wbcsd business ecosystems training

BET Module 1

Understanding the Links between Ecosystem Services and Business

Main Presentation

February 2012

Business Ecosystems Training – Contributors

All content is based on WBCSD material and publically available reports.

BET curriculum and structure was designed by KPMG

The structure and content development of BET was governed by an Advisory Committee consisting of WBCSD member companies and Regional Network partners, NGOs, UN and academic institutions.

Session 1
Icebreaker and Introduction

Module 1: Understanding the links between ecosystem services and business

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Icebreaker and Introduction

a) Your current role and scope of work

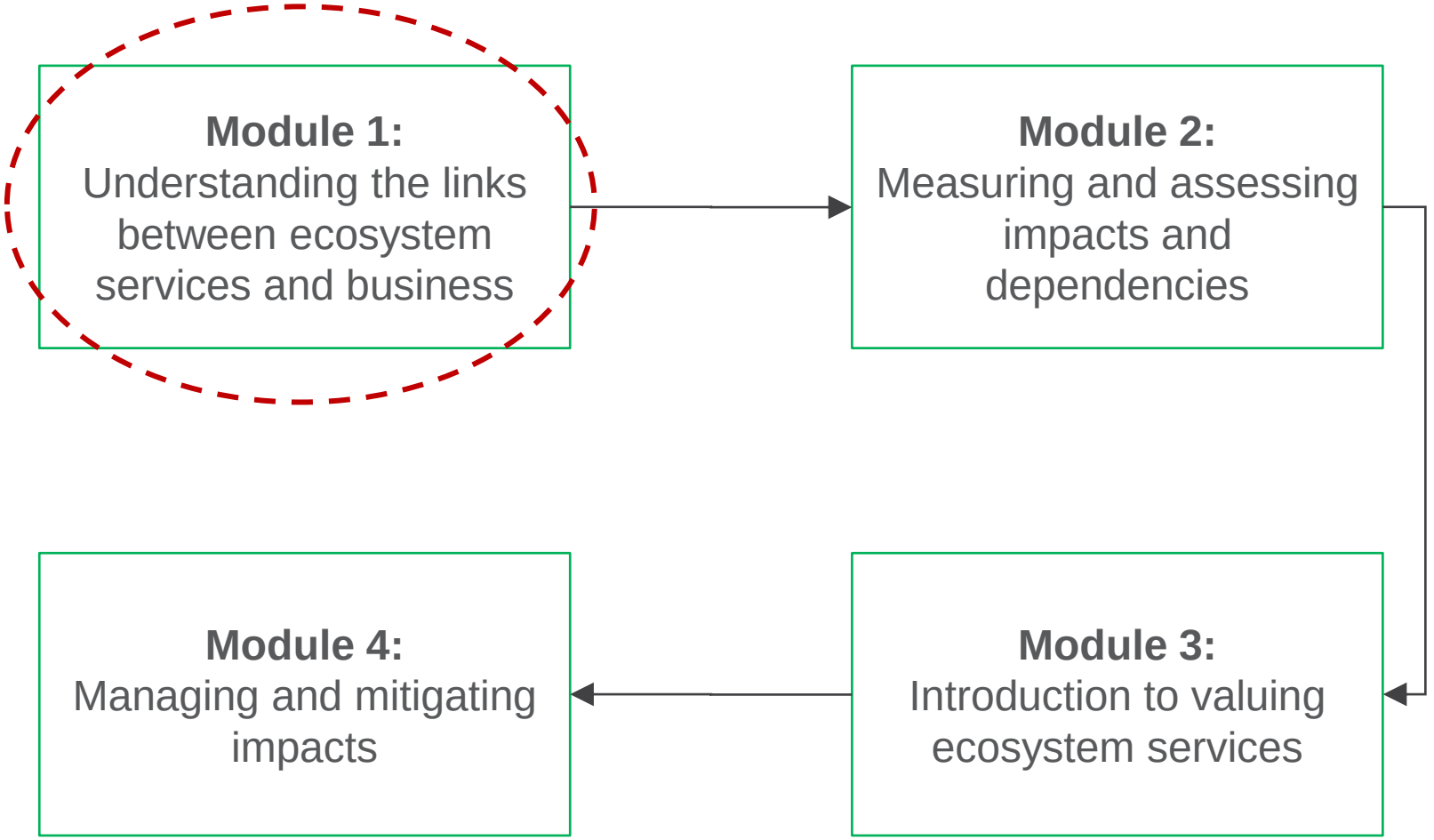
b) Your knowledge of ecosystems

c) What you want to learn from the course and Module 1

5 minutes

Catch the ball!!!

Where module 1 sit within the broader training available?



Module 1 objectives

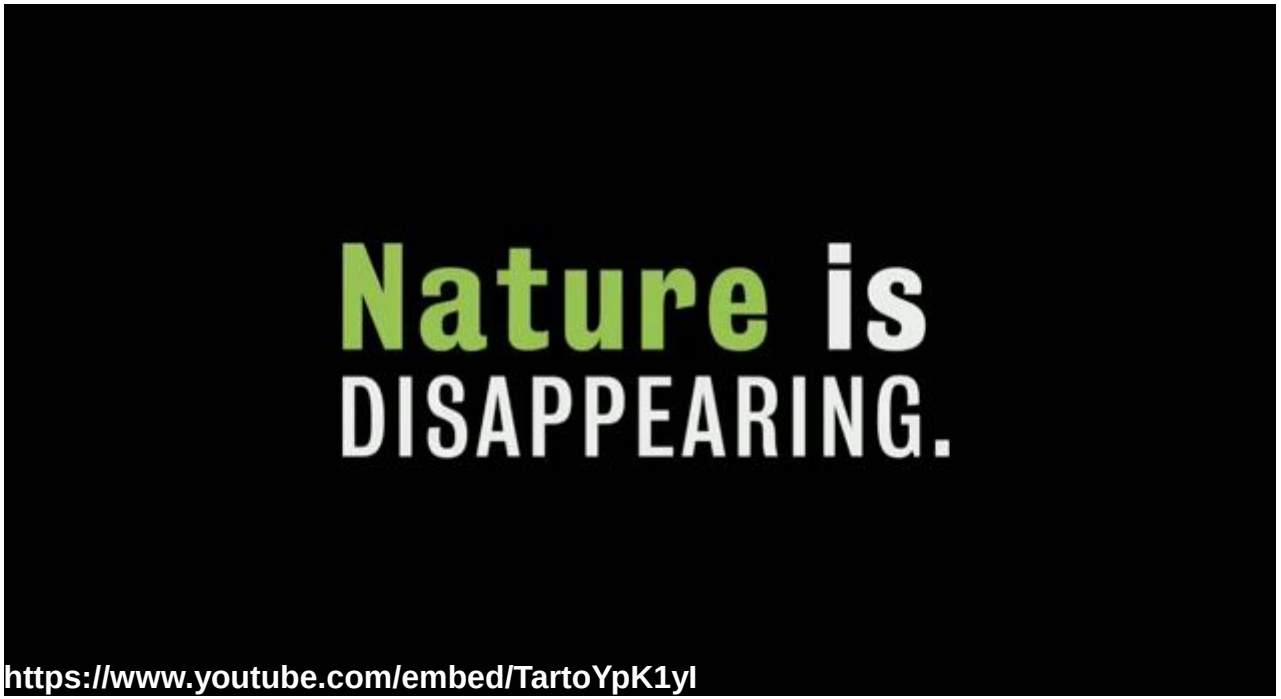
- Demonstrate an understanding of the key terms and concepts around biodiversity, ecosystems, ecosystem services, environment and sustainability.
- Identify the direct and indirect drivers and causes for biodiversity and ecosystem changes and impacts, and the impacts and dependency of companies on ecosystem services.
- Understand the link between ecosystem services and wider sustainability issues.
- Describe the business case for managing ecosystems and identify the specific business case for their own company from the perspective of both risk and opportunity.
- Understand some of the basic regulatory and policy frameworks currently in place as a key driver of change (expanded in module 4).
- Help participants gain knowledge that will help them add value to their organization.

Module 1 summary – checkpoints

- Understand the basics
- Drivers for change and business impacts and dependencies
- Links with sustainability
- Business case for action
- Policy and regulatory frameworks
- Gain useful knowledge

Module 1 – Agenda

Time	Duration (mins)	Session	Facilitator
	45	Icebreaker and introduction	
	30-35	Biodiversity, Ecosystems and Ecosystem Services – the basics	
	10	Introduction to Policy Trends	
	30	Coffee break	
	10-25	Identifying key ecosystem services – activity	
	25-30	The Global Ecosystem Challenge	
	25	Case study and exercise	
	10	Knowledge check	
	10	Re-cap – the business case for action	
	5	Possible actions	
	30	Brainstorming the business case – activity	
	20	Wrap up	



“What is nature worth?”

Source: University of Minnesota, Institute on the Environment

Introduction to Sustainable Development

Brundtland definition, from Our Common Future (WCED 1987)

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Corporate sustainability

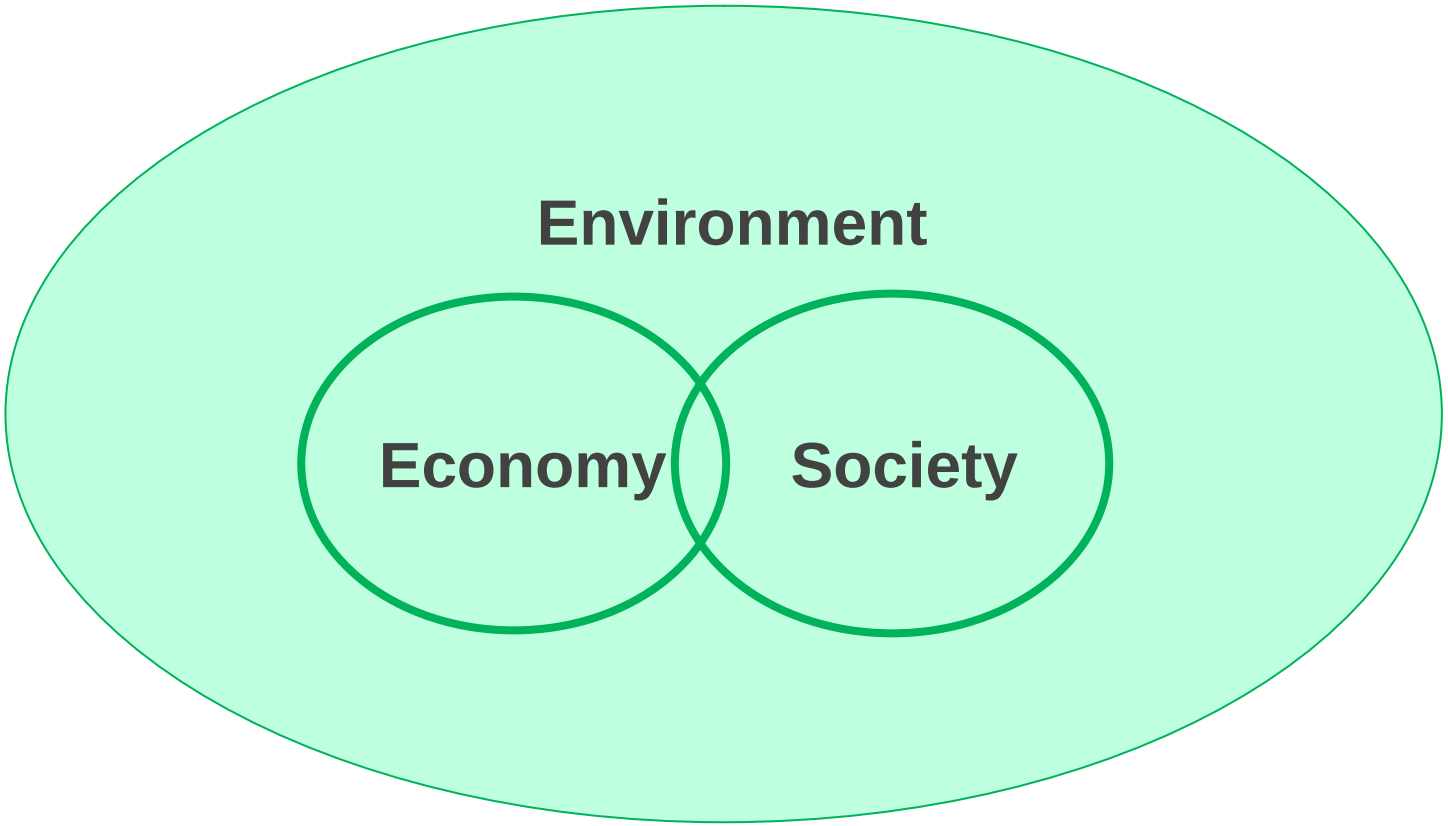
"Managing resources to ensure that a business can survive and maintains conditions under which it can produce goods and services and exist in harmony with nature. It is therefore important to ensure that a business has knowledge of its dependencies on both ecology and society."

Millennium Development Goals

Eradicate Extreme Poverty and Hunger; Achieve Universal Primary Education; Promote Gender Equality and Empower Women; Reduce Child Mortality; Improve Maternal Health; Combat HIV/AIDS, Malaria and Other Diseases; Ensure Environmental Sustainability; and Develop a Global Partnership for Development.

Sources: http://www.un-documents.net/ocf-02.htm#I
http://www.un.org/millenniumgoals/bkgd.shtml

Sustainability



How are companies addressing this issue?

Unilever:

"By 2020 we will source 100% of our agricultural raw materials sustainably."

Source: http://www.unilever.com/sustainability/environment/agriculture/index.aspx

Holcim:

"Our commitment is to continuously improve our environmental performance and provide positive contributions to our business and to society."

Source: http://www.holcim.com/fileadmin/templates/CORP/doc/SD/envPolicywebversion.pdf

Walmart:

"Walmart de México to reduce water use by 20 percent by 2013 (2008 Baseline)"

Source: http://walmartstores.com/download/4887.pdf

Kimberly-Clark:

"25 percent reduction in manufacturing water use by 2015"

Source: http://www.cms.kimberly-clark.com/UmbracoImages/UmbracoFileMedia/2010SustainabilityReport_umbracoFile.pdf

Session 2
Biodiversity, Ecosystems and Ecosystem Services – the basics

Module 1: Understanding the links between ecosystem services and business

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Basic concepts

Biodiversity is not just about:

But also about:

A few definitions

Biodiversity

The variability among living organisms within species and ecosystems.

Ecosystem

A dynamic complex of plant, animal, and micro-organism communities and the non-living environment.

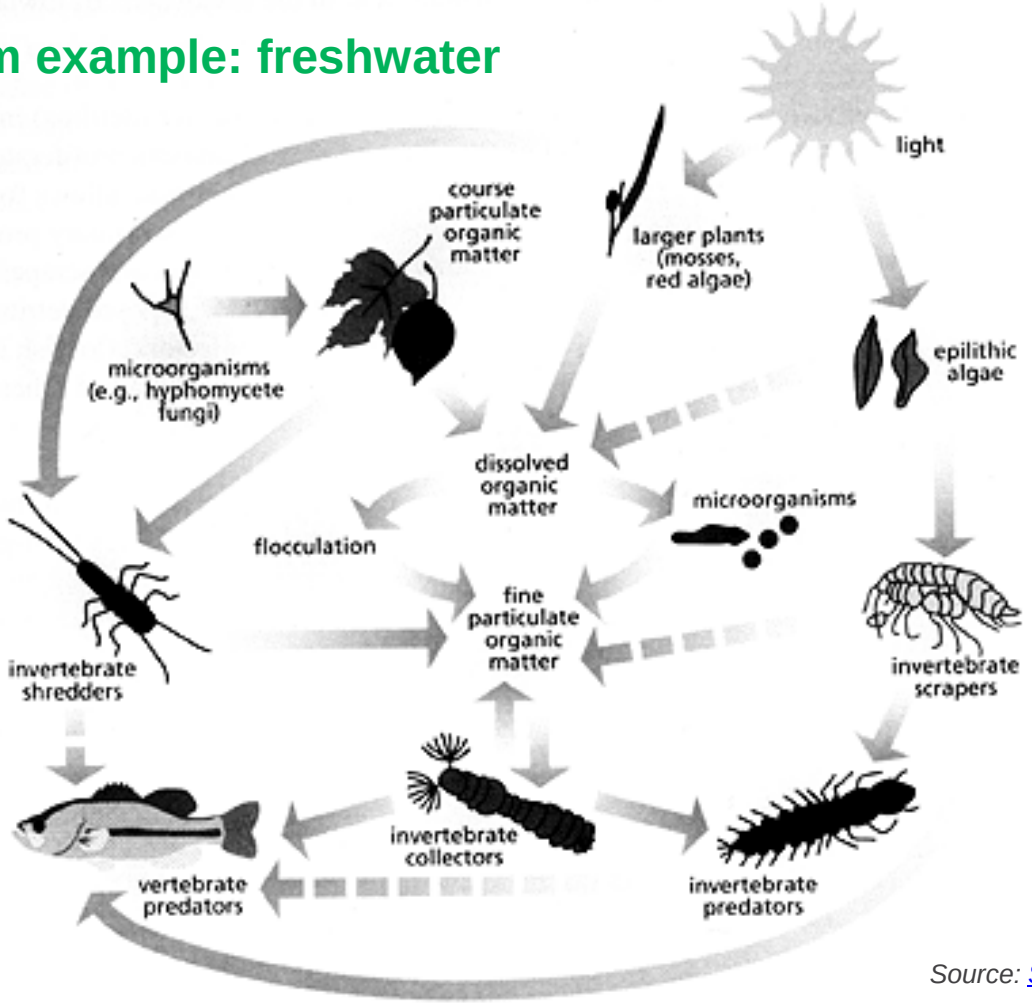
Ecosystem services

The benefits that people obtain from ecosystems – the goods and services of nature.

Source: Connecting the dots (slide 9) and WBCSD. 2008. Corporate Ecosystem Services Review [online]. [Accessed 2 August 2011]. Available from: http://www.wbcsd.org/DocRoot/R3HpfX53CixLEiQsBRpJ/Corporate_Ecosystem_Services_Review.pdf

Basic concepts (cont.)

Ecosystem example: freshwater



Source: [Society for freshwater science]

Concepts

- **Ecosystem Dependency:** *"Environmental conditions required for successful corporate performance"*, e.g. the agricultural industry is dependent on plant pollinator species such as bees.
- **Ecosystem Impact:** *"Company affects the quantity or quality of the ecosystem service"*, e.g. mining industry has an impact on ecosystems that exist on the land occupied by extraction sites.
- **Ecosystem Priority:** *"those services on which the company has a high dependence and/or impact"*, e.g. the paper industry impacts on forests by procuring timber for their products.
- **Drivers:** *"factors–natural or man-made–that cause changes in an ecosystem and its ability to supply ecosystem services".*
- **Resource scarcity:** Production of useful resources by ecosystems diminishes, thereby putting pressure people and industries who are dependent on them.

Source: Connecting the dots (slide 9) and WBCSD. 2008. Corporate Ecosystem Services Review [online]. [Accessed 2 August 2011]. Available from: http://www.wbcsd.org/DocRoot/R3HpfX53CixLEiQsBRpJ/Corporate_Ecosystem_Services_Review.pdf

Ecosystem services – an overview

Provisioning
Goods or products produced by ecosystems

Regulating
Natural processes regulated by ecosystems

Cultural
Intangible benefits obtained from ecosystems







Supporting
Functions that maintain all other services

As described in the *Millennium Ecosystem Assessment*, 2005.

Provisioning services:

Goods produced or provided by ecosystems

Food

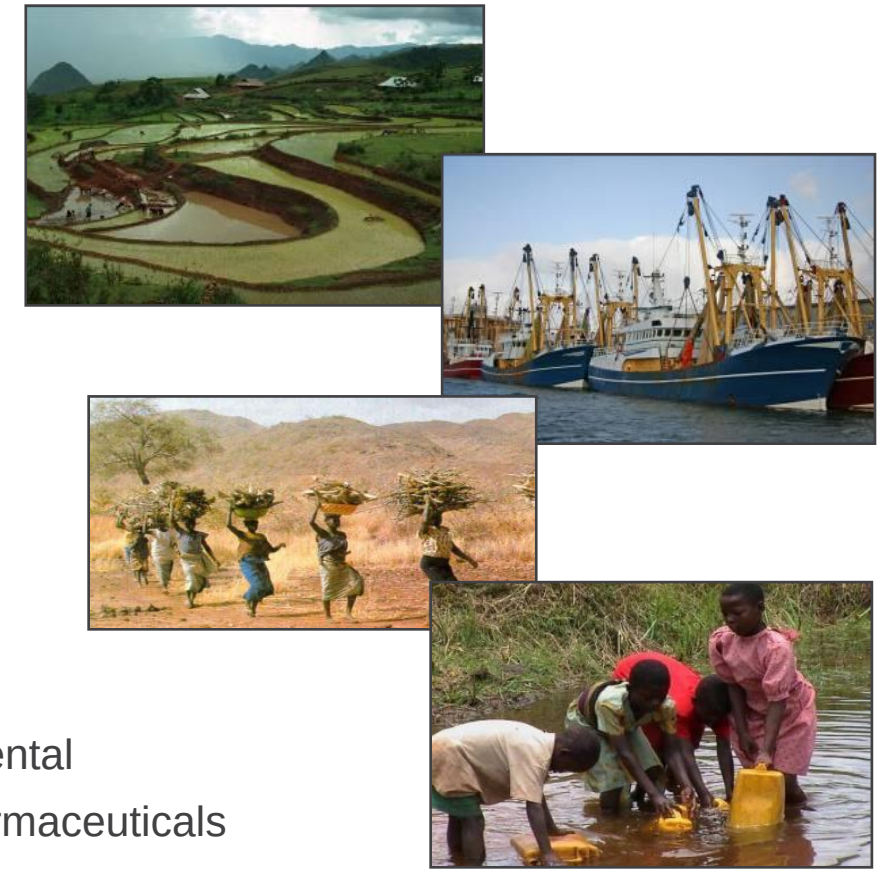
- Crops
- Livestock
- Capture fisheries
- Aquaculture
- Wild foods

Fiber

- Timber
- Cotton, hemp, silk
- Biomass fuel

Freshwater, Genetic resources, ornamental

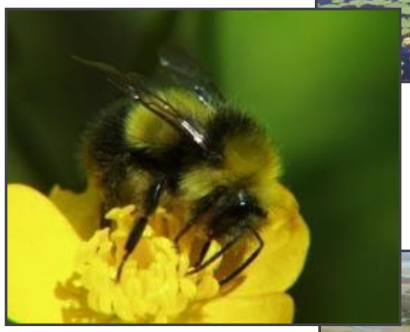
Biochemicals, natural medicines & pharmaceuticals



Regulating services:

Natural processes regulated by ecosystems

- Air quality regulation
- Climate regulation
  - Global (CO2 sequestration)
  - Regional and local
- Water purification and waste treatment
- Water flow regulation
- Natural hazard regulation
- Erosion regulation
- Disease regulation
- Pest regulation
- Pollination



Cultural services:

Cultural and social benefits obtained from ecosystems

- Recreation
- Ecotourism
- Spiritual and religious values
- Educational
- Ethical and “existence” values

Supporting services:

Functions that maintain all other services

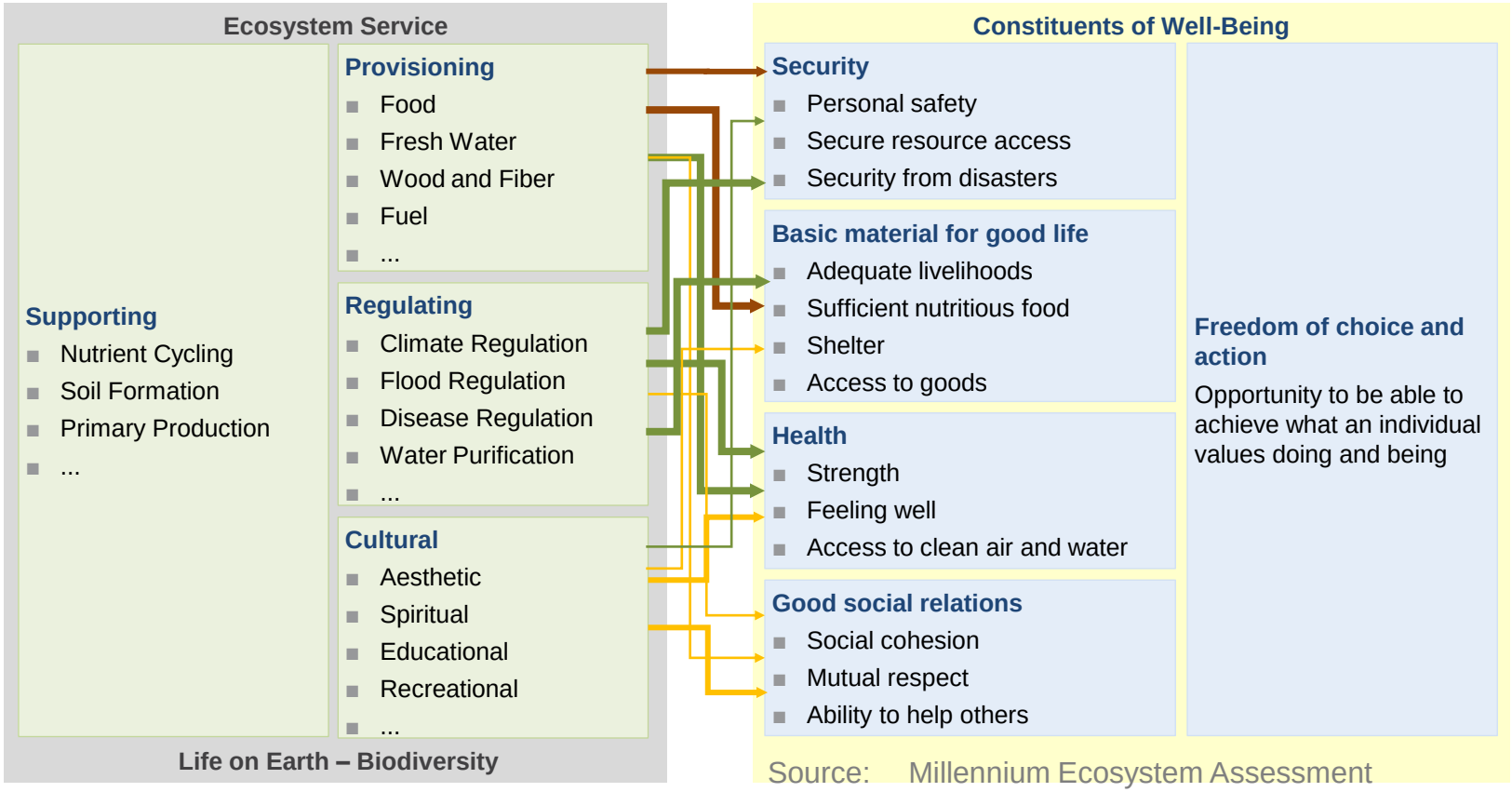
- Nutrient cycling
- Primary production
- Photosynthesis
- Water cycling

Source: http://www.wbcsd.org/Pages/EDocument/EDocumentDetails.aspx?ID=27&NoSearchContextKey=true

Biodiversity, ecosystems and ecosystem services

Biodiversity	Quality	Quantity	Services (examples)
Ecosystems	Variety	Area/extent	Recreation Water regulation Biological control
Species	Diversity	Abundance	Food, fibre, medicine Design inspiration Pollination
Genes	Variability	Population	Bio-tech. inputs Disease resistance Adaptive capacity

Link between ecosystem services and human well-being



Arrow's Color Potential for mediation by socioeconomic factors

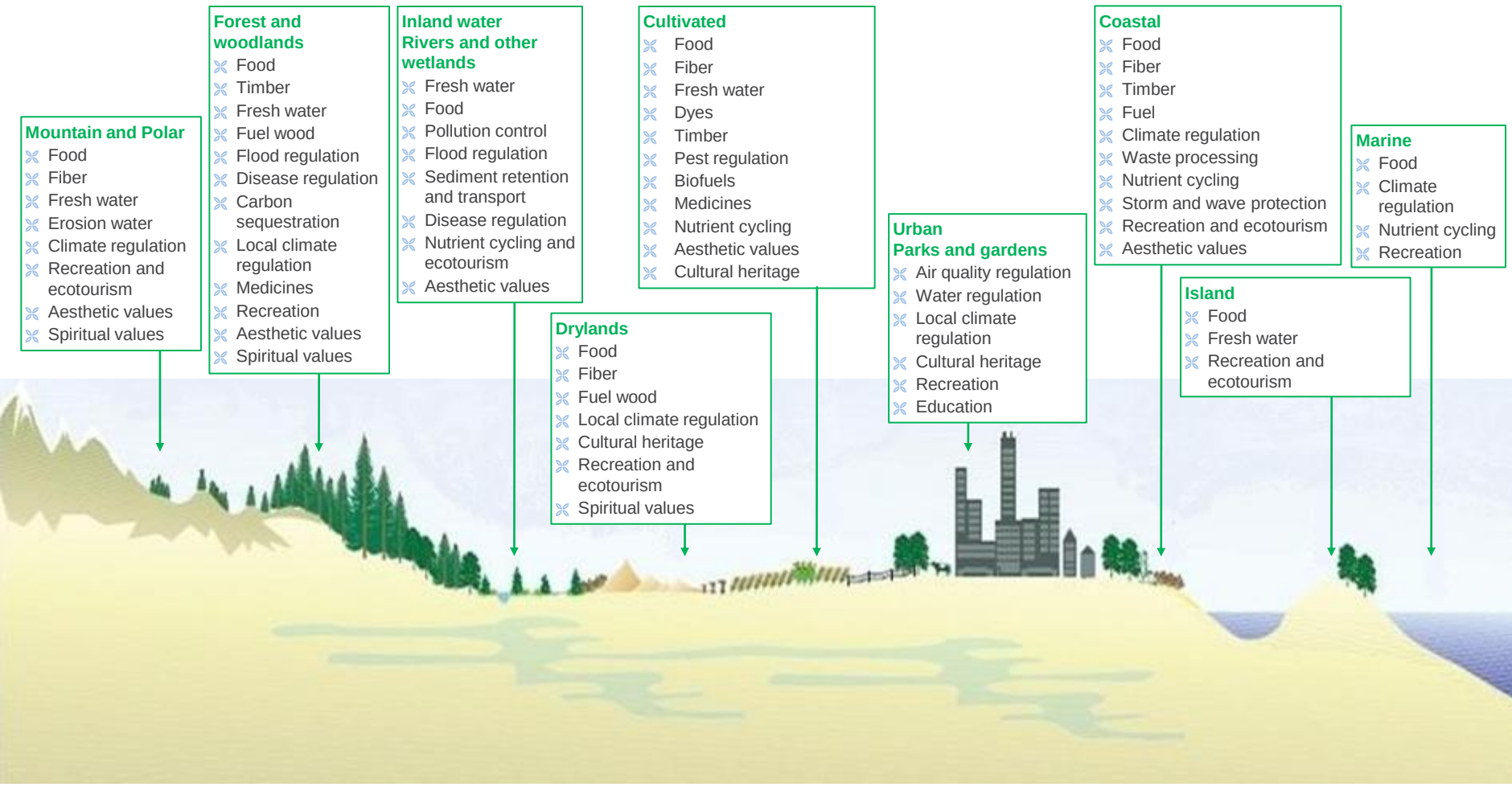
Key: Low Medium High

Arrow's Width Intensity of linkages between ecosystem services and human well-being

Key: Week Medium Strong

Source: Millennium Ecosystem Assessment, Synthesis

The ecosystem landscape



Source: Millennium Ecosystem Assessment

The ecosystem landscape [customize slide]

Source: Millennium Ecosystem Assessment

Basic concepts (cont.) – stakeholder engagement

- Stakeholders are groups or individuals:
  a) that can reasonably be expected to be significantly affected by the organization's activities, products, and/or services; or
  b) whose actions can reasonably be expected to affect the ability of the organization to successfully implement its strategies and achieve its objectives.
- Stakeholder engagement
- Stakeholder mappings

Interactive

Key concepts

Do you know...

Module 1, so far...

- Understand the basics ✓
- Drivers for change and business impacts and dependencies
- Links with sustainability ✓
- Business case for action
- Policy and regulatory frameworks
- Gain useful knowledge

Session 3
Introduction to policy trends

Module 1: Understanding the links between ecosystem services and business

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Background to ecosystem policy

Long history of environmental regulation

a) 1388 UK water pollution measures

b) 1973 EU Action Programme on the Environment / Water

The limits to growth (1972)

- Modelled world population, industrialization, pollution, food production and resource depletion

Brundtland Report (1987)

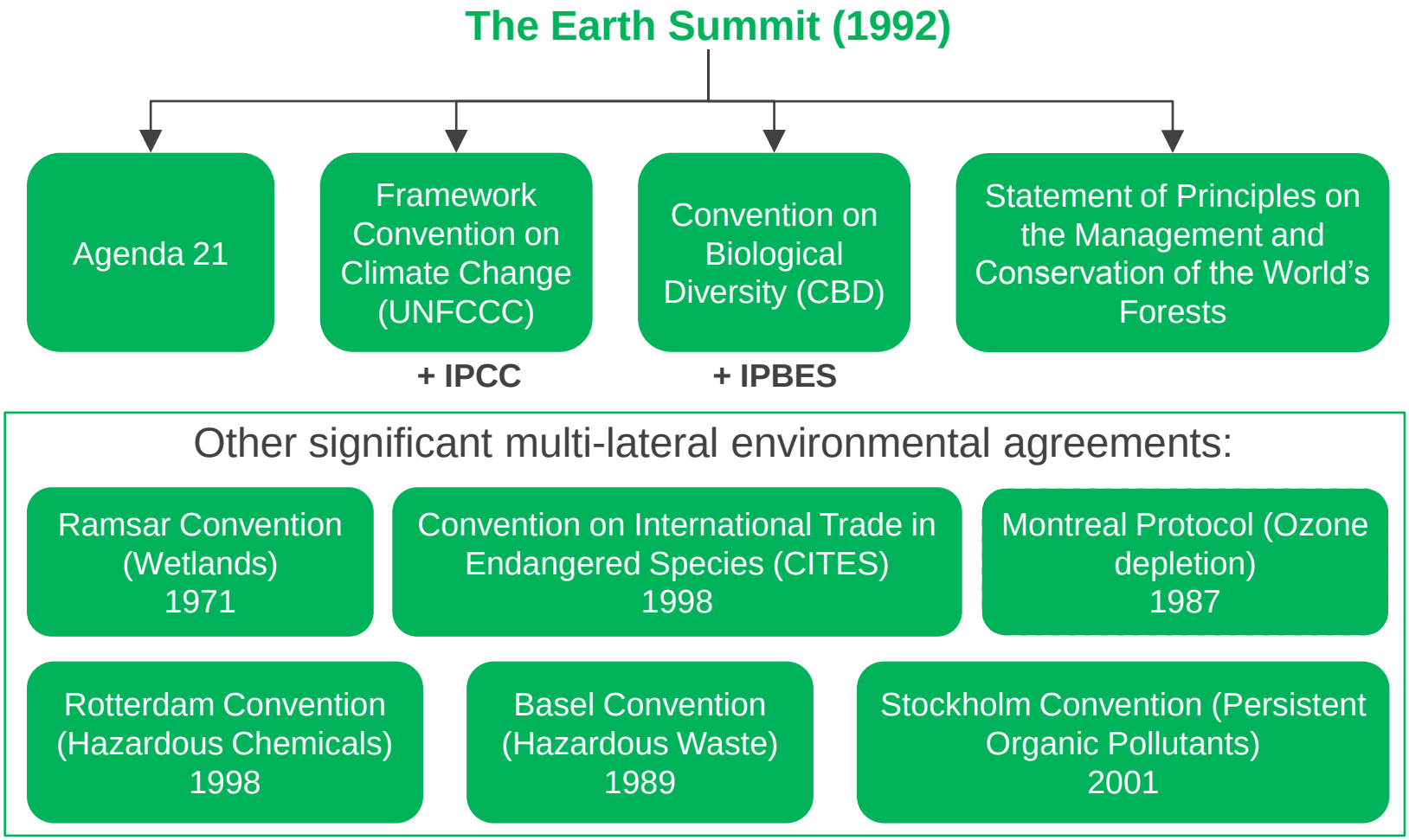
- Defined sustainable development
- Called for increased international cooperation

Conventions, treaties, protocols, agreements…

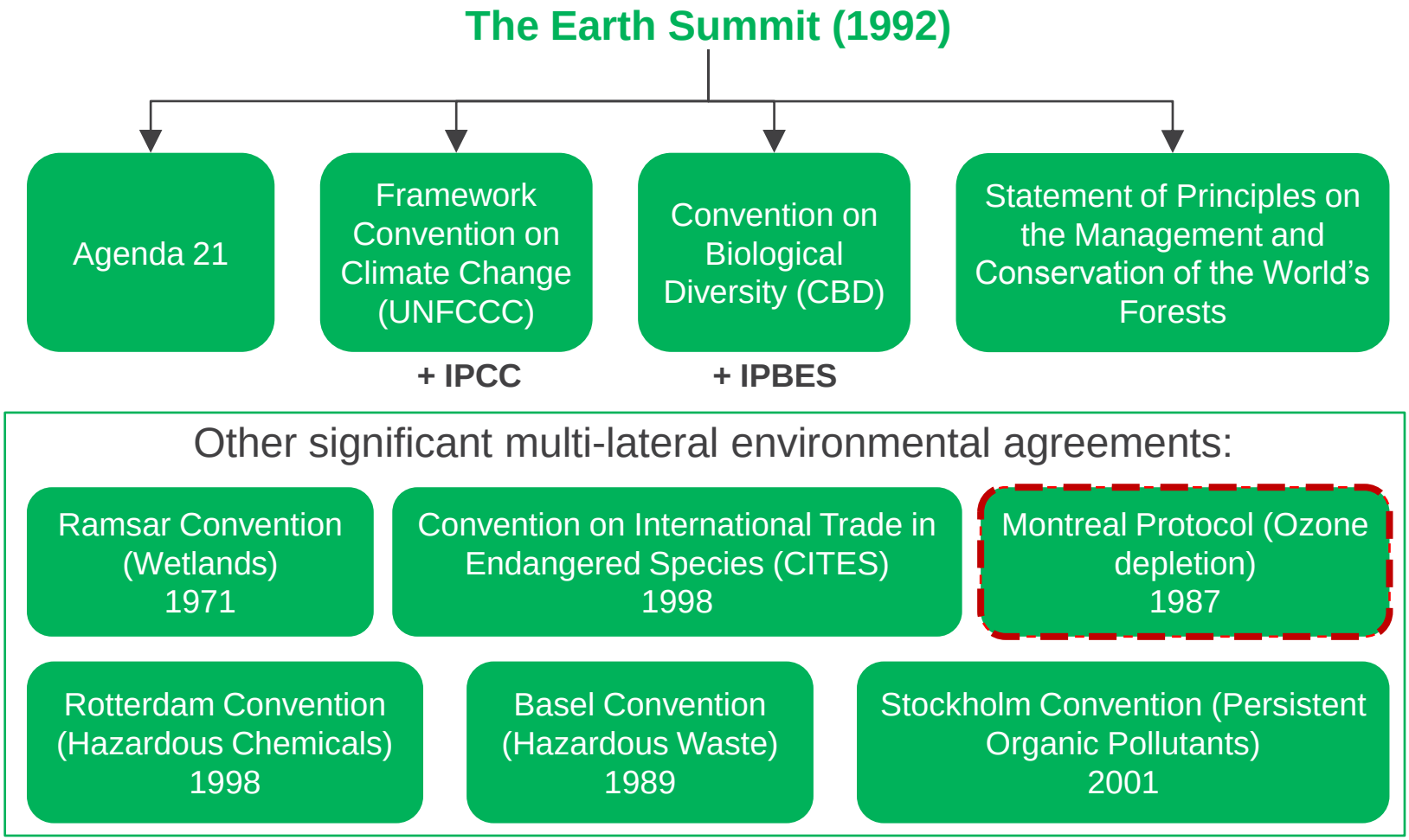
Over 250 multilateral environmental agreements exist

The Earth Summit (1992) – start of 'The Rio Process'

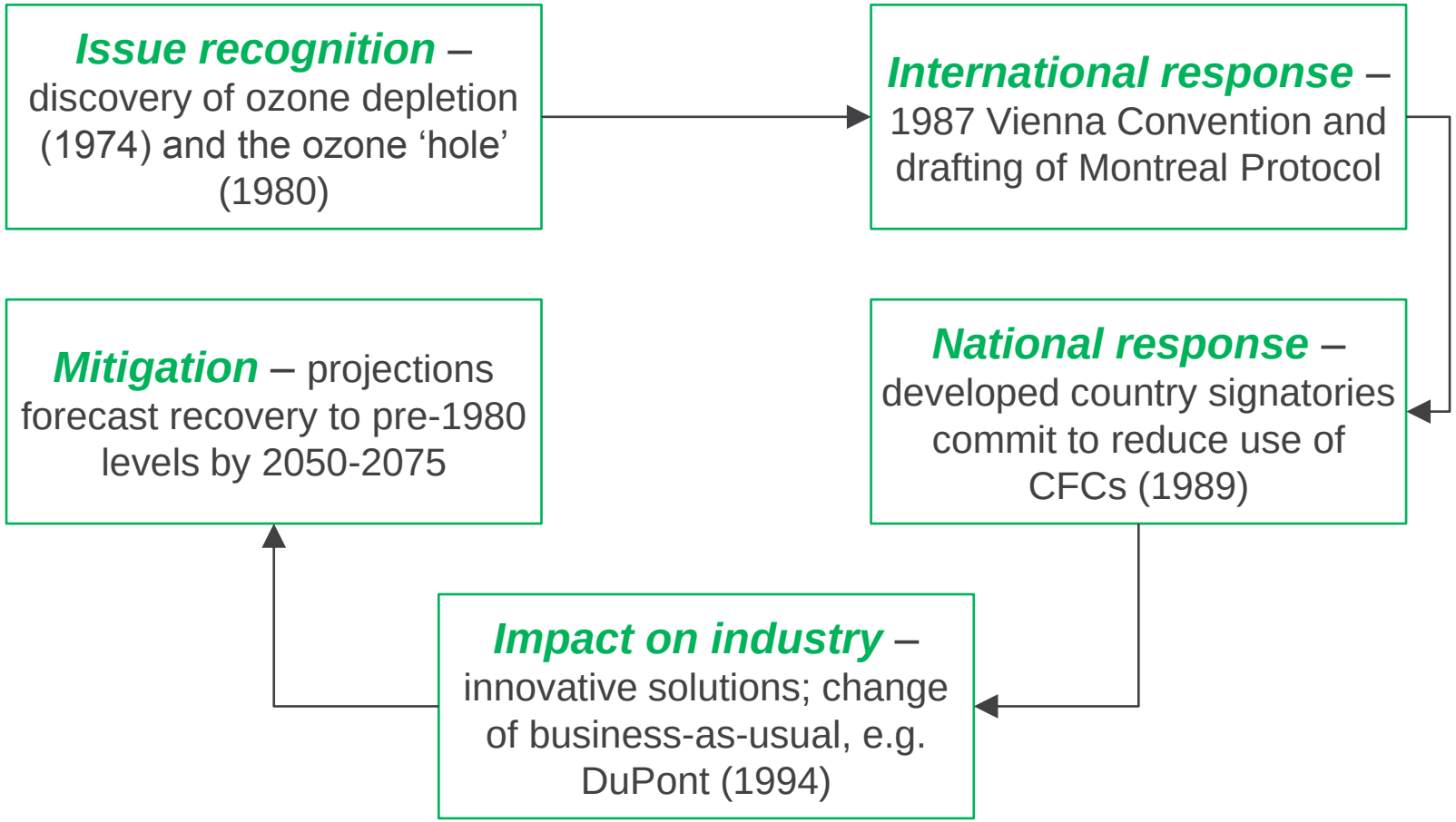
Background to ecosystem policy (cont.)



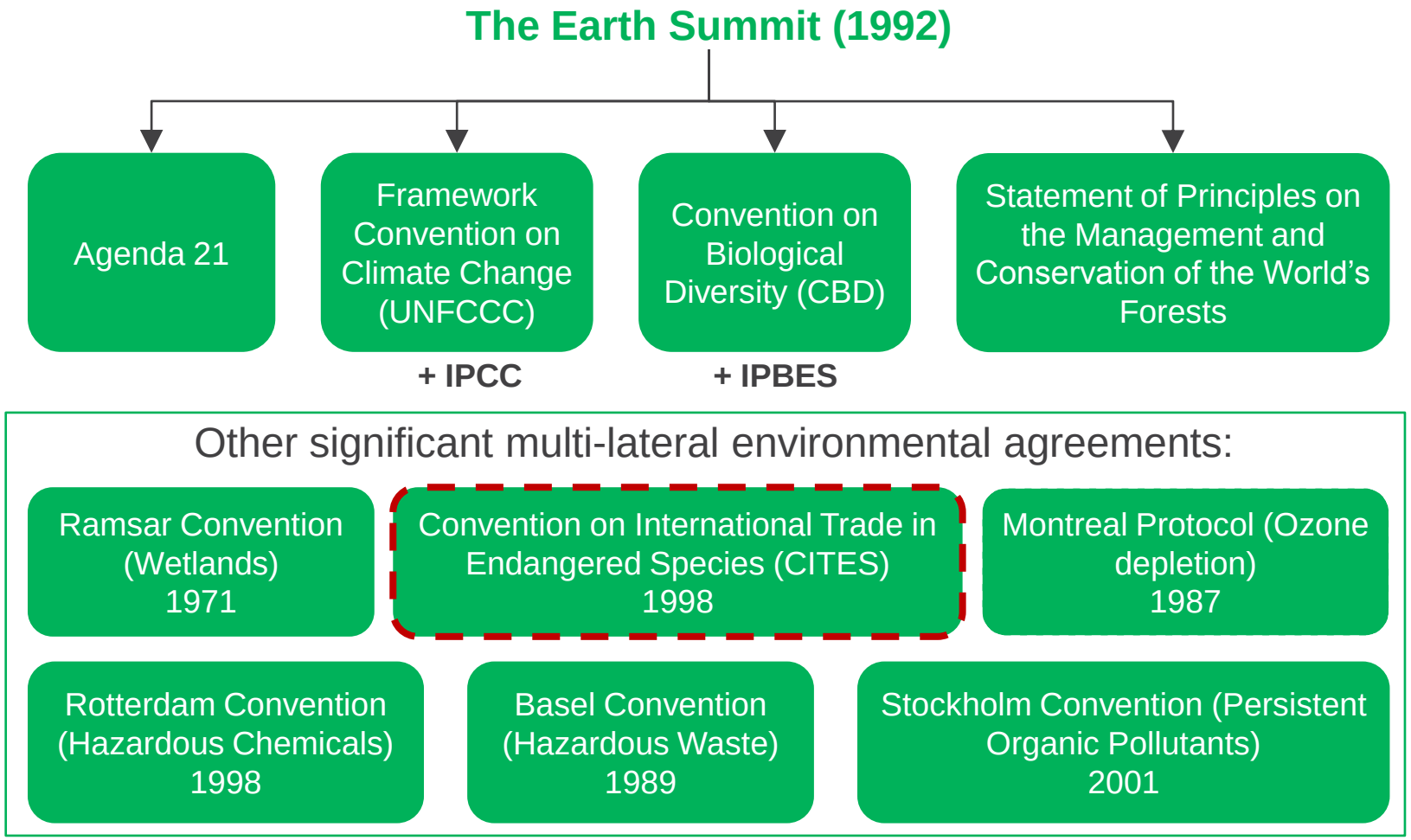
Background to ecosystem policy (cont.)



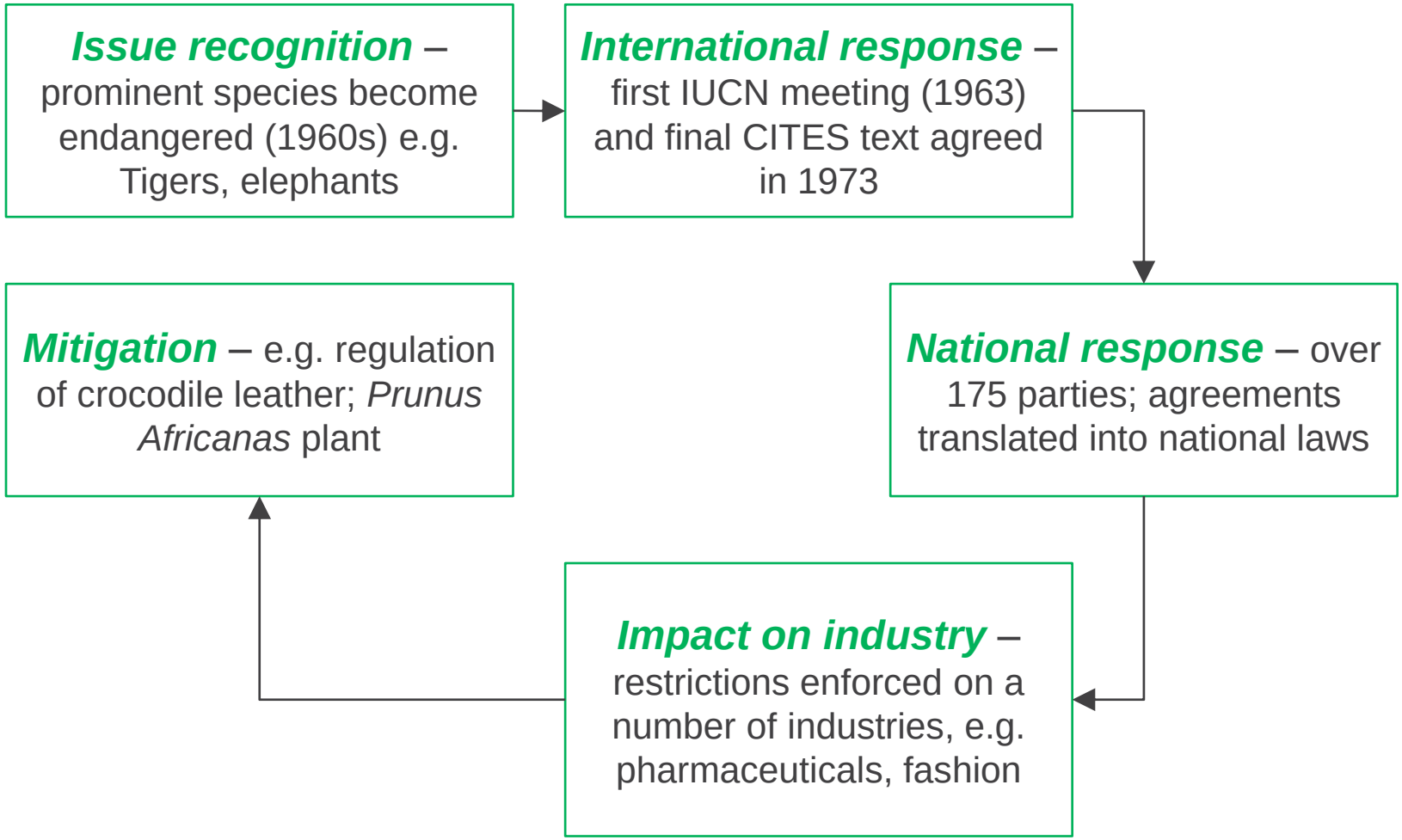
International policy trends – ozone example



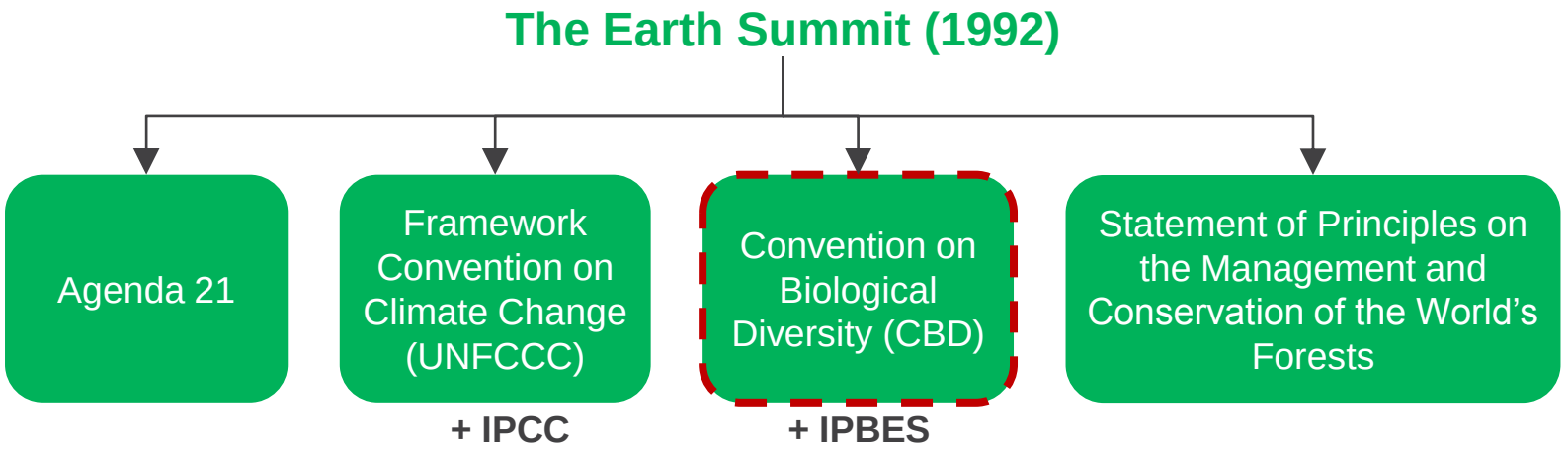
Background to ecosystem policy (cont.)



International policy trends – CITES example



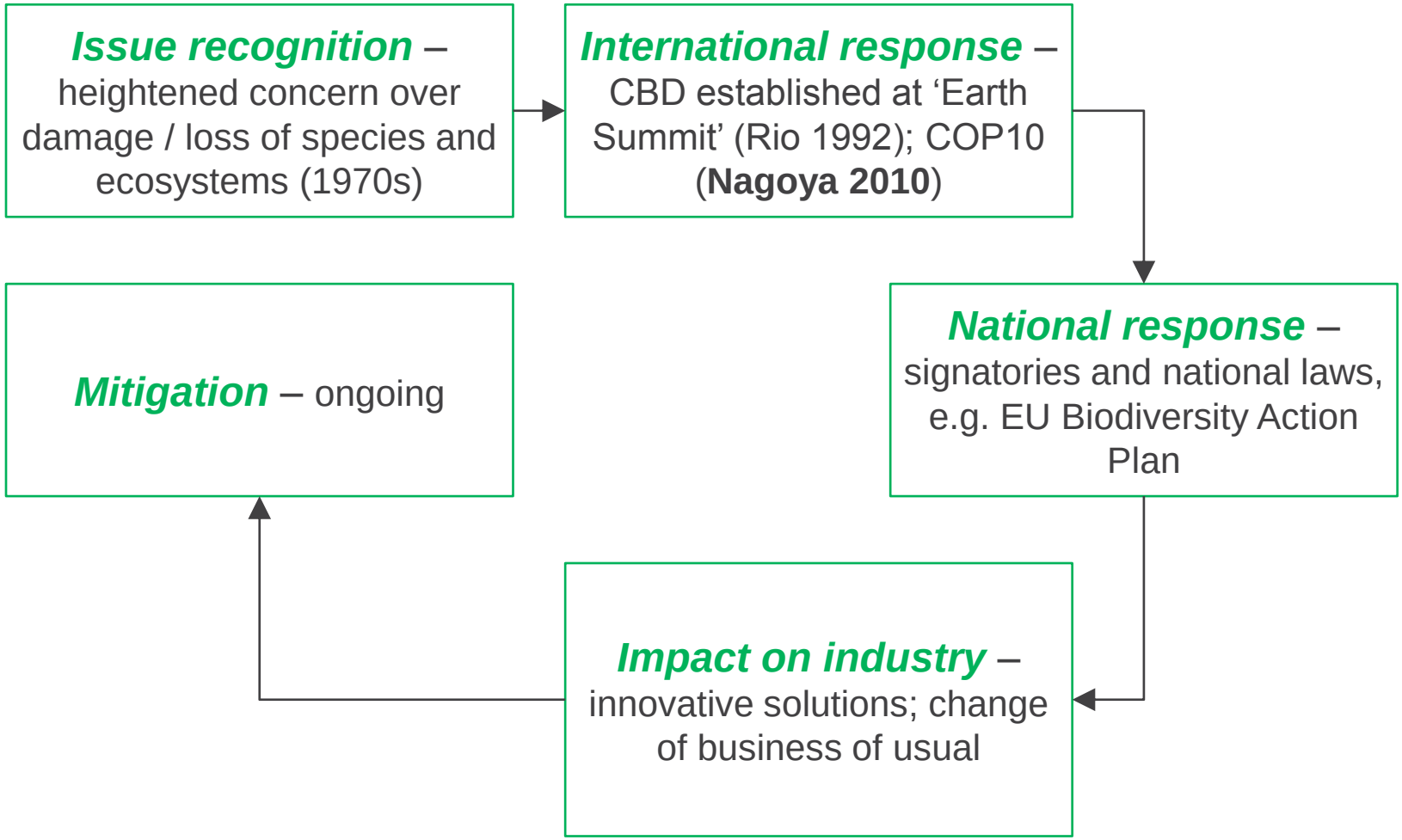
Background to ecosystem policy



Other significant multi-lateral environmental agreements:

- Ramsar Convention (Wetlands) 1971
- Convention on International Trade in Endangered Species (CITES) 1998
- Montreal Protocol (Ozone depletion) 1987
- Rotterdam Convention (Hazardous Chemicals) 1998
- Basel Convention (Hazardous Waste) 1989
- Stockholm Convention (Persistent Organic Pollutants) 2001

International policy trends – Introduction to the CBD



Coffee break

30 min.

Module 1, so far...

- Understand the basics 
- Drivers for change and business impacts and dependencies
- Links with sustainability 
- Business case for action
- Policy and regulatory frameworks 
- Gain useful knowledge

Session 4
Identifying key ecosystem services (exercise)

Module 1: Understanding the links between ecosystem services and business

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Discussion questions

Business Ecosystems Training Score Card

My company has been affected by the following challenges:			
Water scarcity	☐ Yes	☐ No	☐ Don't know
Climate change	☐ Yes	☐ No	☐ Don't know
Habitat change	☐ Yes	☐ No	☐ Don't know
Biodiversity loss	☐ Yes	☐ No	☐ Don't know
Overexploitations of oceans	☐ Yes	☐ No	☐ Don't know
Nutrient overloading	☐ Yes	☐ No	☐ Don't know
Other: ……..			
My company benefits upon or impacts on the following ecosystem services:			
Provisioning *The goods or products obtained from ecosystems such as food, freshwater, timber, and fiber*	☐ Benefits	☐ Impacts	☐ Don't know
Regulating *The benefits obtained from an ecosystem's control of natural processes such as climate, disease, erosion, water flows and pollination, as well as protection from natural hazards.*	☐ Benefits	☐ Impacts	☐ Don't know

Discussion questions (cont.)

Business Ecosystems Training Score Card

My company has been affected by the following challenges:			
Cultural *The non material benefits obtained from ecosystems such as recreation, spiritual values and aesthetic enjoyment*	☐ Benefits	☐ Impacts	☐ Don't know
Note: we are not asking this specific question regarding supporting services as these services are underlying the above 3 categories (Supporting services: the natural processes such as nutrient cycling and primary production that maintain the other services)			
My company has taken the lead on addressing ecosystems:			
To manage risks	☐ Yes	☐ No	☐ How? ……
To improve operational efficiencies	☐ Yes	☐ No	☐ How? ……
To gain business opportunities	☐ Yes	☐ No	☐ How? ……
Additional actions: ……			
My company has considered the long term consequences of ecosystem degradation in its strategy:			
	☐ Yes	☐ No	☐ How? ……

- **Feedback...**

Links between business sectors and ecosystem service values

Links between business sectors and ecosystem service values								
	Company 1		Company 2		Company 3		Company 4	
Key Ecosystem Services	**DEPEND**	**IMPACT**	**DEPEND**	**IMPACT**	**DEPEND**	**IMPACT**	**DEPEND**	**IMPACT**
Provisioning								
Food	●	●	●	●	●	●	●	●
Timber and fibres	●	●	●	●	●	●	●	●
Freshwater	●	●	●	●	●	●	●	●
Genetic / Pharmaceutical resources	●	●	●	●	●	●	●	●
Regulating								
Climate & air quality regulation	●	●	●	●	●	●	●	●
Water regulation & purification	●	●	●	●	●	●	●	●
Pollination	●	●	●	●	●	●	●	●
Natural hazard regulation	●	●	●	●	●	●	●	●
Cultural								
Recreation & tourism	●	●	●	●	●	●	●	●
Aesthetic / non-use values	●	●	●	●	●	●	●	●
Spiritual values	●	●	●	●	●	●	●	●

● Moderate to Major relevance ● Minor relevance ● No relevance

Note: “Supporting services” are not included in this table as they are already captured within provisioning, regulating and cultural services.

Ecosystems: identifying key ecosystem services

Please discuss

Which ecosystem services do your companies rely on or benefit from?

10 minutes

Feedback...

Session 5
The global ecosystem challenge

Module 1: Understanding the links between ecosystem services and business

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Vision 2050 – the global challenge of Business-as-Usual

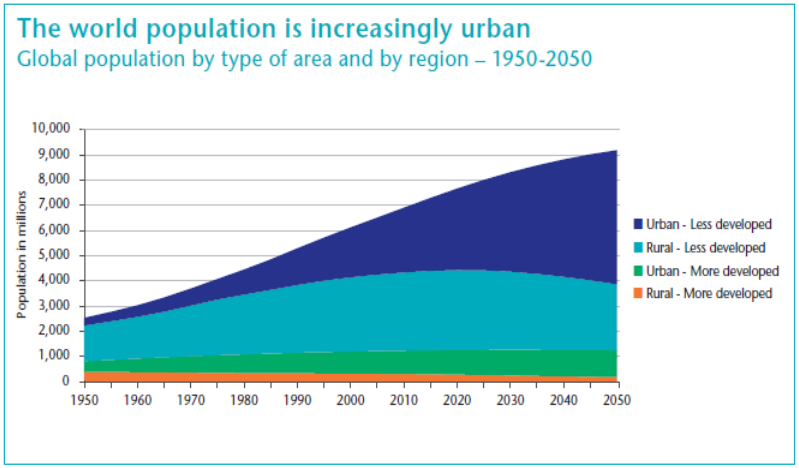
The Vision: In 2050, around 9 billion people live well, and within the limits of the planet.

Growth: Population, urbanization and consumption

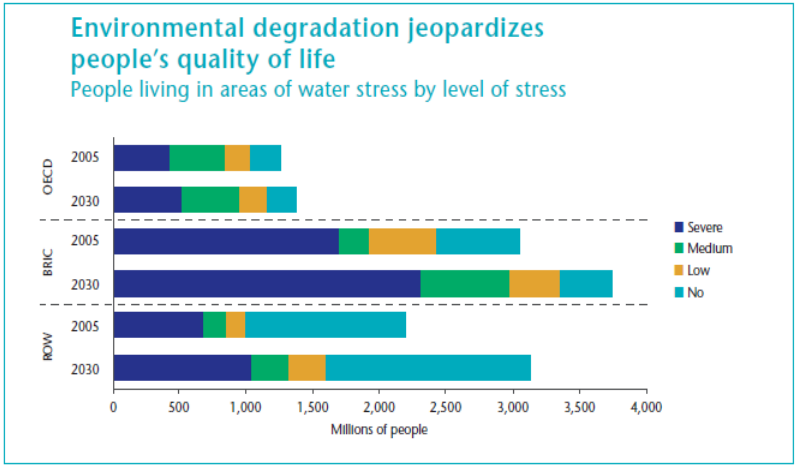
Inertia and inadequate governance

Degradation: Climate change and deteriorating ecosystems

Source: WBCSD. Vision 2050



Source: UN Population Division, *World Population Prospects: The 2008 Revision*, 2008



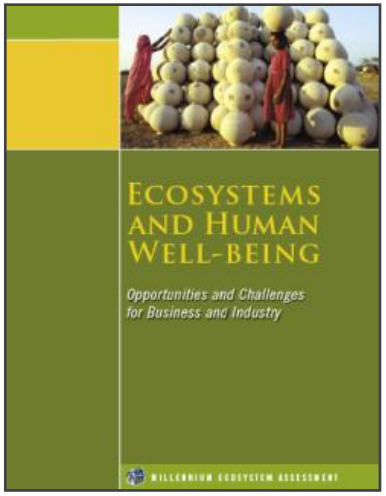
Source: OECD, *Environmental Outlook to 2030*, 2008

Drivers affecting the projected future – by 2050

- **Population size** (reaching ~9 billion people)
- **Lifestyle changes** (increasing urbanisation and per capita income growing 2-4 times)
- **Governance and policy responses** (coordinating responses to global challenges)
- **Land conversion and habitat loss** (converting 10-20% of additional grassland and forestland)
- **Overexploitation incl. overfishing** (increasing pressure)
- **Invasive alien species** (continuing spread)
- **Reactive nitrogen flow** (increasing by another 66% – already doubled during the past 50 years)
- **Climate change** (continuing global warming – expected to become the predominant global cause of ecosystem degradation and ecosystem service loss)

2005: Millennium Ecosystem Assessment

- Many of the world's ecosystems are in serious decline
- Continuing supply of critical ecosystem services like water purification, pollination and climate regulation are in jeopardy
- 6 interconnected challenges are of particular concern for business



Water scarcity

Climate change

Habitat change

Biodiversity loss

Over-exploitation of oceans

Nutrient overloading

Sources: WBCSD, Connecting the dots presentation

Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well-being: Opportunities and Challenges for Business and Industry*

The MA's major finding regarding ecosystems

The structure and functioning of the world's ecosystems has changed rapidly the past 50 years

- 20% of the world's coral reefs have been lost and more than 20% are degraded
- 35% of mangrove area has been lost in the last several decades
- Amount of water in reservoirs quadrupled since 1960
- Withdrawals from rivers and lakes doubled since 1960

Source: Millennium Ecosystem Assessment, 2005.

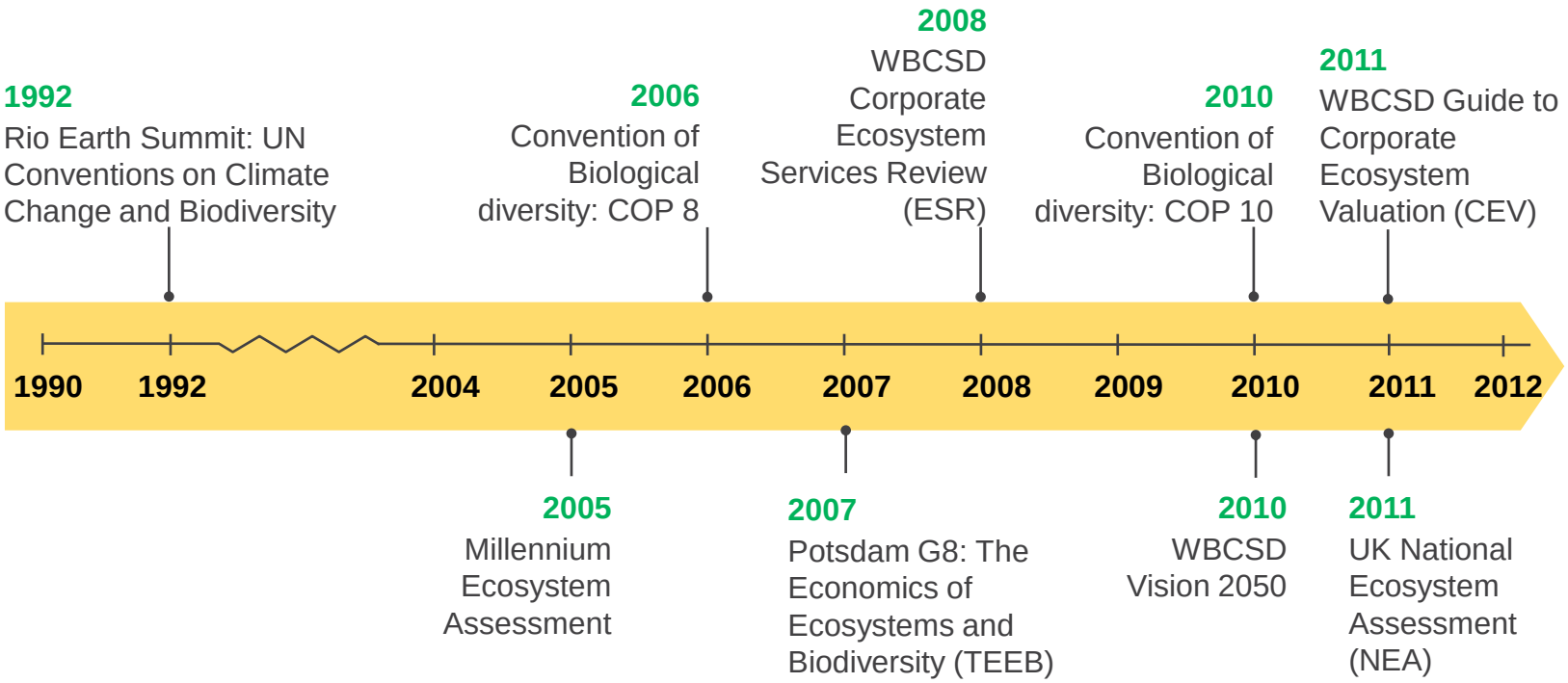
MA major findings regarding ecosystem services

60% of the world's ecosystem services are degraded

	Degraded	Mixed	Enhanced
Provisioning	Capture fisheries Wild foods Biomass fuel Genetic resources Biochemicals, natural medicines, & pharmaceuticals Freshwater	Timber and wood fiber Other fibers (e.g. cotton, hemp, silk)	Crops Livestock Aquaculture
Regulating	Air quality regulation Regional & local climate regulation Erosion regulation Water purification & waste treatment Pest regulation Pollination Natural hazard regulation	Water regulation Disease regulation	Global climate regulation (carbon sequestration)
Cultural	Spiritual, religious, or cultural heritage values Aesthetic values	Recreation & ecotourism	

Source: Millennium Ecosystem Assessment, 2005.

Timeline of major global ecosystem developments

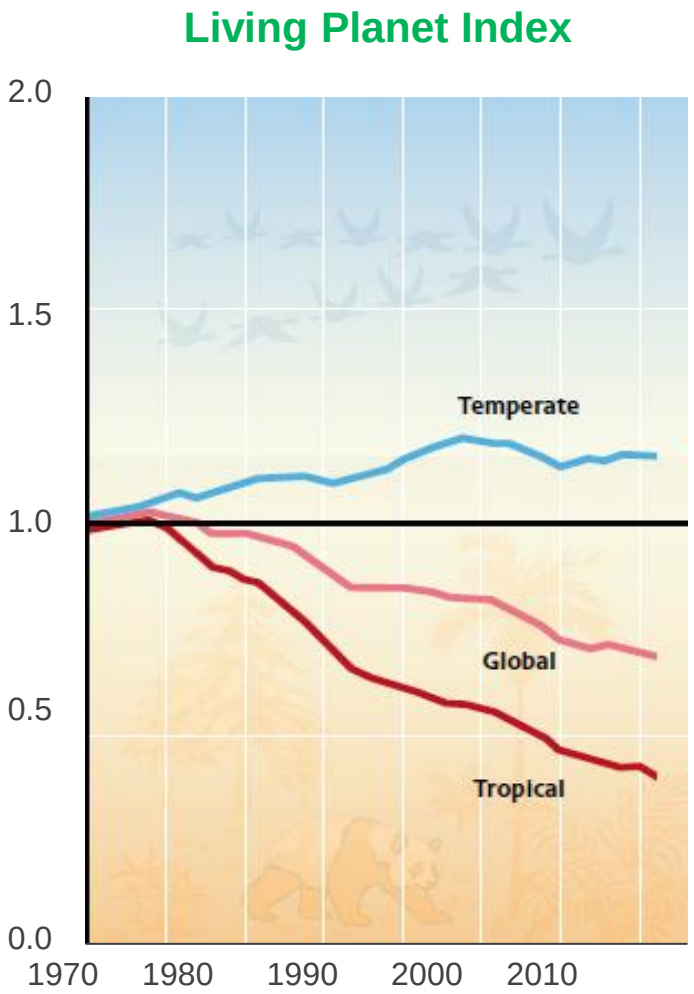


Global Biodiversity Outlook report (CBD)

Continued decline in all three major components of biodiversity:

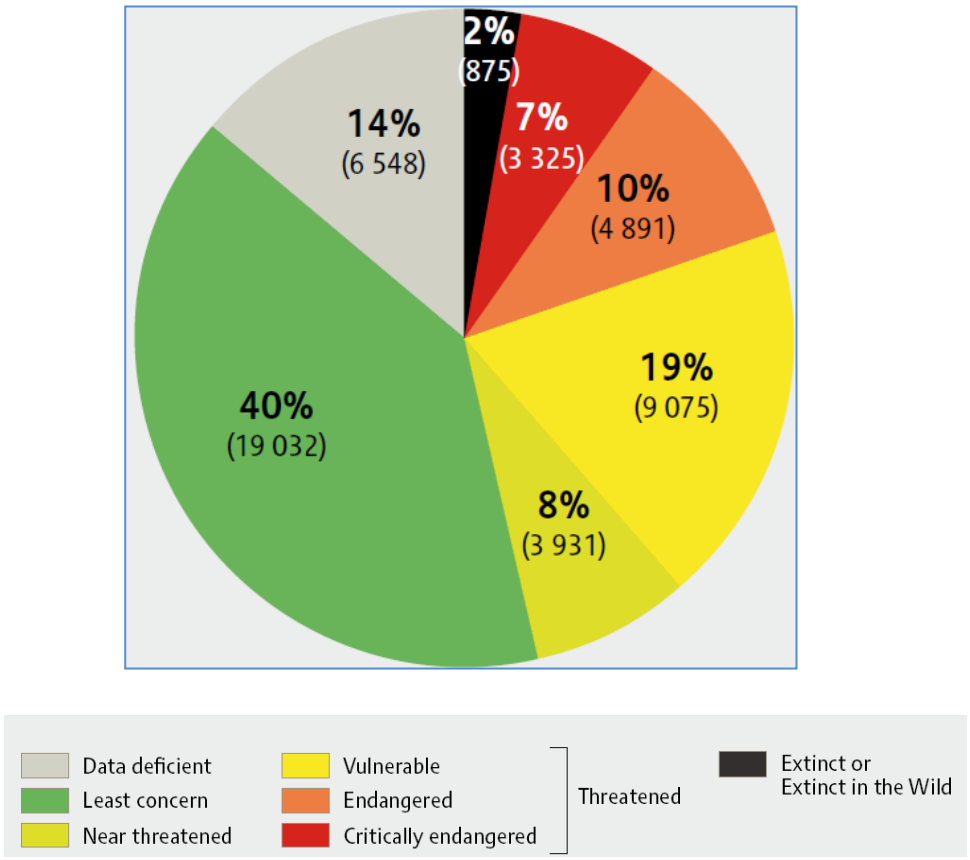
- Genes
- Species
- Ecosystems

Latest findings in this area

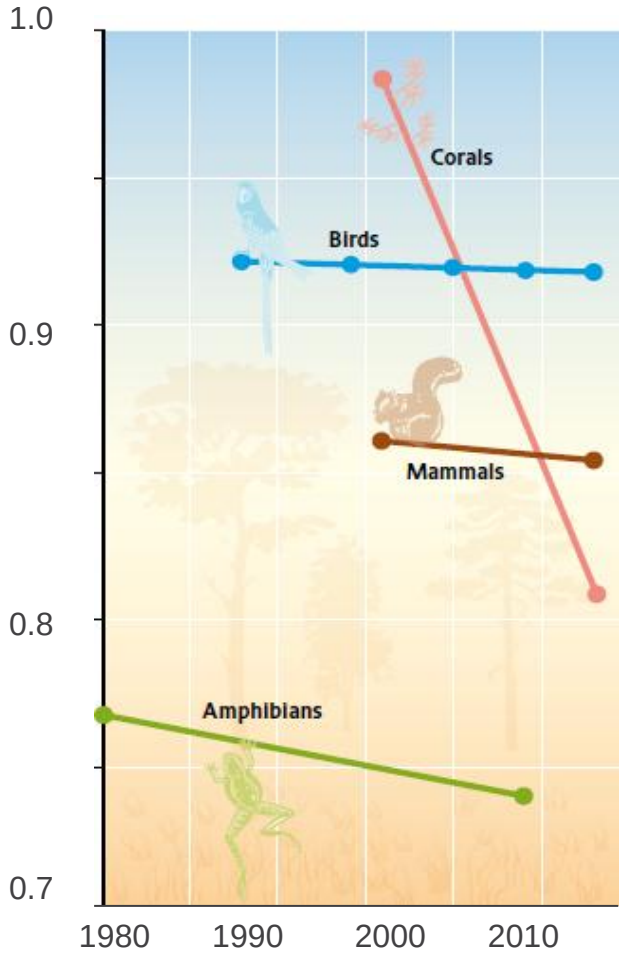


Latest findings in this area (cont.)

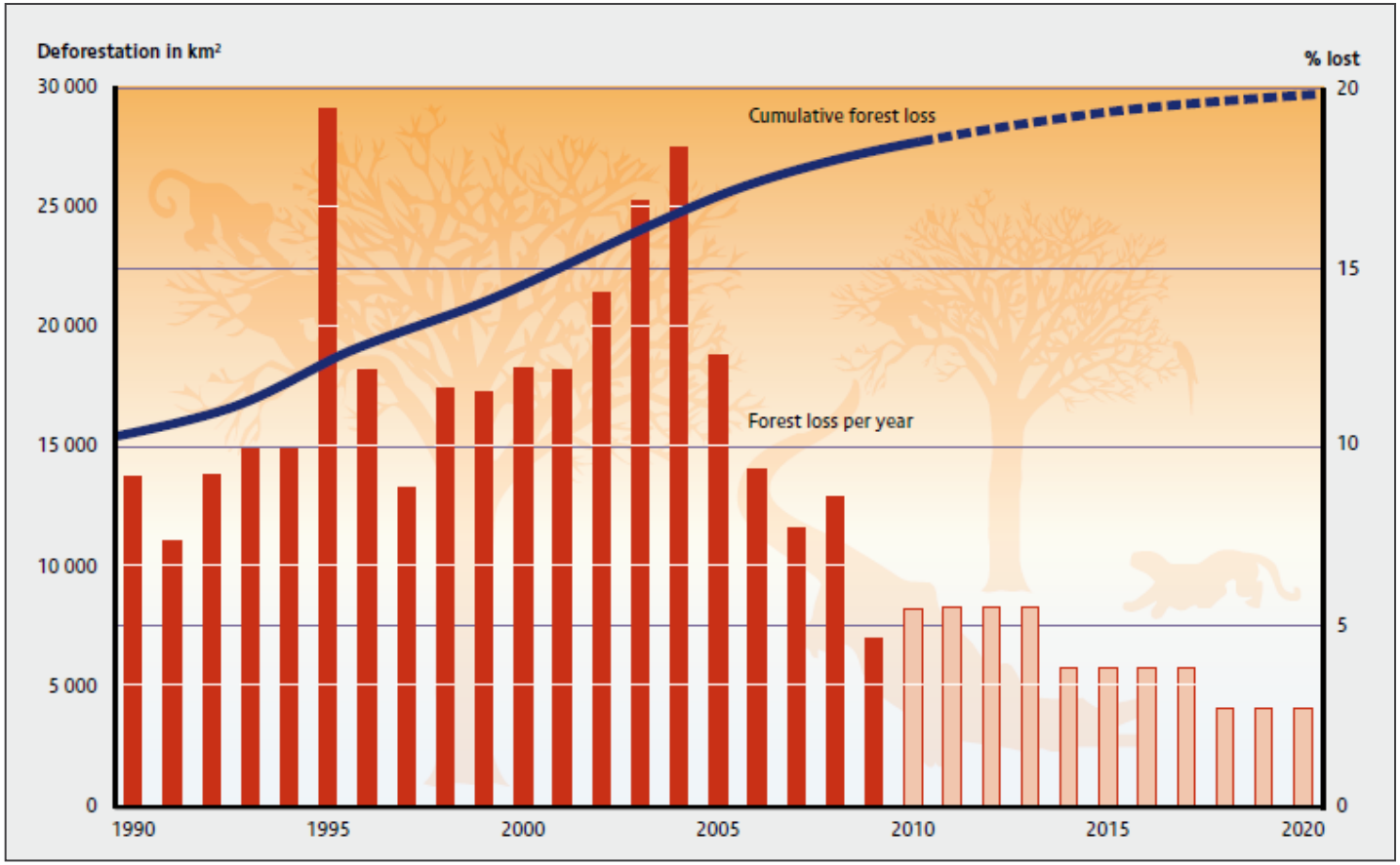
Extinction Risk – IUCN Redlist



IUCN Redlist Index



Latest findings in this area (cont.)



Annual and cumulative deforestation of the Brazilian Amazon

[Optional] Interactive Exercise: The drivers of ecosystem change – Vision 2050

What do you think are the main drivers and underlying causes of ecosystem and ecosystem service change and degradation?

How many can you write down in 5 minutes?

TEEB: Main Purpose

- Understanding the economics case for the conservation of ecosystems and biodiversity
- A series of reports for distinct end-users
  - for ecologists and economists (TEEB D0)
  - for international and national policy makers (TEEB D1)
  - for local and regional policy (TEEB D2)
  - for business (TEEB D3)
  - for citizens (TEEB D4)

Source: http://www.teebweb.org/

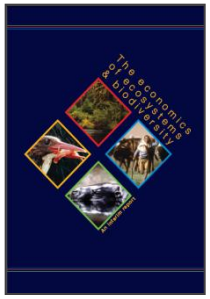
The value of nature is changing – TEEB

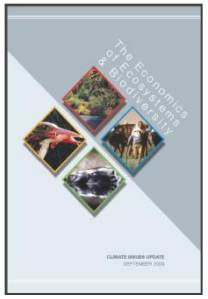
Urgent strategic priorities:

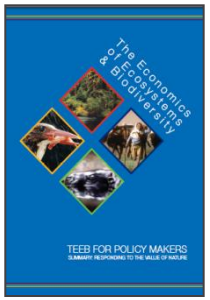
- Halt deforestation and forest degradation
- Protect tropical coral reefs
- Save and restore global fisheries
- Recognize link between ecosystem degradation and the persistence of rural poverty

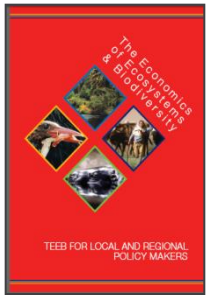
Policy solutions:

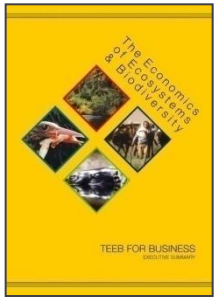
- Rewarding benefits through payments and markets
- Reforming environmentally harmful subsidies
- Adding value through protected areas
- Investing in ecological infrastructure











Session 6
Case study and exercise

Module 1: Understanding the links between ecosystem services and business

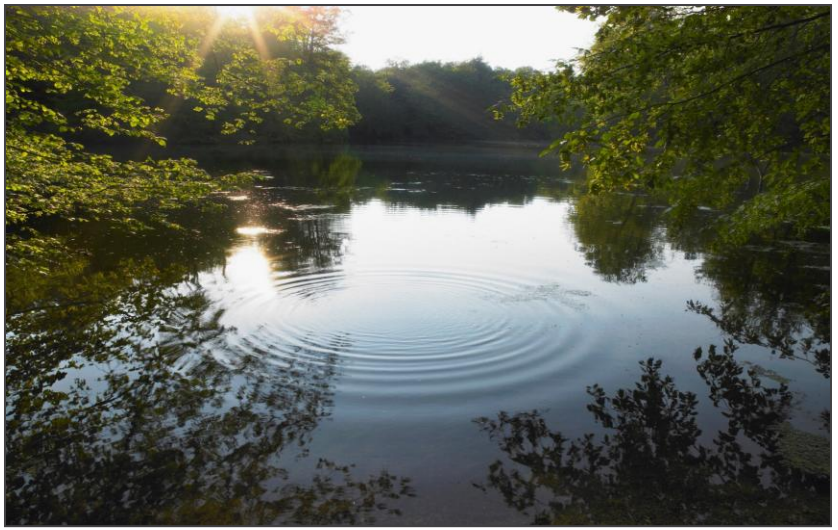
wbcsd business ecosystems training

Case study and exercise – ArcelorMittal

Module 1: Understanding the links between ecosystem services and business

wbcsd business ecosystems training

Creating business value – ArcelorMittal



The issue

Water dependency

ArcelorMittal owned operations in the Great Lakes basin.

- 9 facilities throughout USA and Canada surrounding the Great Lakes
- After iron and coal, water is the most important component in the steel making process.
  - Between 13,000 to 23,000 gallons of water per ton of steel.
- Also dependent on the Great Lakes to ship raw materials for manufacturing and for product distribution.
- 37 million people, including more than 25,000 ArcelorMittal employees, live and rely on the lakes for drinking water, recreation and food sources.

Creating business value – Exercise

ArcelorMittal decided to implement a strategy to manage their impacts and dependencies in the Great Lakes basin.

In your groups, discuss the following questions:

1) What ecosystems and ecosystem services apply to this case study?
2) What are ArcelorMittal's ecosystem service impacts/dependencies?
3) Based on your answers to 1 and 2, how can ArcelorMittal start to address their impacts and dependencies?

Case study and exercise – Lafarge

Module 1: Understanding the links between ecosystem services and business

wbcsd business ecosystems training

Creating business value – Lafarge

The issue

Mitigating impacts and restoring biodiversity, critical steps for extractive industries.

- Lafarge is a French group operating in resources extraction and building materials
- Worldwide operations, significantly in developing countries.
- Several potentials for impacts, e.g. removal of soil and destruction of habitats.
- Managing and mitigating impacts for corporate reputation and the acceptability of mining operations.

Creating business value – Exercise

Lafarge decided to implement a strategy to manage their impacts and dependencies on biodiversity/ecosystem services.

In your groups, discuss the following questions:

1) What ecosystems and ecosystem services apply to this case study?
2) What are Lafarge's ecosystem service impacts/dependencies?
3) Based on your answers to 1 and 2, how can Lafarge start to address their impacts and dependencies?

Case study and exercise – BASF

Module 1: Understanding the links between ecosystem services and business

wbcsd business ecosystems training

Creating business value – BASF

The issue

BASF are a world leading chemical company.

They operate a Crop Protection division in order to work with farmers to enhance sustainable agriculture.

- BASF recognizes that the functioning of ecosystems is important for agriculture and the company's customers, the farmers.
- Acknowledge that competitive agriculture needs to be compatible with biodiversity, in order to be accepted by society.

Creating business value – Exercise

BASF decided to implement a strategy to manage their impacts and dependencies on biodiversity/ecosystem services.

In your groups, discuss the following questions:

1) What ecosystems and ecosystem services apply to this case study?
2) What are BASF's ecosystem service impacts/dependencies?
3) Based on your answers to 1 and 2, how can BASF start to address their impacts and dependencies?

Module 1, so far...

- Understand the basics
- Drivers for change and business impacts and dependencies
- Links with sustainability
- Business case for action
- Policy and regulatory frameworks
- Gain useful knowledge

Session 7
Knowledge check

Module 1: Understanding the links between ecosystem services and business

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Interactive

Key concepts

Do you know...

Session 8a
Re-cap – the business case for action

Module 1: Understanding the links between business and ecosystems

wbcsd business ecosystems training

Business case for action

Businesses impact on ecosystems and ecosystem services

Ecosystem change creates business **risks** and **opportunities**

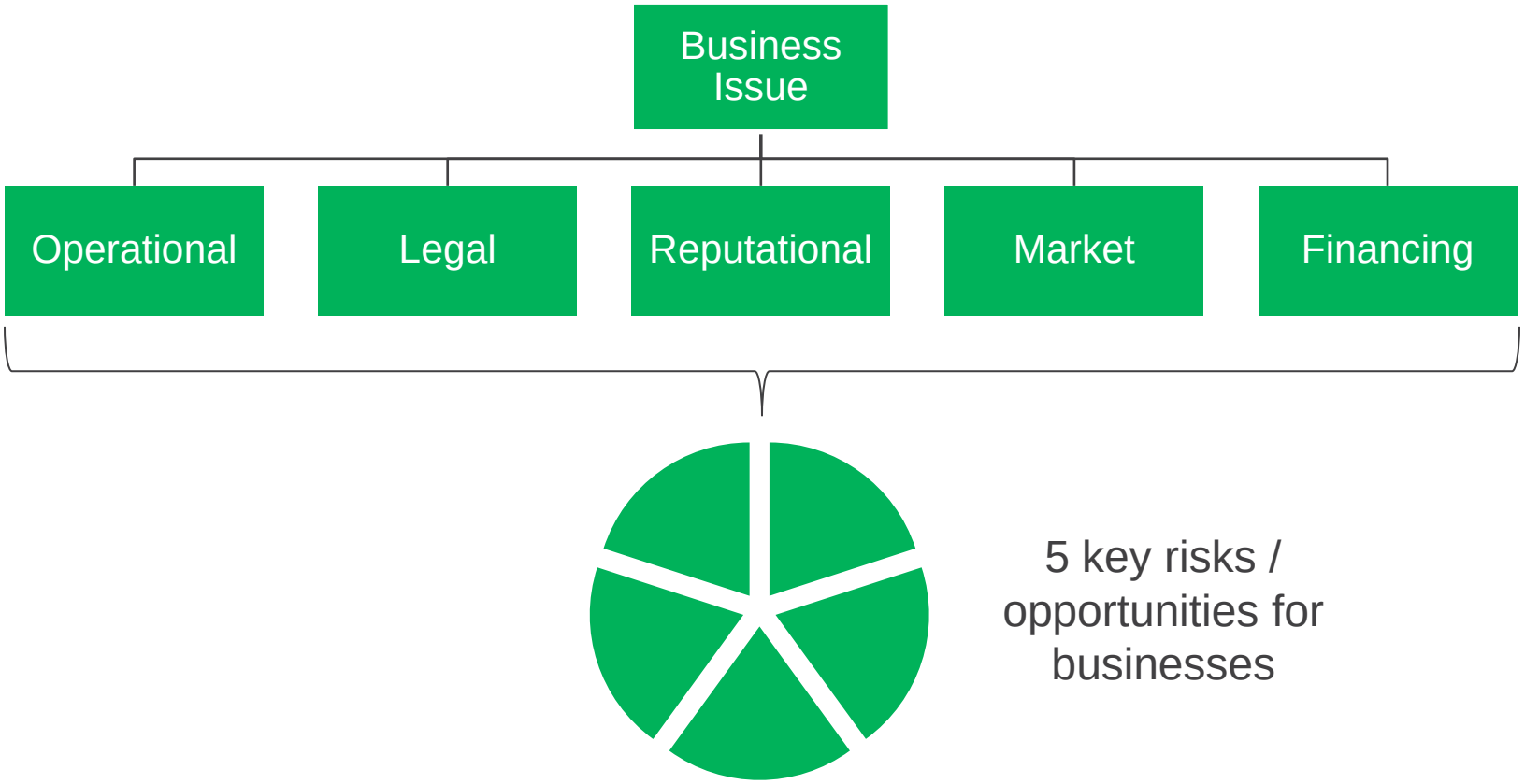
Businesses rely and depend on ecosystems and ecosystem services

Introduction

Issues business can face in daily operations and supply chains:

- Water scarcity and declining water quality
- Disruption of food, fiber or other natural industrial inputs
- Increasing incidents of extreme flooding, storms or drought
- Increasing stakeholder expectations (NGOs, customers, investors etc.)
- Tightened public policies on natural resource management or operational permitting
- Traditional risk management processes do not always capture ecosystem risks / opportunities

Different risks and opportunities – overview



5 key risks / opportunities for businesses

Introduction to different types of risks and opportunities

Operational

Risks

- Increased scarcity and cost of raw materials

Opportunities

- Improving operational efficiencies and saving costs
- Building awareness amongst employees/stakeholders

Introduction to different types of risks and opportunities (cont.)

Regulatory and legal

Risks & opportunities:

- Public policies (e.g. taxes, subsidies and moratoria on extractive activities). Examples of laws that currently consider the value of ecosystems include:
  - The water framework directive
  - The marine strategy framework directive
  - South African water white paper
  - The Environmental liability directive
  - Access and benefit sharing

Introduction to different types of risks and opportunities (cont.)

Reputational

Risks

- Relationships with their customers and other stakeholders.
- Affect a company's brand, image, "goodwill" (e.g. image from media and NGOs)

Opportunities

- Implementing and communicating sustainable purchasing, operating or investment practices in order to differentiate corporate brands

Introduction to different types of risks and opportunities (cont.)

Market and product

Risks

- Relate to product and service offerings, consumer preferences, and other market factors that affect corporate performance
- Consumer preferences

Opportunities

- Potential new revenue streams when participating in emerging environmental markets

Introduction to different types of risks and opportunities (cont.)

Financing

Risks

- Affect the cost and availability of capital to companies

Opportunities

- Could potentially include companies obtaining more favourable lending terms
- Access to new green funds

Session 8b
Possible business responses

Module 1: Understanding the links between business and ecosystems

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How can business respond?

- Measure, manage and mitigate biodiversity & ecosystem impact and dependence ***risks*** and explore ***new opportunities***
- Undertake ***corporate ecosystem valuation*** to quantify business risks and opportunities
- ***Innovate*** and lead the development of:
  - Markets for ecosystem services
  - Eco-efficient goods, services & technologies
- ***Encourage suppliers & purchasers*** – including SMEs – to adopt "best" biodiversity practices through the supply chain
- Enter into ***creative partnerships*** with municipalities, governments, NGOs, science community for on-the-ground solutions
- ***Support "smart" ecosystem regulation*** that reverses degradation, leverage market forces, "levels the playing field" for all and supports social & livelihood benefits

Session 9
Brainstorming the business case

Module 1: Understanding the links between business and ecosystems

wbcsd business ecosystems training

Case study and exercise – ArcelorMittal

Module 1: Understanding the links between ecosystem services and business

wbcsd business ecosystems training

Creating business value – ArcelorMittal

The issue

Water dependency

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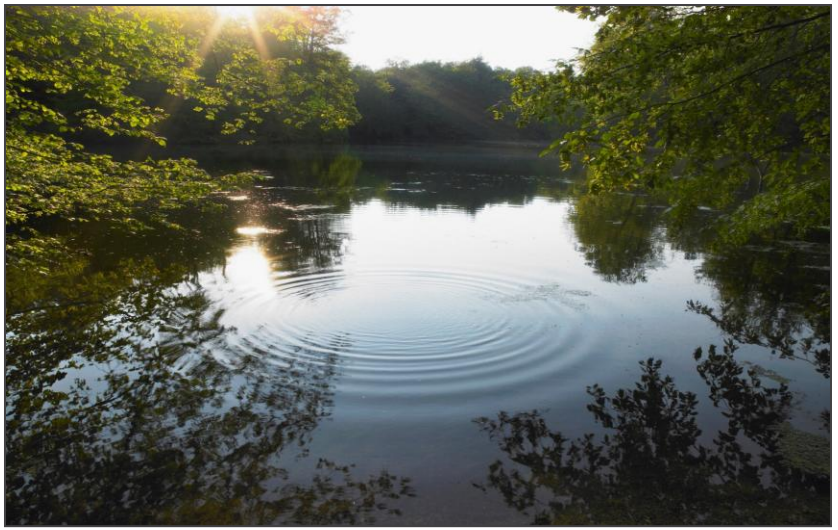

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Case study and exercise – Lafarge

Module 1: Understanding the links between ecosystem services and business

wbcsd business ecosystems training

Creating business value – Lafarge

The issue

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Case study and exercise – BASF

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Creating business value – BASF

The issue

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Business risks and opportunities

Type	Risk	Opportunity
Operational		
Legal and political		
Reputational		
Market and product		
Financing		

Creating business value – ArcelorMittal

The issue

Water dependency

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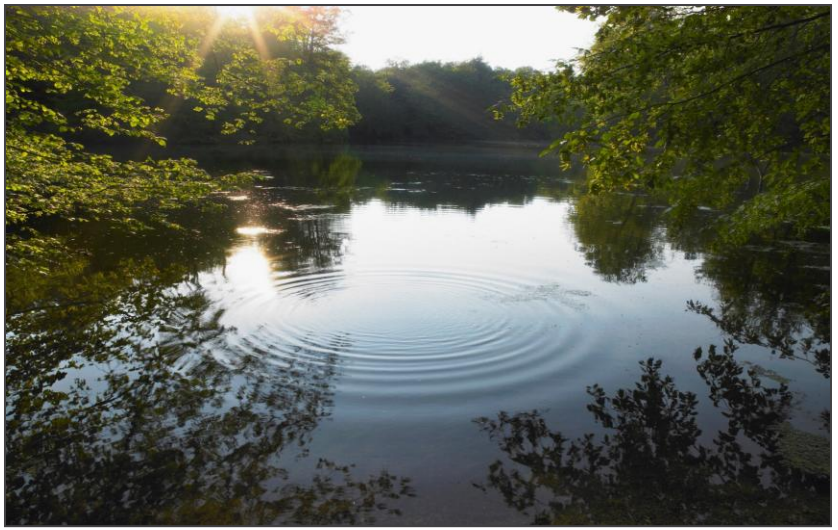

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Creating business value – ArcelorMittal

The response

"Sustain Our Great Lakes" Public Private Partnership

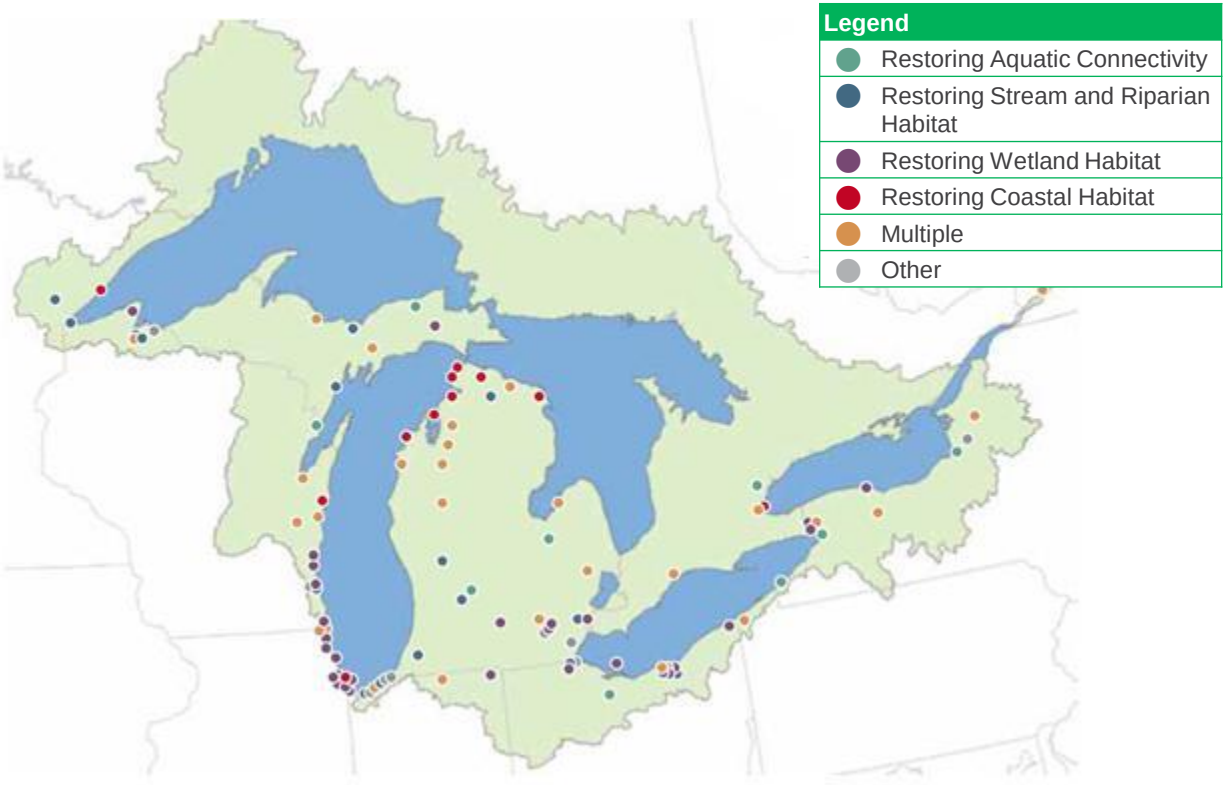
- In 2007, ArcelorMittal joined the National Fish and Wildlife Foundation, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Forest Service and the National Oceanic and Atmospheric Administration.
- Collaborative ecosystem restoration. Partners work together to leverage resources and educate decision makers on the importance of the Great Lakes to the region's economic vitality and quality of life, the needs and priorities of the ecosystem, and to identify potential actions.
- Sustain Our Great Lakes program aims to restore the ecological integrity of the Basin. Financial gains:
  - Increase capacity and collaboration of environmental initiatives; and
  - Enable NGOs to provide on-the-ground impact toward restoration goals, thereby increasing the overall health of the Great Lakes.

ArcelorMittal Case study

“Sustain our Great Lakes” Project Location by Focal Issue (2006-2010)

From 2006 through 2010, the program awarded 103 grants for projects across all eight Great Lakes states and both Great Lakes provinces.

All but nine of the 103 grants directly addressed one or more of the focal issue categories.



Note: Projects that address multiple focal issues are coded as ‘Multiple.’ Projects that did not fit the any of the focal issues are coded as ‘Other’.

Creating business value – ArcelorMittal (cont.)

The results

Different projects for the same objective: biodiversity conservation

- Public-private partnership model
- Grants are leveraged two to one
- Since 2006, 103 grants totalling $29 million USD in conservation investment ($12.1 million cash funded by the partnership, $16.9 million provided in matching funds)
- Supports the implementation of the Great Lakes Restoration Initiative and is designed to protect, maintain and restore the basin’s ecosystems
- In the long term, ArcelorMittal's involvement in these projects demonstrate its responsibility and strengthens its license to operate in the Great Lakes region

Creating business value – Lafarge

The issue

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Creating business value – Lafarge

The response

Plant nurseries as part of biodiversity restoration

- Lafarge has developed a biodiversity management system, including tools and best practices.
- Local nurseries important feature of rehabilitation as plants ensure soil stability and landscape integration. Local nurseries respect indigenous species, adaptation to the local biogeographical context, and avoid spread of invasive species.
- Specific rehabilitation programs in Uganda and the Philippines. Seeds and material for vegetative multiplication are collected directly in the vicinity of the quarry.
- Local know-how plays an important role by helping to choose the most adapted species and build the protocols for planting and care. Partnerships with botanical authorities the ultimate stage of the process.

Creating business value – Lafarge (cont.)

The results

Different projects for a same objective: biodiversity conservation.

- In Uganda, the nursery production capacity is 100,000 seedlings per year.
- 30,000-50,000 seedlings are used for alternative fuel plantations and 12,000-15,000 seedlings are used for rehabilitating the mined area.
- The local communities receive 30,000 to 50,000. The nursery projects employ more than 30 people.
- These actions, whilst helping Lafarge rehabilitate its former quarry, have also helped the company secure its operations in the region.

Creating business value – BASF

The issue

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Creating business value – BASF

The response

BASF implemented 3 different projects:

- **Project 1 – Testing methods of biodiversity enhancement (UK):** partnered with a commercial farm to implement and monitor new biodiversity methods suggested by the Farming and Wildlife Advisory Group and the Royal Society for the Protection of Birds (RSPB).
- **Project 2 – Planting trees for a more sustainable agriculture (Brazil):** education of farming communities and action on biodiversity restoration and conservation. Partnered with local organizations and planted over half a million native Brazilian trees, covering around 300 hectares.
- **Project 3 – Protecting and preserving bees (France):** Increasing mortality rates for pollinating insects such as bees has a direct impact on agriculture. Partnered with the French Bee Biodiversity Network to protect honeybees and other pollinators in France. Special ‘bee pastures‘ have been set up on more than 2500 hectares every year.

Creating business value – BASF

The results

Three different methods – providing habitats and food supply to local species, reforestation and education programs.

The expected outcomes are:

- Demonstrate that modern and registered crop protection and good agricultural practices are compatible with biodiversity;
- Improve and strengthen the relationship with farmers, by providing solutions that are compatible with farming practices; and
- Enhance the reputation of the farming sector and BASF's industry as a provider of agricultural solutions.

Feedback...

Wrap-up

Module 1: Understanding the links between business and ecosystems

wbcsd business ecosystems training

Module 1 objectives – recap

- Demonstrate an understanding of the key terms and concepts around biodiversity, ecosystems, ecosystem services, environment and sustainability.
- Identify the direct and indirect drivers and causes for biodiversity and ecosystem changes and impacts, and the impacts and dependency of companies on ecosystem services.
- Understand the link between ecosystem services and wider sustainability issues.
- Describe the business case for managing ecosystems and identify the specific business case for their own company from the perspective of both risk and opportunity.
- Understand some of the basic regulatory and policy frameworks currently in place as a key driver of change (expanded in module 4).
- Help participants gain knowledge that will help them add value to their organization.

Module 1

- Understand the basics
- Drivers for change and business impacts and dependencies
- Links with sustainability
- Business case for action
- Policy and regulatory frameworks
- Gain useful knowledge

Review...

Have we achieved your objectives?

Action planning

Identify how ecosystem services relate to your own company's situation.

References

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- WBCSD. Corporate Ecosystem Services Review
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- WBCSD. Pathways to 2050
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- Crocodile example – http://www.doc.govt.nz/upload/documents/about- doc/role/international/cites-crocs.pdf
- UK Environmental Law Association guide – http://www.environmentlaw.org.uk/rte.asp?id=108
- Limits to growth – http://www.clubofrome.org/?p=326
- UN Earth Summit Fact Sheet – http://www.un.org/geninfo/bp/enviro.html
- CBD – http://www.cbd.int/2010-target/goals-targets.shtml

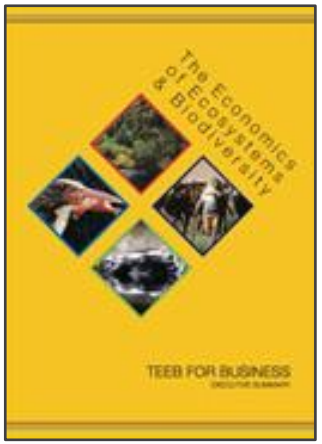
Action Planning

Step 1: Build awareness

- Consider the use of BET either within your company or as an industry initiative in partnership with other companies

Step 2: Use other publicly available resources

- Review WBCSD case study examples and publications, which include:
  - Case studies: more than 28 examples, from 16 different countries and 15 sectors complemented by specific Corporate Ecosystem Valuation Road testers
  - Publications: *Guide to Corporate Ecosystem Valuation, Corporate Ecosystem Valuation: Building the Business Case, The Corporate ESR, Responding to the Biodiversity Challenge, Connecting the Dots: The nexus between business & ecosystems.*
- Other key resources: The Economics of Ecosystems and Biodiversity (TEEB) reports (specifically TEEB for business), The Millennium Ecosystem Assessment and the UK National Ecosystem Assessment



Action Planning

Step 3: Join networks and contact experts

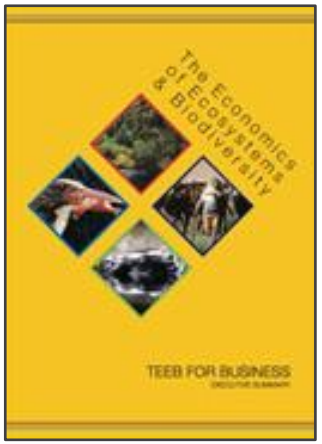
- Consider joining the WBCSD Ecosystems Focus Area (http://www.wbcsd.org/work-program/ecosystems.aspx)
- Make use of the WRI's Ecosystem Services Experts Directory (http://projects.wri.org/ecosystems/experts)

Step 4: Piloting

- Pilot biodiversity risk and opportunity assessments internally
- Pilot the Corporate Ecosystem Valuation or Ecosystem Services Review for a selected project, site or stage of your supply chain

Step 5: Implementation

- Contact the WBCSD Ecosystem Focus Area team (overleaf) and plan a full implementation strategy with the assistance of international experts



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February 2012

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