Sustainable Aggregates Supply Planning & EU Green Economy Vision: rethinking the development model

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IN THIS PRESENTATION

1. Sustainable Aggregates Supply Planning vs. EU development process – similarities in complexity

2. Common challenges

3. In search of the implementation tools

Sustainable Aggregates Supply Planning vs. EU development process – similarities in complexity

Sustainable Aggregates Supply Planning	EU – transnational Sui Generis interstate arrangement
Question of business and politics	Shaping the environment for business and *new politics / policies*
Affecting multiple stakeholders	Working on a common development paradigm, trying to be inclusive, equal opportunities agent, *united in diversity*
Has impact on the environment	Is very concerned for the environment
Is facing pressures to *modernize, go green, complement production processes*	Is facing pressure to reduce democratic deficit, *implement principles of equality not uniformity*
Is a strong generator of economic growth with multiplying effect	Is is search of a new development paradigm – *which lead to follow*
Affects human wellbeing on several levels	Affects human wellbeing *on almost all levels*
Is not only a matter of domestic politics anymore...	Identity crisis?

Sustainable Aggregates Supply Planning vs. EU development process – similarities in complexity

SOME OTHER SIMILARITIES

One might argue that EU is somewhat funded on early Sustainable Aggregates Supply Planning...

Both are *facing legitimate and legal* pressure from increasing multitude of stakeholders

This is the consequence of developing socio-economic-political circumstances

Both are also facing *new transnational reality* in their interaction in political and economy area

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Sustainable Aggregates Supply Planning vs. EU development process – similarities in complexity

IN A SENTENCE…

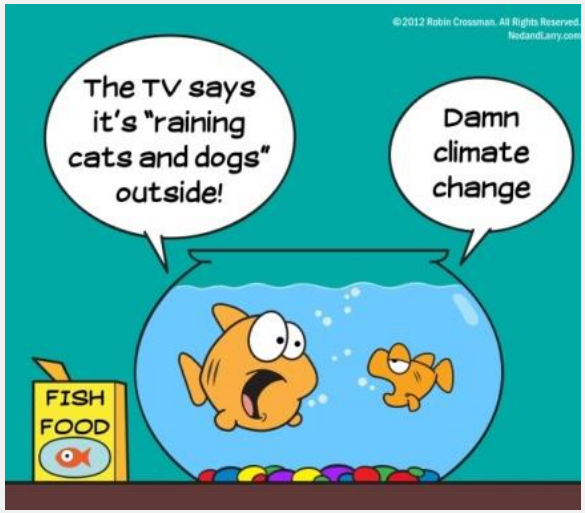
EU as a sui generis experiment and concept of Sustainable Aggregates Supply Planning have some very important intrinsic similarities.

- both affect multiple, transnational stakeholders
- both affect multiple sectors,
- both are political concepts as well as economic concepts
- both are now seen as increasingly affecting human wellbeing and the wellbeing of the environment
- **both have a problem with a lot of visionary concepts and too little tools to implement them**

Sustainable Aggregates Supply Planning vs. EU development process – similarities in complexity

CAN THEY BOTH USE THE SAME TOOLS TO SUPPORT THEIR DEVELOPMENT PROCESS?

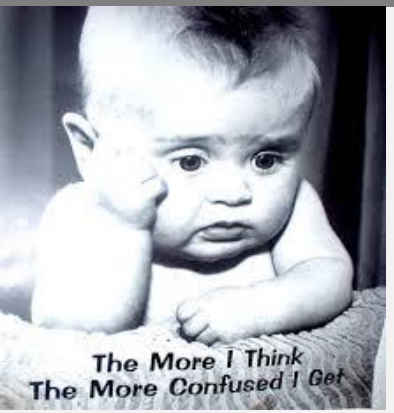
America and England are two countries divided by a common language (Oscar Wilde)



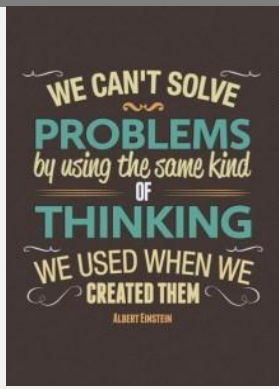
COMMON CHALLENGES

Sustainable Aggregates Supply Planning	EU – transnational Sui Generis interstate arrangement
Adopt to new-socio-economic situation – new regulators	Improve cooperation between Member states so that EU can function as a identifiable subject in international relations
Diversify in terms of new business models, implementation of new business concepts	Mitigate between member state interests and EU interest...(what is that?)
Improve public image	Improve reputation
Become more environmentally conscious	Carbon footprint
Increased resource efficicency	Adding value through cooperation
Carbon footprint	Support incentives, industries, development that help reach above challanges
Adding value through supply chain...in a sustainable way	**Develop all of its potentials...in a sustainable way**

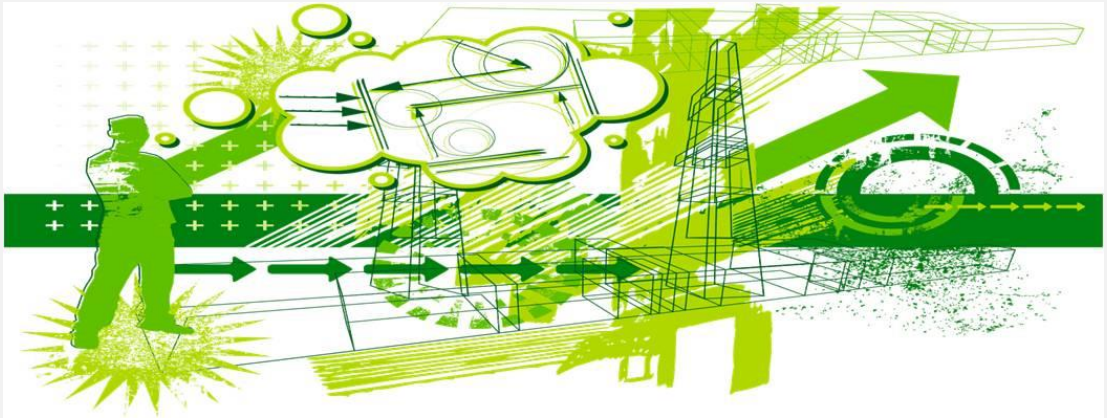
COMMON CHALLENGES



WE NEED CLEAR MESSAGES AND UNDERSTANDABLE CONCEPTS

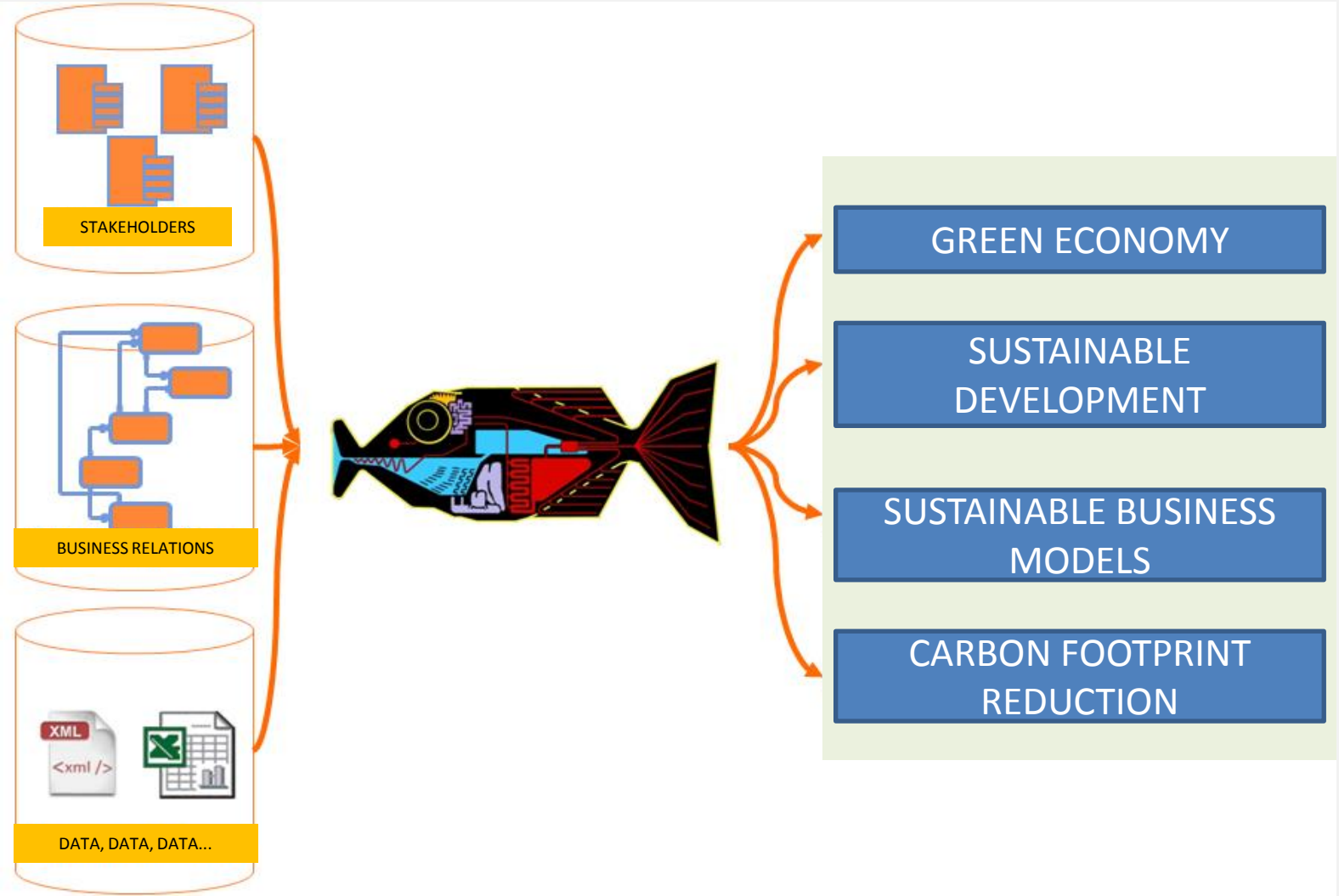


WE NEED MANAGABLE TOOLS TO IMPLEMENT THOSE CONCEPTS



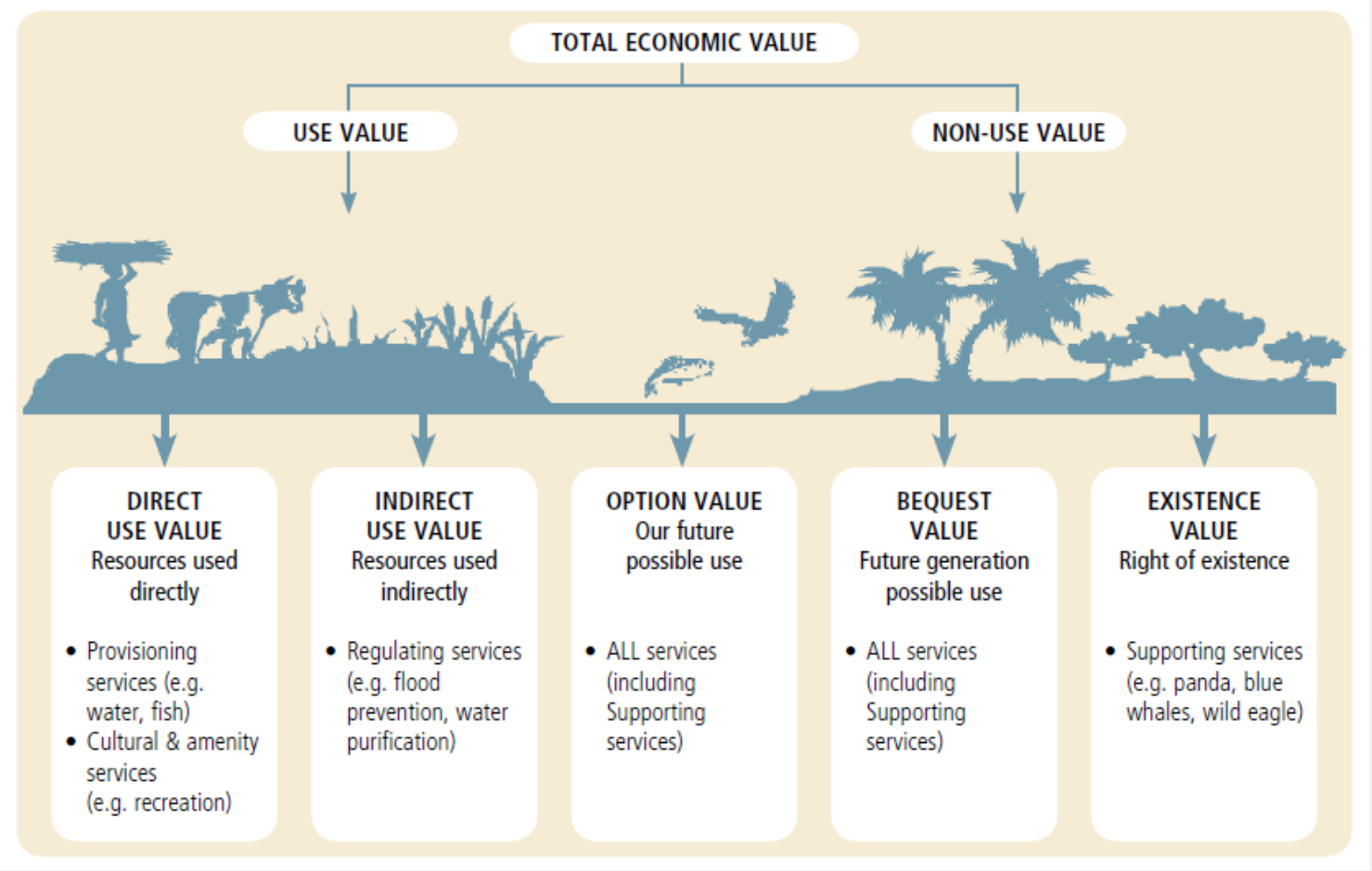
COMMON CHALLENGES

WE NEED A COMMON DENOMINATOR FOR ALL “DEVELOPMENT PROCESSES” SO THAT EVERYBODY UNDERSTANDS WHAT WE ARE TALKING ABOUT



In search of the implementation tools

ENVIRONMENTAL ECONOMICS



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ENVIRONMENTAL ECONOMICS

Ecosystem:

A dynamic mix of communities of plants, animals and micro-organisms and their non-living environment, which are connected in a functional unit.

Ecosystem services:

Benefits which humanity has from functioning of ecosystems. That includes state and the processes in the ecosystem and those benefits which arise from these processes.






In search of the implementation tools

ENVIRONMENTAL ECONOMICS

PROVISIONING SERVICES

Food

- Crops
- Domestic animals
- Fish
- Forest goods

Material

- Wood and wood products
- Fiber and resin
- Rocks and sand
- Fodder

Fresh water

- Drinking water
- Water for clening
- Water for industry
- Electricity production

Biochemical and genetic resources

- Medicinal plants
- Biocide
- Food additives

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ENVIRONMENTAL ECONOMICS

REGULATING SERVICES

- Global climate
- Local climate (temperature, rainfall)

Climate control

- Binding and storage of CO_2 in plants
- Air quality
- Mitigating climate change

CO_2 sequestration

- Self-cleaning ability of water
- Some polluttants are bound by plants

Water cleaning

- Flood protection
- Fire protection

Prevention or mitigation of extreme events

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ENVIRONMENTAL ECONOMICS

REGULATING SERVICES

- Plants reduce the possibility of landslide

Erosion prevention

- Decomposition of organic matter
- Soil aeration

Conservaion of soil quality

- The transfer of pollen from male to female parts of plants

Pollination

- Predators regulate the number of pests

Disease and pest control

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ENVIRONMENTAL ECONOMICS

CULTURAL SERVICES

- Camping
- Observation of animals and plants

Tourism

- Hiking
- Biking
- …

Recreation

- Beauty of nature
- inspiration

Aesthetic value of ladsape

- Search for peace and relaxation in nature

Spiritual relaxation

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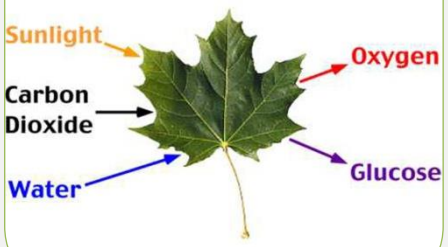
ENVIRONMENTAL ECONOMICS

SUPPORTING SERVICES

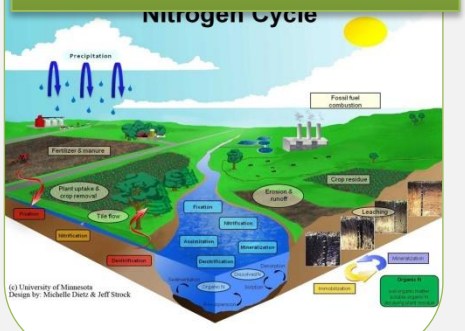
- Formation of biological material through the process of photosynthesis and assimilation of nutrients

Primary production



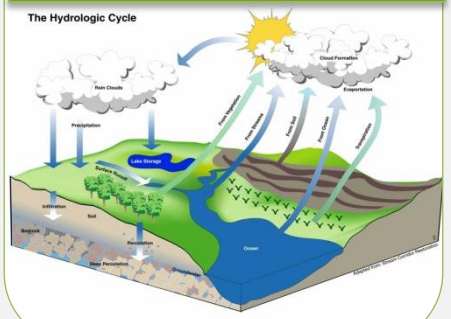
- Circulation of nutrients (nitrogen, sulfur, phosphorus, carbon, ...) between organisms and the atmosphere.

Nutrient cycling



- Circulation of water through the ecosystem
- Water enters the plant, evaporates from them and then returns to earth as rain.

Water cycling



- Population maintainence
- Resilence of ecosystems

Animal and plant habitat

In search of the implementation tools

ECONOMIC EVALUATION OF ECOSYSTEM SERVICES IS ASSIGNING VALUE TO ECOSYSTEM SERVICES THAT SURROUND US

VALUE # PRICE

WE ALL UNDERSTAND EUROS / DOLLARS

In search of the implementation tools

Method	Applicable to…	Description and Importance	Constraints and limitations
Market Price Method	Direct Use values, especially wetland products.	The value is estimated from the price in commercial markets (law of supply and demand)	Market imperfections (subsidies, lack of transparency) and policy distort the market price.
Damage Cost Avoided, Replacement Cost or Substitute Cost Method	Indirect Use Values: coastal protection, avoided erosion, pollution control, water retention…	The value of organic pollutant or any other pollutant's removal can be estimated from the cost of building and running a water treatment plant (substitute cost). The value of flood control can be estimated from the damage if flooding would occur (damage cost avoided).	It is assumed that the cost of avoided damage or substitutes match the original benefit. But many external circumstances may change the value of the original expected benefit and the method may therefore lead to under- or over-estimates. Insurance companies are very interested in this method.
Travel Cost Method	Recreation and Tourism	The recreational value of a site is estimated from the amount of money that people spend on reaching the site.	This method only gives an estimate. Over-estimates are easily made as the site may not be the only reason for traveling to that area. This method also requires a lot of quantitative data.
Hedonic Pricing Method	Some aspects of Indirect Use, Future Use and Non-Use Values	This method is used when wetland values influence the price of marketed goods. Clean air, large surface of water or aesthetic views will increase the price of houses or land.	This method only captures people's *willingness to* pay for perceived benefits. If people are not aware of the link between the environment attribute and the benefits to themselves, the value will not be reflected in the price. This method is very data intensive.

In search of the implementation tools

Method	Applicable to…	Description and Importance	Constraints and limitations
Contingent Valuation Method	Tourism and Non-Use values	This method asks people directly how much they would be willing to pay for specific environmental services. It is often the only way to estimate the Non-Use values. It is also referred to as a "stated preference method".	There are various sources of possible bias in the interview techniques. There is also controversy over whether people would actually pay the amounts stated in the interviews. It is the most controversial of the non-market valuation methods but is one of the only ways to assign monetary values to non-use values of ecosystems that do not involve market purchases.
Contingent Choice Method	For all wetland goods and services	Estimate values based on asking people to make tradeoffs among sets of ecosystem or environmental services	Does not directly ask for willingness to pay as this is inferred from tradeoffs that include cost attribute. This is a very good method to help decision makers to rank policy options.
Benefit Transfer Method	For ecosystem services in general and recreational uses in particular	Estimates economic values by transferring existing benefit estimates from studies already completed for another location or context.	Often used when it is too expensive to conduct a new full economic valuation for a specific site. Can only be as accurate as the initial study. Extrapolation can only be done for sites with the same gross characteristics.
Productivity Method	For specific wetland goods and services: water, soils, humidity in the air…	Estimates the economic values for wetland products or services that contribute to the production of commercially marketed goods	The methodology is straightforward and data requirements are limited but the method only works for some goods or services.

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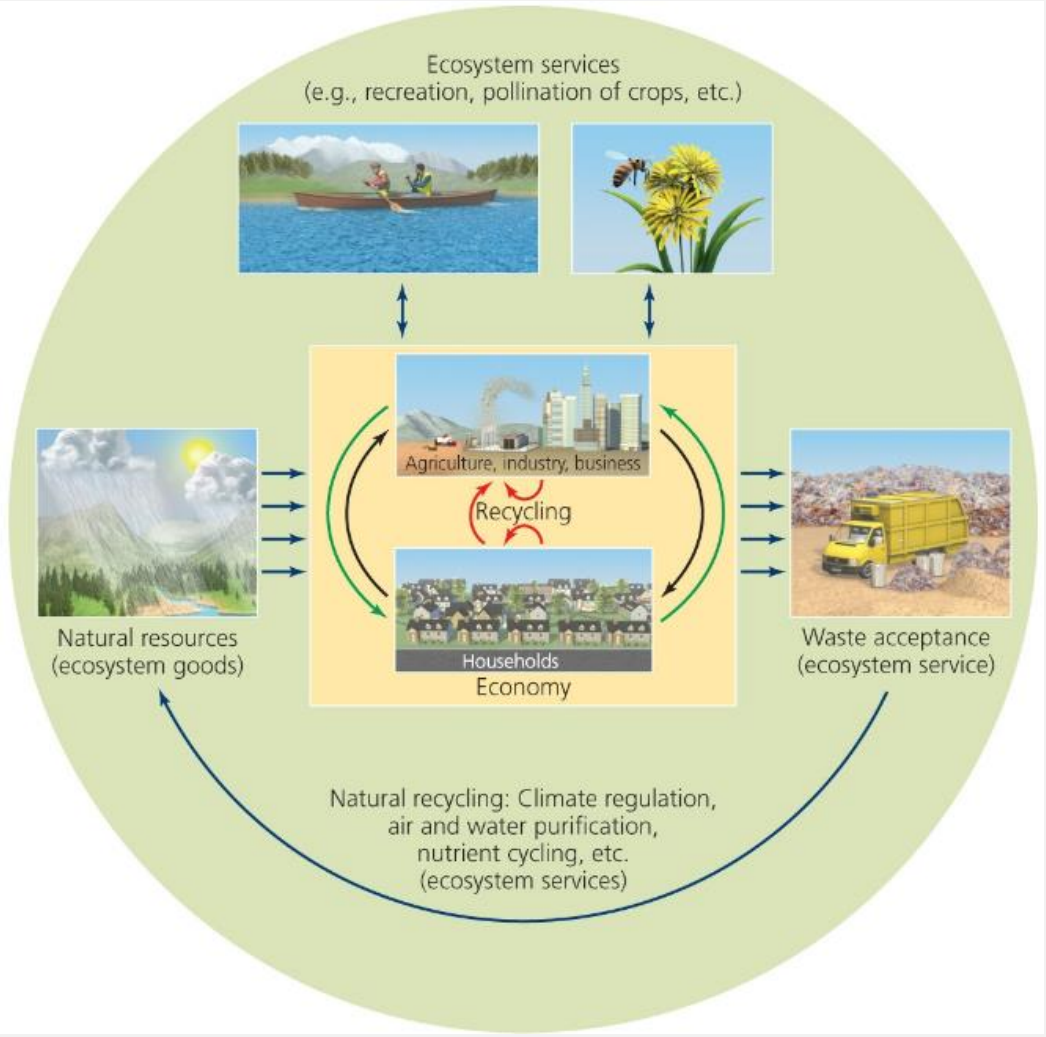

Environmental economics shows us (mainly) monetary interactions of interference with the ecosystem services in this economic system.

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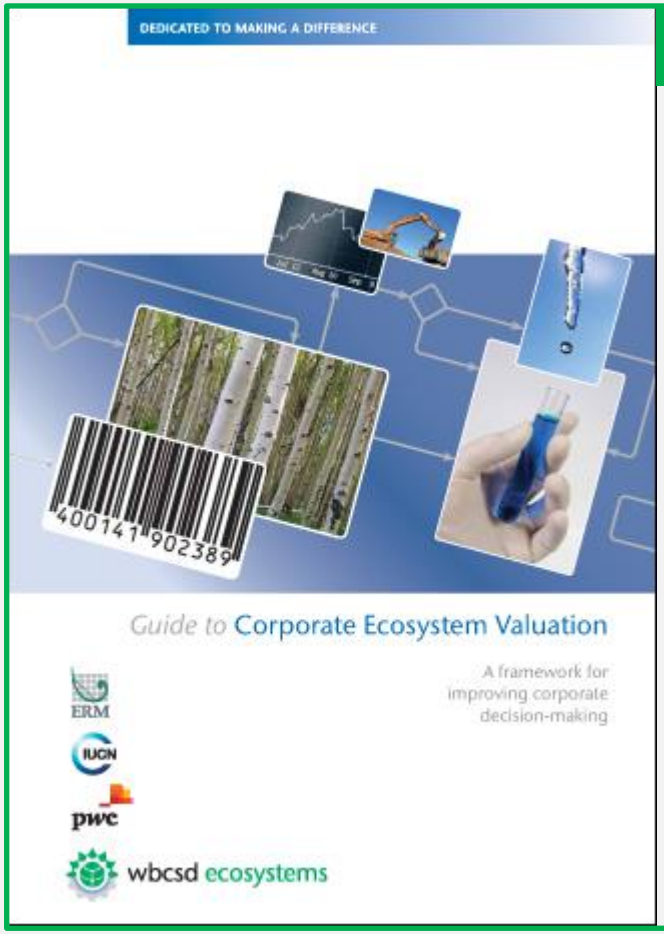
Stakeholder participation process and environmental economics are two of the supportive tools for complex decision making.

They are / *can be* politically unbiased, can address complex situations in long term perspective.

Combination of those two “tools” can lead to informed decision making, reduce opposition, open possibilities for new business initiatives.

In search of the implementation tools

CONCEPT OF ECOSYSTEM SERVICES AND ITS ECONOMIC EVALUATION BEING THE BASIS FOR ECONOMIC DEVELOPMENT AND LONG TERM BUSSINES PLANNING IS NOT ANYMORE JUST A CONCEPT OF ALTERNATIVE INTEREST GROUPS, ENVIRONMENTALISTS OR TRENDY POLITICS.



CONNECTING BUSSINESS AND NATURE

Corporate Ecosystem Valuation (CEV) can be defined as a process to make better-informed business decisions by explicitly valuing both ecosystem degradation and the provided by ecosystem services. By including ecosystem values, the company's aim is to improve corporate performance in relation to social and environmental goals and the financial bottom-line. Valuation can make decision making around ecosystems more compelling and practical, thereby enhancing sustainable development strategies and outcomes.

Thank you for your attention!

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