



## Perverse and positive incentives working insights from TEEB

**Patrick ten Brink**

**TEEB for Policy Makers Co-ordinator**

**Head of Brussels Office**

**Institute for European Environmental Policy (IEEP)**



**International Workshop on the Removal and Mitigation of Perverse,  
and the promotion of positive, incentive measures**

**Paris**

**6-8 October 2009**





# Presentation overview



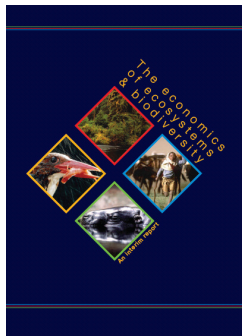
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# TEEB's Genesis and progress



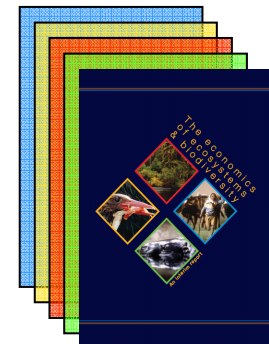
**“Potsdam Initiative – Biological Diversity 2010”**  
**1) The economic significance of the global loss of biological diversity**



**TEEB Interim Report @ CBD COP-9, Bonn, May 2008**



**Strömstad 7-9 September**





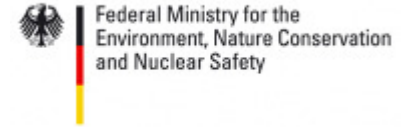
# TEEB's goals



1. Demonstrate the **value to the economy, to society/individuals and wider environment** – what we have & what we risk losing.
2. Underline the **urgency of action, benefits of action (opportunities), analyse costs of action**
3. Show how the value of ecosystem services and biodiversity can be assessed and where it can be useful
4. Show how we (can) **take into account the value of ecosystem services and biodiversity in our decisions and choices,**
5. **Identify / support solutions**
6. Address the needs of **policy-makers, local administrators, business and citizens (the "end-users")**



# TEEB – Final Report June 2010



TEEB D0: Ecological and Economic Foundations



TEEB D1: TEEB for International and National Policy-Makers



TEEB D2: TEEB for Local Policy-Makers and Administrators



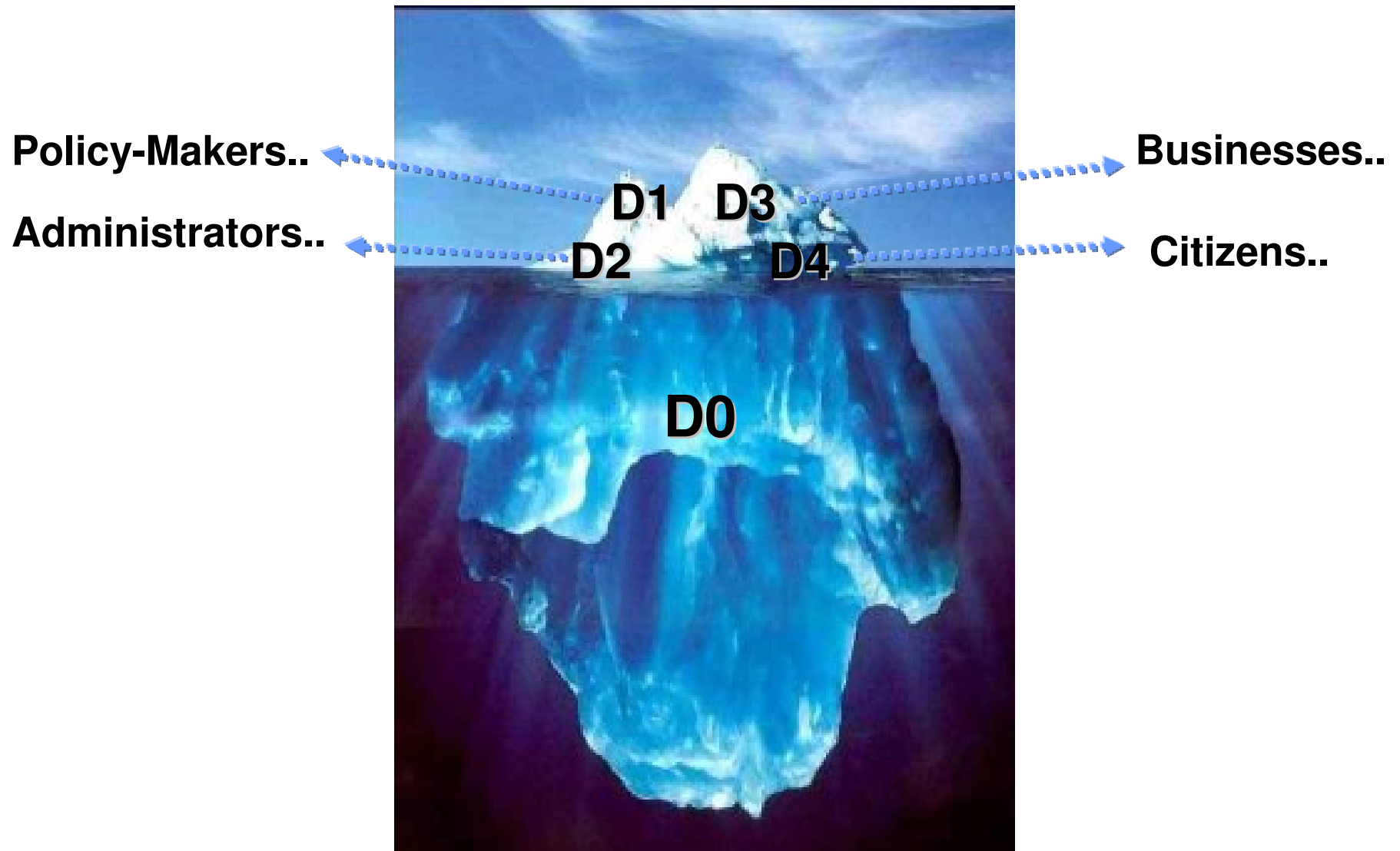
TEEB D3: TEEB for Business



TEEB D4: TEEB for Citizens

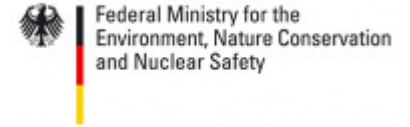


# TEEB – the Role of “D0”...





# TEEB D1: TEEB for International and National Policy-Makers



## **Part I: The Global Biodiversity Crisis and Framework for Policy Response**

**Ch1 The global biodiversity crisis and related policy challenge**

**Ch2 Framework and guiding principles for the policy response**

## **Part II: Measuring what we Manage: Information & Tools for Decision-Making**

**Ch3 Measuring to Manage our Natural Capital**

**Ch4 Recognised the Value of Biodiversity**

## **Part III: Solutions: Instruments and measures**

**Ch5 Rewarding benefits of Ecosystems and Biodiversity**

**Ch6 Reforming Subsidies**

**Ch7 Incorporating the costs of ecosystem and biodiversity loss**

**Ch8 The Value of Protected Areas**

**Ch9 Direct Investments in natural capital and ecosystem restoration**

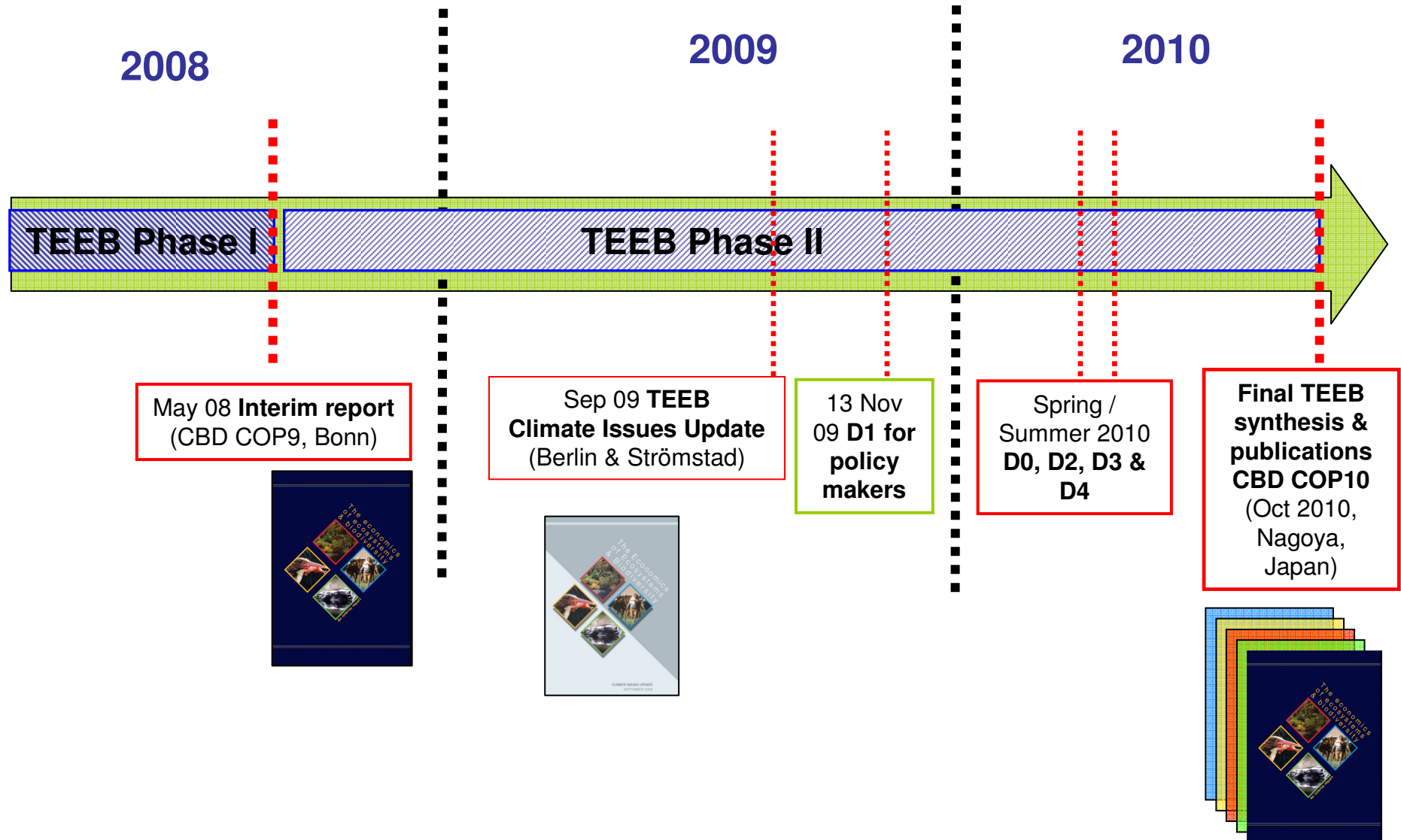
## **Part IV: Synthesis**

**Ch10 Conclusions and recommendations**





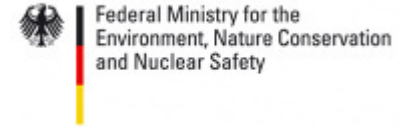
# TEEB timeline







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# Critical issues

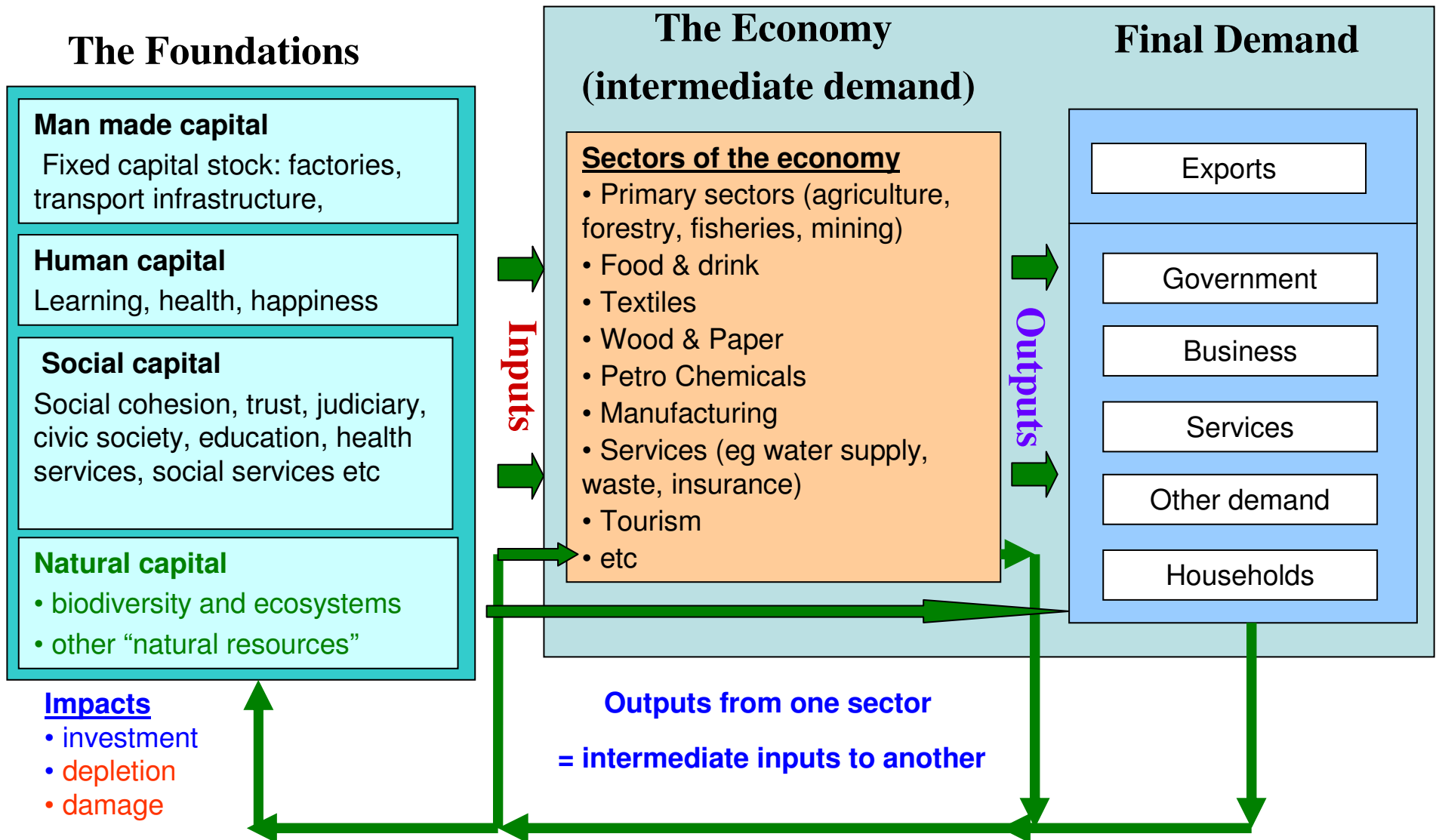
## **The values of biodiversity and ecosystems are missing**

- **Many not known (but this is changing); widespread lack of awareness**
- **They are generally not integrated into the economic signals, into markets – the economy is therefore often not part of the solution**
- **Values are not taken systematically into account in assessments and decision making**

**There is not enough political will or conviction or awareness of benefits/cost to launch due policies**



# Natural capital is a foundation of the economy and wellbeing – often outside of the market





# The (missing) values of biodiversity and ecosystems to the economy



Federal Ministry for the  
Environment, Nature Conservation  
and Nuclear Safety

## Market signals -

Do not fully take into account the value of ecosystems & biodiversity

- **Climate regulation:** carbon stored in trees, soils, wetlands;
- **Natural hazard management** and **adaptation** to climate change

Often do not reflect damage to ecosystems/biodiversity, losses of services:

- **Land conversion** (tropical forests to palm oil based biofuels),
- **Degradation costs** (eg water pollution, soil degradation)

Rarely offer appropriate incentives for sustainable use of natural resources

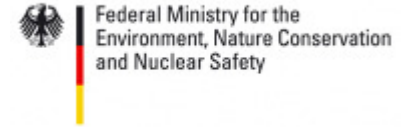
- **Forest products** (timber et al), agricultural products
- **Water use** (re groundwater depletion), soil mining and erosion

This already non-level playing field is distorted/affected further by subsidies

it is no surprise that we have a socially inequitable and economically inefficient use of ecosystems and their biological resources.



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# TEEB and subsidies general observations

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- The last decade has witnessed **increasing, and in some cases considerable, efforts for the phasing out or reform of subsidies in various countries**
- Yet, the **overall level of subsidies remains remarkable**
- Globally, **agricultural & fisheries subsidies of particular concern**
- **Opportunities** other areas: energy, water (full cost recovery), transport
- **Not all subsidies are bad for the environment.**
- **even 'green' subsidies can still distort economies and markets, and may not be well-targeted or cost-effective.**
- **Phasing out ineffective subsidies frees up funds which can be re-directed to areas with more pressing funding needs**



# Examples of EHS

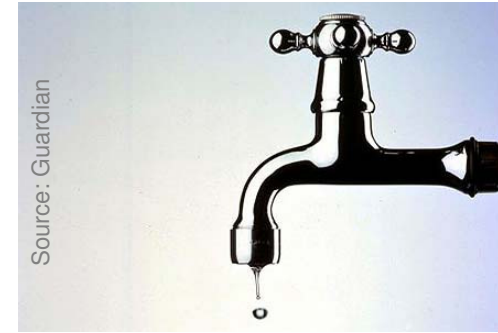
## Energy: Coal mining direct transfers



## Fishing tax exemptions + no liability for damage to sea bed)



## Water use Non resource pricing



## Agriculture Direct payments + no liability for eutrophication damage et al



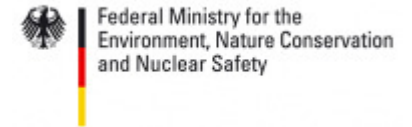
## Energy: oil spills Only partial liability / compensation for damage







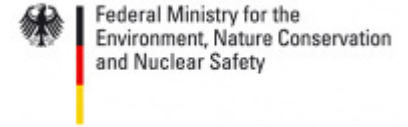
# Aggregate subsidy estimates for selected economic sectors



Sector	OECD/ world
<b>Agriculture</b>	<b>OECD : USD 261 bn a year (in 2006-8)</b> (OECD 2009) <b>Biofuels: US, EU and Canada €11 bn in 2006</b> (GSI 2007; OECD 2008b)
<b>Fisheries</b>	<b>World: USD 15-35 billion</b> (UNEP, 2008)
<b>Energy</b>	<b>IEA: \$310bn in 20 largest non-OECD countries in 2007</b> (IEA 2008)
<b>Transport</b>	<b>World: ~ €179-230 bn/year – of which EHS €130-175 bn</b> (EEA 2005)
<b>Water</b>	<b>OECD: €33.6 bn</b> (Myers and Kent 1998) – including irrigation



## Reforming EHS: ...some working thoughts...



- **A lot of rhetorical and even policy support** for EHS Reform - **in practice progress is generally slow (with exceptions).**
- **Subsidies are launched for a reason** (eg food or energy security, economic sector survival) – in some cases the reason is no longer valid.
- **Subsidies create activity and people can be dependant on that activity..** Also **vested interests** / “culture of entitlement”
- **The level of subsidies, their impacts and the potential benefits from reform are not always (easily) clarified** – some subsidies are hidden and impacts not immediate or direct, complexities of interactions, impacts mitigated by policies or complementary measures.
- There is also often **too little commitment to transparency and too little real assessment as to where attention is needed, possible and would offer benefits.**



# Yet reforming EHS > potential benefits



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and Nuclear Safety

- **saving resources. Lesser** pollution. Fewer/lesser impacts on ecosystems and biodiversity
- **Increase competitiveness** - exposing subsidised sectors to competition & supporting future competitiveness by resource availability
- **Level the playing fields / fix market distortions** by making resource prices reflect resource value, & making polluters pay for their pollution.
- **Overcome technological 'lock-in'** whereby alternative, less established, and possibly more environmentally-friendly, technologies and practices are unable to compete on an equal basis with the subsidised sector
- Enable governments to **divert budget to other areas** (e.g. education, poverty, PES, energy saving),



## Reforming EHS: overcoming arguments against it

### “myths about subsidy reform”: reforming subsidies will or will not?

- **... harm competitiveness** – but keeping subsidies is bad for long-term competitiveness of the sector; sector becomes dependent on subsidy and puts strains on public finances and can reduce national competitiveness
- **... result in job losses** – In the short-term, can be the case, for the specific sector, but compensatory measures can address some adverse short-term impacts and incentives can be put in place to attract investment; also possible employment gains from use of monies elsewhere – net effect depends on relative labour intensities
- **... have implications for social equity** – But poorer households spend less on energy than middle income households, so better ways of helping the former than subsidies
- **... EHS reform almost impossible to make happen given vested interests** – reality is a mixed picture / careful of self “fulfilling profesy”



# Organising reform

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**The design of the reform process is a critical success factor.** It needs to take the **political economy** and other barriers into consideration, build on quality data/analysis & often hinges on the following conditions:

- The **policy objectives** must be defined transparently and rigorously;
- The **distribution of benefits** and **costs** must be **transparently** identified;
- Government must **engage broadly with stakeholders + often need “whole of government approach”**;
- Need strong leadership, a broad coalition. Champions to make it happen
- Government should set **ambitious endpoints**, but, depending on circumstances (eg affordability), timetables for reform may be cautious;
- **Windows of opportunity** should be seized (or created), and
- **Fiscal transfers** are often required to facilitate the **transition process** (OECD 2007) – and other flanking measures (eg retraining)



# Recommendations

In the short run, Countries should:

- establish **transparent** and **comprehensive subsidy inventories**,
- **assess** their **effectiveness** against stated objectives, their **cost-efficiency**, and their **environmental impacts**,

and, based on these assessments,

- develop **prioritized plans of action** for subsidy removal or reform (inc. transition mg't), for implementation at medium term (to 2020).
- **Windows of opportunity** proactively and systematically **seized**.
- Windows of opportunity should be **created** too - eg via road maps.

>> Make good use of any funds liberated - both from reform itself, and from effect of the reform as a more level playing field may also reduce need for pro-env subsidies. A reform can save in two places...



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# Positive incentives, other incentives and investments

**Those creating the benefits should be rewarded**

- **Payments for environmental services (PES);**
- **Distribution of benefits and access and benefits sharing (ABS)**
- **Development of markets, certification, and GPP**
- **Tax breaks**

**The polluter not society should pay; resource user not resource owner should pay**

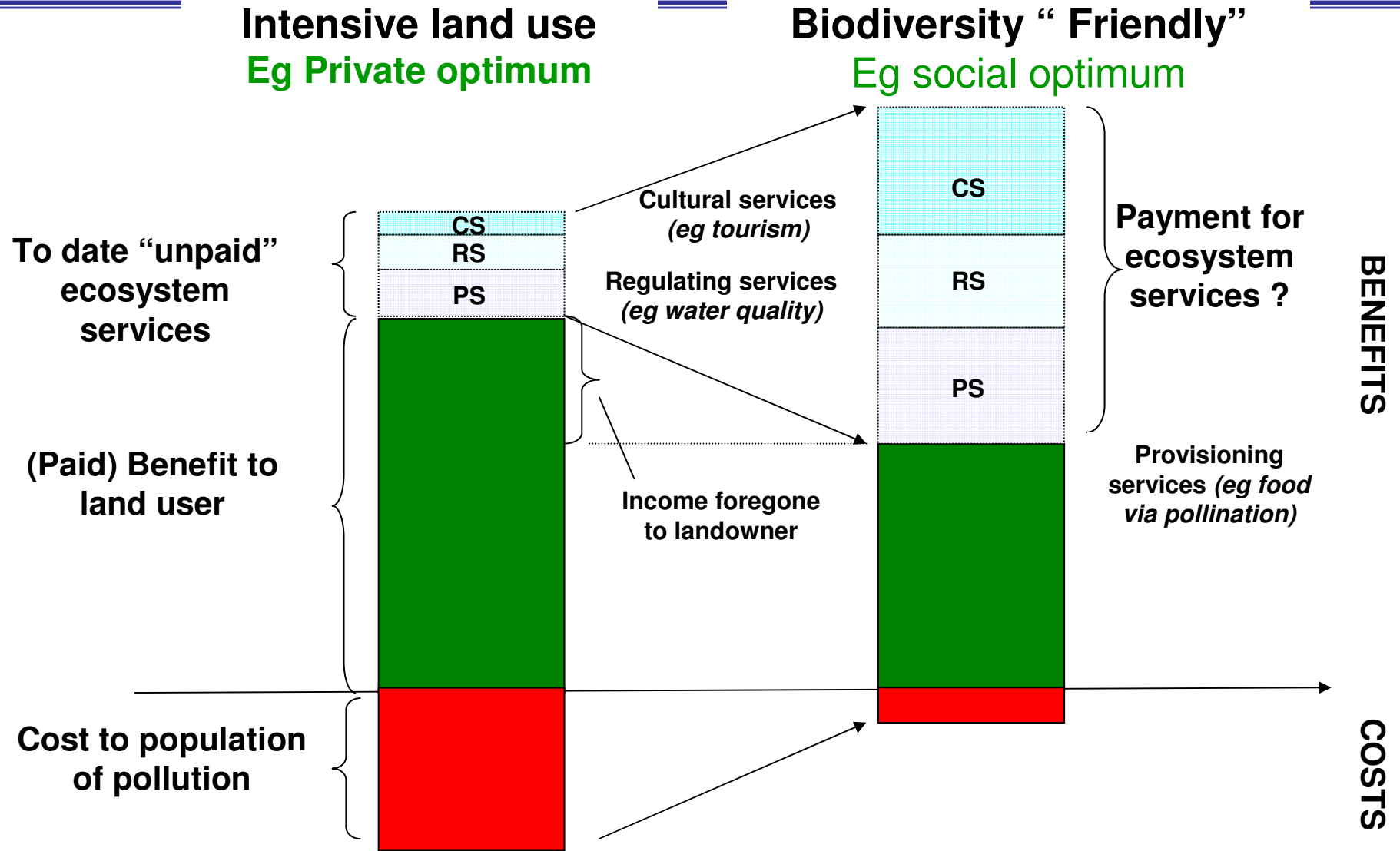
- **Charges and full cost recovery**
- **Taxes and fees**
- **Fines and liability charges / compensation requirements**

**The assets creating the benefits should be invested in – invest in Natural capital**

- **Protected Areas, ecological infrastructure**



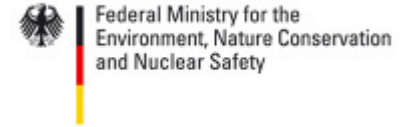
# Ecosystem services - the unpaid benefits (till PES)



Source: Samuela Bassi and Patrick ten Brink, IEEP, adapted from S Bassi et al Agriculture and Environment: Payments for Environmental Services (PES), Presentation at Common Agriculture Policy and its impact in Malta Victoria – Gozo, 7-9 November 2008



# They exist, they work (though lots of lessons to learn)



- The underlying principle of PES - 'beneficiaries pays' principle
- Work across services:
  - **Watershed restoration, watershed protection (eg from fertilisers, pesticides)**
  - **carbon storage,**
  - **Addressing threats – IAS removal in South Africa**
  - **Traditional knowledge, bio prospecting – India**
  - **Multiple service PES – eg for PAs**
- Big and small :
  - **E.g. 496 ha being protected in an upper watershed in northern Ecuador**
  - **eg. 4.9 million ha sloped land being reforested by paying landowners China.**
- Public (municipal, regional, national) and private (eg Vittel)
- Local and national (and international?)
  - **Local: New York, Ecuador,**
  - **national level systems in Costa Rica, Mexico and Ecuador**
  - **REDD+ (reduced emissions from deforestation and degradation) ? ABS ?**

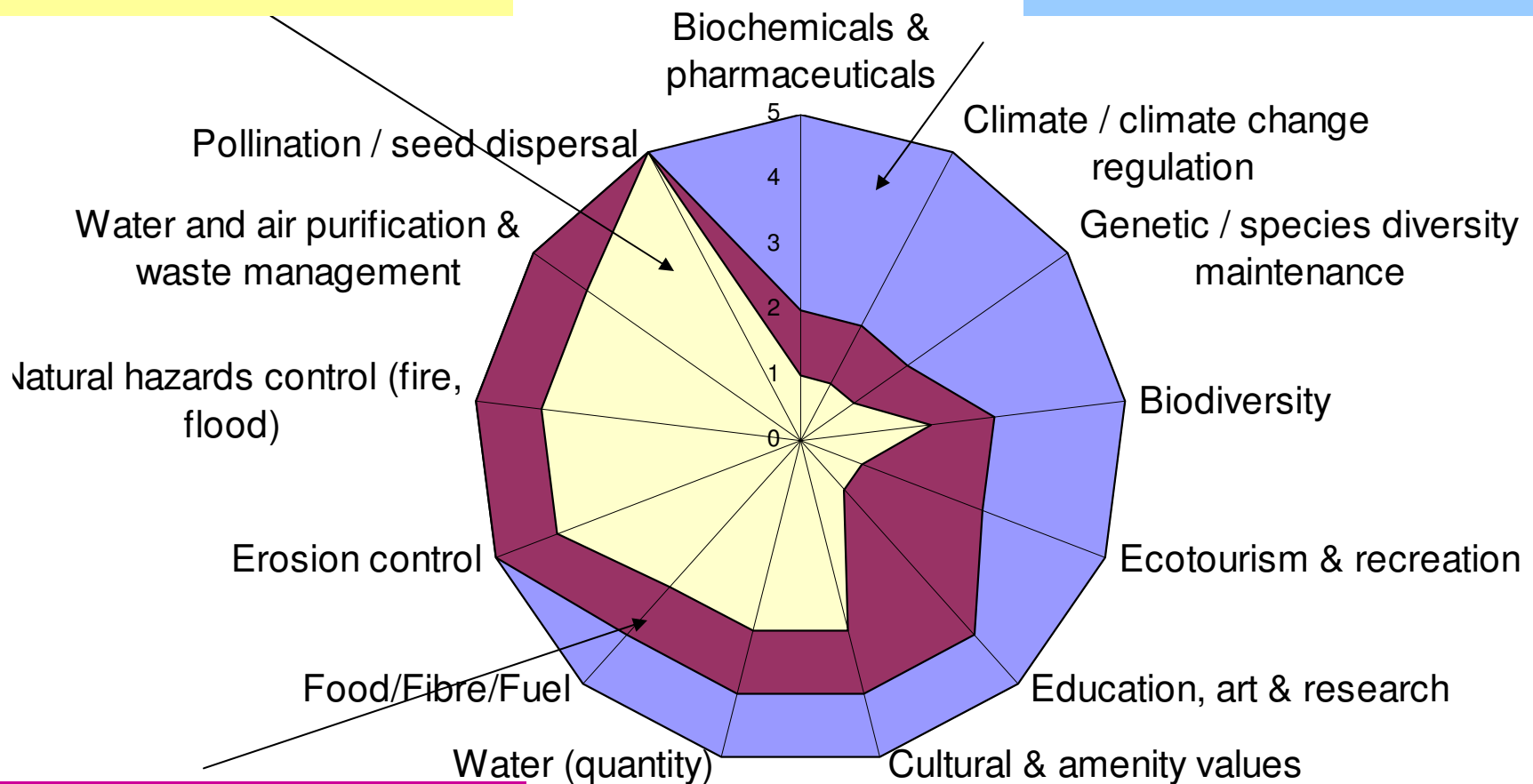


# Who benefits, who should pay? Eg Protected Areas

Action locally leads to local, to national & to global benefits.

Mainly local benefit

Mainly global benefit

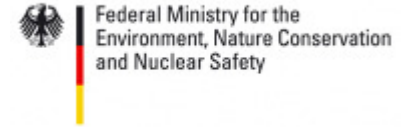


Additional national benefit

What are the policy implications > Funding? PES?



# PES – some key points



**There is high interest in tools that pay for the provision of ecosystem services (PES).**

**There are significant opportunities to have more local and national level PES schemes – but this requires significant information, investment and capacity building**

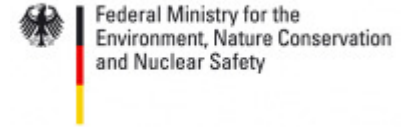
**Of particular promise is the PES-REDD (Reducing Emissions from Deforestation and Forest Degradation) mechanism.**

**Also scope for extending water related PES, *inter alia*.**

**+ fundamental need to agree suitable access and benefits sharing regime (ABS).**



# Recommendations ...working thoughts...



**Develop and support demonstration activities and also wider capacity building to develop the knowledge base.**

**It is essential that proactive efforts be made to build successful cases of where and under what conditions PES can work.**

**investment in spatial analyses of ecosystem services (ES) with particular attention to the role of providers & beneficiaries.**

**The design of these activities should promote conditionality and additionality (ie additional benefits beyond business as usual) .**

**It also needs appropriate monitoring, reporting and verification, effective enforcement and better governance**

**Similarly, important to invest in the local capacities for monitoring, documenting and assessing the state and value of biodiversity.**

**to support the future development of ABS schemes, as well as for due establishment, monitoring and evaluation of PES schemes.**



# Recommendations ...working thoughts on REDD...



**It is critical that REDD is included within the new climate agreement that will emerge from Copenhagen,**

**REDD needs to be designed & implemented so that it offers**

- **the greatest synergies with biodiversity and ecosystem conservation measures [taking value of ecosystem services into account] whilst**
- **also respecting indigenous peoples' rights, livelihoods and potential constructive role in ecosystem management.**





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# Link between perverse incentives and positive ones

- **Reforming the perverse incentive can release funds for positive incentives.**
- **Reforming perverse incentives can also reduce the need for (positive) subsidies that aim at righting the level playing field – hence saving further money.**
- **They can usefully be combined in a package as part of transition management.**
- **Some instruments aim to be positive, but end up being perverse incentives from faulty design (eg biofuels)**
- **Some instruments start positive (overall), but end up being perverse incentives as needs change (eg CAP), but can be reformed back to positive (modulation, cross-compliance of CAP)**
- **Targeted and designed wrongly a PES is more a subsidy than a positive incentive – eg payment to reduce pollution**



# Payments for Environmental Services (PES) & the Polluter Pays Principle (PPP)



## Reducing emissions/impacts example farming & PES

Zero emissions

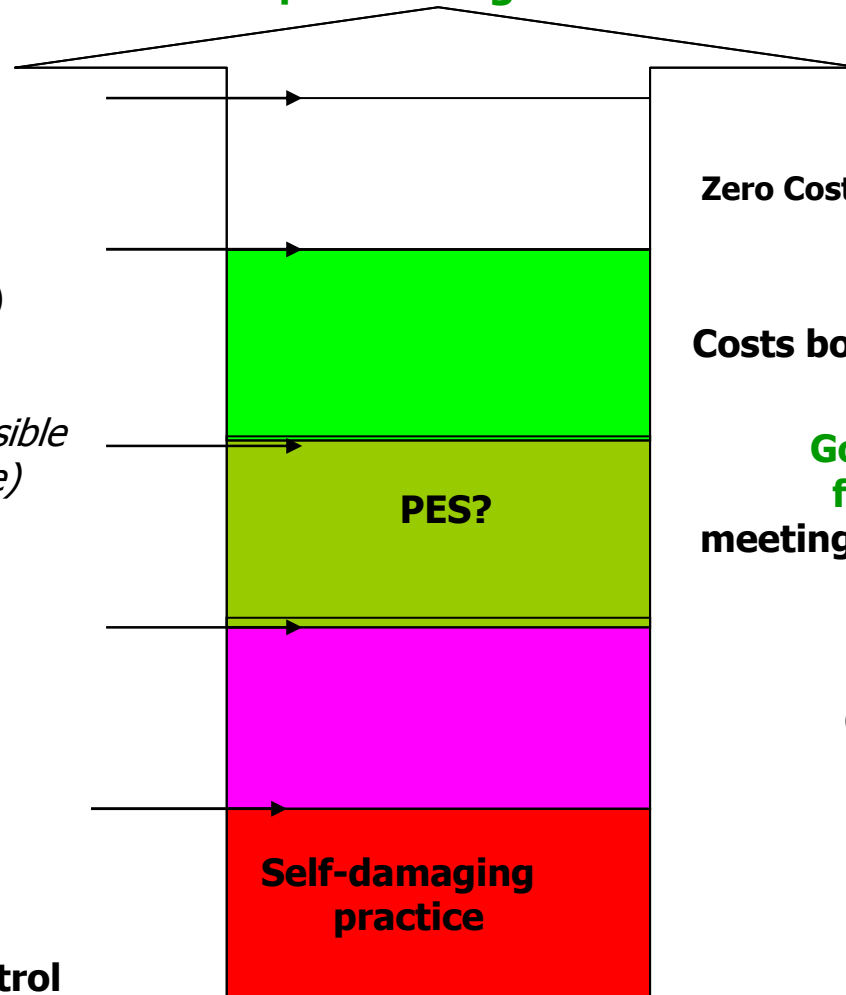
Zero impact (within assimilative capacity)

Environmental target  
*(practical /politically feasible env optimum at the time)*

Private solution with legal requirements  
("reference level")

Private Optimum

Full damage – no control



Zero Costs born by **society** (env impacts)

Costs born by **society** (env impacts)

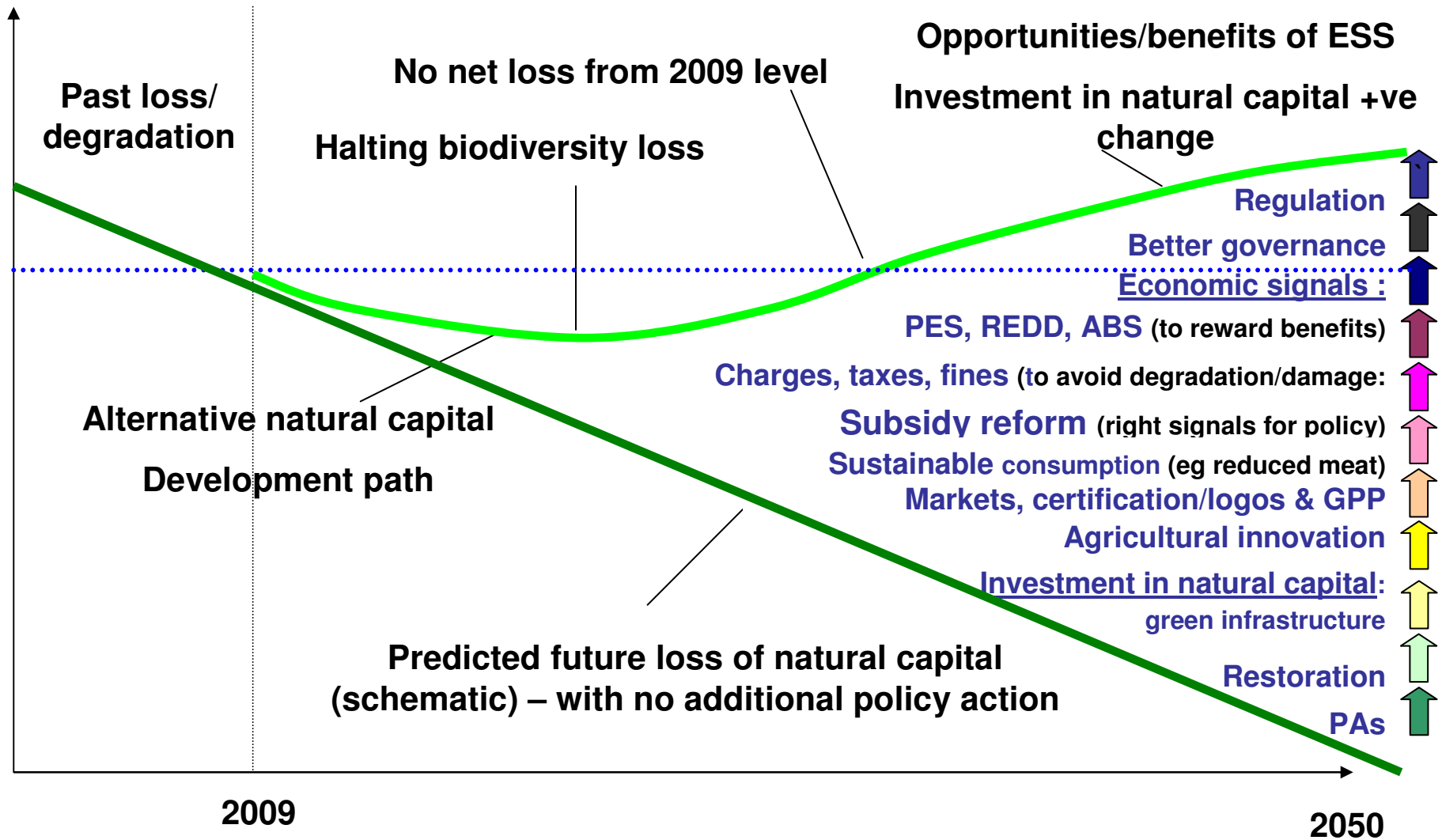
**Government pays PES to help farmers pay for measures to meeting targets/objectives beyond legislative requirements**

Costs of **measures borne by farmer** – eg **Polluter Pays Principle** (partly implemented)

**(Damage) Costs to farmers and society**



# Instruments and measures Contributions to natural capital





# Thank you

1. What do you see as critical issues to progress subsidy reform?
  2. What positive incentives do you see as particularly valuable?
  3. What do you see as the links between the two?
  4. What practical insights have you on “enabling conditions” and “making it happen”?
- & What from your experience do you see as powerful and credible stories to illustrate the instruments ?

Patrick ten Brink

[ptenbrink@ieep.eu](mailto:ptenbrink@ieep.eu)



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# Presentation overview



**Annex – back up slides**



# Basic structure common to most PES:

- National/regional/local **gov/ agencies**
- **Multi-actor organisations** eg watershed authorities
- **Committees** eg including gov, NGOs, private sector **etc**

Ensure transparency and impartiality

