Convention on the Conservation of European Wildlife and Natural Habitats
Meeting of the Select Group of Experts on Biodiversity and Climate Change
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Ecosystem-based services and the transition to a greener economy

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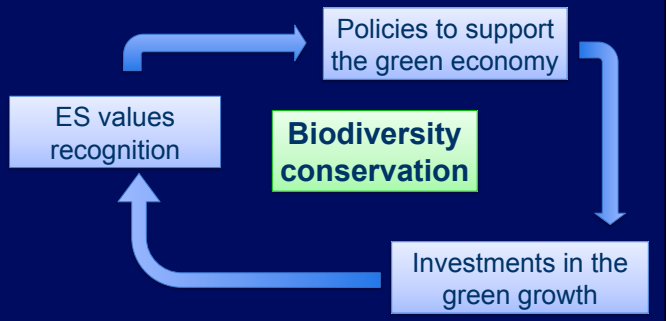
A common perception



Outline

3 alert messages:

1. Green (or bio-based) economy: a buzz concept with different interpretations
2. Market + environmental instability: negative synergies
3. New policy tools: the risk of "financialization" of biodiversity protection

Slides can be downloaded from the web: search "pettenella"

1. Towards a green (or bio-based) economy: the two views

Bio-based (nature-based or green) economy: two views

Adaptive strategy ("Old wine in new bottles") → conventional wisdom of innovation generation and externality correction (i.e., "getting prices right")

Alternative strategy: "**Strategies for synergies**" (M.Toman, 2012): which consider not only the protection of natural capital, "*but it stresses as well the importance of addressing equity and social inclusion challenges in moving toward a green economy*".

Two views with different impacts on biodiversity conservation: the case of the forest resources

Adaptive strategy: focus on forests producing raw materials together with agriculture, fishery, food and biotechnology being the engine of the growth

Technological innovations, large scale investments (→ high risks), diversification in outputs, …

→Developing Nordic forestry in a value chain perspective (sectoral development – **vertical dimension of bio-economy**) = the Nordic model

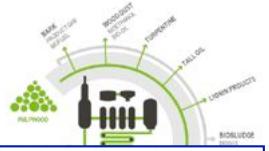
Strategies for synergies: focus the increasing importance on the social dimension of the forestry economy (from an economy based on commodities to a an economy based on services)

An example of the vertical model

Finland: the first next-generation bio-product mill in the world

Bioproduct mill – more than a traditional pulp mill

- Wood is refined into biomaterials, bioenergy, biochemicals and fertilizers sustainably and with great resource efficiency
- Resource-efficient way of using all production sidestreams
- The mill will not use fossil fuels
- Energy efficiency will be emphasized when choosing equipment and machin
- Helps Finland to reach its targets for th use of renewable energy



- Metsä Group is planning the biggest investment in the forest industry in Finland (EUR 1.1 billion)
- Annual pulp production: 1.3 million tonnes
- Use of wood: 6.5 million m³ annually (currently 2.4| million m³)
  → Wood mobilisation
- Over 2,500 jobs will be created throughout the value chain, new jobs in harvesting and wood transport
  → Competent workforce

Source: Riikka Joukio, 2014

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Social innovations, small scale, diversification in the use of inputs, networks, high added value P&S

→Forests as the green infrastructures for the rural development (intesectoral development – **horizontal dimension**) = the Med model

An example of the horizontal model

Enterprises: 62
15 Agritourisms/ Farm businesses
12 Hotels/Guest quarters
8 Bed&Breakfasts/Inns/Hostels
9 Cheese, sausage and wine growing and producing factories
2 Didactic farms
3 Museums/Private collections
30 Restaurants/Porterhouses
26 Typical products sellers

2. Market + environmental instability: negative synergies

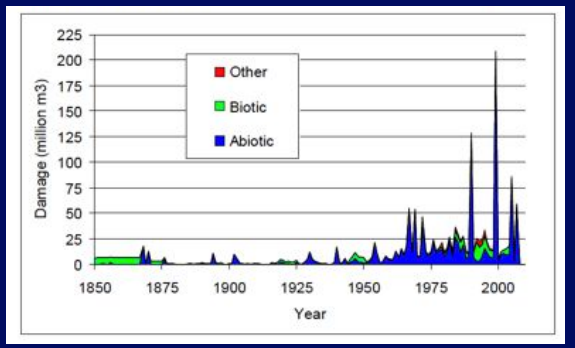
A general feature of the market: structural instability

A good indicator: wood prices

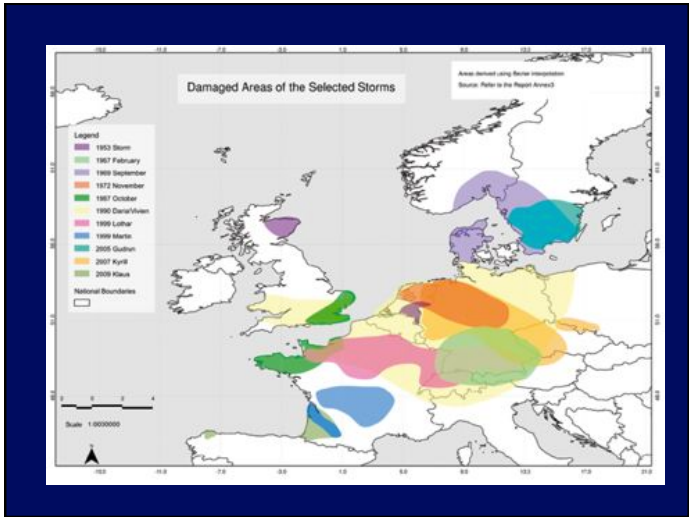
Source: Daos Oy, 2012

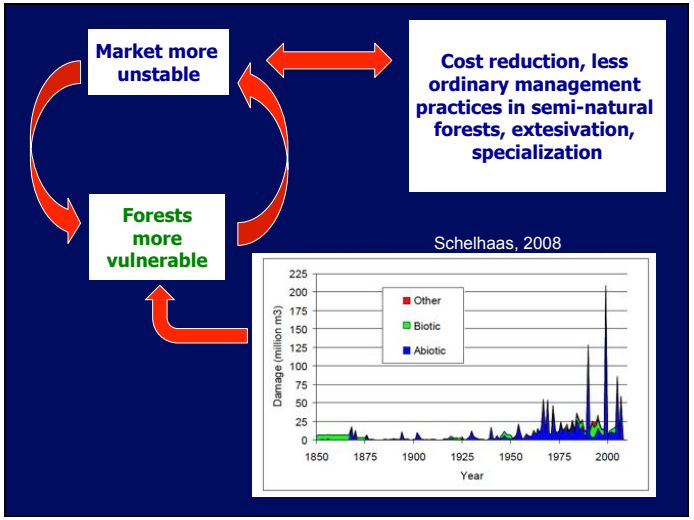
Instability not only in the demand (economic crisis) but also in the supply.

Main large damage event (storms, fires, insect attacks, …) to (ageing) European forests



Schelhaas, 2008





Growing role of industrial plantations

- 230 M ha in 2005
- 75% for production, 25% for protection
- mainly conifers: 32% gen. Pinus; Eucaliptus 8%

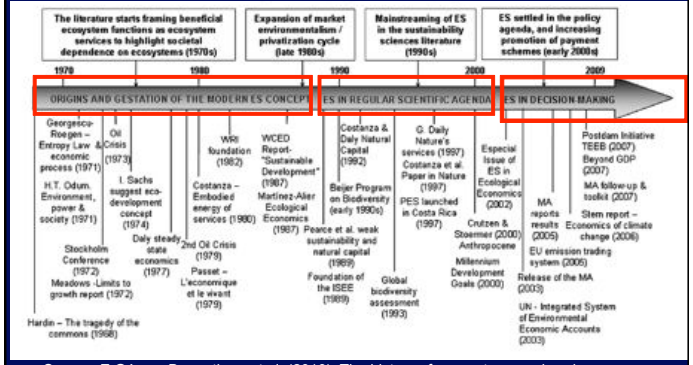
Ten countries with largest area of planted forests, 2005 *(1 000 ha)*

Country	Total	Productive	Protective
China	71 326	54 102	17 224
India	30 028	17 134	12 894
United States of America	17 061	17 061	0
Russian Federation	16 963	11 888	5 075
Japan	10 321	0	10 321
Sweden	9 964	9 964	0
Poland	8 757	5 616	3 141
Sudan	6 619	5 677	943
Brazil	5 984	5 984	0
Finland	5 270	5 270	0
Total	**181 693**	**132 095**	**49 597**

Source: FAO State of the World's Forests 2007

3. New policy tools: the risk of "financialization" of biodiversity protection

The political process related to ES



Source: E.Gómez-Baggethun, et al. (2010): The history of ecosystem services in economic theory and practice

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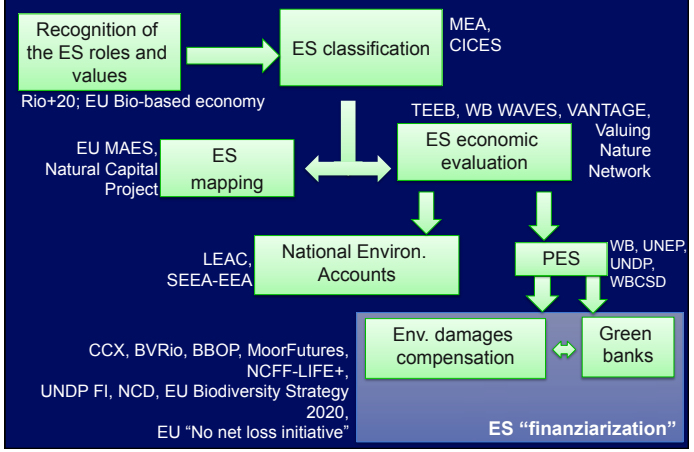

Finanziarization of nature

(definition by J.Kill, 2014)

"A process whereby the natural functions and processes of forests, woodlands, meadows, mountains and other natural areas become treated as a range of 'ecosystem services' including biodiversity, regulation and filtration of water, carbon storage and sequestration, the economic value of which can be calculated and expressed in monetary terms. **Financialization** transforms both everyday perceptions and policy, and **involves not only the framing and valuation** of these natural spaces **in economic terms** via commodification, monetization, commercialisation, **but also their integration into financial markets as a tradable asset"**

EUROPEAN COMMISSION

PRESS RELEASE

Brussels, 6 June 2014

Halting biodiversity loss – the EU no net loss initiative

The European Commission has published an on-line consultation to seek the public's views on a future EU initiative to halt biodiversity loss. Biodiversity – the natural world that surrounds us – is in decline around the world, often as a result of human activities. Even when efforts are made to minimize such damage, there is often a residual impact. If we are to stop the decline, losses resulting from human activities must be balanced by gains: when gains are at least equivalent to the losses, the principle of "No Net Loss" is respected.

Achieving No Net Loss would require that all planned developments which are expected to have an impact on biodiversity adhere to a strict "mitigation hierarchy", whereby priority is given, first, to avoiding or preventing negative impacts; second, where impacts cannot be avoided, to minimising damage and rehabilitating their effects; and lastly, to offsetting or compensating for residual adverse impacts.

No net loss → biodiversity offset

Some risks we are facing from this spontaneous ES market development:

- Many actors, many rules, many transactions → **increased transaction costs** (also connected with speculative or illegal behaviours)
- **A process of "specialization"** in demand/ supply: with very specialized new ES markets we run the **risk to lose the overall picture** of the environmental and social problems

> *The carbon market doesn't care about sustainable development. All it cares about is the carbon price"* (J.Cogen from Natsource LLC, cit. in Jutta Kill, 2014)

- Some ES are associated to **critical natural capital** that cannot be traded and reproduced in reasonable time. Many ES, in particular those related to biodiversity offset, **cannot easily standardized and marketed like normal commodities** (the loss of a rare species is not like the loss of 1 ton palm oil)
- PES development can **destroy ethical motivations** to manage public goods on the basis of solidarity and philanthropy ("I will supply an ES only if they pay me")
- Compensation are frequently used **not in the damaged areas**, involving **the same actors** and have **time limitations**; their values do not always correspond to the **subjective values** of the damaged persons

4. Conclusions

My final reflexion

The real innovative and crucial aspects of the **green economy** are related to equity, social inclusiveness, promotion of local knowledge and employment creation, i.e. to **social innovation, more than** to problems connected to **technology innovation**

MILANO 2015

An European community with **higher level of social capital** will be able **to promote biodiversity** conservation more effectively than a community that rely only on advanced green technology innovations.

The enlarged set of tools to promote ES provision needs a **much higher level** of multi level and multi sectoral **governance** by public institutions, but not always public institutions are **open and reactive to a rapidly changing world.**