



## Investing in healthy ecosystems makes economic sense

### insights from TEEB for Policy Makers report

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**Ministerie van Buitenlandse Zaken**

**12:00 – 14:00      20 April 2010**

**Den Haag, The Netherlands**



Federal Ministry for the  
Environment, Nature Conservation  
and Nuclear Safety



Rijksoverheid





**Part A: TEEB Process, content and context**

**Part B: Values and Decision Making**

**Part C: Selective instruments from the toolkit**

**Part D: The Way forward : understanding and responding to the value of nature**



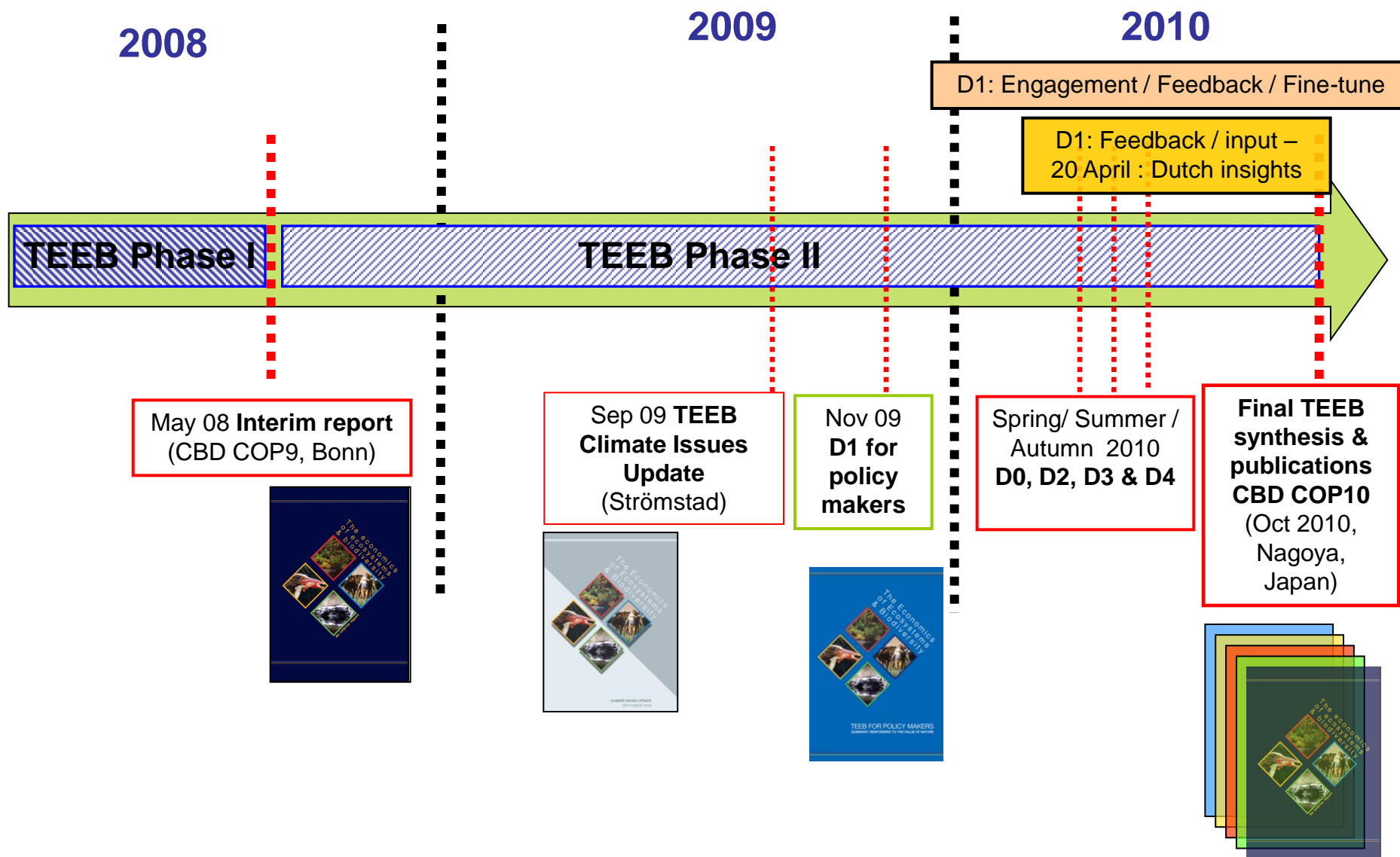
## TEEB's goals

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")**

# The Economics of Ecosystems & Biodiversity



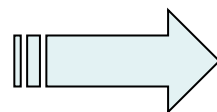
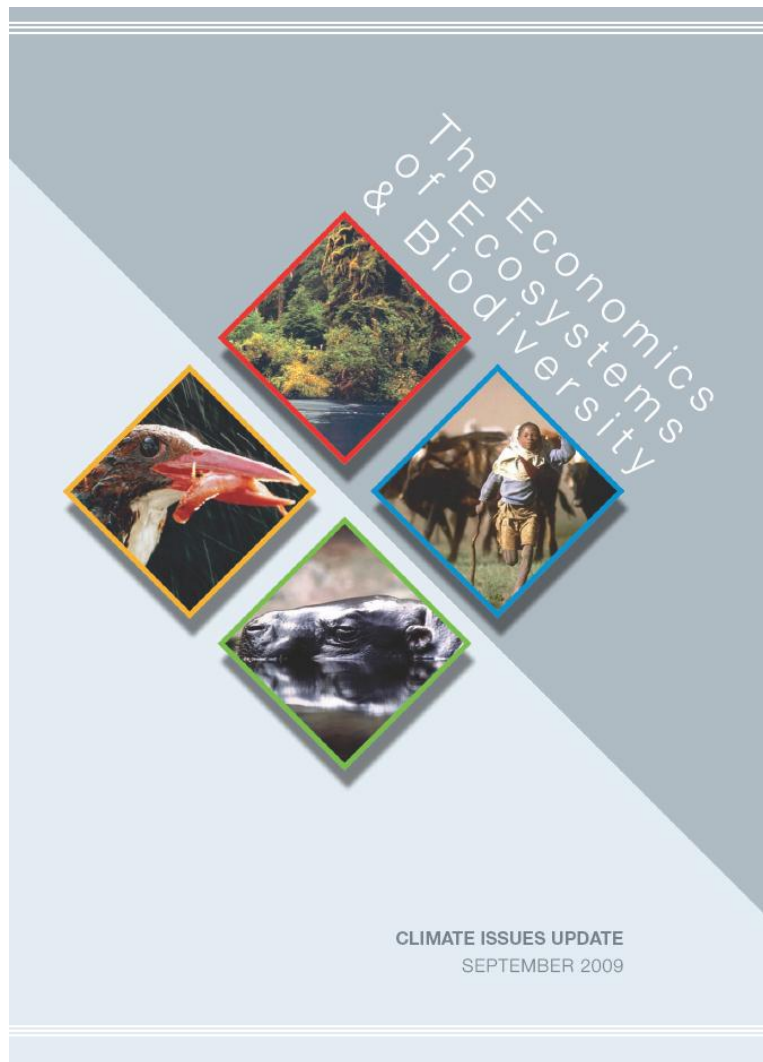
## TEEB timeline



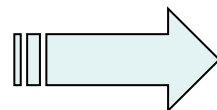


# TEEB Climate Issues Update

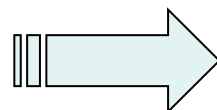
## - September 2009-



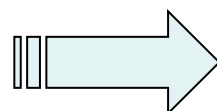
**Coral reef emergency**



**Forest carbon for climate mitigation**



**National accounting for forest carbon**



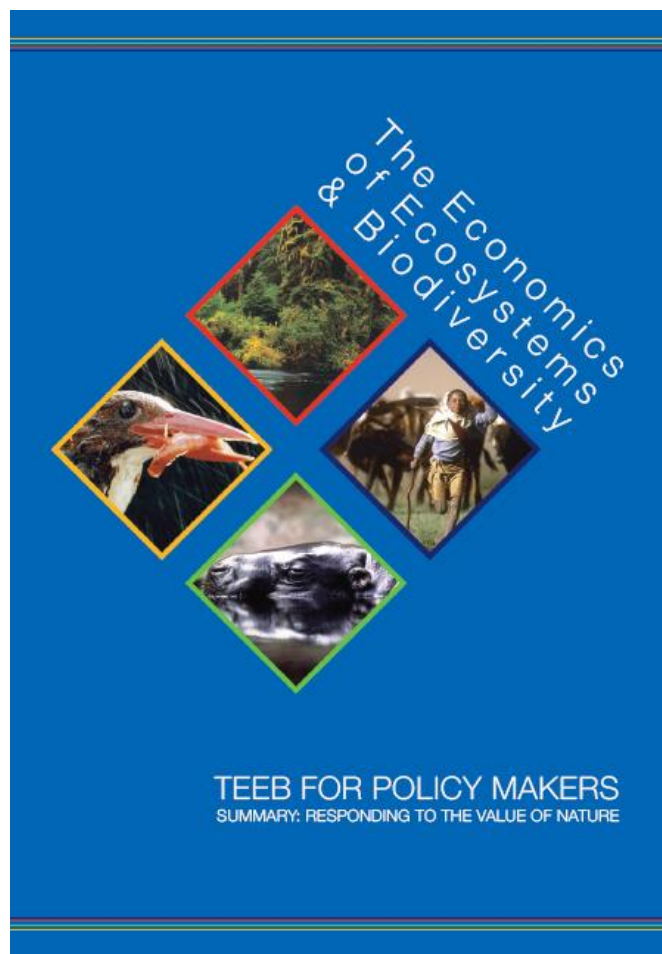
**Ecosystem investment for climate adaptation**

# The Economics of Ecosystems & Biodiversity



## TEEB for Policy Makers report

- launched 13 November 2009 -



<http://www.teebweb.org/>

## The Global Biodiversity Crisis

- Coral reef emergency
- Deforestation
- Loss of public goods...

## Measuring what we manage

- BD & ecosystem service indicators
- Natural capital accounts
- Beyond GDP indicators *et al*

## Available Solutions

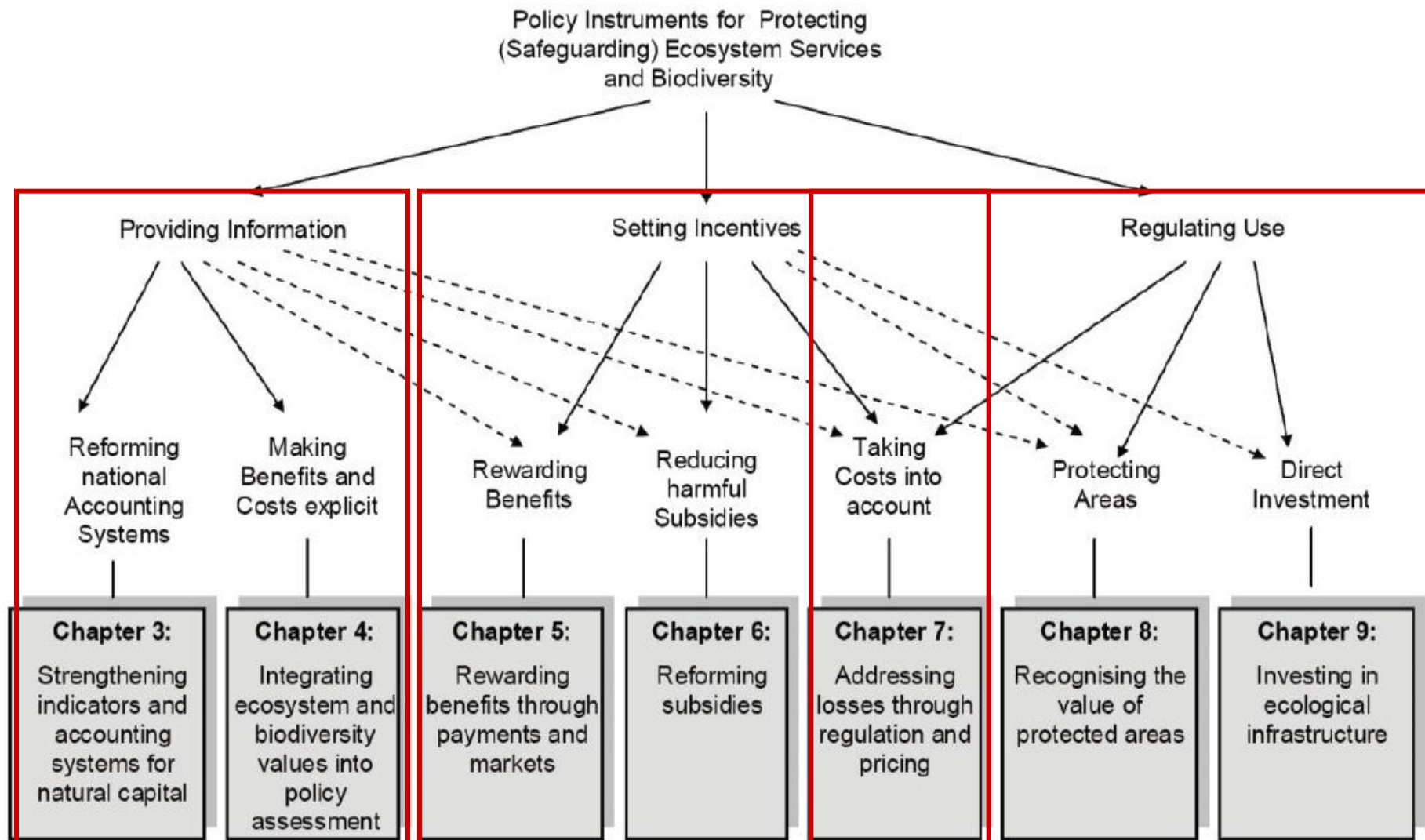
- PES water, PES – REDD+
- Markets, GPP
- Subsidy reform
- Legislation, liability, taxes & charges
- Protected Areas
- Investment in natural capital *et al*

## Responding to the value of nature





## What does economic valuation (i.e. TEEB D1 Toolkit) offer ?



# The Economics of Ecosystems & Biodiversity



**Part A: TEEB Process, content and context**

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**Part C: Selective instruments from the toolkit**

**Part D: The Way forward : understanding and responding to the value of nature**





## Integrating Economic Values into Policy Assessment

**“I believe that the great part of miseries of mankind are brought upon them by false estimates they have made of the value of things.”**

Benjamin Franklin, 1706-1790

**“There is a renaissance underway, in which people are waking up to the tremendous values of natural capital and devising ingenious ways of incorporating these values into major resource decisions.”**

Gretchen Daily, Stanford University

# Ecosystem Services - multiple benefits from ecosystems

## Provisioning services

- Food, fibre and fuel
- Water provision
- Genetic resources

## Regulating Services

- Climate /climate change regulation
- Water and waste purification
- Air purification
- Erosion control
- Natural hazards mitigation
- Pollination
- Biological control

## Cultural Services

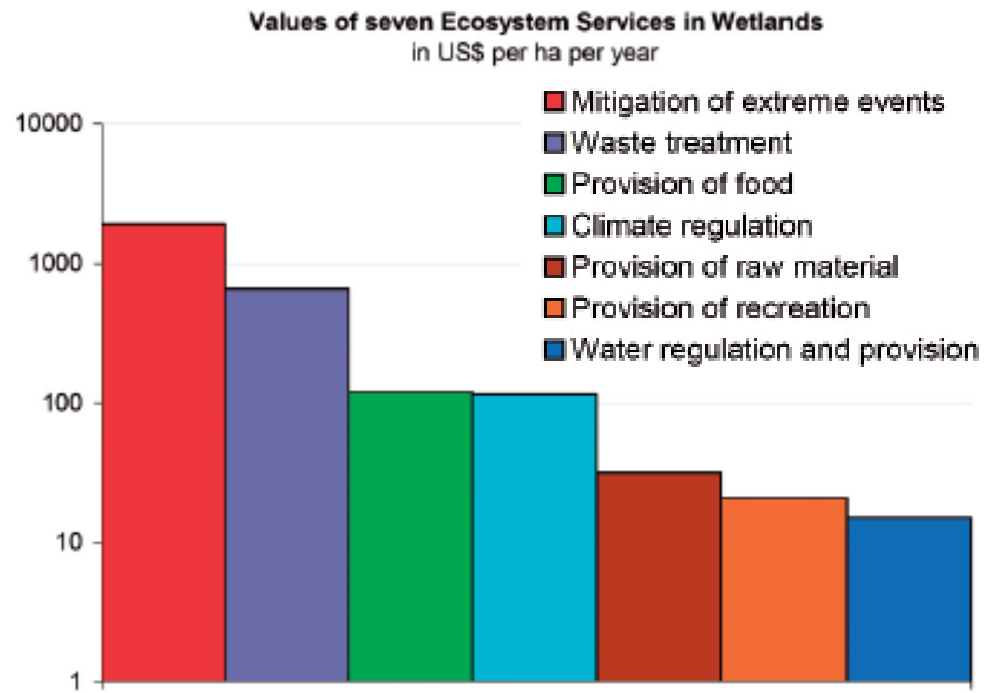
- Aesthetics, Landscape value, recreation and tourism
- Cultural values and inspirational services

## Supporting Services

- *Soil formation*

**+ Resilience** - eg to climate change

## Many services from the same resource



Source: Emerton and Kekulandala 2003

**Important to appreciate the whole set  
of eco-system services**

# Ecosystem Services and awareness of values

## Provisioning services

- Food, fibre and fuel
- Water provision
- Genetic resources



Market values – known and generally taken into account in decision making on land use decisions



Value historically oft overlooked; priv. sector exceptions

## Regulating Services

- Climate /climate change regulation
- Water and waste purification
- Air purification
- Erosion control
- Natural hazards mitigation
- Pollination
- Biological control



Value long ignored, now being understood



Value often overlooked



Value oft appreciated only after service gone  
>> Replacement/substitute costs

## Cultural Services

- Aesthetics, Landscape value, recreation and tourism
- Cultural values and inspirational services



Sometimes value explicit / implicit in markets  
(eg tourism spend / house prices)



Often values rarely calculated

## Supporting Services

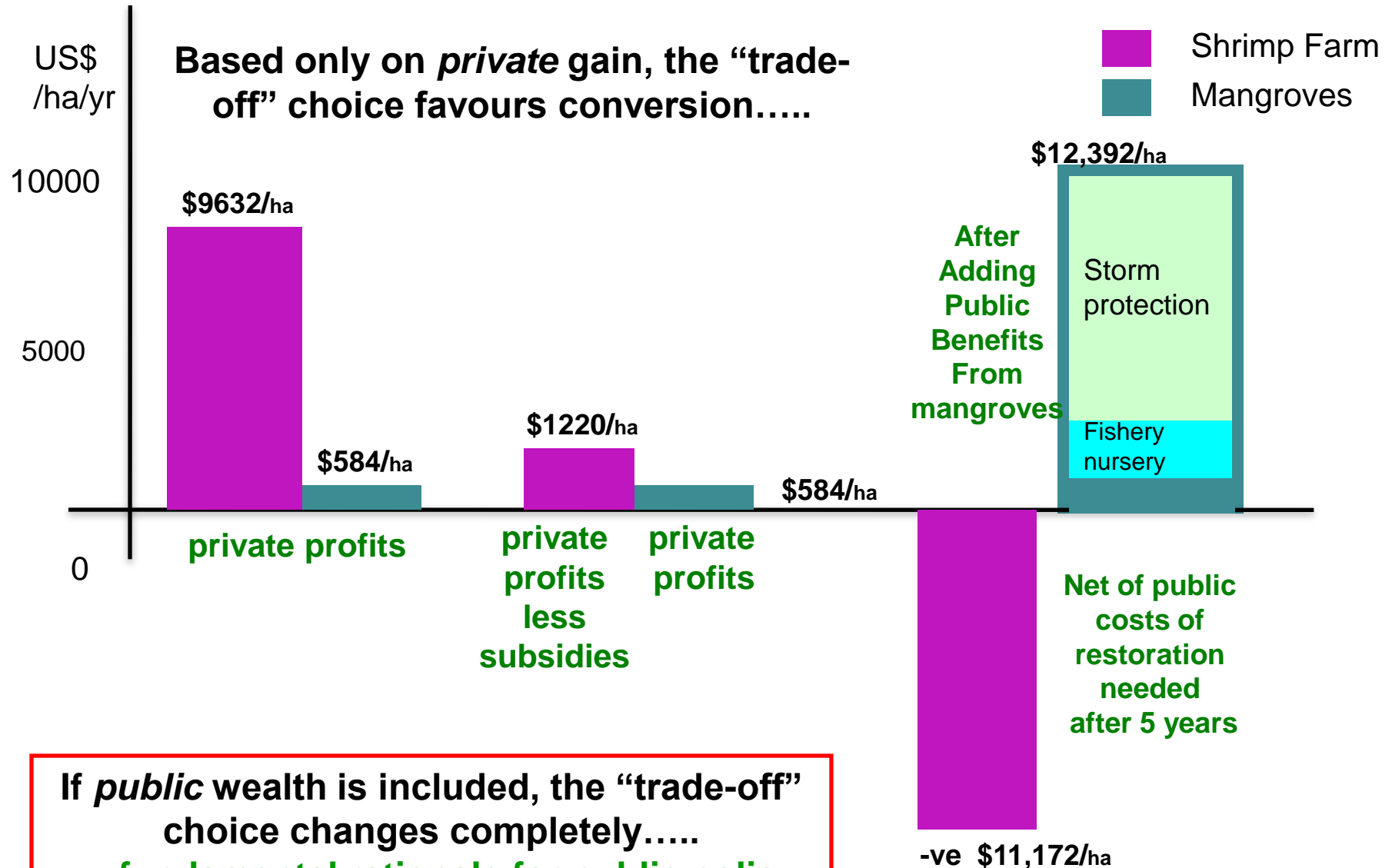
- *Soil formation*

+ **Resilience** - eg to climate change

Decision making is biased towards short term economic benefits as the (long-term) value of ecosystem services is poorly understood.

# Taking account of public goods

...can change what is the “right” decision on land/resource use



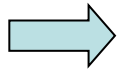
If *public* wealth is included, the “trade-off” choice changes completely.....

>> fundamental rationale for public policy

# Valuation and policy making: from valuing natural assets to decisions

To underline the value of natural assets & help determine where ecosystem services can be provided at lower cost than man-made technological alternatives

e.g. water purification and provision, carbon storage, flood control



**Conservation / restoration and other Investments decisions**

**Avoided cost of alternative water purification and provision**

e.g. **USA-NY** – Catskills-Delaware watershed

e.g. **New Zealand** – Te Papanui Park - water

e.g. Saltillo City, **Mexico** – Zapaliname mountains

**Avoided loss of output** e.g. **Venezuela**: PAs to avoid sedimentation & loss of hydro output

**Carbon storage** – more cost effective than many mitigation or storage options, CCS & biofuels

e.g. PAs, REDD+ & equiv (Carbon payments NZ, Uganda: funds Norway, Germany )

**Lower cost of flood control**

e.g. **Vietnam** and restoring/investing in Mangroves - cheaper than dyke maintenance

e.g. **Belgium** Schelde river: natural flood defence - cheaper than man-made infrastructure

**What example of practice in NL ? What further scope ?**





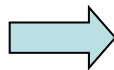
**Create Political support for new (fiscal) instruments**

eg UK landfill tax, building on valuation of damage of using landfills for waste disposal.

**To communicate the need for and influence the size of payments for ecosystem services (PES).**

Valuation can be useful for **municipalities setting up PES for activities leading to clean water provision – and also private sector (eg Vittel)**  
&

at **international/national level** in discussions on **design and future implementation of REDD** (reducing Emissions from Deforestation and Degradation) and REDD+



**Political and public support for action**  
**Instrument Choice**  
**Instrument design**

# The Economics of Ecosystems & Biodiversity

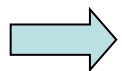


## Inform impact assessment of Proposed legislation & policies

Creating and improved evidence base



- Valuable for **new marine legislation in UK**: establishment of **Marine Conservation Zones** on the basis of ecosystem service benefits
- **Impact assessment** within European Commission - change around **2/3<sup>rd</sup>s** of **policies for the better** & often low-cost investment (Evaluation Partnership 2007; Jacobs 2006)
- Valuable for **EU Water Framework Directive**



**Improve legislative design and implementation**  
**Trend: we can expect future legislation (and its implementation) to ever increasingly take the value of nature into account**

# The Economics of Ecosystems & Biodiversity



**Inform land-use decision - Creating and improved evidence base**

– eg **India: Floodplain between Yamuna River and Delhi.**

**Choice:** convert floodplain / embankment plan or not

Evidence showed that ecosystem benefits exceeded opportunity costs of conversion.

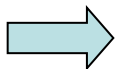
**>> Delhi government halted embankment plan of Yamuna until further order**

- e.g. **Opuntia scrubland in Peru**

**Choice:** maintain scrubland or move to agriculture?

Analysis of value of provisioning services (e.g. fruit and cochineal), regulating services (nursery and refugium services), erosion control and supporting services (soil formation)

**>> even if only some of the intangible benefits considered, the value of the scrubland higher than direct revenues from agriculture.**



**Avoid socially less good investment decisions**



**Evaluate damage to natural resources to determine appropriate compensation,**

**e.g. under liability regimes in the US and the EU – Exxon Valdez, Erika**

**e.g. Indian Supreme court: compensation payments for forested land conversion**

## Box 4.6: Using valuation to assess levels of compensation

**In 1989, response to the Exxon Valdez oil spill:**

- boosted efforts to evaluate environmental damage and helped to speed up development and use of new methodologies for capturing the value of biodiversity and ecosystems;
- spurred the introduction of policy responses consistent with the polluter pays principle i.e. compensation payments based on values of the biodiversity and ecosystem services that had been damaged;
- led to enactment of the US Oil Pollution Act 1990 and international maritime regulations;
- based on economic analysis, led to regulatory prescriptions for double-hull ship building measures. 79% of all oil tankers criss-crossing the globe are now of double-hull design.



**Court rules  
Court rulings**

**Expect increasing  
attention in future?**

**Sea deadzones & Ag?  
Pollution impacts?  
Damage to resources?**

## Indian Supreme Court and Forest Conversion Payments

In 2006, the Indian Supreme Court set compensatory payments for the conversion of different types of forested land to non-forest use. The Court drew on an economic valuation study of Indian forests by the Green Indian States Trust (GIST 2006), to determine the rates. The study estimated the value of timber, fuel-wood, non-timber forest products and eco-tourism, bio-prospecting, ecological services of forests and non-use values for the conservation of some charismatic species (e.g. Royal Bengal tiger, Asian lion) for six different classes of forests. The compensatory payments are directed towards an afforestation fund to improve the country's forest cover. In 2009 the Supreme Court directed that Rs.10 billion (around 143 million EUR) be released every year towards afforestation, wildlife conservation and for creating rural jobs (see full analysis in Chapter 7).

# **Part B Summary**

## **Values and Decision Making**

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- Under-valuing biodiversity and the ecosystem services it supports has contributed to the loss of natural capital
- Historically, many values have been invisible
- Increasingly values are understood and available
  - Some concrete/real money, market or equiv: eg replacement/substitute costs
  - Some less concrete/virtual money (eg WTP studies).....that may become real
- Increasing use in policy assessment and policy choices.
  - Sometimes broad values are enough to raise appreciation of importance
  - Sometimes specific values key - eg for investment decision
  - sometimes either – eg PES schemes: calculation or negotiation approaches work
- Real world effects – on policies, instruments, investments, results.

**What values of nature/ecosystem services have been carried out in the Netherlands?**  
**Where has an appreciate of value led to policy decision ?**  
**What have investment decisions results from appreciating the value of nature?**



# The Economics of Ecosystems & Biodiversity



**Part A: TEEB Process, content and context**

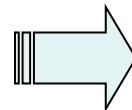
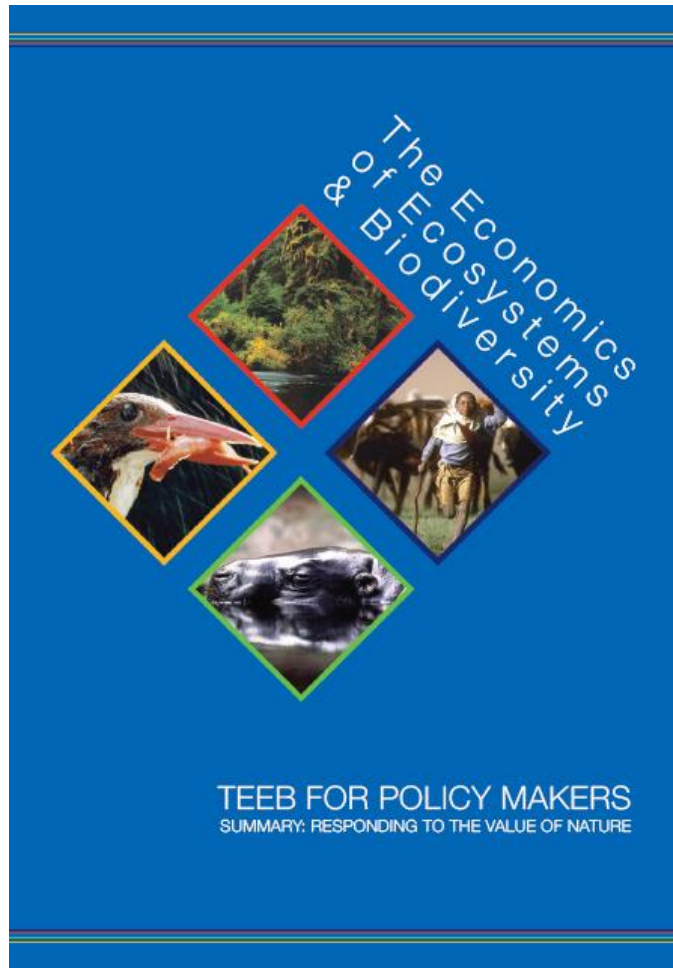
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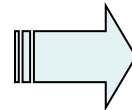
**Part D: The Way forward : understanding and responding to the value of nature**



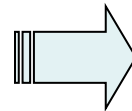
## Part C: Using Economics-based Policy Instruments for Biodiversity and Ecosystem services



**The Global Biodiversity Crisis**

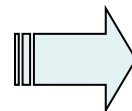


**Measuring what we manage**



### **Available Solutions**

- **Rewarding benefits:** PES, REDD+, ABS, tax relief & fiscal transfers, Markets, GPP
- **Subsidy reform**
- **Addressing losses :** Regulation legislation, liability, taxes & charges, offsets, banking
- **Protected Areas**
- **Investment in natural capital** *et al*



**Responding to the value of nature**

# Ecosystem Services

## Public Goods and Private Goods

### Provisioning services

- Food, fibre and fuel
- Water provision
- Genetic resources



**Market values**



**Potential Market values**

– eg water supply PES; -eg ABS

### Regulating Services

- Climate /climate change regulation
- Water and waste purification
- Air purification
- Erosion control
- Pollination
- Biological control



**Potential Market values**

– eg REDD & water purification PES  
- Avoided cost of purification



**Social value – health, wellbeing**



**Opportunity cost: Lost output or  
cost of alternative service provider**

### Cultural Services

- Aesthetics, Landscape value, recreation and tourism
- Cultural values and inspirational services



**Market values : eco-tourism**



**Social value – identity et al**

### Supporting Services

- *Soil formation*

**+ Resilience** - *eg to climate change*

**Creation of markets, development of  
pricing mechanisms one set of solutions to  
level the economic playing field**



## Rewarding Benefits through payments & markets

Tools that reward the provision of ecosystem services and promote the greening of supply chains, include:

- Payments for Ecosystem services (local, national, international) PES
- Access and benefits sharing (ABS)
- Tax based mechanism and public compensation mechanisms
- Green markets and fiscal incentives (Certification, premia markets, GPP)

+ *investment in natural capital (conservation/restoration/new green infrastructure)*



## PES for provision of a specific service

- Managing forest & agricultural land to **ensure water quality** - New York (Catskills-Delaware watershed); Saltillo city, Mexico (Zapalinamé mountains),
- To **cleanse coastal waters** in Sweden
- to **protect groundwaters** in many European countries & parts of Japan
  - Public - eg **Germany** and Private - eg **Vittel mineral water, France**
- **Carbon storage/sequestration** via farm management is rewarded in New Zealand & via forest management in Costa Rica & Uganda & REDD+
- PES are also used for removal of **invasive alien species** through South Africa's Working for Water Programme

## PES for provision of multiple services from a given area

- Costa Rica's PSA - **carbon, hydrological services preserving biodiversity and landscape beauty.**
- **groundwater quality** + increased **biodiversity** : e.g. Germany & Bolivia (Los Negros watershed)

**What example of practice do you know of re PES in the Netherlands?  
What potential do you see ? For what services ?**





## **REDD+** Reducing Emissions from Deforestation and Forest Degradation

Major potential for this instrument (deforestation ~17% of global GHG emissions)

**One of the few areas given fairly solid support at the UNFCCC's Copenhagen COP**

**Probably a very significant scope for private sector engagement.**

### **Needs:**

**Confidence:** monitoring & verification; natural capital accounts

**Experience:** pilot projects, capacity building, monitoring solutions

**Investment:** money for the projects and payments.

**Evolution:** phasing from pilot, to funds, to market links....

International rationale, international cooperation needs.

What is and what could the NL do to help this tool reach its potential ?



## ABS (Access and benefits sharing)

***“My father said: You must never try to make all the money that's in a deal.***

***Let the other fellow make some money too, because if you have a reputation for always making all the money, you won't have many deals.”***

J. Paul Getty

**The current ABS discussions do not appear to be proceeding at an adequate rate for positive final result in Nagoya (though strong interest to address this).**

**What insights/advice does the Netherlands have for making progress?**



## Greening Markets... from niches to mainstream

Market (niches) for products & services demonstrating conservation benefits:

- **products with reduced direct impacts on biodiversity**, due to adoption of more efficient or low-impact production and processing methods
  - e.g. for reduced impact forestry - FSC, PESC certified timber
  - e.g. for fisheries, MSC certification;
- **products with reduced indirect impacts on biodiversity** as a result of decreased pollution load
  - e.g. biodegradable detergents – **eco-labelled products**
- **products and services based on the sustainable use of ecosystem services and biodiversity**
  - e.g. ecotourism or biotrade.

Need for certification in third countries to facilitate process.

Practice and Scope for international dimension of NL support?



## Green Public Procurement

**Green Public Procurement (GPP)** means that public purchasers **take account of environmental factors when buying products, services or works**. A product or service can only qualify as 'green' if it **goes beyond what is required by law** and **beyond the performance of products commonly sold** in the market.

- GPP rapidly developing since the early 2000s;
- Many large economies – including Japan, China, New Zealand, Korea and the US – also have formal policies in place that stimulate GPP
- The Netherlands – one of the most committed
  - National government intends to purchase 100% green by 2010,
  - 50 to 75% for local and regional governments.

What is your experience of the tool? Lessons for other countries?

What needs to make it work best for biodiversity?



## Subsidy reform

- increase share of the “good” subsidies

still relevant, targeted, effective, positive impacts, few negative effects

- remove/reform the “bad” subsidies

no longer relevant, waste of money, important negative effects

- reform the “ugly” subsidies

badly designed – eg inefficient, badly targeted, potential for negative effects

# The Economics of Ecosystems & Biodiversity



Over \$ 1 trillion per year in Subsidies

**Table 6.1: Aggregate subsidy estimates for selected economic sectors**

Sector	Region
Agriculture	<b>OECD: US\$ 261 billion/year (2006-8) (OECD 2009)</b> <b>Biofuels: US, EU and Canada US\$ 11 billion in 2006 (GSI 2007; OECD 2008b)</b>
Fisheries	<b>World: US\$ 15-35 billion (UNEP 2008)</b>
Energy	<b>World: US\$ 500 billion/year (GSI 2009a)</b> <b>US\$ 310 billion in the 20 largest non-OECD countries in 2007 (IEA 2008)</b>
Transport	<b>World: US\$ 238-306 billion/year – of which EHS US\$173-233 billion (EEA 2005)</b>
Water	<b>World: US\$ 67 billion – of which EHS US\$ 50 billion (Myers and Kent 2002)</b>

Most sensible use of funds? Or potential for reform?



# Yet reforming EHS > potential benefits

- Reduce resource intensive inputs, **saving resources** & **less pollution**

## >> Lesser pressure on the nature capital stock

- **Increase competitiveness** by exposing subsidised sectors to competition and supporting future competitiveness by resource availability
- **Level the playing fields / fix market distortions** by making resource prices reflect resource value, and 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

## >> Move to a more resource efficient economy

- Enable government to **divert budget to other areas** (e.g. education, poverty, PES, energy saving)

## >> Good governance in a time of crisis

**What realistic scope for economic savings and environmental (and other) improvements in the Netherlands?**



***‘Taxes are the price of a  
civilized society’***

Franklin D. Roosevelt upon introducing the first US  
income tax in the 1940s.

***‘Maybe environmental tax reform  
is the price of a sustainable society?’***

Jacqueline McGlade (EEA)  
speech at the 8th Global Conference on  
Environmental Taxation (Munich, 18 October 2007).



## Taxes & polluter pays principle

### Incentive effect & revenue raising effect

**Pesticides tax:** 20 SEK/kg (in 2002) 65 % reduction in use (Sjöberg, 2007)

**Fertiliser taxes or taxes on excess nutrients:** Decrease in product use 20-30% in the Netherlands, 11-22% in Finland, 15-20% in Sweden & 15% in Austria. (Ecotec 2001)

**Plastic bag tax:** Ireland (2002). 33 cents per bag at checkout. Plastic bag consumption dropped by 80% from 1.2 billion to 230 million bags in the first year, generating tax revenues (US\$ 9.6 million) earmarked for a green fund.

**Landfill tax:** UK £1 billion of contributions paid from landfill operators to env. projects

...also energy taxes, carbon taxes, NO<sub>x</sub>, SO<sub>x</sub> taxes, range of product taxes etc

**Scope and ambitions for new taxes in time of budget crisis and year of biodiversity ?**



## Charges & full cost recovery

### Water pricing:

e.g. Many **EU Member States** (e.g. Netherlands, UK) have moved towards full cost recovery for water; significant changes in water pricing for most newer Member States

In the Czech Republic, water pricing gradually increased from €0.02/m<sup>3</sup> before 1990 to €0.71/m<sup>3</sup> in 2004. Between 1990 and 1999, water withdrawals decreased by 88% (agriculture), 47% (industry) and 34% public water mains).

### Waste:

e.g. **Korea: volume based waste fee:** 1994 to 2004: 14% reduction in municipal waste

**Netherlands early leader in ETR. Lessons ?**

**Scope and ambitions for taking up this leadership role again?**

# The Economics of Ecosystems & Biodiversity



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# The Way forward : understanding and responding to the value of nature

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**Who can do what:** Differentiated responsibility / differentiated interests and diverse opportunities

**Learning from Copenhagen:** Multiple paths to progress

**National Steps / Making TEEB work for countries:** Essential building blocks



# Differentiated responsibility / differentiated interests and diverse opportunities

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- **Global context: International negotiations, Conventions, Protocols, Treaties**
  - CBD COP 10: Nagoya and CBD decisions.
  - + desertification, UNFCCC (REDD+ links; ecosystem based adaption), CITES etc
- **National - international links – eg** Bilateral aid: eg Norway, Germany & Forestry
  - Needs: certification of markets in 3<sup>rd</sup> countries, capacity building re REDD+, taxonomy / science / biomimicry, IPES, offsets/investments, GPP/market pull, monitoring, Natural Capital accounts, and an international platform for science, communication and collaboration: IPBES; et al
- **National efforts – doing it for oneself and demonstrating value**
  - Own assessments of value
  - Responding to value : policies, regulation, instruments, investments
- **Private sector** – bottom line, opportunities, risks & liabilities, responsibilities
  - greening the supply chain, responding to GPP, making most of markets, measuring risks (eg to inputs), liabilities, investing to reduce risk or liabilities.
- **Communities** – solutions (Eg fisheries mng't), engagement (eg PES/REDD), participation
- **Citizens** – actions and purchasing: responsibility and self interest.



## The way forward : learning form Copenhagen

### Copenhagen underlines

- Risk of **international route**: success far from guaranteed.
  - >> Selective progress nevertheless possible: REDD+
  - >> do not put all eggs in CBD COP 10 basket?...how many eggs?
- Europe's clout less than we would like to believe/hope?
- Insufficient preparation – “shoe leather” around the world
- Insufficient trust – need action (ODA, 0.7%) not words in many cases
- Recognise moral responsibility – words, commitments and action
- IPCC: invaluable process but can be target of attack >> IPBES needed, but needs careful design and operation.
- “other eggs”: **bilateral international solutions**
  - Benefits of international cooperation: Norway, Germany and Forestry
  - Copenhagen underlines: (own) responsibility & commitments: ODA promises important element of political capital and trust/goodwill
- “other eggs” **national efforts**: to lead by example, show commitment (to issues, inc. international dimension), realise own benefits



## National Steps to understand & respond to the value of nature

### 1. Understand the nation's natural capital and the services they provide

- **assessing and mapping ecosystems, sources of ecosystem services and beneficiaries**

- eg national ecosystem assessment, local assessments - where promising interest.
- include state, trends and threats and potentials
- include link between biodiversity / activities that provide the service and the beneficiaries
  - locally, nationally, internationally/globally
- understand trade-offs (across ecosystem services etc).
- start with promising/important sources, but aim for full picture over time (integrated approach).



## National Steps to understand & respond to the value of nature

### 1. Understand the nation's natural capital and the services they provide (cont.)

#### valuation where it matters: eg start re investment decisions

- eg water purification services and water supply for cities
  - eg flood control (& other natural hazards) and natural solutions
  - eg green infrastructure and health benefits (cities)
  - eg PA and tourism
  - eg MPAs and fisheries benefits
  - eg carbon storage and sequestration value (trees, soil, grasslands, wetlands etc)
  - eg pollution impact (Eutrophication, oil spills, water quality, soil quality) & value lost.
  - eg risks of invasive species & benefits of action (avoided damage/lost output)
- some are discrete stand alone, many are interrelated: aim for whole picture across services.

#### • start towards natural capital accounts – long route, essential destination

- Physical accounts
- links to economic accounts - via depreciation of natural capital etc



## 2. Understand opportunities to respond

- **Differentiated responsibility / rights, roles, potential**
  - international bodies/processes, national public authorities, regional / local authorities
  - Private sector and how to engage them (interest, responsibility)
  - Communities and citizens and how to engage them (information, participation)
- **Policy review/audit** – what instruments are in place addressing what issues ?
  - strengths, gaps, weaknesses; good governance: synergies and coherence
- **What windows of opportunities** are there for action ?
  - eg election manifestos (eg France: Grenelle de L'environnement; UK)
  - major reports or events to respond to (oil spills, species loss/collapse, flooding...and in due course, natural capital accounts publication or IPBES reports)
  - major political events or processes (CBD, UNFCCC, CITES... )
  - Creating own windows of opportunity (eg green tax commissions)

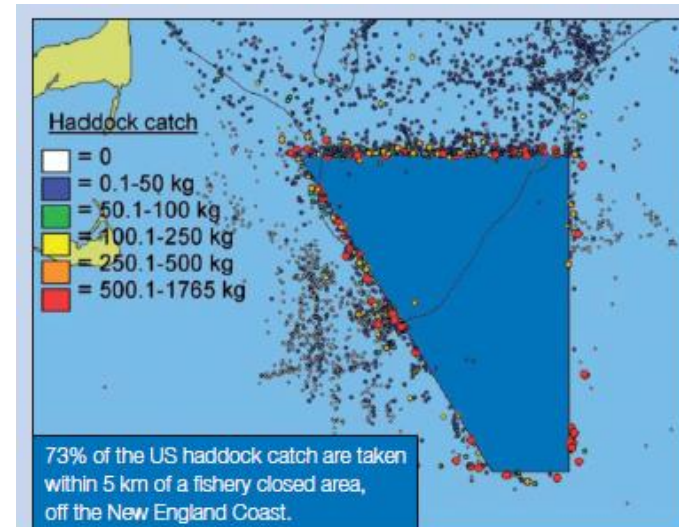
What opportunities in the Netherlands and for NL internationally ?



## 3. Understand where greatest benefits of action (and resistance to action) will lie

- understand scale, location and timescale of the benefits of action (here and now; there and then; them and us – the whole picture)
  - understand winners and losers (losers will often resist more than winners will encourage)
  - understand tradeoffs across 4 capitals (man-made, environmental, social and human)
  - understand synergies and tradeoffs across ecosystem services
  - timescale of costs, timescale of benefits (critical for PA dialogue and transition management)
- 
- ..eg Marine protected areas (MPAs):
  - often major benefits after, 3,5,8 years

**Lessons from transition management in the Netherlands ?**







## 4. Action: Choose solutions that work & lead by example

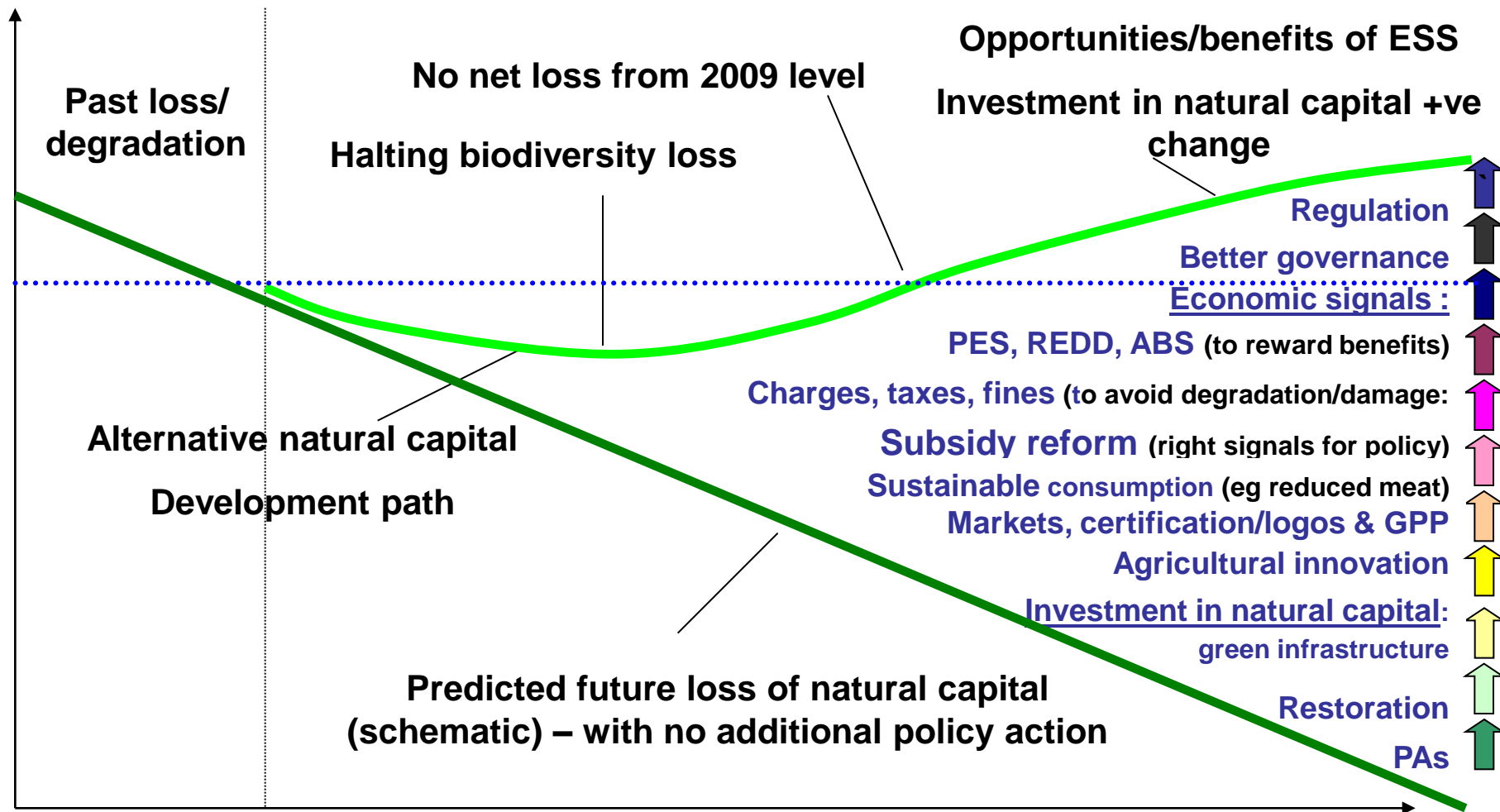
- Each country has different ecological context and challenges
  - Different economic and social context
  - Different experience with policy tools
  - Different political appetite for action in different areas
  - No one solution for all
  - Lead by example where it works nationally
  - Keep an eye on the bigger picture and timing for other initiatives
- 
- Eg some countries might start with a focus on MPAs and fish
  - Others on cities and water purification and provision
  - yet others on PAs, landscape and tourism

**What are the particular biodiversity challenges in the Netherlands?**

**Where is there potential to build on the value of ecosystem services?**

**Where is and where can the NL lead by example?**

# Eroding natural capital base & tools for an alternative development path



Where is the Dutch experience of value to other countries ? What plans exist or potential is there for domestic or international measures in 2010+?

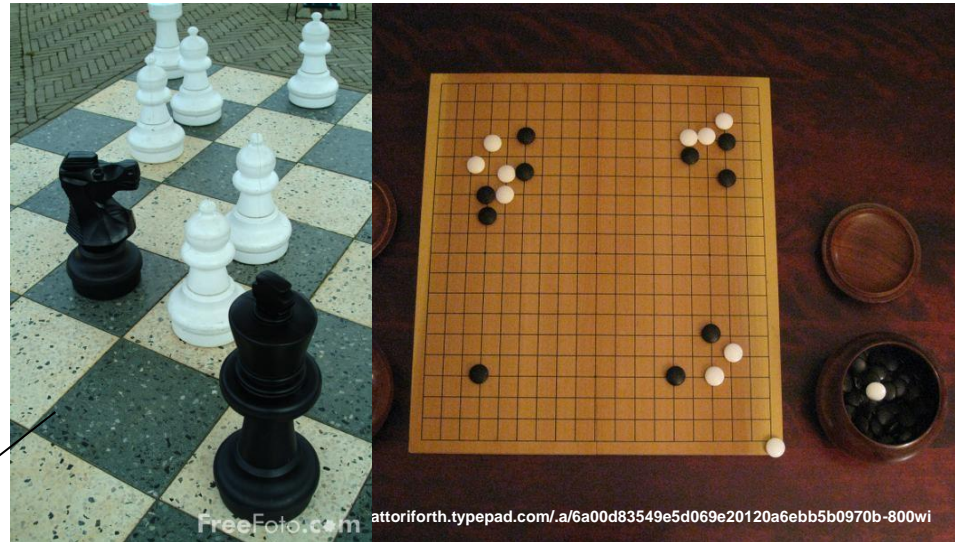
# Part D Summary

## Making it happen

- Under-valuing biodiversity and the ecosystem services it supports has contributed to the loss of natural capital
- Historically, many values have been invisible
- Increasingly values are understood and available
- Increasing use in policy assessment and policy choices.
- Real world effects – on policies, instruments, investments, results.

More steps are needed to appreciate and respond to the value of nature

The whole picture of benefits and costs need to be appreciated – the here and now, the over there and over time, the private and public



...is this enough to work out what to do?

...always better to look at the whole board



*“It is not enough to know,  
one should also use; it is not  
enough to want, one should  
also act.”*

Johann Wolfgang von Goethe, 1749-1832



# TEEB for National and International Policy Makers

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**Thank you !**  
**Looking forward to discussion**  
**on the Insights from the Netherlands**

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Rijksoverheid







## TEEB reports for different end-users



TEEB D0: Ecological and Economic Foundations



TEEB D1: TEEB for National and International Policy-Makers



TEEB D2: TEEB for Local Policy-Makers and Administrators



TEEB D3: TEEB for Business



TEEB D4: TEEB for Citizens

# The Economics of Ecosystems & Biodiversity



## Major Policy Interest

### G8+5



### Message from Syracuse

<http://www.g7.utoronto.ca/environment/env090424-summary.pdf>

### CBD Process

#### Bonn (COP 9)

London (UK-Brazil co-chaired informal experts meeting) *60+countries*;

Trondheim Biodiversity Conferences *100+countries*

#### Nagoya (COP 10)

### EU

#### Message from Athens

[http://ec.europa.eu/environment/nature/biodiversity/conference/pdf/message\\_final.pdf](http://ec.europa.eu/environment/nature/biodiversity/conference/pdf/message_final.pdf)

#### Message from Strömstad

[http://www.se2009.eu/polopoly\\_fs/1.14381!menu/standard/file/Chairs%20conclusion%20Str%C3%B6mstad.pdf](http://www.se2009.eu/polopoly_fs/1.14381!menu/standard/file/Chairs%20conclusion%20Str%C3%B6mstad.pdf)

#### Message from Madrid

[http://www.fundacion-biodiversidad.es/minisites/2009/conferencia2010/doc/Prioridades\\_Cibeles.pdf](http://www.fundacion-biodiversidad.es/minisites/2009/conferencia2010/doc/Prioridades_Cibeles.pdf)

### National Politics

#### Benn to call on world leaders to adopt biodiversity pricing

Environment secretary says a way must be found to take account of the economic impact of decisions on biodiversity

[Patrick Wintour](#)

<http://www.guardian.co.uk/science/2010/jan/25/hilary-benn-biodiversity-pricing>



## Structure of TEEB for Policy Makers

### **Part I      The need for action**

Chapter 1   The global biodiversity crisis and related policy challenge

Chapter 2   Framework and guiding principles for the policy response

### **Part II      Measuring what we manage: information tools for decision-makers**

Chapter 3   Strengthening indicators and accounting systems for natural capital

Chapter 4   Integrating ecosystem and biodiversity values into policy assessment

### **Part III     Available solutions: instruments for better stewardship of natural capital**

Chapter 5   Rewarding benefits through payments and markets

Chapter 6   Reforming subsidies

Chapter 7   Addressing losses through regulation and pricing

Chapter 8   Recognising the value of protected areas

Chapter 9   Investing in ecological infrastructure

### **Part IV     The road ahead**

Chapter 10   Responding to the value of nature