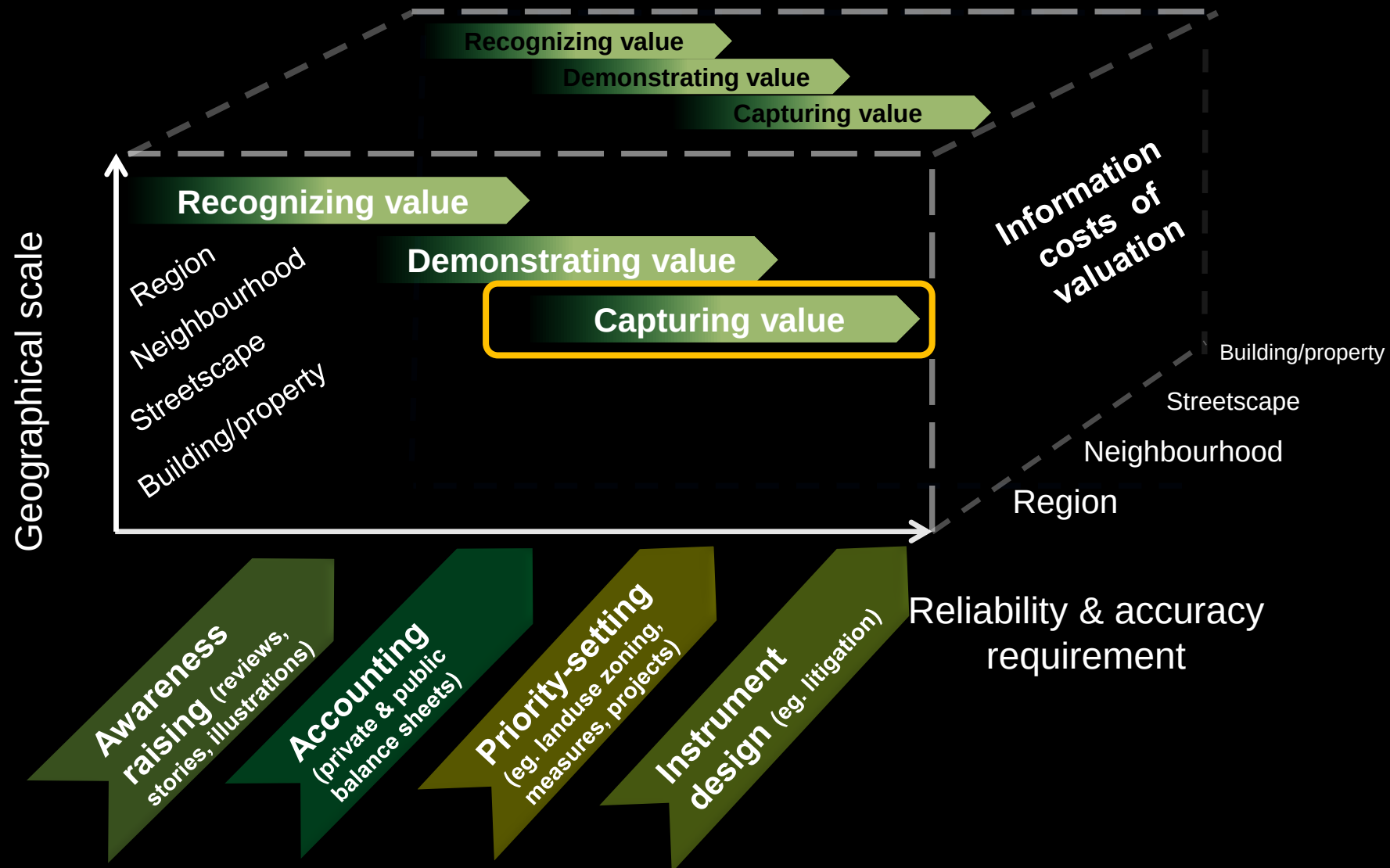
Provisioning services



Supporting /Habitat / maintenance services



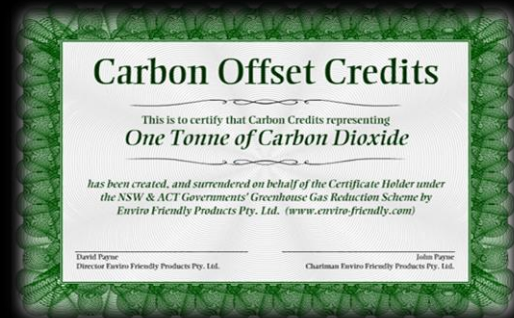
Capturing the values of nature



Capturing the values of nature



MES:
Polluter pays principle



PES:
Steward gets principle



The limits of markets and the case for collective action

Commodification of nature

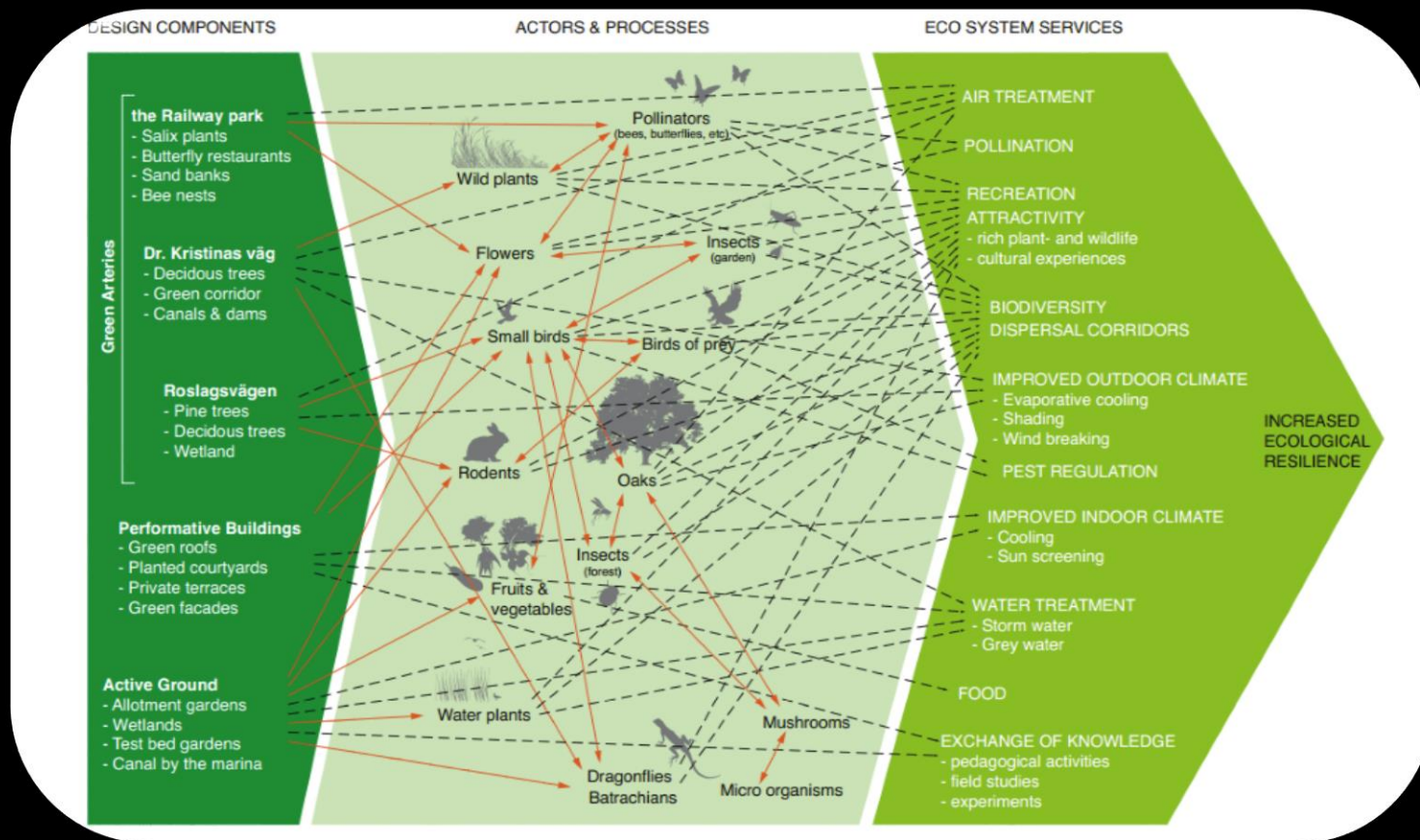
The reach of market values into aspects of life traditionally governed by non-market norms stands amongst one of the most significant developments of our time



The limits of markets and the case for collective action

Capturing value

- **Biophysical limits:** uncooperative nature of environmental commodities for being non-fungible or separable into discrete tradable units



The limits of markets and the case for collective action

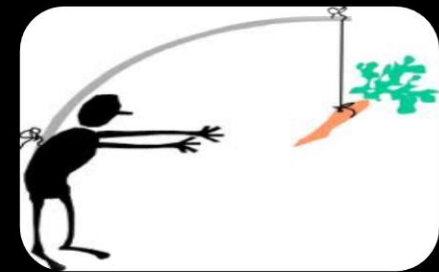
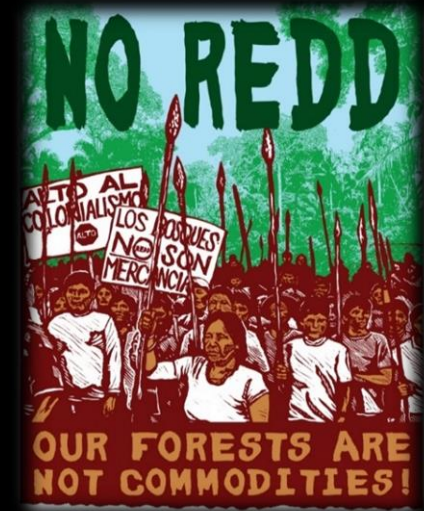
Capturing value

- **Institutional limits:** Public good nature of most ES makes exclusion technically difficult and economically expensive

		RIVALRY	
		Low	High
EXCLUDABILITY	Difficult	Public	CPRs
	Easy	Club	Private

The limits of markets and the case for collective action

- **Sociocultural & political limits:** cultural barriers to extend markets to domains traditionally been governed by non-market norms
 - **Indigenous groups (& others) react to commodification of environmental policy:** Reluctance towards utilitarian framings of “Mother earth” + restrictions in access to public and common goods
 - In some places attempts to commodity essential ecosystem services has encountered strong **societal opposition** (e.g. Water war in Bolivia)
 - **Uncertainty with regard to behavioral and motivational changes** (value crowding effects): frame shifting: fines >> prices & indulgencies...



Concluding remarks

- **Value** refers both to **importance** (economic, cultural, ecological), and to **principles** (justice, virtue, ethics). Importance of acknowledging **multiple values** and **worldviews**
- Nature valuation needs to expand its traditional focus: from money to multiple values, from individual consumer values to shared and collective values
- Used beyond its appropriate context of applicability, monetary valuation leads to the **tragedy of well intentioned valuation**, providing discursive framings and metrical technology for undesirable commodification of ecosystem services
- To value or not to value? That is not the question. Necessity to demarcate the domain of money and markets in environment policy. Then we can decide which **externalities to internalize, which internalities to externalize**
- Limited scope for MBIs in ecosystem services governance due to biophysical, institutional and cultural boundaries. Governing environmental common / public goods requires **international cooperation, public regulation** and **collective action**

Erik Gómez-Baggethun

Norwegian Institute of Nature Research - NINA



Erik.Gomez@nina.no