



wbcsd business ecosystems training

BET India Module 4

Managing and Mitigating Impacts

Main Presentation

December 2012



Business Ecosystems Training – Contributors

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

BET curriculum and structure was designed by 

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

[Option 1]

Module 4: Managing and Mitigating Impacts



wbcSD business ecosystems training

Session 1

Introduction

[Option 2]

Module 4: Managing and Mitigating Impacts



wbcSD business ecosystems training

Icebreaker and Introduction (cont.)

[Option 1]

- a) Your current role and scope of work
- b) Your knowledge of how to measure ecosystem impact
- c) What you want to learn from the course and Module 4



5 minutes



Icebreaker and Introduction

[Option 2]

✧ Catch the ball!!!



Introduction

[Option 3]

Please discuss:

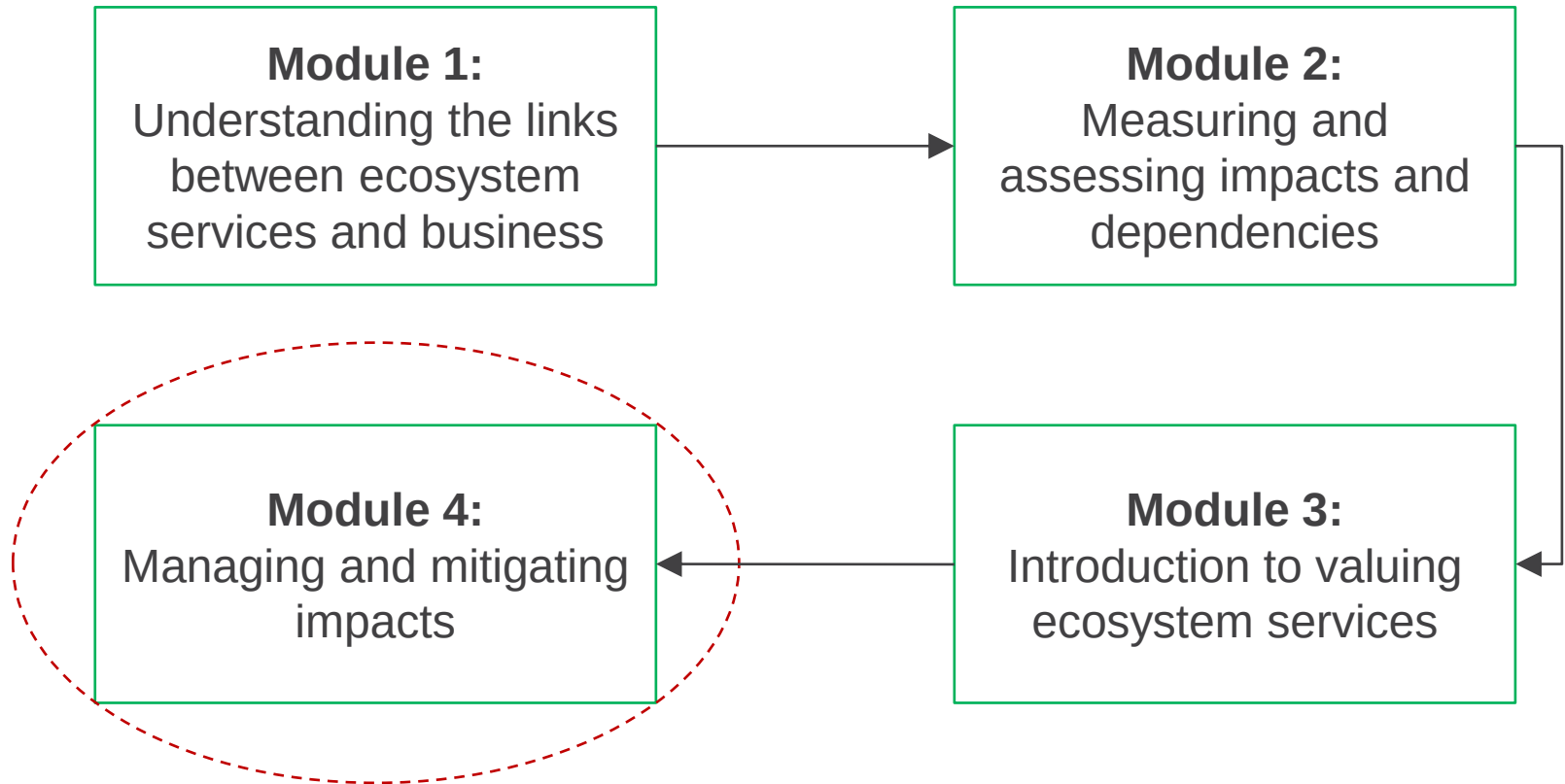
✧ What you hope to learn from Module 4?



5 minutes



Where does Module 4 sit within the broader training available?



Module 1 – Recap [optional module re-cap]

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



Module 2 – Recap [optional module re-cap]

- ✧ Understand the basics
- ✧ Policy and regulatory frameworks
- ✧ The business case for action
- ✧ Introduction to Ecosystem Services Review (ESR)
- ✧ Introduction to tools, frameworks and methodologies



Module 3 – Recap [optional module re-cap]

- ✧ Understand the basics
- ✧ Policy and regulatory frameworks
- ✧ The business case for action
- ✧ Introduction to Corporate Ecosystem Valuation (CEV)
- ✧ CEV screening and supporting tools and methodologies



Module 4 – Objectives

By the end of the module, delegates should be able to:

1. Define key policies and policy mechanisms for addressing and mitigating environmental impact, and enhancing business practice for better management.
2. Identify the business case for managing and mitigating impacts.
3. Apply the mitigation hierarchy, i.e. develop ideas on how their company can mitigate, offset and provide compensation for their impacts
4. Identify how regulatory frameworks and policy mechanisms relate to delegates' employers through action planning.



Module 4 – Summary

- ✧ Understand the basics
- ✧ Policy and regulatory trends
- ✧ The mitigation hierarchy
- ✧ Compensation and offsetting
- ✧ Reporting and indicators
- ✧ Current policies and regulations



BET Module 4: Managing and mitigating impacts

Timetable

	Time	Duration (mins)	Session	Facilitator
→ →		10-40	Session 1: Icebreaker and introduction	
→		20	Session 2: Basic concepts	
→		10	Session 3: Introduction to policy trends	
→ →		45	Session 4: Case study example: applying the mitigation hierarchy	
		30	Coffee break	
→		10	Session 5: Knowledge check	
→ →		40	Session 6: Compensation and offsetting	
→		25	Session 7: Reporting and Indicators	
→		20-35	Session 8: Policy framework	
→ →		15	Session 9: Knowledge share	
→ →		10-25	Session 10: Wrap up	

Key: → Presentation
→ Exercise



Company commitments

Rio Tinto :

“ Our goal is to have a net positive impact on biodiversity by minimizing the negative impacts of our activities and by making appropriate contributions to conservation in the regions in which we operate.”

Source: <http://www.riotinto.com/documents/ReportsPublications/RTBiodiversitystrategyfinal.pdf>

PepsiCo:

“Striving for “positive water balance” in our operations in water-distressed areas”

Source: http://www.pepsico.com/Download/Positive_Water_Impact.pdf

Walt Disney :

“Long term objective of having a net positive impact on ecosystems”

Source: <http://corporate.disney.go.com/citizenship2010/environment/overview/ecosystems/>



Company commitments

Sony:

“Sony strives to achieve a zero environmental footprint throughout the lifecycle of our products and business activities.”

Source: <http://www.sony.net/SonyInfo/csr/environment/management/gm2015/index.html>

Walmart:

“A pledge: to protect one acre of conservation land for every acre occupied by Walmart’s US facilities.”

Source: <http://walmartstores.com/Sustainability/5127.aspx>

The Coca-Cola company:

“Work to safely return to nature and communities an amount of water equivalent to what we use in our beverages for their production” (by 2020).

Source: http://www.thecoca-colacompany.com/citizenship/water_main.html

Kimberly-Clark:

“100% of the virgin wood fiber to be sourced from certified supplier by 2015 (FSC Certification)”

Source:

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



Company commitments in India

Rio Tinto, India:

“Respect for the environment is central to our approach to sustainable development. Wherever possible we prevent, or otherwise minimise, mitigate and remediate, harmful effects of the Group's operations on the environment.”

Source: Rio Tinto India http://www.riotintoindia.com/ENG/ourapproach/375_sustainable_development.asp

Tata Chemicals:

"Attain overall water neutrality and reduce/ eliminate ground water usage especially from shallow aquifers which can affect the ground water table in the surrounding area"

Source: TATA Chemicals http://www.tatachemicals.com/Sustainability/downloads/2008-10/sustainability_report2008-10.pdf



Ecosystems as an economic part of infrastructure



Business should think of ecosystems as:

- ✧ Valuable assets and natural capital
- ✧ Elements of basic infrastructure
- ✧ Supporting production, consumption, trade and investment

Conventional definitions of infrastructure often omit natural ecosystems.

It pays to value and invest in ecosystems as economic infrastructure.

Source: WBCSD, Connecting the dots



Session 2

Basic Concepts

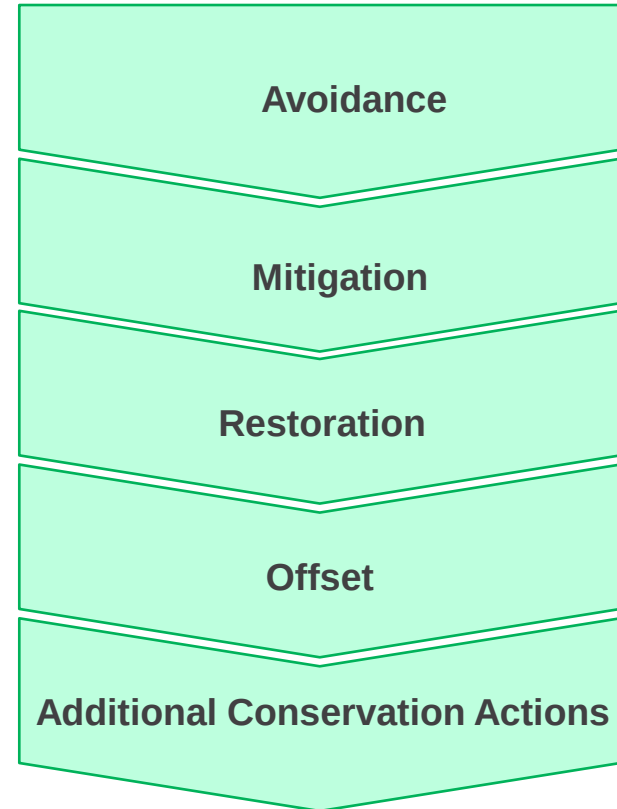
Module 4: Managing and Mitigating Impacts



wbcd **business ecosystems training**

The mitigation hierarchy

- ✧ Mitigation = actions to manage expected environmental impacts in a responsible way
- ✧ The 'mitigation hierarchy' concept suggests 5 steps
- ✧ Biodiversity offsetting system in the US and some other countries



Source: WBCSD, CEV helpdesk presentation July 2011



Biodiversity offsets

Measurable conservation outcomes resulting from:

- ✧ Compensation for significant residual adverse biodiversity impact
- ✧ In particular, those that persist even after appropriate prevention and mitigation measures

The goal of biodiversity offsets is to achieve:

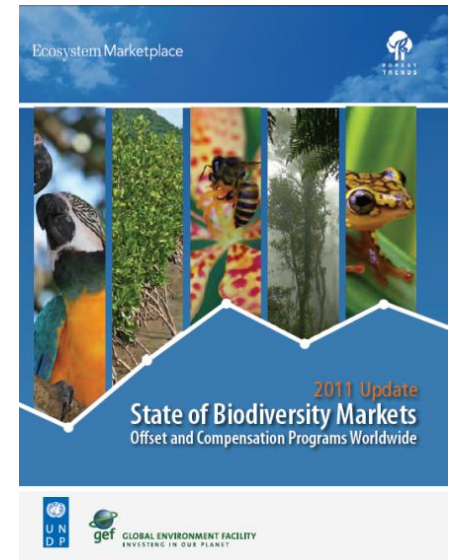
- ✧ No net loss, or preferably net gain, of biodiversity



Biodiversity markets - overview

- ✧ 45 compensatory mitigation programs (banks and offsets), 27 in development.
- ✧ Numerous individual offset sites (over 1,100 banks).
- ✧ Global annual market size min. US\$ 2.4-4.0 billion. Likely much more (80% of programs not transparent enough to estimate market size).
- ✧ Conservation impact >187,000 hectares annually.
- ✧ North America dominates: US\$ 2.0-3.4 bn. >15,000 ha annually. 0.5m ha cumulatively.

Source: Madsen et al, *Ecosystem Marketplace* (June 2011)



Biodiversity offsets - Example

Australia – BushBroker scheme

- BushBroker – a government operated broker
- Government start-up funding, now in cost recovery
- First trade in May 2007
- Regulation of native vegetation clearing
- The scheme generates offsets, with over \$34 million traded to date
- The scheme also allows for 'banking' of credits for future use



Photo Credit: Bush Brokers

Source: BBOP, Within The Mitigation Hierarchy



Payments for Ecosystem Services (PES)

Definition

*“PES can be defined as **voluntary transactions** where a well-defined **ecosystem service (ES)** (or land-use likely to secure that service) is **‘bought’** by at least **one ES buyer** from at least **one ES provider**, if and only if the ES provider secures ES provision (conditionality)”*

Key messages

- ✧ PES can help mitigation or management of risks where dependencies on ecosystem services are identified
- ✧ PES can provide opportunities for new revenue streams if businesses identify where they are providing ecosystem service benefits to others
- ✧ Proactive engagement in PES-like schemes can help to avoid unforeseen costs of regulation

Source: TEEB for National and International Policy Makers, Chapter 5, page 6



Payments for Ecosystem Services

Example 1: Equitable sharing of benefits in Sukhomajri, India

Ecosystem services considered are soil preservation, afforestation ground water protection and forest management.

- ✧ Sukhomajri village located in the foothills of the Himalayas was amongst the first in India to test participatory watershed management.
- ✧ The entire agricultural land of Sukhomajri village was under rain-fed single cropping and there was no source of irrigation up until 1975.
- ✧ Small land holdings suffered due to frequent crop failures due to erratic distribution of rainfall.
- ✧ The degradation of agricultural lands forced villagers to bring hill slopes under agriculture and soil erosion increased in the hills.
- ✧ Practices of free grazing of cattle's, land clearance and tree-felling created various problems.

Source: [TEEB case by A. Agarwal and S. Narain \(2010\) Equitable sharing of benefits in Sukhomajri India](#)



Payments for Ecosystem Services

Example 1: Equitable sharing of benefits in Sukhomajri, India (cont.)

- ✧ A Water Users' Association was set up in 1982, charged with implementing watershed management, dam management and the collection of fees from water users.
- ✧ Two new earthen dams in the catchment of Sukhomajri village and Sukhna Lake benefited the Sukhna Lake downstream and the inhabitants of Chandigarh.
- ✧ Sukhomajri is the first village in India to have tax levied on the income it earns from the ecological regeneration of its degraded watershed.
- ✧ The local farmers were given some incentives to develop agriculture and protect soil. The fee on water was Rs. 16 per hour.



Source: [TEEB case by A. Agarwal and S. Narain \(2010\) Equitable sharing of benefits in Sukhomajri India](#)



Payments for Ecosystem Services

Example 2: PES in India from the bottom up

- ❖ Kuhan is tucked far away in the hills of Himachal Pradesh's Kangra district. It is typical of this region that receives high rainfall and yet faces water shortages due to lack of storage facilities
- ❖ In 2003 the village pooled resources and with some help from a watershed development project and constructed a checkdam on Gulana Khad, a nullah (creek) that ran across the village .
- ❖ Silt came from the grazing land of Ooch village, high up the nullah.
- ❖ Ooch banned grazing for 8 years on its four-hectare common land and planted saplings of fruit, fodder bearing trees as well as bamboo and elephant grass.
- ❖ Kuhan paid for the saplings and even worked out an arrangement to sell irrigation water to Ooch as and when required.
- ❖ Ooch had to compromise on grazing to save the water from siltation, Kuhan, being the beneficiary, compensated for it.
- ❖ Kuhan-Ooch joint venture indicates that people will want to conserve them if they are paid to do so.



Source: [Supriya Singh, Centre for Science and Environment \(CSE\), India](#)

Payments for Ecosystem Services

Example 3 :The Equitable Payments for Watershed Services Program (EPWS) – Tanzania

- ❖ Uluguru and East Usambara mountains – Ruvu and Sigi River basins are major water source to cities the cities of Dar es Salaam and Tanga
- ❖ Dar es Salaam provides water to 4 million inhabitants and 80 per cent of industries
- ❖ Public water utility spends nearly US \$2 million a year on water treatment due to increased sediment load in Ruvu River
- ❖ EPWS aims to improve supply for downstream users by compensating upstream users (e.g. farmers) to manage their land-use, which in turn controls soil erosion and has other sustainability benefits.
- ❖ As of 2008, DAWASCO and Coca-Cola have enrolled over 450 farmers



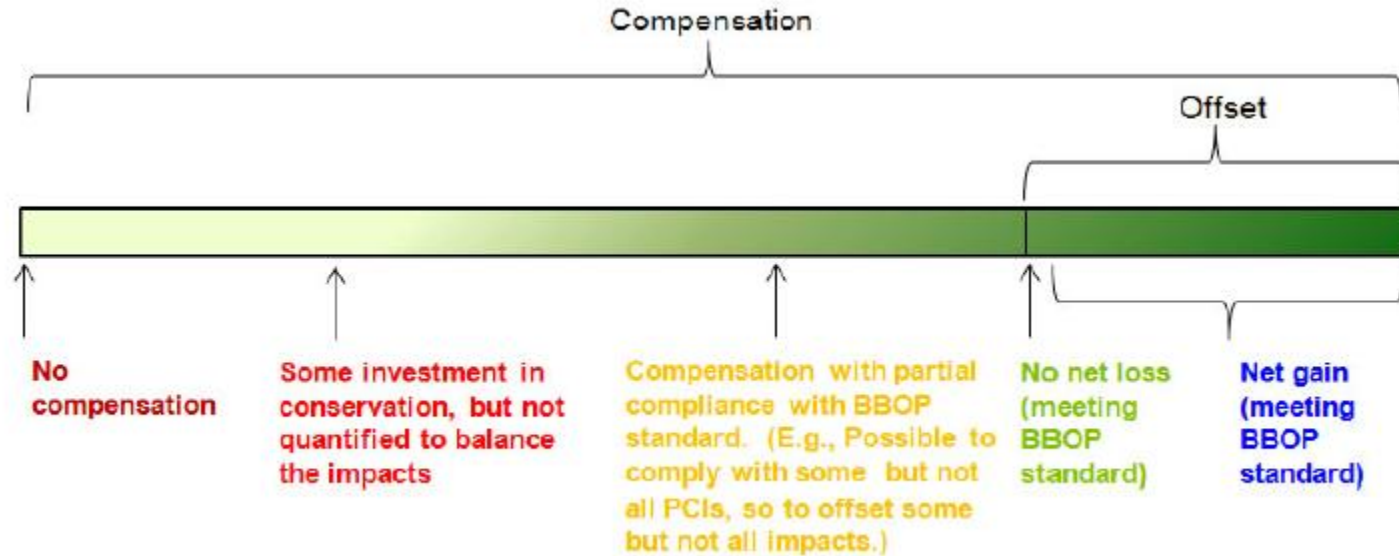
Photo Credit: PRESA



Compensatory measures

In terms of biodiversity

“Compensation involves measures to restore, create, enhance, or avoid loss or degradation of a community type, in order to compensate for residual impacts on it and/or its associated species.”



Sources:

BBOP glossary, <http://bbop.forest-trends.org/guidelines/glossary.pdf>

BBOP Standard on Biodiversity Offsets, <http://bbop.forest-trends.org/guidelines/Standard.pdf>



Procurement policies (managing supply chain)

Sustainable procurement is the process by which organizations buy supplies and services taking into consideration the best value for money and the environmental and social aspects that the product/service has over its whole life cycle.

Some examples:

- ✧ Belgian Government Procurement Policy
- ✧ German Procurement Policy
- ✧ Greenpeace's Responsible Procurement Policy
- ✧ International Finance Corporation (IFC) Procurement Policy
- ✧ Kimberly-Clark
- ✧ Sompo Japan
- ✧ Unilever



Green Development

The Green Economy

“A Green Economy is one that results in improved human well-being and social equity, while significantly reducing environmental and ecological scarcities.” **UNEP**

Green Growth

*“Green growth means fostering **economic growth** and development, while ensuring **that natural assets continue to provide the resources and environmental services** on which our well-being relies.”* **OECD**

Green Growth builds on the concept of **sustainable development**, but the emphasis is more on the environmental aspect as opposed to the social.

Source: WBCSD, CEV helpdesk call (September 2011)



Green Development (cont.)

5 Dimensions for Green Growth

- ✧ Climate change adaptation and mitigation
- ✧ Low-carbon growth
- ✧ Equitable growth
- ✧ Strong communities and habitats
- ✧ Valued natural capital



Source: PwC and WWF



Session 3

Introduction to policy trends

[Optional session]

Module 4: Managing and Mitigating Impacts



wbcd **business ecosystems training**

Background to ecosystem policy

✧ Long history of environmental policy

- A. 1388 water pollution guidance
- B. UK Alkali Act of 1863 limits industrial pollution

✧ 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...

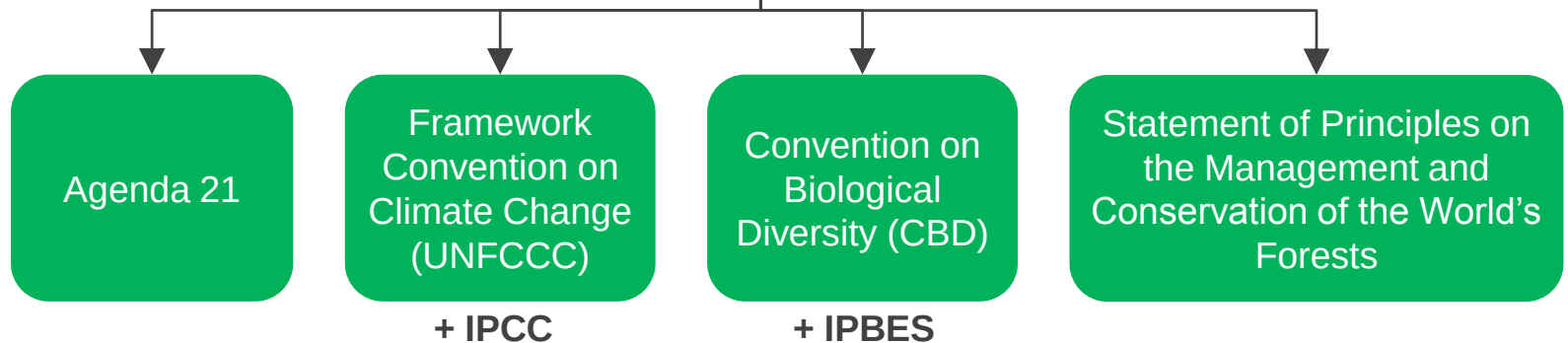
- Over 250 multilateral environmental agreements exist

✧ The Earth Summit (1992) – start of ‘The Rio Process’



Background to ecosystem policy (cont.)

The Earth Summit (1992)



Other significant multi-lateral environmental agreements:

Ramsar Convention
(Wetlands)
1971

EU Environmental Liability Directive
(2004)

Montreal Protocol
(Ozone depletion)
1987

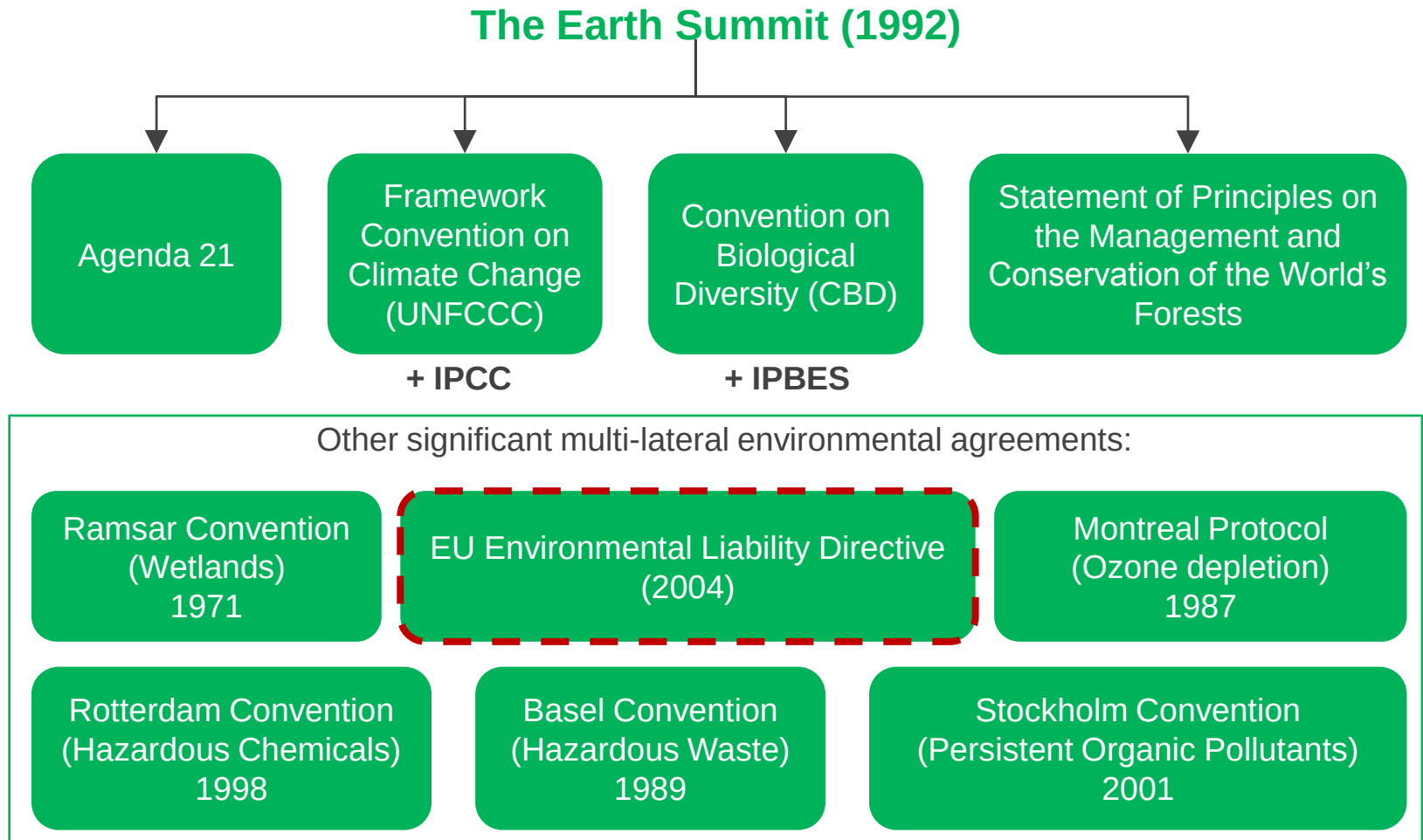
Rotterdam Convention
(Hazardous Chemicals)
1998

Basel Convention
(Hazardous Waste)
1989

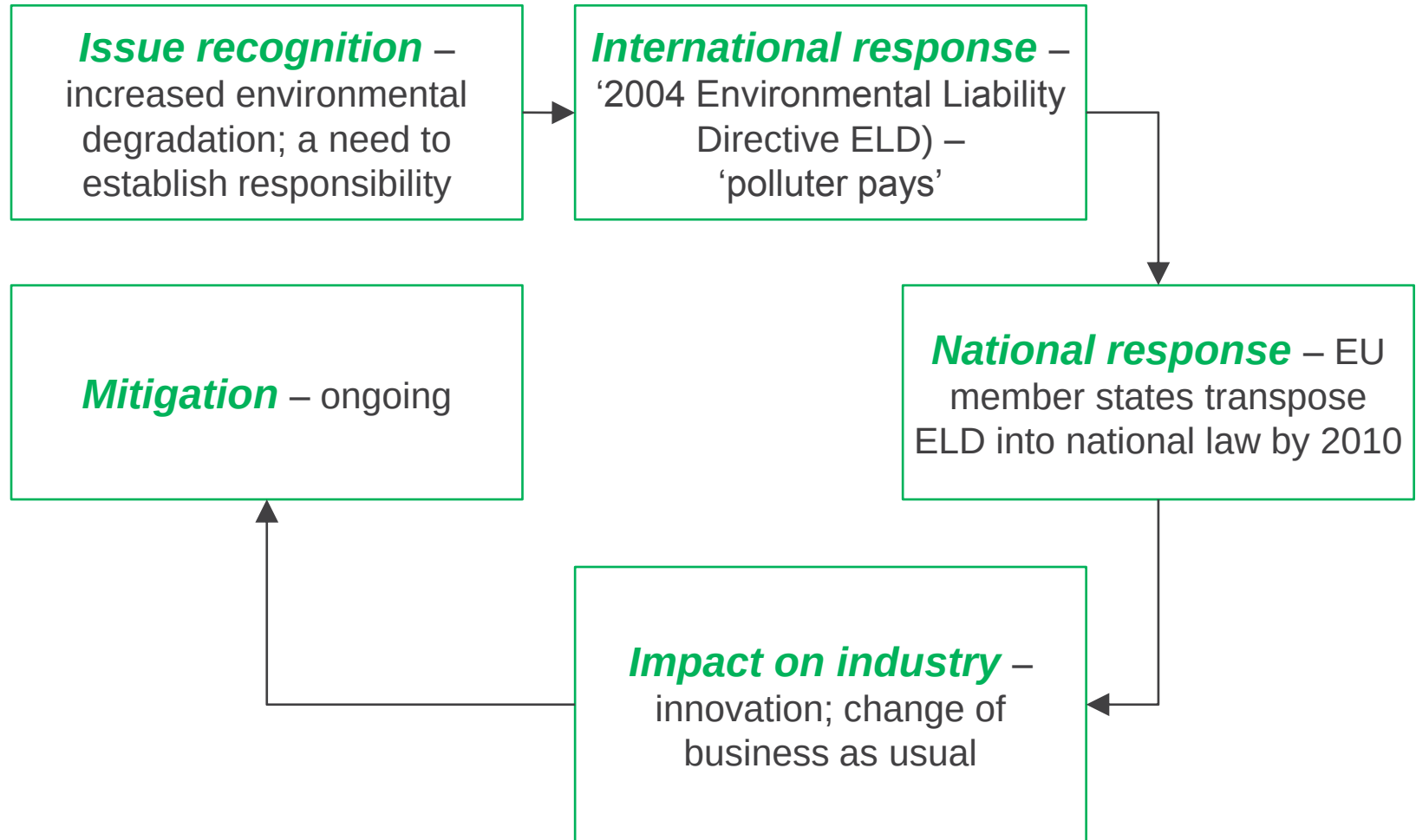
Stockholm Convention
(Persistent Organic Pollutants)
2001



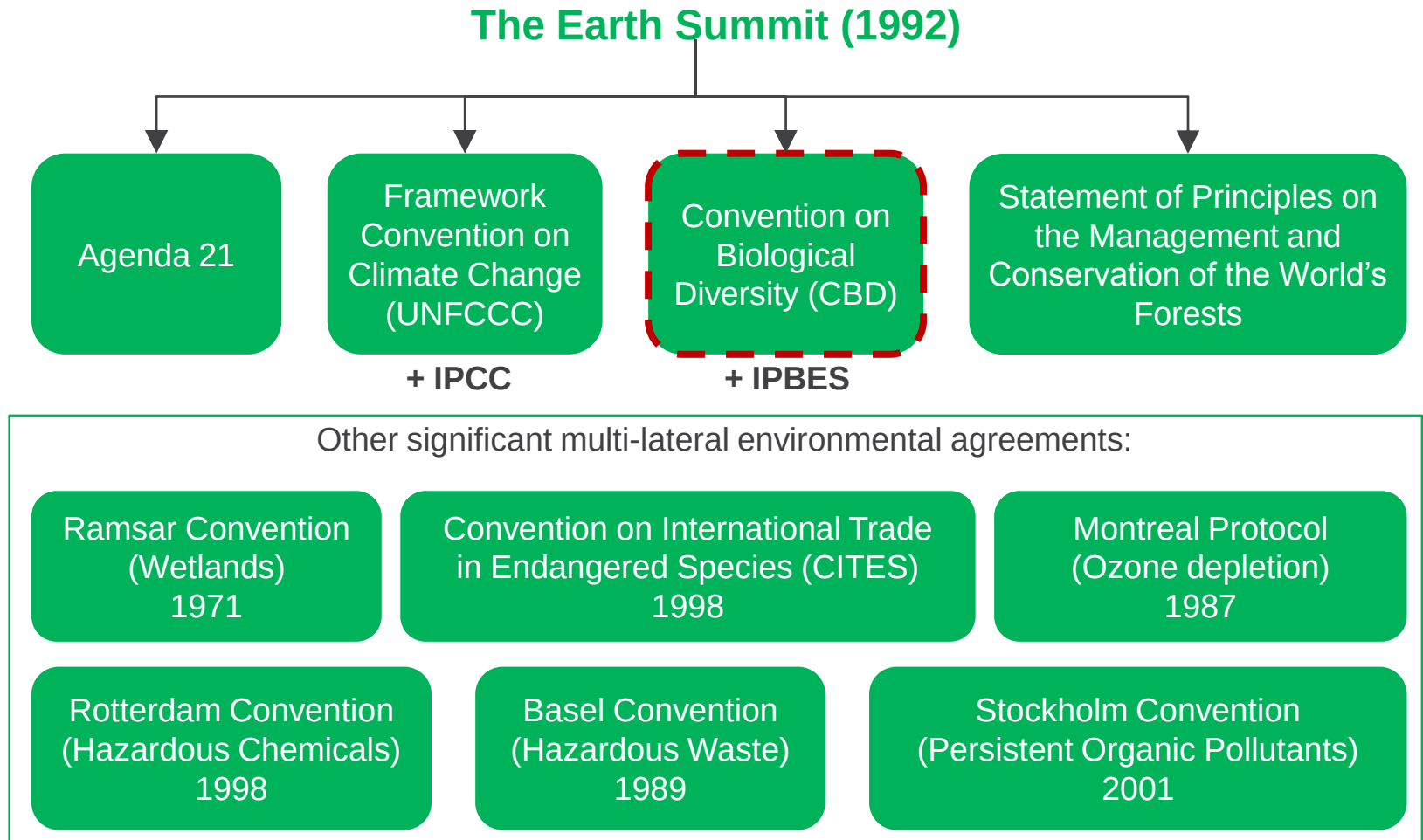
Background to ecosystem policy (cont.)



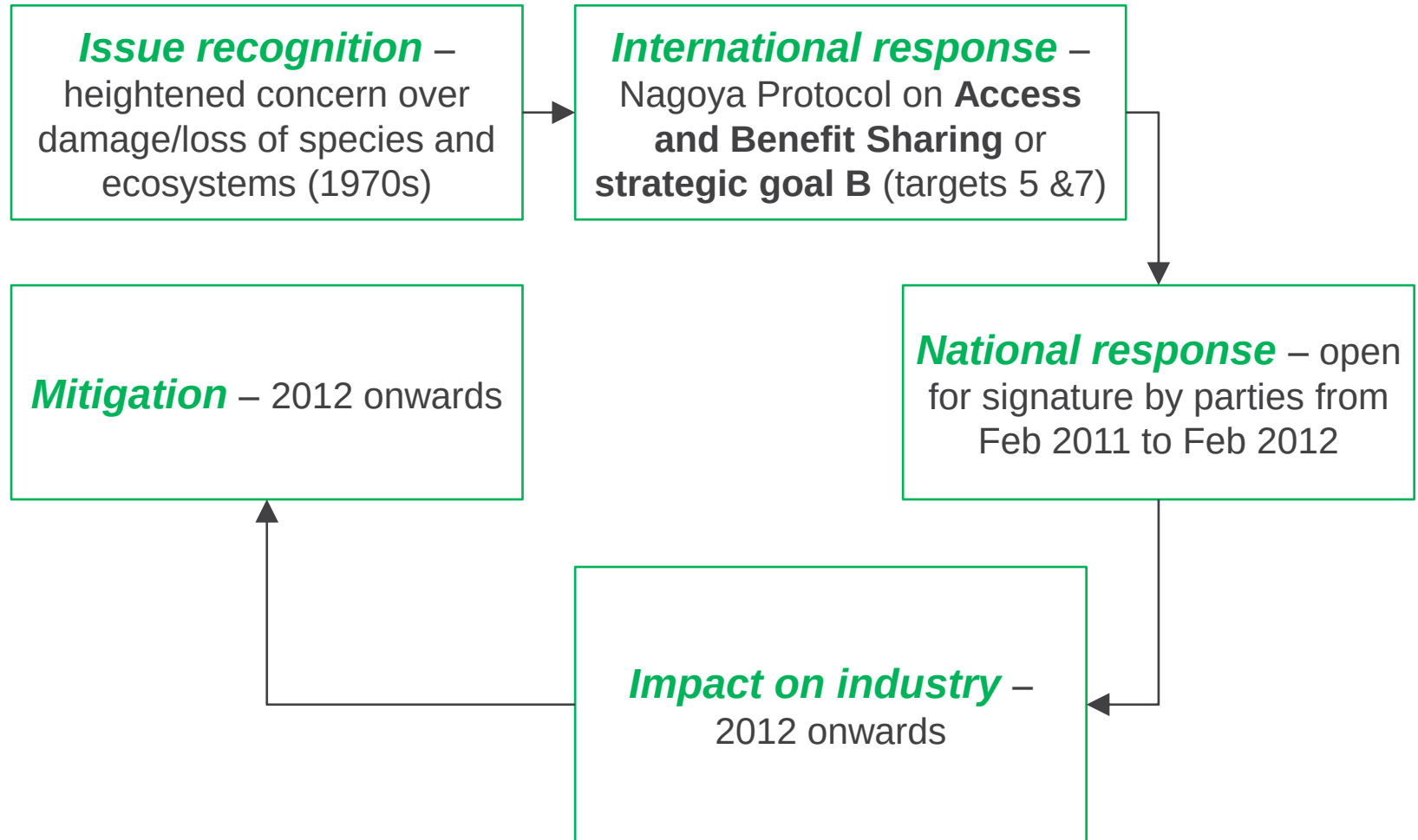
International policy trends – Environmental Liability Directive example



Background to ecosystem policy (cont.)



International policy trends – Introduction to the CBD



Module 4 – Summary

- ✧ Understand the basics ✓
- ✧ Policy and regulatory frameworks ✓
- ✧ The mitigation hierarchy
- ✧ Compensation and offsetting
- ✧ Reporting and Indicators
- ✧ Current policies and regulations



Session 4

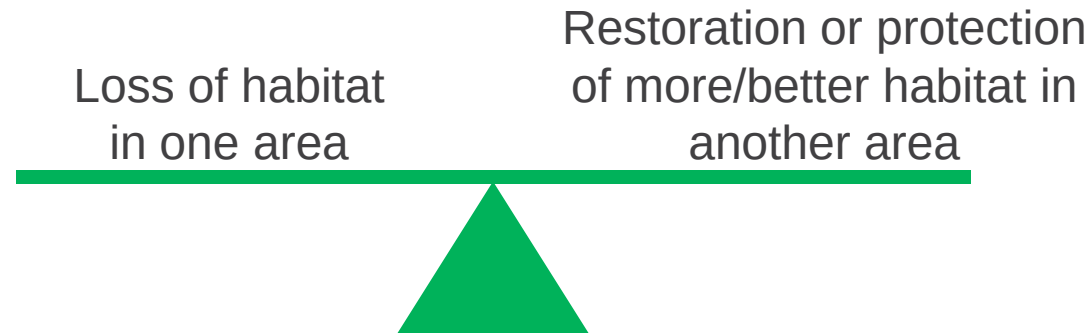
Applying the Mitigation Hierarchy

Module 4: Managing and Mitigating Impacts



wbcSD business ecosystems training

‘No Net Loss’

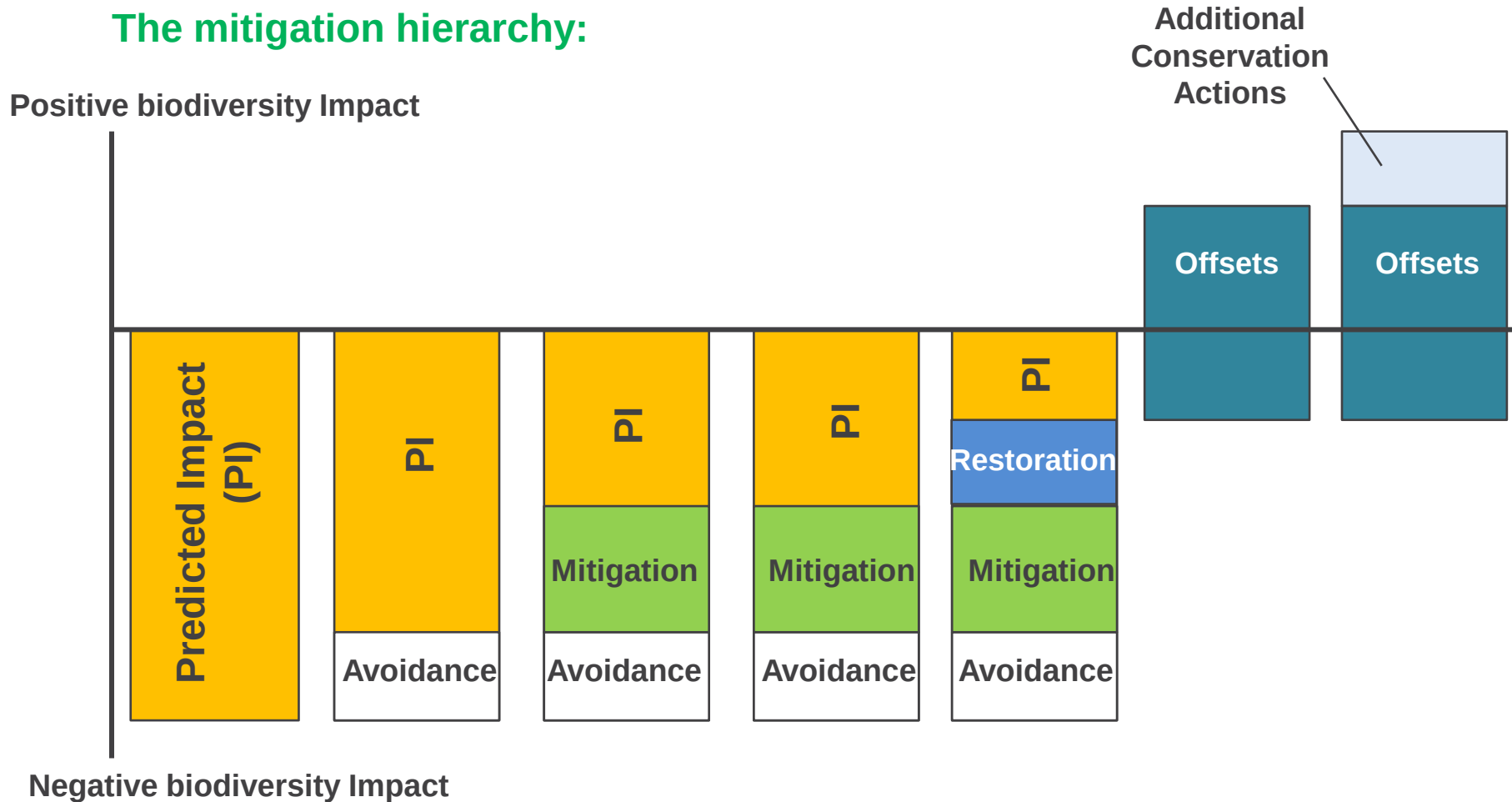


- ✧ **No Net loss** = impacts on biodiversity caused by the project are balanced or outweighed by measures taken to avoid and minimize the project's impacts, to undertake on-site restoration and finally to offset the residual impacts, so that no loss remains
- ✧ Some businesses have taken this one stage further by aiming for a **Net Positive Impact** (e.g. across their operations or for all new developments)



Biodiversity offsets and impact mitigation – recap

The mitigation hierarchy:



Source: Adapted from Rio Tinto and Western Australia EPA

wbcscd business ecosystems training

December 2012

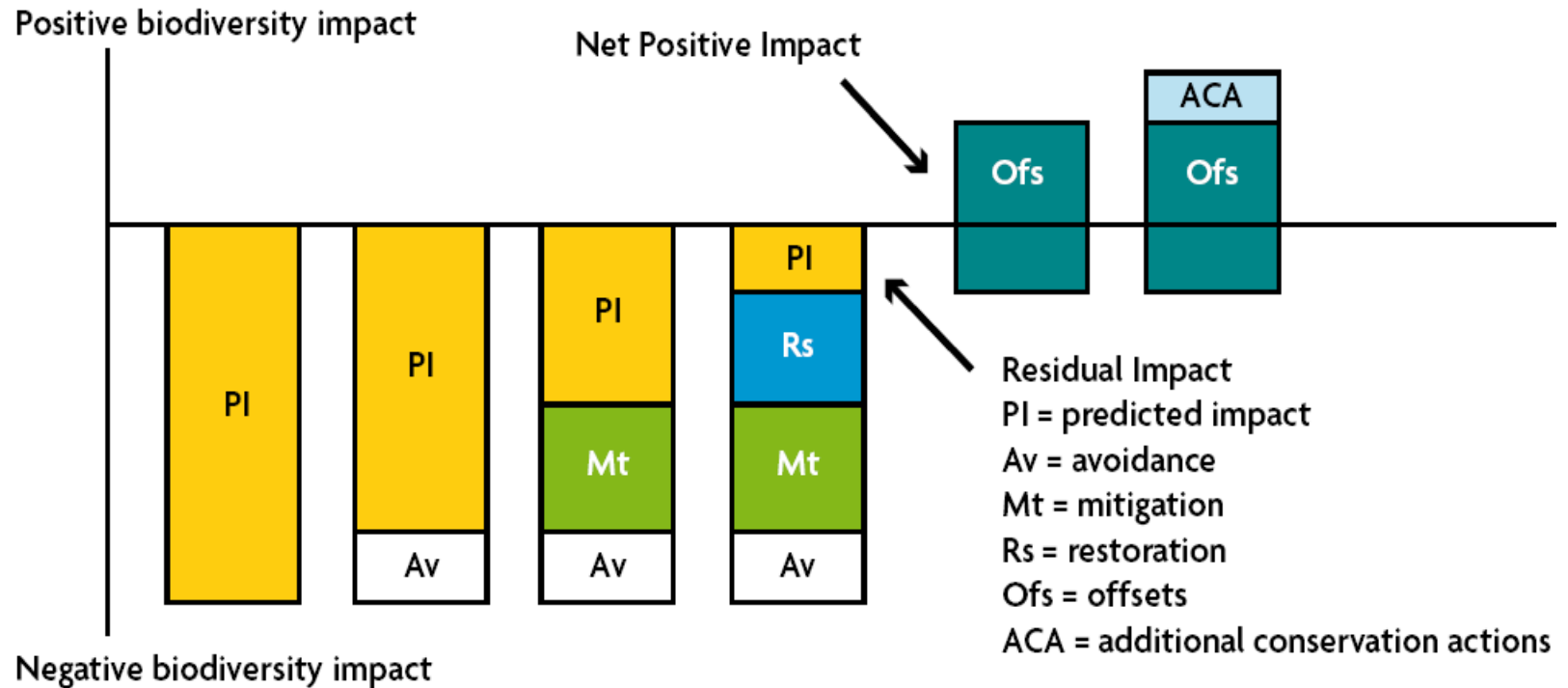
43

Case Study: Rio Tinto

- ✧ Rio Tinto's long-term goal is to have a **Net Positive Impact** on biodiversity
- ✧ Positive actions outweigh inevitable negative effects associated with mining and mineral processing by using:
 - Mitigation hierarchy (avoid, mitigate, restore)
 - Offsets and other conservation actions



Rio Tinto's Goals



Sources: adapted from Rio Tinto and Western Australia EPA



Case study exercise – Reliance Industries Limited

The issue

The company and its operations

- ✧ The Reliance Industries' Jamnagar oil refinery on the West Coast of India in Gujarat State is the largest single location for refining operations globally.
- ✧ The refinery has been running since it was first commissioned in 1999, with its second refinery being commissioned in 2003 when the Company acquired additional land for its new operations at the site.

The region

- ✧ Gujarat coastline is a semi arid region with no perennial water sources and high wind velocity causing soil erosion.
- ✧ The area has low rainfall (300-500 millimetres per year) providing little irrigation water, and has frequent storms and cyclones that blow away the topsoil.
- ✧ The land surrounding the refinery at the start of the project was barren, with high salinity and very high pH basaltic rocky and sandy soil.

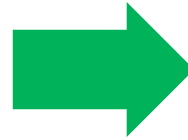
Legal requirements

- ✧ The State Government requires that around 9% of acquired land be utilized for raising a "green belt"(i.e. no infrastructure development)



Group exercise: flipchart layout

Ecosystems Services
Impacted?



Approach?



Feedback...



Case study exercise – Reliance Industries Limited

The response

Reliance felt there was a strong business case to go beyond the legal green belt requirement and allocated an additional 591 hectares of land to increase the biodiversity potential of the land.

Avoidance of impacts – waste water

- ✧ Allocated 26 km periphery of land for a biodiversity enhancement project.
- ✧ Planted teak and other forest trees on a part of the land, which can absorb treated effluent water from the refinery, as an alternative to disposing of the discharged water.

Compensation of impacts – tree plantation and irrigation

- ✧ Reduced the salinity and pH of the soil in & surrounding the refinery using , organic manures, green manures, gypsum and elemental sulphur.
- ✧ Planted tree species that would provide crops, employment, soil retention, biodiversity, reducing noise, dust & gases pollution and a green working environment around the refinery, as well as act as wind-breakers.
- ✧ Used drip irrigation techniques, reducing water requirements by half.
- ✧ A further 30% of the water was then saved using black polythene mulching around the planted trees to reduce evaporation of irrigation water.



Case study exercise – Reliance Industries Limited

The results

Environmental

- ✧ The majority of the plantations were completed within 8 years of the start of the project
- ✧ A total of 5.7 million trees were planted on the biodiversity project land, and a further 1.8 million trees on the refinery grounds and in its township.
- ✧ Along the coastline in the actual refinery area, over 1 million mangroves were planted to improve the coastal ecosystem and aesthetics
- ✧ A total 200 species were planted and small-scale vermi-composting set up, which have both greatly improved soil health and fertility.
- ✧ 5.67 million metric tons of CO₂ per annum sequestered by the trees (estimation)

Social

- ✧ Plantation generated employment opportunities in the mango plantation for approximately 430 local people

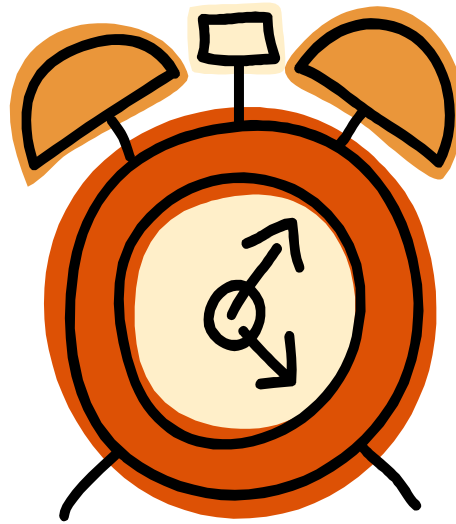


Module 4 – Summary

- ✧ Understand the basics ✓
- ✧ Policy and regulatory frameworks ✓
- ✧ The mitigation hierarchy ✓
- ✧ Compensation and offsetting
- ✧ Reporting and indicators
- ✧ Current policies and regulations



Coffee break



30 minutes



Session 5

Knowledge check

Module 4: Managing and Mitigating Impacts



wbcd **business ecosystems training**

Module 4 – Recap

- ✧ Understand the basics ✓
- ✧ Policy and regulatory frameworks ✓
- ✧ The mitigation hierarchy ✓
- ✧ Compensation and offsetting
- ✧ Reporting and indicators
- ✧ Current policies and regulations



Interactive

- ✧ Key concepts
- ✧ Do you know...



Session 6

Compensation and Offsetting

Module 4: Managing and Mitigating Impacts



wbcd **business ecosystems training**

Offsetting

Can anyone give me an explanation of offsetting?

The Business and Biodiversity Offsets Programme (BBOP) definition:

*“Measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development and persisting **after appropriate prevention and mitigation measures have been implemented.**”*

*The goal of biodiversity offsets is to achieve **no net loss** and preferably a **net gain** of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function and people’s use and cultural values associated with biodiversity.”*



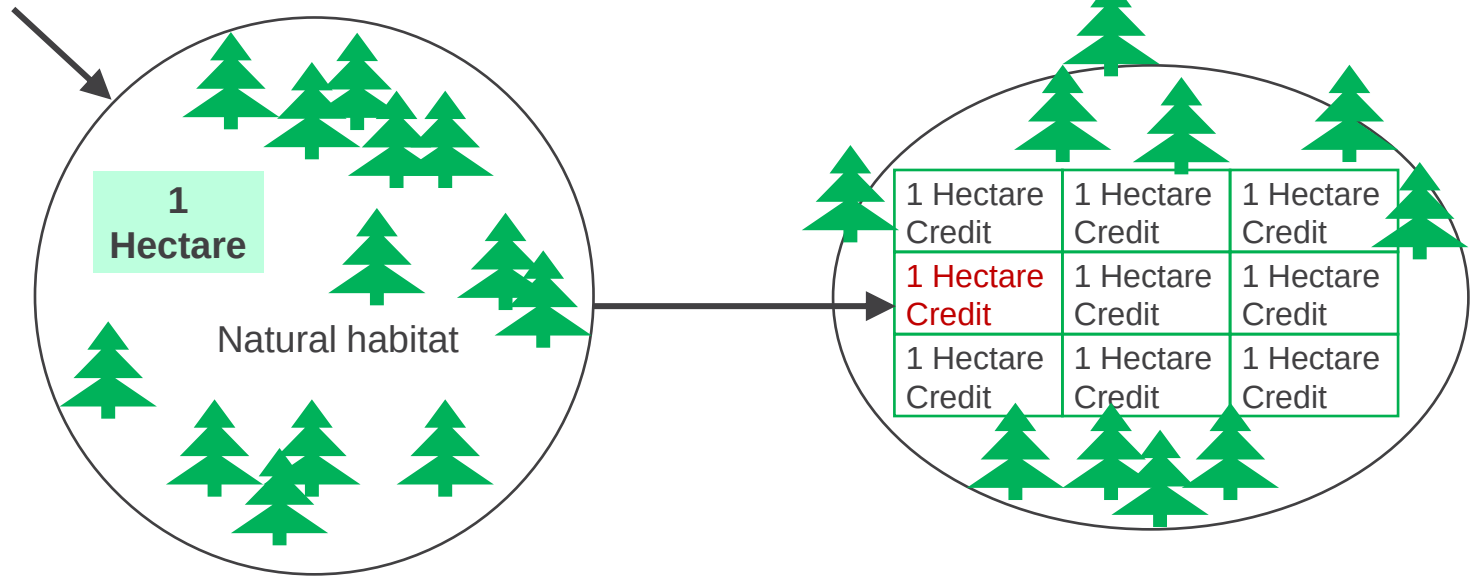
What is biodiversity offsetting?



Development project



Biodiversity offset



Source: BBOP



BBOP Standard on Biodiversity Offsets

Objectives

- ✧ To help auditors assess conformance with the BBOP standard.
- ✧ To help companies design & implement offsets.

- ✧ **Principles:** Fundamental statements about a desired outcome.
- ✧ **Criteria:** The conditions that need to be met to comply with a Principle.
- ✧ **Indicators:** Measurable states to tell whether or not a particular Criterion has been met.



IFC Performance Standard 6

“Biodiversity Conservation and Sustainable Management of Living Natural Resources”

- ✧ Measurable conservation outcomes reasonably expected to result in no net loss and preferably a net gain of biodiversity.
 - Natural habitats: no net loss, where feasible
 - Critical habitats: net gains
- ✧ The design of a biodiversity offset must adhere to the “like-for-like or better” principle.
- ✧ Must be carried out in alignment with best available information and current practices.
- ✧ External experts with knowledge in offset design and implementation must be involved.



The Drivers for Offsetting

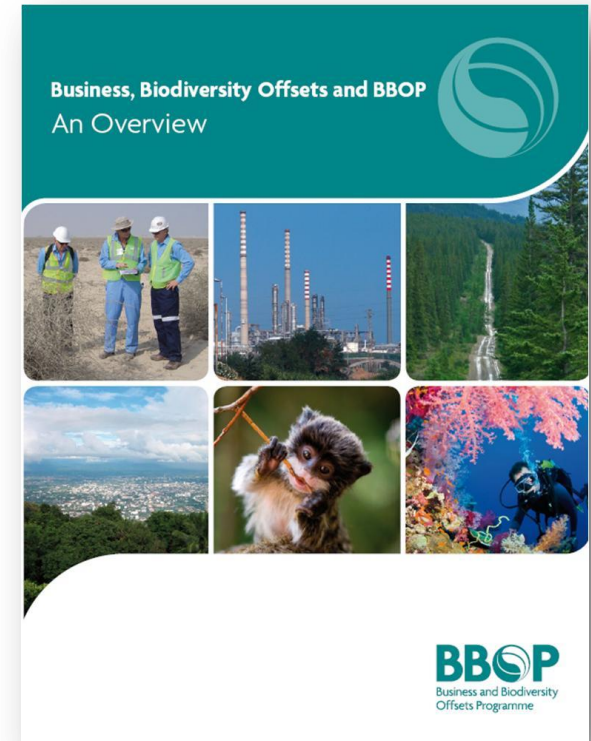
Broad categories of drivers of biodiversity markets are:

- ✧ Regulatory compliance;
- ✧ Access to finance;
- ✧ Government-mediated payments; and
- ✧ Voluntary provisioning.



Key challenges in offset development (BBOP)

- ✧ Trade offs
- ✧ Risk management and assurance of outcomes
- ✧ Indigenous peoples' rights
- ✧ Boundaries of acceptable impacts
- ✧ Availability of land and marine areas for offsets
- ✧ Scientific uncertainty and data gaps
- ✧ Multiple definitions and methods regarding no net loss and lack of a common currency for quantifying biodiversity loss and gain
- ✧ Multiple benefit offsets
- ✧ Capacity



Challenges and practical solutions for biodiversity offsetting

Challenge

1. Political, environmental and social concerns
2. Difficulty in defining biodiversity metrics or currencies
3. Lack of fungibility of biodiversity – more complex than carbon
4. Maintenance of access to natural resource rights
5. Offset failure

Note: (a) Points 1 & 2 adapted from Ekstrom, J (2011). Biodiversity Offsets. Everything you ever need to know in 10 minutes. Presentation to WBCSD, Montreux, 5th April 2011.



Compensation case study – EDP

The issue

The environmental impact of invoicing

- ✦ EDP distributes around **34 million paper invoices per year** in Portugal, a quantity that has non-negligible environmental impacts.
- ✦ To mitigate these impacts, EDP has first committed to **reduce the number of invoices mailed out** every month through on-line invoice services
- ✦ Started in 2007 and by the end of 2009, more than 500,000 clients had joined the initiative.
- ✦ The company was willing to go further and to **compensate all the impacts resulting from its paper invoicing process**.



Compensation case study – EDP (cont.)

The response

Life Cycle Assessment methodology to assess impacts on ecosystems

- ✧ The approach, called “**Zero Impact**” has been developed at the Lisbon school of engineering – Instituto Superior Técnico.
- ✧ “Zero Impact” aims to **quantify and cover all negative environmental externalities of the life cycle of paper invoices.**
- ✧ Software used : **Life Cycle Assessment** (Sigma Pro 6.0)
 - Accounts for the resources, energy and equipment used for generating invoices (paper, plastic and printing process), as well as for invoices delivery (fuel).



Compensation case study – EDP (cont.)

The response (cont.)

- ✧ The compensation initiative consists mostly in **agro-forestry good practices**, which are implemented in rural areas. The approach is as follows:
 1. Compensation of environmental impacts is carried out in the same ecosystem service category and, whenever possible, in the same location.
 2. When not possible, compensation is carried out in another ecosystem service category.
- ✧ The compensation initiative **cover most of the impacts on ecosystem services**
- ✧ The **remaining negative impacts** not covered by the agro-forestry initiative are compensated through the **CO₂ markets** (approx.1120 tons of CO₂ credits).



Photo Credit: EDP



Extraction project – Africa (Handout 1)

Company

The extraction project is for a mining company the mine itself has a capacity of approx. 200,000 tonnes of different minerals.

Context

Production in Africa began in 2008, with full capacity is expected by 2015. The project's assessed reserve life is 35 years, with potential for extension beyond this.

Issue

The main impacts on biodiversity will occur at the mine site and in the upper portion of the 200 km slurry pipeline through the progressive clearing of a forest. The mine footprint (approximately 2000 ha), is located within an ecologically sensitive natural forest.



Case study: Extraction Project – Africa

Response

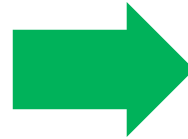
- ✦ Commitment to no net loss of biodiversity for the Project according to the BBOP Principles (voluntary and to meet IFC Performance Standard 6).
- ✦ A Biodiversity Management Programme is being implemented to avoid and mitigate impacts, to undertake restoration and to offset the residual impacts.
- ✦ The mitigation measures cover flora, fauna and aquatics.
- ✦ To offset the residual impacts, options include the following:
 1. Offset
 2. Reforestation
 3. Conservation forest
 4. Forest corridor
 5. Protected area
 6. Reforestation corridor
 7. Replacement forest



Extraction project case study – Flip chart

Case study impacts

Pick from the management options and give your reasons for your choice



Feedback...



Module 4 – Summary

- ✧ Understand the basics ✓
- ✧ Policy and regulatory frameworks ✓
- ✧ The mitigation hierarchy ✓
- ✧ Compensation and offsetting ✓
- ✧ Reporting and indicators
- ✧ Current policies and regulations



Session 7

Reporting and Indicators

Module 4: Managing and Mitigating Impacts



wbcd **business ecosystems training**

Reporting frameworks

Business analytical approaches: Monetary

- ✧ Financial accounting
- ✧ Management accounting
- ✧ Full (environmental) cost accounting

Business analytical approaches: Sustainability non-monetary

- ✧ Company reporting
- ✧ Environmental management systems



Reporting

Common issues

- ✧ Lack of reporting on biodiversity and/or ecosystems in annual report
- ✧ Sometimes located in separate sustainability report
- ✧ No mandated standards

Integrated reporting:

- ✧ Integration of financial and non-financial reporting provides a balanced and meaningful picture of a company.
- ✧ Biodiversity/ecosystems challenge is managing and tracking information to ensure economic values are properly reflected.

Full (environmental) cost accounting:

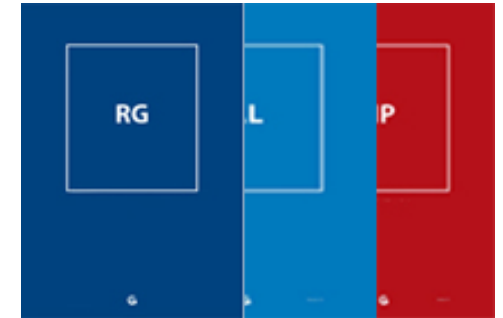
- ✧ Accounting approach that recognizes costs and benefits associated with an activity.
- ✧ Usually only includes internal costs and benefits, but can also include externality costs and benefits (either monetized or non-monetized).



Global Report Initiative (GRI)

GRI is a network-based organization that produces a comprehensive sustainability reporting framework:

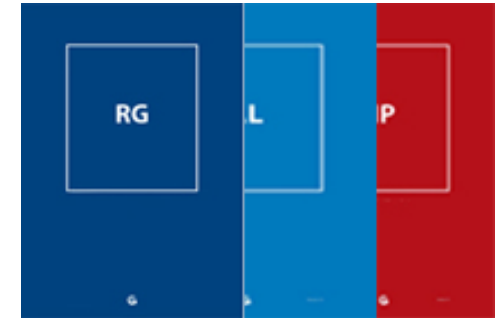
- ✧ Widely used around the world.
- ✧ Developed through a consensus-seeking, multi-stakeholder process. Participants are drawn from global business, civil society, labour, academic and professional institutions.
 - GRI's core goals include the mainstreaming of disclosure on environmental, social and governance performance.



Global Report Initiative (GRI) (cont.)

The Sustainability Reporting Framework provides guidance on how organizations can disclose their sustainability performance. It consists of:

- ✧ Sustainability Reporting Guidelines
- ✧ Sector Supplements
- ✧ Technical Protocol – Applying the Report Content Principles.
 - The Framework is applicable to organizations of any size or type, from any sector or geographic region, and has been used by thousands of organizations worldwide as the basis for producing their sustainability reports.



GRI indicators

There are six categories: environmental, human rights, labour practices and decent work, society, product responsibility, and economic.

They are formed of individual indicators, which can be:

- ✦ Core Indicators (55 in total): indicators identified in the GRI Guidelines to be of interest to most stakeholders and assumed to be material unless deemed otherwise on the basis of the GRI Reporting Principles.
- ✦ Additional Indicators (27 in total): those indicators identified in the GRI Guidelines that represent emerging practice or address topics that may be material to some but not generally for a majority.



GRI indicators and biodiversity

In GRI's environmental section, biodiversity is covered by the following indicators:

EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.
EN13	Habitats protected or restored.
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.

Core indicator

Additional indicator



Corporate Responsibility Reporting, India

- ✧ CR reporting is at a very nascent stage in India
- ✧ 31% of the N100 companies report on corporate responsibility performance in the public domain.
- ✧ TATA were the first to report in 2000
- ✧ Construction and building material companies are leaders in sustainability reporting followed by metals and mining, oil and gas and chemical companies
- ✧ GRI based sustainability reporting common in India (71% of reporting companies)
- ✧ Only 16% of N100 companies have a CR strategy in place

Sources: [KPMG, Corporate Responsibility Survey 2011](#)

GRI in <http://greencleanguide.com/2011/09/28/gri-based-sustainability-reporting-in-india/>



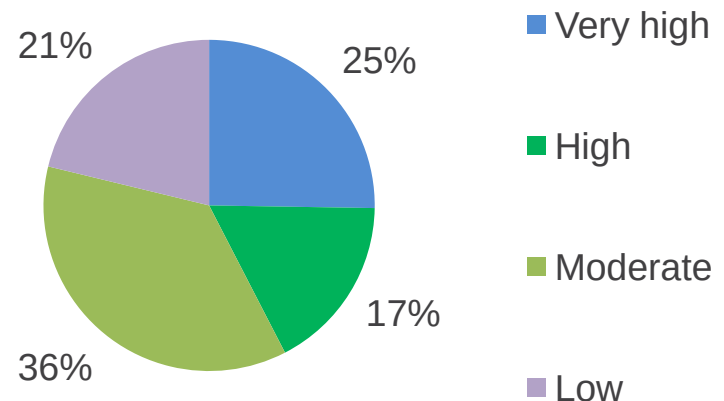
Biodiversity reporting by Rio Tinto

Biodiversity values assessment

- ✧ Developed the group-wide biodiversity values assessment protocol in 2007 to assess the biodiversity values of Rio Tinto's land holdings and surrounding areas to help prioritise action.
- ✧ Operations are ranked as having either 'very high', 'high', 'moderate' or 'low' biodiversity values.
- ✧ Biodiversity values were assessed on the basis of:
 - land in proximity to biodiversity rich habitats

- species of conservation significance
- additional site specific context
- the external conservation context

Biodiversity values assessment (2010)



British American Tobacco

Managing Biodiversity:

The British American Tobacco Biodiversity Partnership includes:

- ✧ Fauna & Flora International
- ✧ The Tropical Biology Association
- ✧ Earthwatch Institute

The Partnership produces annual progress reports, separate from BAT's main sustainability report



British American Tobacco (cont.)

✧ Report on GRI biodiversity indicators EN11 – EN15

✧ Goals for managing biodiversity:

- Review + revise risk and opportunity assessment tool
- Use risk and opportunity assessments to identify and, where necessary, mitigate possible biodiversity risks
- Raise awareness of biodiversity issues
- Conduct research to verify the apparent return of wildlife to trial areas of re-established natural forest in Sri Lanka



Environmental Management Systems

- ✧ A structured framework for managing an organization's significant environmental impacts.
- ✧ Includes an assessment of a company's activities, products, processes and services that might affect the environment, and an environmental improvement program.



Environmental Management Systems (cont.)

Example: Holcim/IUCN Biodiversity Management System (BMS)

Biodiversity Risk Matrix used as part of three stage implementation of BMS:

- ✧ **Stage 1:** Know the potential impact
- ✧ **Stage 2:** Match the level of effort to risk
- ✧ **Stage 3:** Monitor results to demonstrate progress towards targets

Biodiversity risk matrix (© 2010 Holcim)

Biodiversity Importance	Potential Impact			
	Very High	High	Medium	Unlikely
Global	Critical	Significant	Medium	Low
National	Critical	Significant	Medium	Low
Local	Significant	Medium	Low	Low
Low	Low	Low	Low	Low

Source: IUCN-Holcim independent expert panel adapted by Holcim 2010



Environmental Management Systems (cont.)

Example: Holcim/IUCN BMS (cont.)

- ✧ Full inventories of all 500+ extraction Holcim sites (70+ countries) have been collected and categorized on the risk matrix.
- ✧ By 2013, 80% of sensitive sites will have a biodiversity action plan in place.

Biodiversity risk matrix (© 2010 Holcim)

Biodiversity Importance	Potential Impact			
	Very High	High	Medium	Unlikely
Global	Critical	Significant	Medium	Low
National	Critical	Significant	Medium	Low
Local	Significant	Medium	Low	Low
Low	Low	Low	Low	Low

Sensitive sites require Biodiversity Action Plan

Source: IUCN-Holcim independent expert panel adapted by Holcim 2010



Session 8

Policy Frameworks

Module 4: Managing and Mitigating Impacts



wbcds business ecosystems training

Current Biodiversity/Ecosystem Services Legislations

In the EU:

- ✧ Water Framework Directive
- ✧ Marine Strategy Framework
- ✧ Environmental Liability Directive

In the US:

- ✧ The Lacey Act
- ✧ Endangered Species Act

[Customize: company to add any legislation that impacts their business in particular]



Current Biodiversity/Ecosystem Services Legislations (cont.)

In South Africa

- ✧ Example: South Africa Water Law, 1996.
- ✧ Water viewed as a common resource, policy review aimed at redistributing resources to maximize equality and fairness.
- ✧ Revoked inequitable private ownership, appointing the National Government as custodian of water resources.
- ✧ Minimum requirements for drinking water and ecosystem functioning set aside in the reserve, which has free access.

[Customize: company to add any legislation that impacts their business in particular]



Current Biodiversity/Ecosystem Services Legislations (cont.)

China

- ✧ The Chinese Government has made water a major priority
- ✧ The 12th Five-Year Plan includes a range of targets and policies to improve water supply
- ✧ Growth in number of municipal waste water treatment plants increasing from 18% between 2005 – 2009 to 32% between 2009 to 2012, with 5,200 plants built every year

[Customize: company to add any legislation that impacts their business in particular]



Current Biodiversity/Ecosystem Services Legislations (cont.)

India

- ✧ Indian constitution: duty of the state to '*protect and improve the environment and to safeguard the forests and wildlife of the country*'
- ✧ Examples of current environmental laws
 - 1986 - The Environment (Protection) Act
 - 1999 - The Environment (Siting for Industrial Projects) Rules
 - 2002 - The Biological Diversity Act



REDD

- ✧ Reducing Emissions from Deforestation and Forest Degradation
- ✧ Accounts for nearly 20% of global GHG emissions
- ✧ Has expanded to REDD+ measures, possibility of expanding to agriculture, forest and other land use (AFOLU) measures
- ✧ A market/financial mechanism to split the costs between developed and developing countries
- ✧ Donor countries: Norway currently largest contributor.

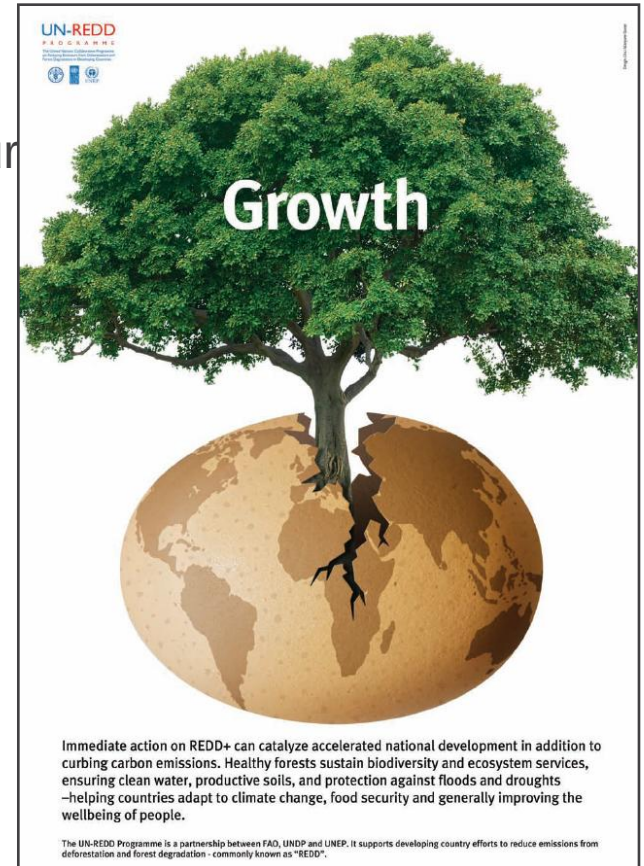


Source: <http://www.un-redd.org/>



REDD – Challenges and Uncertainties

- ✧ Difficulties in reducing emissions from deforestation:
leakage, additionality, permanence, measurement
- ✧ How will finance work? Offsets, carbon trading, binding targets
- ✧ Reference levels and measurements
- ✧ Distribution of benefits



Source: <http://www.un-redd.org/>

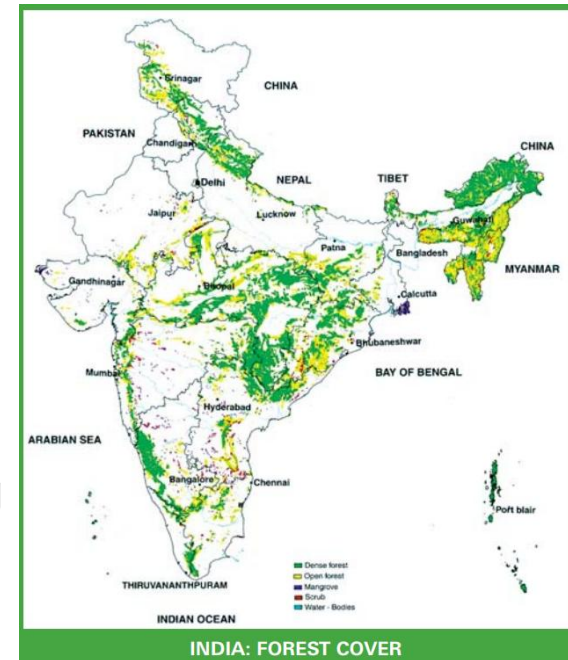
Source: <http://www.redd-monitor.org/>



REDD+ in India

Forests in India

- ✧ India has more than 70 million ha under forest cover, which is more than twice the entire geographical area of Finland
 - Forests neutralize ~11% of India's GHG emissions
 - 200 million people are dependent on forests for livelihood in India
- ✧ India has one of the most advanced forest mapping programmes in the world, with the Forest Survey of India conducting a biennial cycle of forest and tree cover assessment.



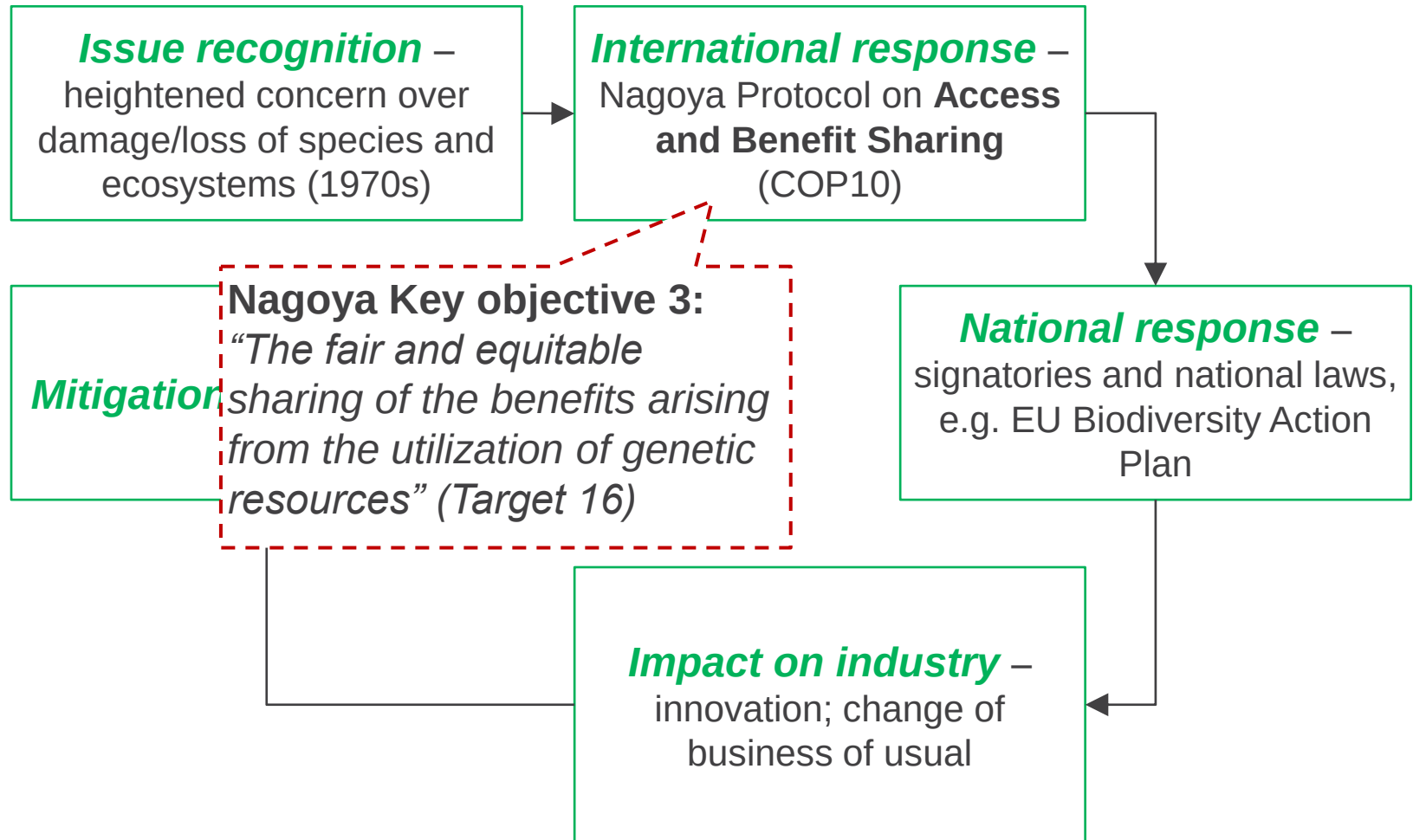
REDD+ in India

- ✧ It is estimated that a REDD+ programme for India could provide capture of more than 1 billion tonnes of additional CO₂ over the next 3 decades and provide more than USD 3 billion as carbon service incentives under REDD+.
- ✧ India is playing a positive role and has taken a firm stance in favour of a comprehensive REDD+ approach

Source: [Ministry of Environment and Forests, Government of India, India's Forests and REDD+](#)



International policy trends – Introduction to the CBD



Convention on Biological Diversity (CBD) – Nagoya Protocol (2010)

The 2011-2020 strategic plan includes:

- ✧ Resource mobilisation: Government aid versus ‘innovative financing mechanisms’
- ✧ The encouragement of sustainable use and links to biodiversity, development, and poverty alleviation
- ✧ Protected areas and conservation
- ✧ Focus on **Access and Benefit sharing**



Other targets to define policy and action

By 2020:

- ✧ **Target 2:** Biodiversity values integrated into planning processes, national accounting, and reporting systems.
- ✧ **Target 3:** Phase out of incentives and subsidies negatively impacting biodiversity, and implementation of positive incentives.
- ✧ **Target 5:** Halving rate of loss of all natural habitats, including forests, and where feasible brought close to zero.
- ✧ **Target 7:** Agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.
- ✧ **Target 11:** Protection of at least 17 percent of terrestrial and inland water, and 10 percent of coastal and marine areas.
- ✧ **Target 15:** Restoration of at least 15 percent of degraded ecosystems.

By 2015:

- ✧ **Target 16:** Nagoya Protocol on Access and Benefit sharing is in force and operational, consistent with national legislation.



Access and Benefits Sharing Principles

- ✧ One of three key objectives from the CBD: conservation, sustainability, **fairness and equity**
- ✧ Expanded to:
 - Enhance the benefits to all from biodiversity and ecosystem services
 - Enhance implementation through participatory planning, knowledge management and capacity building
 - 20 headline targets – the Aichi targets – within the 5 strategic goals
- ✧ Relates to the use of genetic resources & traditional knowledge – a central aim of CBD
- ✧ Price to access these resources should be an incentive to protect them
- ✧ Need to recognize that commercial value of genetic resources generally results from costly R&D by private sector



Access and Benefits Sharing Principles (cont.)

What is ABS about?

- ✧ How genetic resources may be accessed
- ✧ How users and providers reach agreement on the sharing of benefits that may result from their use

Users seek access to genetic resources for:

- ✧ Scientific research (e.g. taxonomy)
- ✧ Development of commercial products (e.g. pharmaceuticals)



Providers of genetic resources grant access:

- ✧ In exchange for a share of the benefits that result from their use



Access and Benefits Sharing Principles (cont.)

Users seeking access to genetic resources must:

- ✧ Get permission from the provider country (known as prior informed consent or PIC)

Both provider and user must:

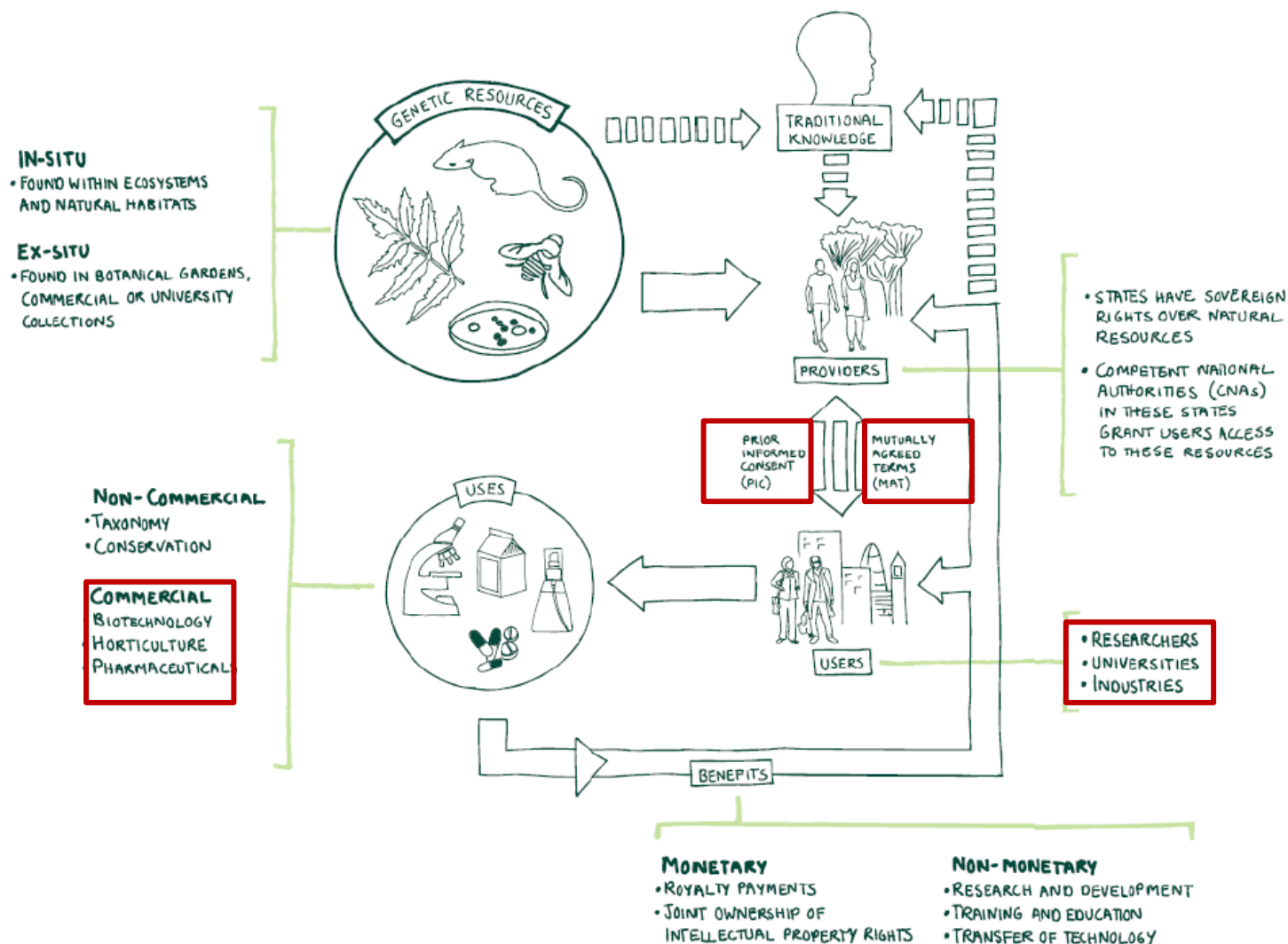
- ✧ Negotiate an agreement to share resulting benefits (known as mutually agreed terms or MAT)

Benefits arising from the use of genetic resources may be:

- ✧ Monetary when research and developments leads to a commercial product (e.g. royalties, milestone payments, licensing fees)
- ✧ Non-monetary (e.g. technology transfer, enhancement of research skills)



Access and Benefits Sharing Principles (cont.)



Access and benefits sharing case study – Natura

The issue

Sustainability as a business platform

- ✧ Brazilian cosmetic, fragrance and personal hygiene products company
- ✧ Adopted the sustainable use of Brazilian biodiversity as a business platform since 2000
- ✧ Leverage traditional knowledge to develop products that allow differentiated qualities for the consumer, while resulting in socio-environmental gains through partnerships with communities.
- ✧ Most exemplified in the Natura 'Ekos' line, consisting of around 100 products



Photo Credit: Natura



Access and benefits sharing case study – Natura (cont.)

The response

Respecting the criteria of the Convention on Biological Diversity

Natura 'Ekos' line:

- ✧ Establishes partnerships with indigenous communities to source raw materials when developing new products
- ✧ Adopts CDB principles, seeking to promote fair trade, sustainable use, social development and biodiversity conservation
- ✧ Has developed 26 community partnerships: in return for providing access to the natural ingredients and sharing traditional knowledge, local communities receive payments and benefits from Natura investment in local development

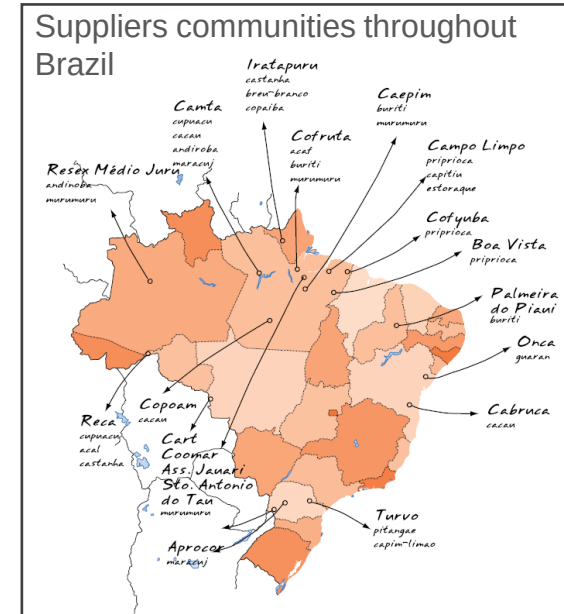


Photo Credit: Natura



Access and benefits sharing case study – Natura (cont.)

The response (cont.)

Values received by traditional communities in 2010:

	2010 <i>'000 USD</i>
Supply	2,481
Benefit Sharing	840
Local Development Funds	880
Use of Image	43
Training	105
Certification and Management	120
Studies, Consultancy and Support	469
Total	4,938



Access and benefits sharing case study – Natura (cont.)

The results

A ‘win-win’ partnership

- ✧ Business model creates a virtuous cycle, generating and sharing income whilst returning value to the place of origin:
 - Activities benefit partners’ families and communities
 - Natura benefits from its business platform by increased revenue from products higher value to consumers
 - Consumers are proposed products with high quality natural ingredients
 - Environmental benefits: the community preserves forests to ensure a better quality of life for present and future generations
- ✧ Example: the Maracatu Project



Access and Benefit Sharing in India

For ensuring Access and Benefit Sharing (ABS), India has taken the following legislative measures.

- ✧ **Biodiversity Act (2002)** provides for regulating access to biological resources and associated traditional knowledge so as to ensure equitable sharing of benefits arising out of their use, in accordance with the provision of the CBD.
- ✧ **Protection of Plant Varieties and Farmers Rights Act (PPV&FR), 2001** and the PPV&FR Rules 2003, provide measures to protect plant breeder's rights over new varieties developed by them and the entitlement of farmers to register new varieties and also to save, breed, use, exchange, share or sell the plant varieties, which the latter have developed, improved and maintained over many generations.
- ✧ The **Patent Second Amendment Act 2002** and **Patent Third Amendment Act 2005**, provide for exclusion of plants and animals from the purview of patentability (Section 4e); exclusion of an invention which in effect is traditional knowledge from patentability (Section 4p); mandatory disclosure of the source and geographical origin of the biological material in the specification when used in an invention (Section 8d); and provision for opposition to grant of patent or revocation of patent in case of non-disclosure or wrongful disclosure of the source of biological material and any associated knowledge.

Source: [India's Fourth National Report to the Convention on Biological Diversity \(2009\)](#)



Access and Benefit Sharing in India

Procedure for access to biological resources and associated traditional knowledge

- ✧ Any person seeking approval of the Authority for access to biological resources and associated knowledge for research or for commercial utilization shall make an application in Form I (see NBA website).
- ✧ Every application shall be accompanied by a fee of 10,000 rupees in the form of a Cheque or demand draft drawn in favour of the Authority.
- ✧ The Authority shall after consultation with the concerned local bodies and collecting such additional information from the applicant and other sources, as it may deem necessary, dispose of the application, as far as possible, within a period of 6 months from the date of its receipts.
- ✧ On being satisfied with the merit of the application, the Authority may grant the approval for access to biological resources and associated knowledge subject to such term and conditions as it may deem fit to impose.
- ✧ The approval to access shall be in the form of a written agreement duly signed by an authorized officer of the Authority and the applicant.

Source: National Biodiversity Authority, Rules. <http://nbaindia.org/content/17/20/rules.html>



Access and benefits sharing case study – KANI

Context

- ✧ 'Jeevani' is a restorative, immunoenhancing, anti-stress and anti-fatigue agent, based on the herbal medicinal plant arogyapaacha, used by the Kani tribals in their traditional medicine.
- ✧ The knowledge was divulged by three Kani tribal members to the scientists of Tropical Botanical Garden and Research Institute (TBGRI) who isolated 12 active compounds from arogyappacha (*Trichopus zeylanicus*), and developed the drug 'Jeevani'.



Photo credit: [WIPO](#)

Source: <http://www.cbd.int/doc/world/in/in-nr-abs-en.pdf>



Access and benefits sharing case study – KANI

Principles of the ABS

- ✧ The technology was licensed to the Arya Vaidya Pharmacy Ltd., an Indian pharmaceutical manufacturer pursuing the commercialization of Ayurvedic herbal formulations.
- ✧ It was decided that the Kani tribals would receive 50 per cent of the licence fee, as well as 50 per cent of the royalties obtained by the TBGRI on sale of the drug, as part of the benefit sharing arrangement for divulging the information.
- ✧ A Trust Fund was established to share the benefits arising from the commercialization of the TK-based drug 'Jeevani'. All the nine registered members of the Trust are Kani tribals. The objectives of the Trust are:
 - Welfare and development activities for Kanis in Kerala,
 - Preparation of a biodiversity register to document the knowledge base of the Kanis,
 - Evolving and supporting methods to promote sustainable use and conservation of biological resources.



Photo credit: [WIPO](http://www.wipo.int)

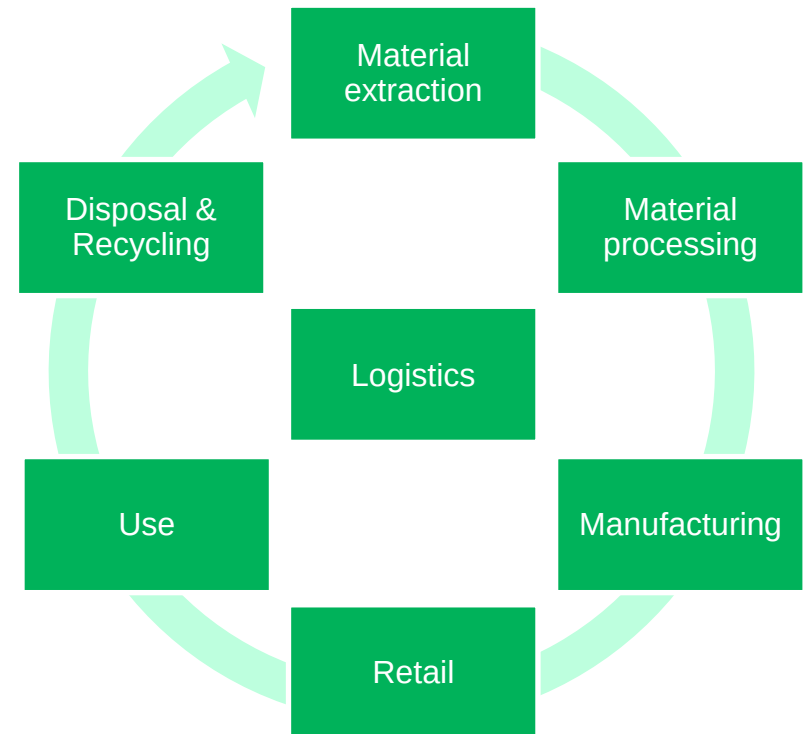


Source: <http://www.cbd.int/doc/world/in/in-nr-abs-en.pdf>

Sustainable Procurement Policies

Recap basic concepts:

- ✧ Value chains and sustainability
- ✧ 6 factors in developing a sustainable value chain
- ✧ Sustainable procurement



Source: *Collaboration, innovation, transformation. Ideas and inspiration to accelerate sustainable growth – A value chain approach*, WBCSD (2012)

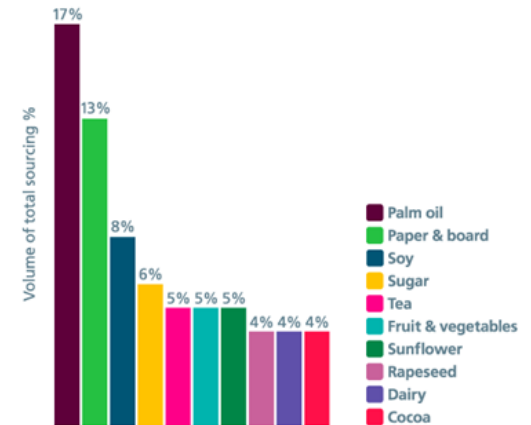


Sustainable Procurement Policies (examples)

Unilever

- ✧ “Today we source 10% of our agricultural raw materials sustainably. By 2012 we will source 30%; by 2015 50%; and by 2020 100%”
- ✧ Sustainable Agricultural Code and 11 key indicators
- ✧ Measuring sustainable procurement through certification and self-verification

Our top 10 agricultural raw materials
(% total agricultural volume 2009)



Sompo Japan

- ✧ Green procurement policies disseminated throughout the value chain
- ✧ Partnership with the Green Purchasing Network
- ✧ Voluntary procurement system adopted by over 4,000 entities



Sustainable Procurement Guide for Wood and Paper-Based Products

10 Things You Should Know

Sourcing and legality aspects

Origin	Where do the products come from?
Information accuracy	Is information about the products credible?
Legality	Have the products been legally produced?

Environmental aspects

Sustainability	Have forests been sustainably managed?
Special places	Have special places, including sensitive ecosystems, been protected?
Climate change	Have climate issues been addressed?
Environmental protection	Have appropriate environmental controls been applied?
Recycled fiber	Has recycled fiber been used appropriately?
Other resources	Have other resources been used appropriately?

Social aspects

Local communities and indigenous peoples	Have the needs of local communities or indigenous peoples been addressed?
---	---

Source: WBCSD, Sustainable Procurement of Wood and Paper-Based Products



Green Procurement Policies: EU Green Public Procurement



- ✧ Public authorities are major consumers, spending approximately **2 trillion Euros annually, equivalent to 19% of the EU's GDP**
- ✧ Mandatory Government Buying Standards for all EU member states to harness governments' purchasing powers
- ✧ Voluntary Green Public Procurement instrument

[Option for customisation: presenter may wish to discuss alternative country example. Links and details of all EU member states' GPPs can be found at: http://ec.europa.eu/environment/gpp/pdf/national_gpp_strategies_en.pdf]



Green Procurement Policies: EU Green Public Procurement (cont.)



✧ UK Government Buying Standards

✧ Covers the same key products as EU GPP:

- Cleaning products
- Construction
- Electricity / Electrical Goods / Energy-using products
- Food
- Furniture
- Gardening Services / Horticulture
- Office ICT Equipment
- Paper
- Textiles
- Transport



Opportunities for business engagement

- ✧ Partnerships with other stakeholders key to achieving common biodiversity/ecosystems goals.
 - Business engagement in national/international policy initiatives:
 - Business coalitions with NGOs and civil society
 - OECD Green Growth Roundtables
- ✧ WBCSD's project "Sustainable Consumption and Value Chain System Solution"
- ✧ Other groups: IUCN, GRI and so on.



Session 9

Knowledge share – regulations/policy for managing and mitigating ecosystem impacts

Module 4: Managing and Mitigating Impacts

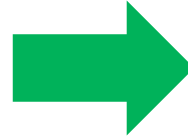


wbcd **business ecosystems training**

Group exercise: flipchart

List legislation of interest

List corporate/department commitments



[Customize: with the questions chosen within the list of facilitator's guide]



Feedback...



Session 10: Wrap up

Module 4: Managing and Mitigating Impacts



wbcSD business ecosystems training

Module 4 – Objectives

By the end of the module, trainees should be able to:

1. Define key policies and policy mechanisms for addressing and mitigating environmental impact, and enhancing business practice for better management.
2. Identify the business case for managing and mitigating impacts.
3. Apply the mitigation hierarchy, i.e. develop ideas on how their company can mitigate, offset and provide compensation for their impacts.
4. Identify how regulatory frameworks and policy mechanisms relate to participants' employers through action planning.



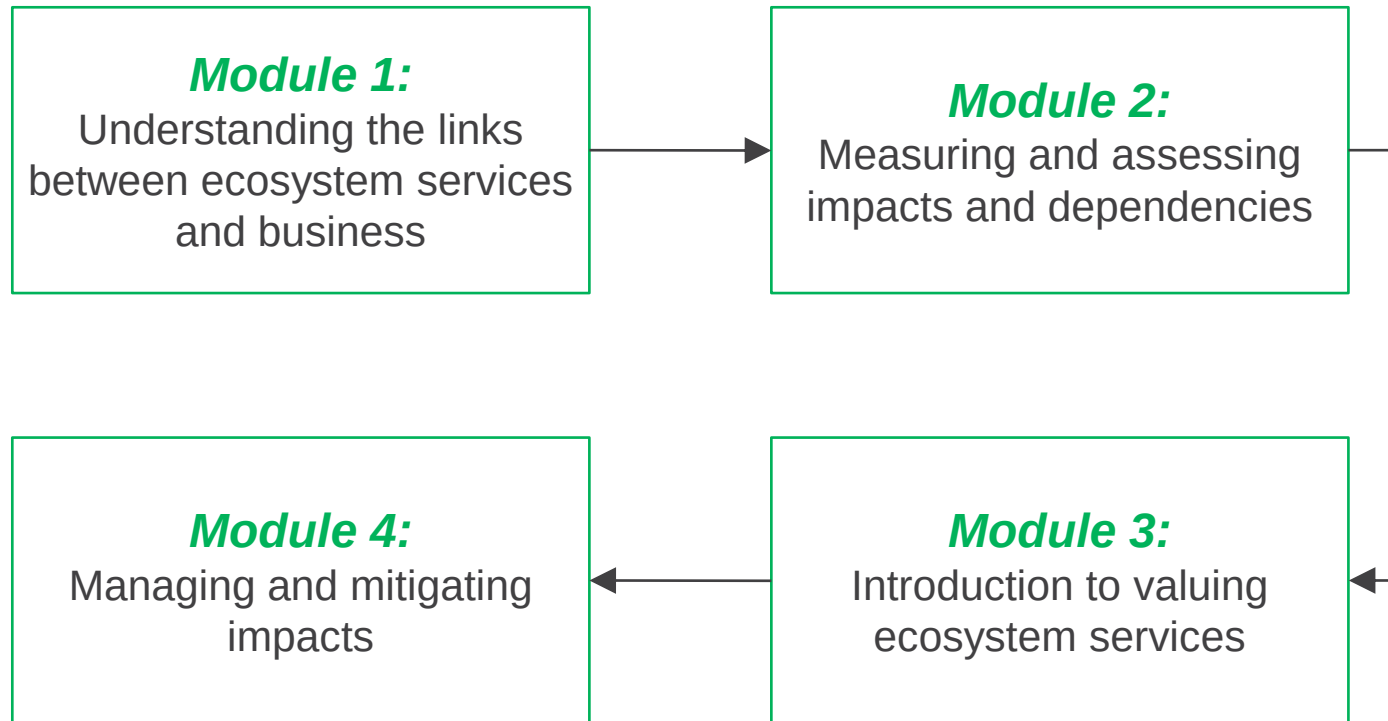
Module 4 – Summary

- ✧ Understand the basics ✓
- ✧ Policy and regulatory frameworks ✓
- ✧ The mitigation hierarchy ✓
- ✧ Compensation and offsetting ✓
- ✧ Reporting and indicators ✓
- ✧ Current policies and regulations ✓



What have we covered? [optional]

Modules 1- 4: Overview



Module 1 – Recap [optional]

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



Module 2 – Recap [optional]

- ✧ Understand the basics
- ✧ Policy and regulatory frameworks
- ✧ The business case for action
- ✧ Introduction to Ecosystem Services Review (ESR)
- ✧ Introduction to tools, frameworks and methodologies



Module 3 – Recap [optional]

- ✧ Understand the basics
- ✧ Policy and regulatory frameworks
- ✧ The business case for action
- ✧ Introduction to Corporate Ecosystem Valuation (CEV)
- ✧ CEV screening and supporting tools and methodologies



Review...

Have we achieved our objectives?



Action planning

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



BET: Understanding the Links between Ecosystem Services and Business

Action Planning

- **Step 1: Build awareness**

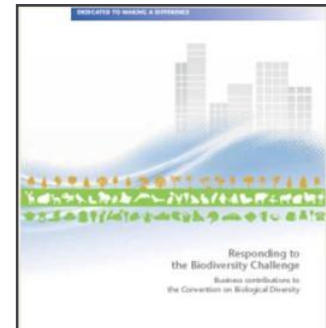
Consider the use of BET either within your company or as an industry initiative in partnership with other companies

- **Step 2: Use other publicly available resources**

Review WBCSD case study examples and publications, which include:

- ✧ Case studies: more than 50 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](#), [Biodiversity and ecosystem services: scaling up business solutions](#).

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



BET: Understanding the Links between Ecosystem Services and Business

Action Planning

- **Step 3: Join networks and contact experts**

Consider joining the WBCSD Ecosystems Focus Area
(<http://www.wbcds.org/work-program/ecosystems.aspx>)

Make use of the WRI's Ecosystem Services Experts Directory
(<http://projects.wri.org/ecosystems/experts>)

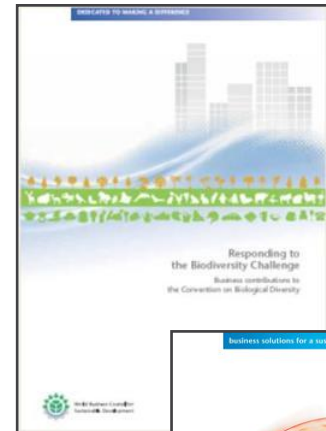
- **Step 4: Piloting**

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



Main References - Weblinks

- ✧ WBCSB May CEV helpdesk presentation
- ✧ WBCSD, Responding to the Biodiversity Challenge
- ✧ WBCSD, Effective biodiversity and ecosystem policy and regulation
- ✧ WBCSD. Connecting the dots
- ✧ WBCSD, case studies
- ✧ WBCSD. Sustainable Procurement of Wood and Paper-based Products Guide and Resource Kit. Available from:
<http://www.wbcd.org/Pages/EDocument/EDocumentDetails.aspx?ID=183&NoSearchContextKey=true>
- ✧ WBCSD, CEV helpdesk September 2011
- ✧ WBCSD, CEV helpdesk presentation July 2011
- ✧ WBCSD, Effective Biodiversity and Ecosystem Policy and Regulation
- ✧ BBOP website:
<http://bbop.forest-trends.org/site/misc/Slide1.ppt>
<http://bbop.forest-trends.org/offsets.php>
<http://bbop.forest-trends.org/guidelines/glossary.pdf>
<http://bbop.forest-trends.org/guidelines/principles.pdf>
- ✧ TEEB for National and International Policy Makers
- ✧ TEEB for business –
<http://www.teebweb.org/LinkClick.aspx?fileticket=26aoFB8xrwU%3d&tabid=1021&language=en-US>



Main References - Weblinks (cont.)

- ✧ IFC:
http://www.ifc.org/ifcext/footprint.nsf/Content/Environment_Procurement
- ✧ European Commission –
http://ec.europa.eu/agriculture/capexplained/sustain/index_en.htm
- ✧ Green Development Initiative – <http://gdi.earthmind.net/>
- ✧ Rio Tinto and Biodiversity, http://www.riotinto.com/documents/ReportsPublications/RT_Biodiversitystrategyfinal.pdf
- ✧ Ecosystem market place report, http://www.envliability.eu/docs/REReviewUS_D6A_Stratus_FINAL.pdf
- ✧ <http://www.wbcsd.org/DocRoot/bR7dwpBEOAEx2dbLKFF8/EDPBiodiversityFund.pdf>
- ✧ GRI portal – <http://www.globalreporting.org>
- ✧ GRI portal. G31Guidelines including Technical Protocol Final – <http://www.globalreporting.org>



Main References - Weblinks (cont.)

Policy trends chapter:

- ✕ <http://www.environmentlaw.org.uk/rte.asp?id=108>
- ✕ <http://www.povertyenvironment.net/files/IUCN%20-%20Implementing%20TEEB%20for%20Business%20-%20public.pdf>
- ✕ <http://www.st-andrews.ac.uk/~dib2/atmos/control.html>
- ✕ <http://www.clubofrome.org/?p=326>
- ✕ http://www.un.org/esa/sustdev/csd/csd15/media/backgrounder_brundtland.pdf
- ✕ <http://www.un.org/geninfo/bp/enviro.html>
- ✕ <http://www.un.org/geninfo/bp/envirp2/html>
- ✕ http://ozone.unep.org/Publications/MP_Acheivements-E.pdf
- ✕ <http://www.cites.org/>
- ✕ <http://www.cites.org/common/prog/african-cherry/11-CUNNINGHAM.pdf>
- ✕ <http://www.doc.govt.nz/upload/documents/about-doc/role/international/cites-crocs.pdf>
- ✕ <http://www.un-redd.org/>
- ✕ <http://www.un-redd.org/AboutREDD/tabid/582/Default.aspx>
- ✕ <http://www.redd-monitor.org/>
- ✕ <http://www.environment.gov.au/epbc/publications/consultation-draft-biodiversity-policy.html>
- ✕ http://www.wwf.org.za/what_we_do/outstanding_places/fynbos/biodiversity_wine_initiative
- ✕ http://www.conservation.org/sites/celb/fmg/articles/Pages/070199_energy_biodiversity_initiative.aspx



Disclaimer

Business Ecosystems Training (BET) is a capacity building program released in the name of the WBCSD. It is the result of a collaborative effort by members of the secretariat and senior executives from KPMG and an Advisory Committee composed of member companies, Regional Network partners, NGOs, UN and academic institutions, and others. A wide range of members reviewed drafts, thereby ensuring that BET broadly represents the majority of the WBCSD membership. It does not mean, however, that every member company agrees with every word.

Business Ecosystems Training (BET) has been prepared for capacity building only, and does not constitute professional advice. You should not act upon the information contained in BET without obtaining specific professional advice. No representation or warranty (express or implied) is given as to the accuracy or completeness of the information contained in BET and its translations in different languages, and, to the extent permitted by law, WBCSD, KPMG, members of the Advisory Committee, their members, employees and agents do not accept or assume any liability, responsibility or duty of care for any consequences of you or anyone else acting, or refraining to act, in reliance on the information contained in this capacity building program or for any decision based on it.

Copyright © World Business Council for Sustainable Development

December 2012





wbcsd business ecosystems training