

Convention on the Conservation of European Wildlife and Natural Habitats

Meeting of the Select Group of Experts on Biodiversity
and Climate Change

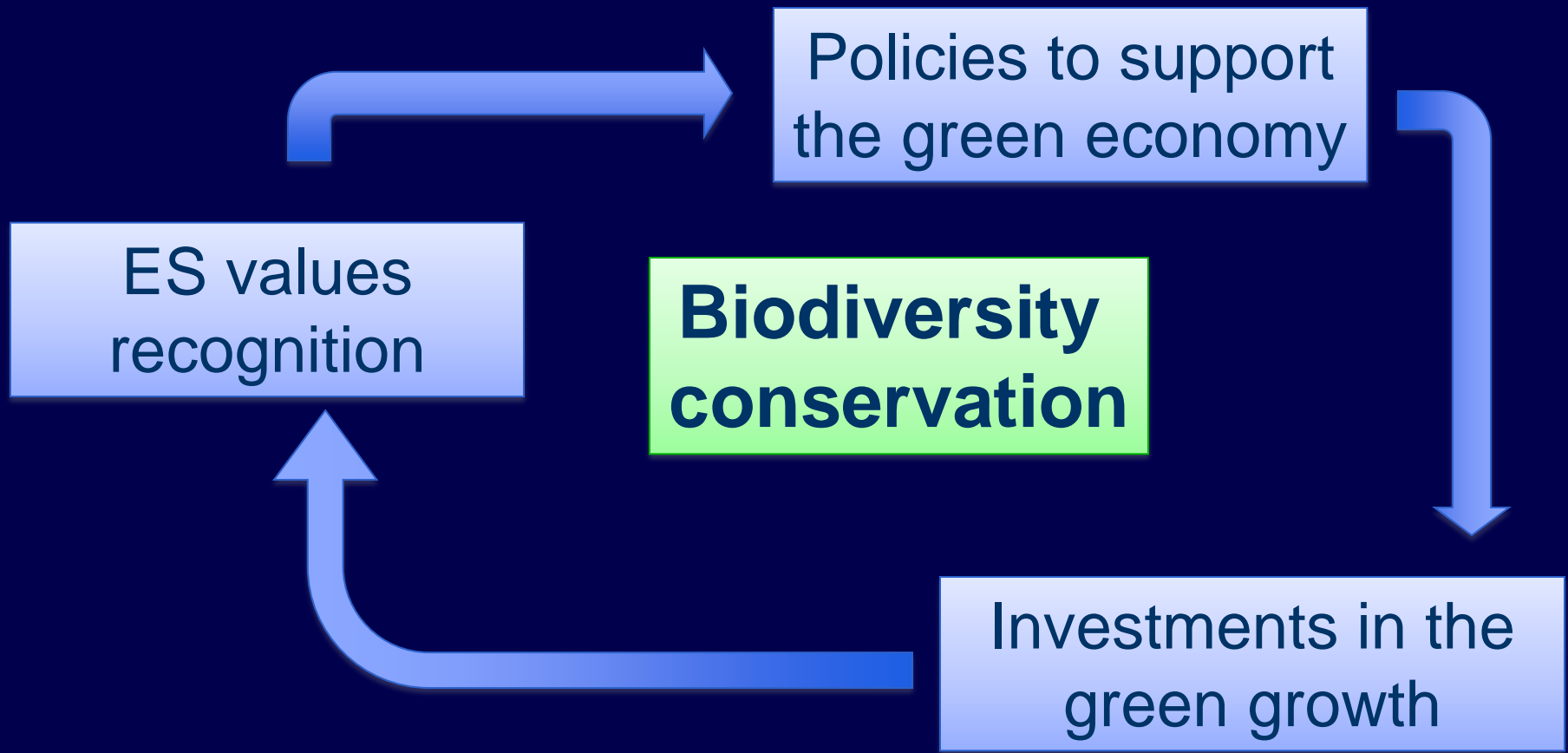
Rome, 28 April 2015

Ecosystem-based services and the transition to a greener economy

Davide Pettenella



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



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

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)

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

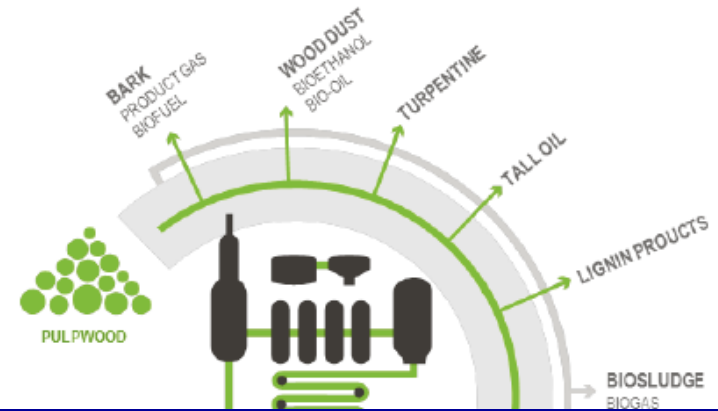
→ Developing Nordic forestry in a value chain perspective (sectoral development – **vertical dimension of bio-economy**) = the Nordic model

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 machines
- Helps Finland to reach its targets for the 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

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

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

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 (intesectional 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

LE STRADE DEI VINI E DEI SAPORI



Territorio

THE TRAIL

MAP OF THE TRAIL

ITINERARI

TOWNS ALONG THE TRAIL

PARKS

MUSEUMS

TOURIST INFORMATION

FOTOGALLERY

FIRMS

Bed & Breakfast

Caseificio / Salumificio / Az. Vitivinicola

Farmhouse holidays

Fattoria Didattica

Hotel

Museo / Collezione privata

Restaurant

Sale of local products

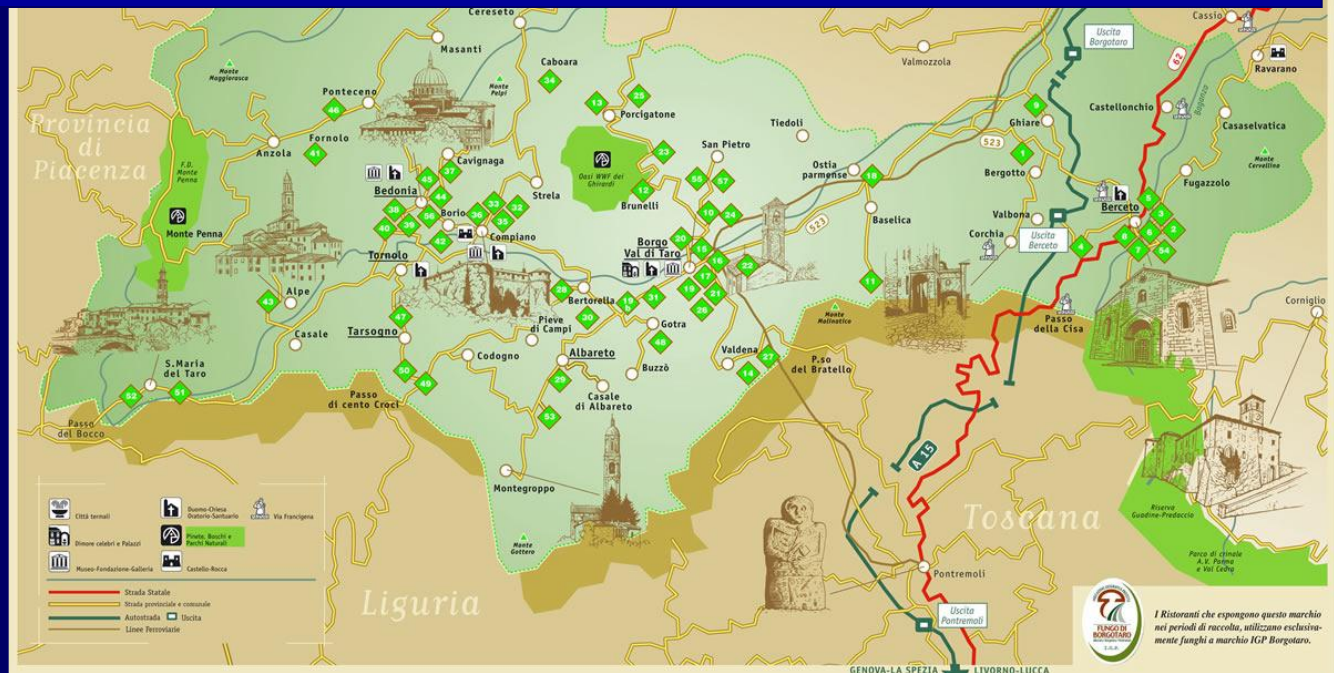
Link

Fungo di Borgotaro

Meteo Apuane

Strada del Prosciutto

Emilia Romagna Turismo



FIERA DEL FUNGO DI BORGOTARO IGP

Il fungo porcino di Borgo val di Taro, prodotto

Write your e-mail...



I Ristoranti che espongono questo marchio nei periodi di raccolta, utilizzano esclusivamente funghi a marchio IGP Borgotaro.

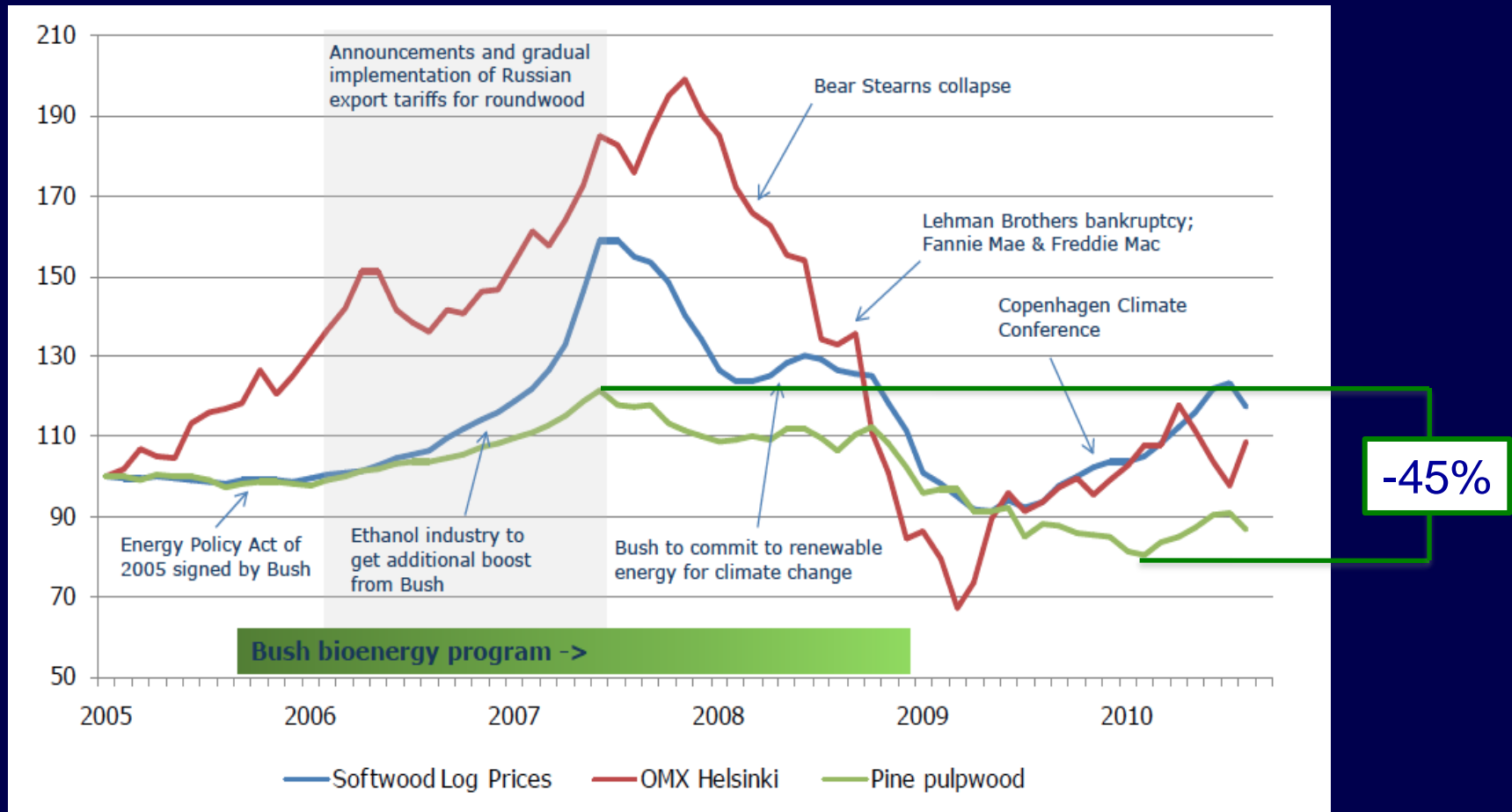


2. Market + environmental instability: negative synergies



A general feature of the market: structural instability

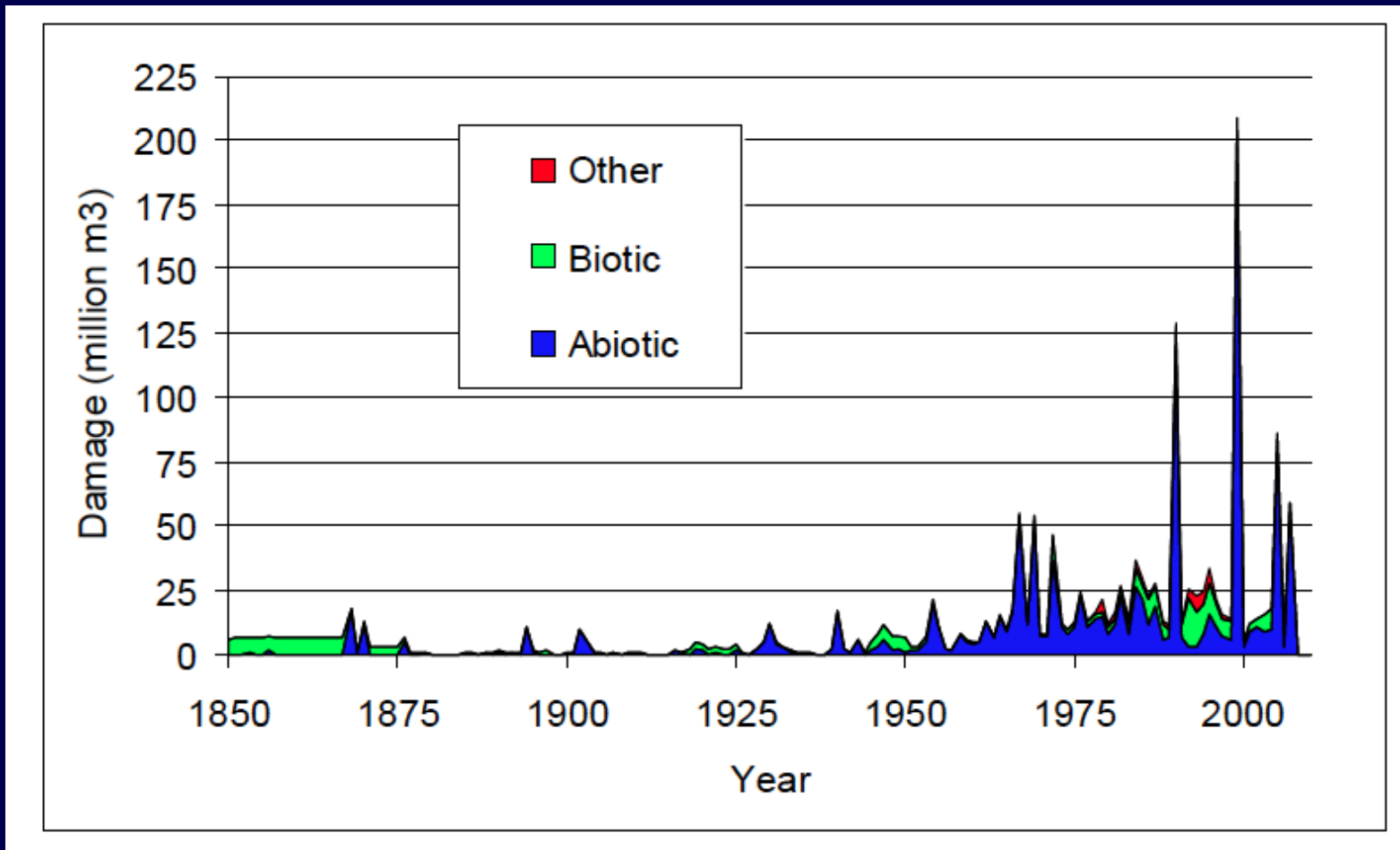
A good indicator: wood prices



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



Damaged Areas of the Selected Storms

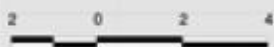
Areas derived using Bezier interpolation

Source: Refer to the Report Annex3

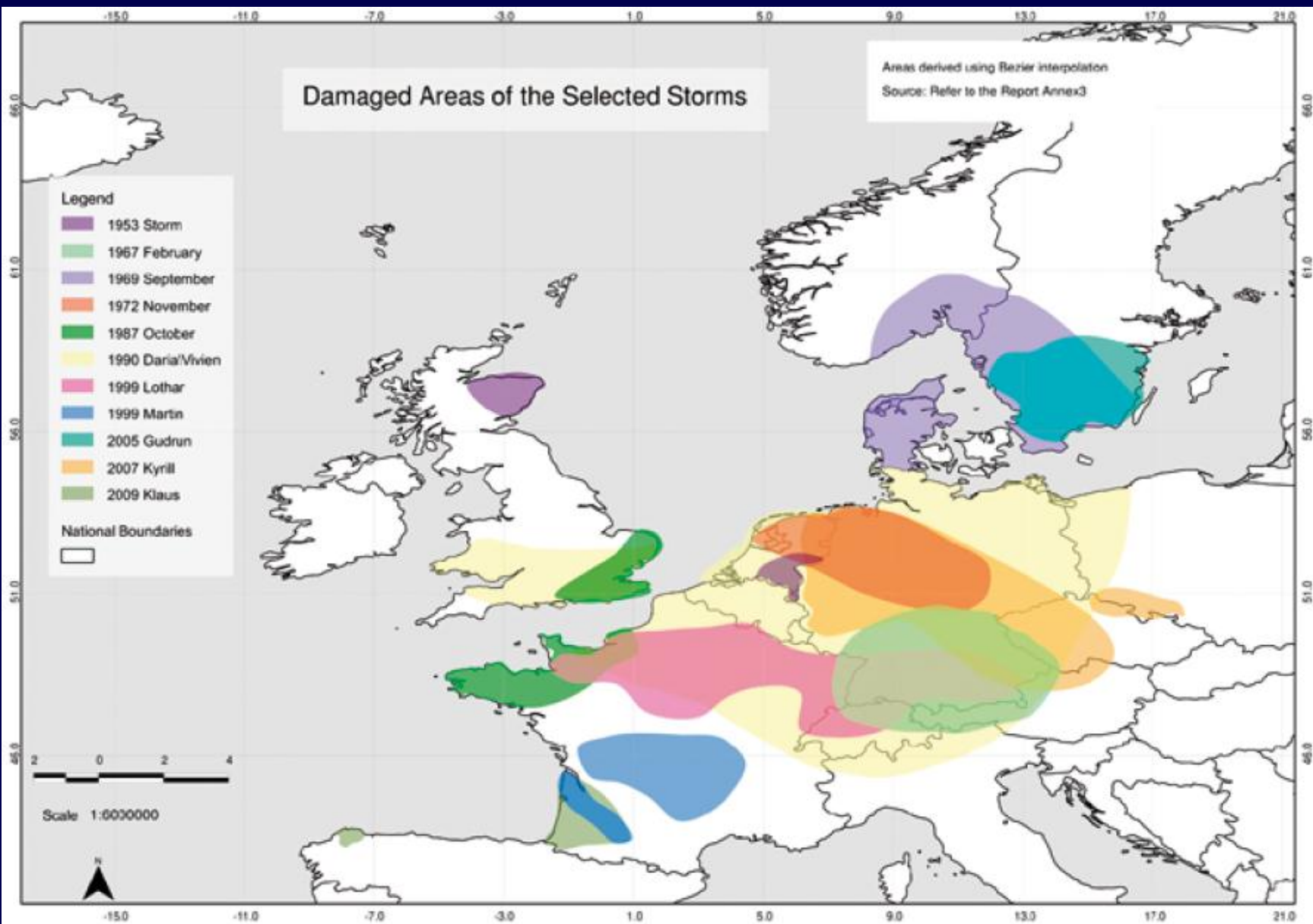
Legend

- 1953 Storm
- 1967 February
- 1969 September
- 1972 November
- 1987 October
- 1990 Daria/Vivien
- 1999 Lothar
- 1999 Martin
- 2005 Gudrun
- 2007 Kyrill
- 2009 Klaus

National Boundaries



Scale 1:6000000

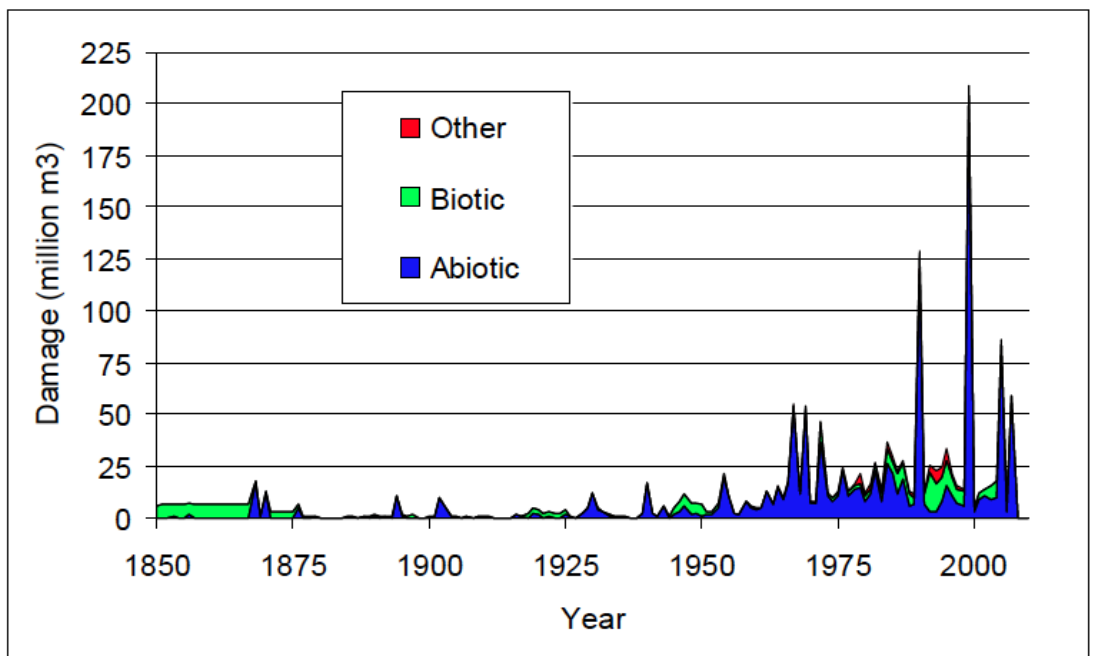


**Market more
unstable**

**Cost reduction, less
ordinary management
practices in semi-natural
forests, extesivation,
specialization**

**Forests
more
vulnerable**

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	5 384	5 384	0
Finland	5 270	5 270	0
Total	181 693	132 095	49 597

Source: FAO State of the World's Forests 2007

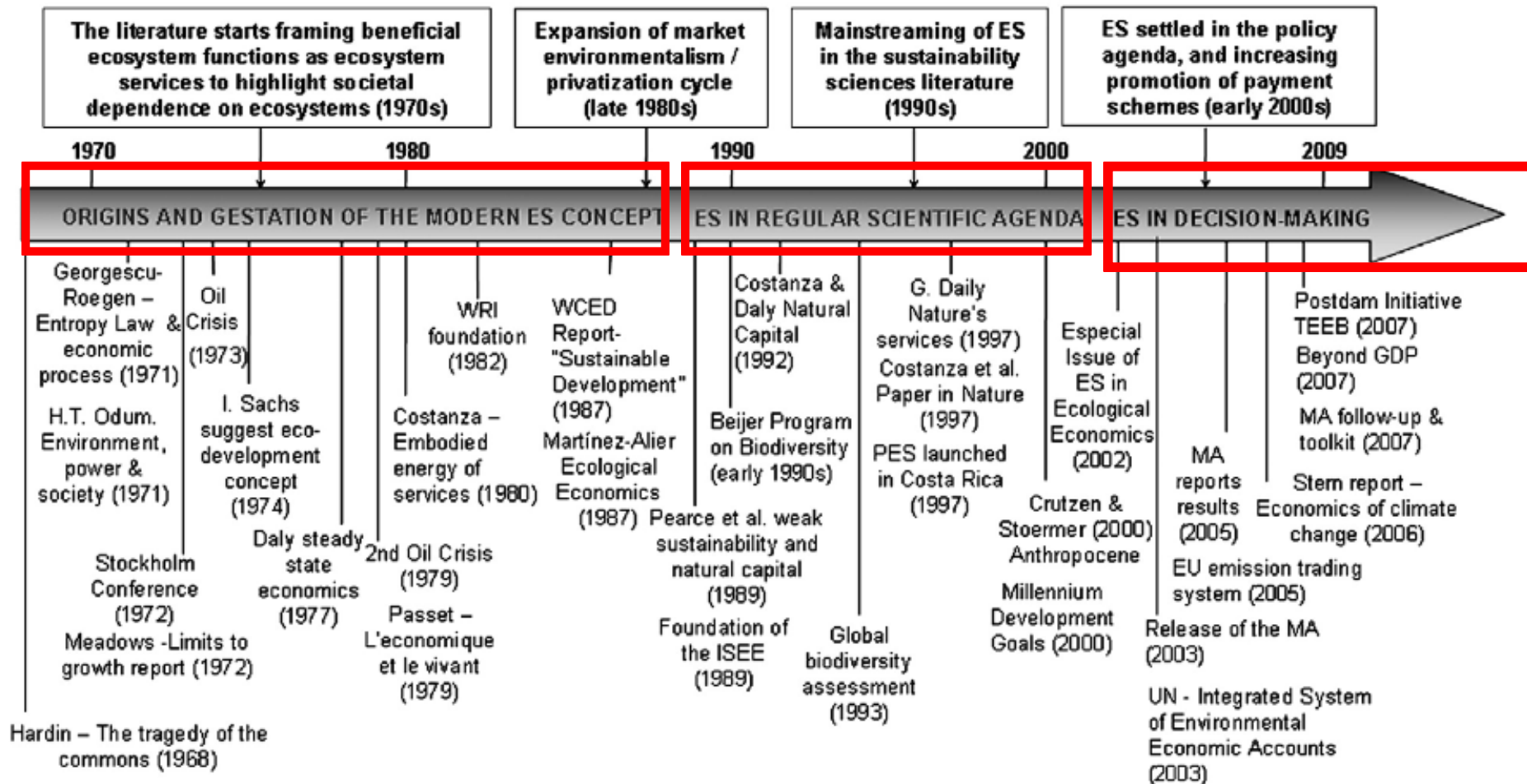




3. New policy tools: the risk of “financialization” of biodiversity protection

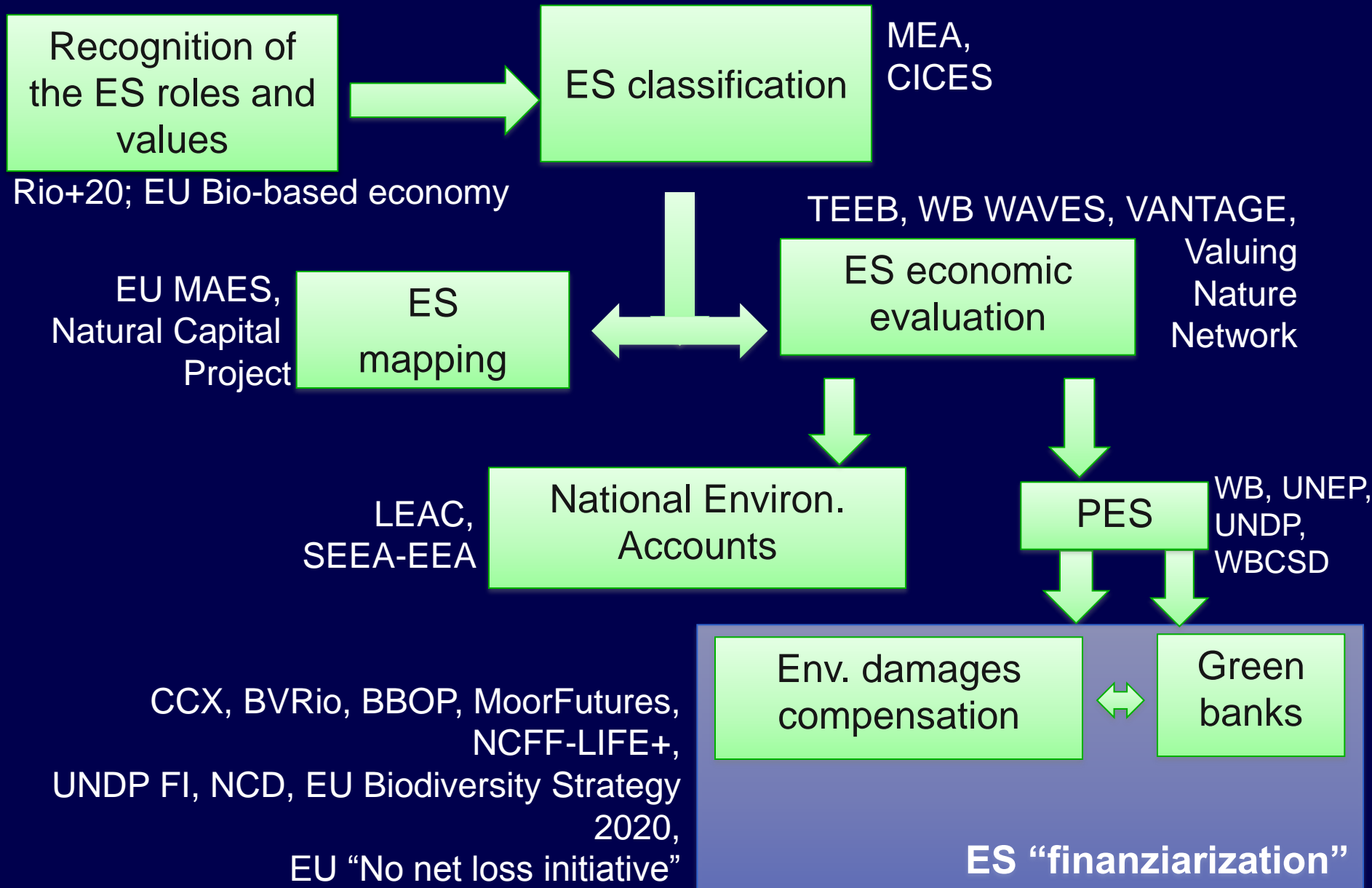


The political process related to ES



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

The political process related to ES



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**



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.**

