



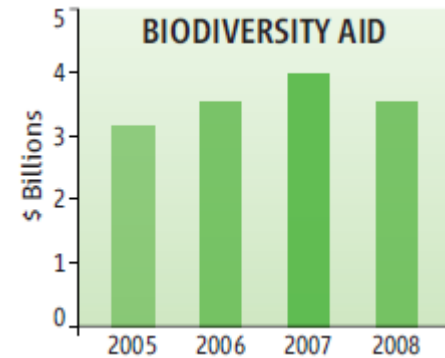
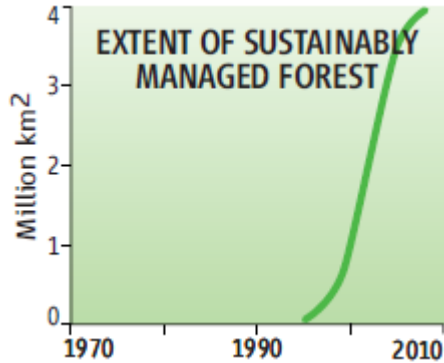
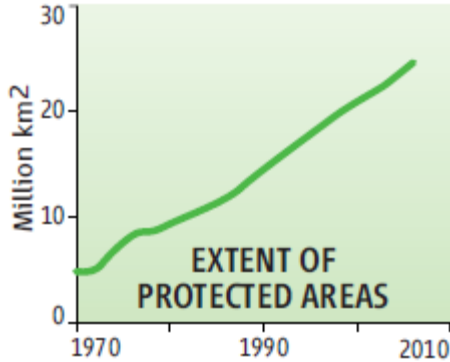
UN Convention on Biological Diversity (CBD) defines biodiversity as “the web of life”

- **Variety of species**
 - plants, animals and microorganisms
 - **Genetic differences within each species**
 - e.g., varieties of crops and breeds of livestock
 - **variety of ecosystems**
 - e.g., deserts, forests, wetlands, mountains, lakes, rivers, and agricultural landscapes
-

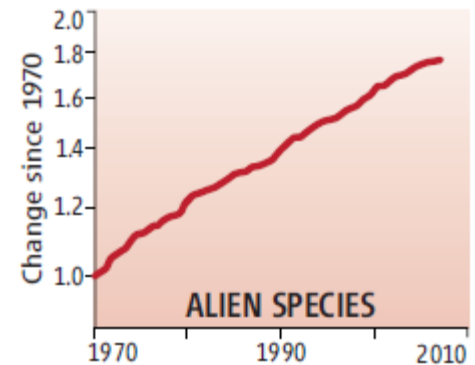
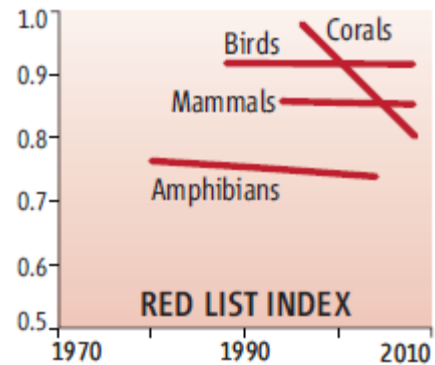
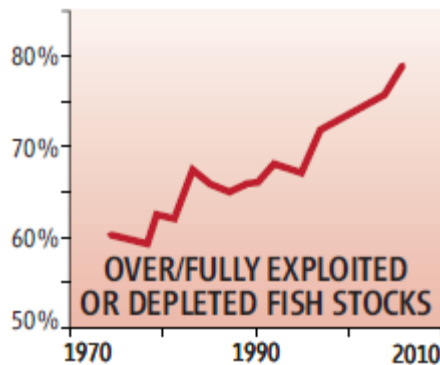


What is happening to biodiversity?

- Good news...

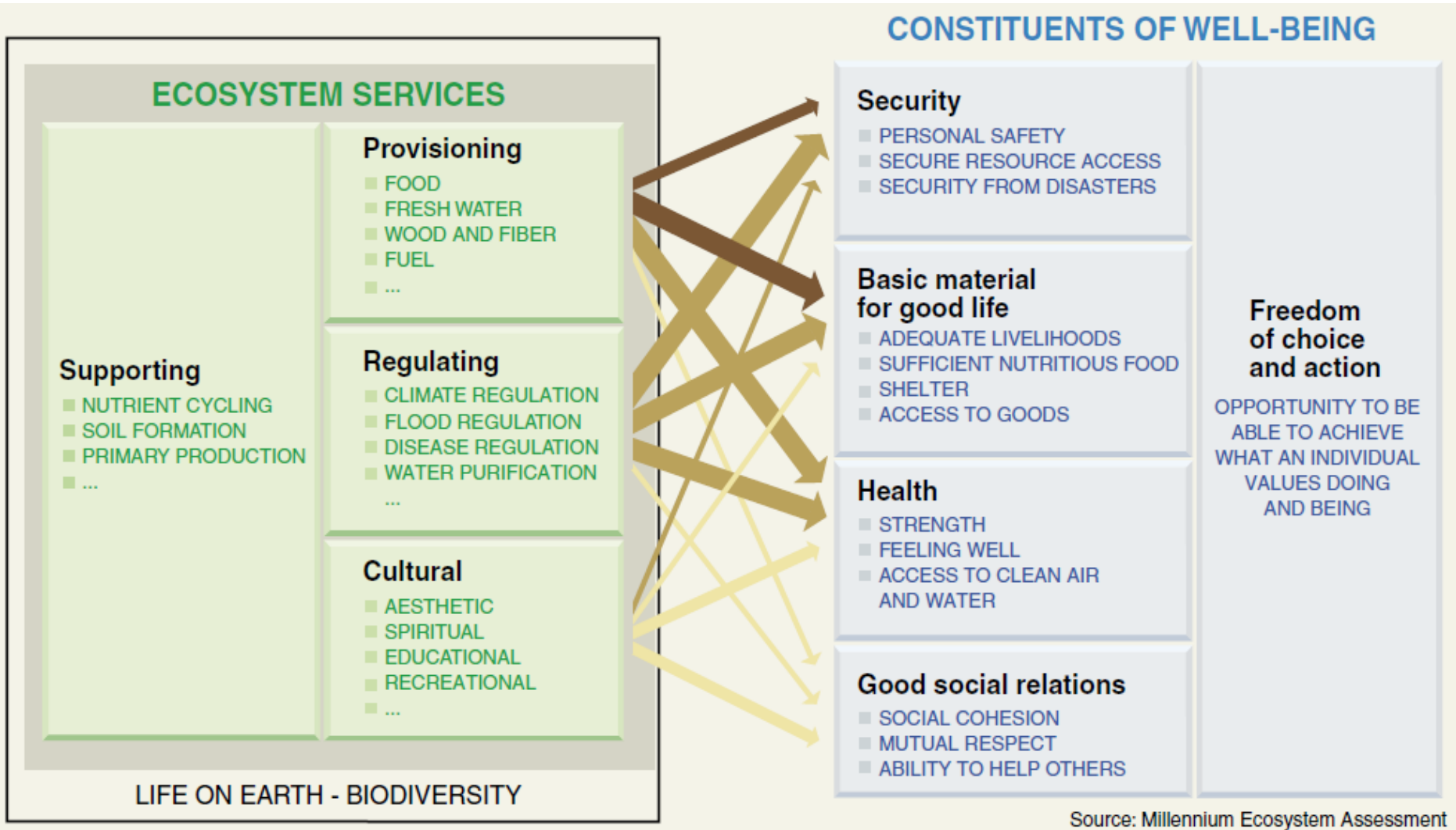


- Bad news...



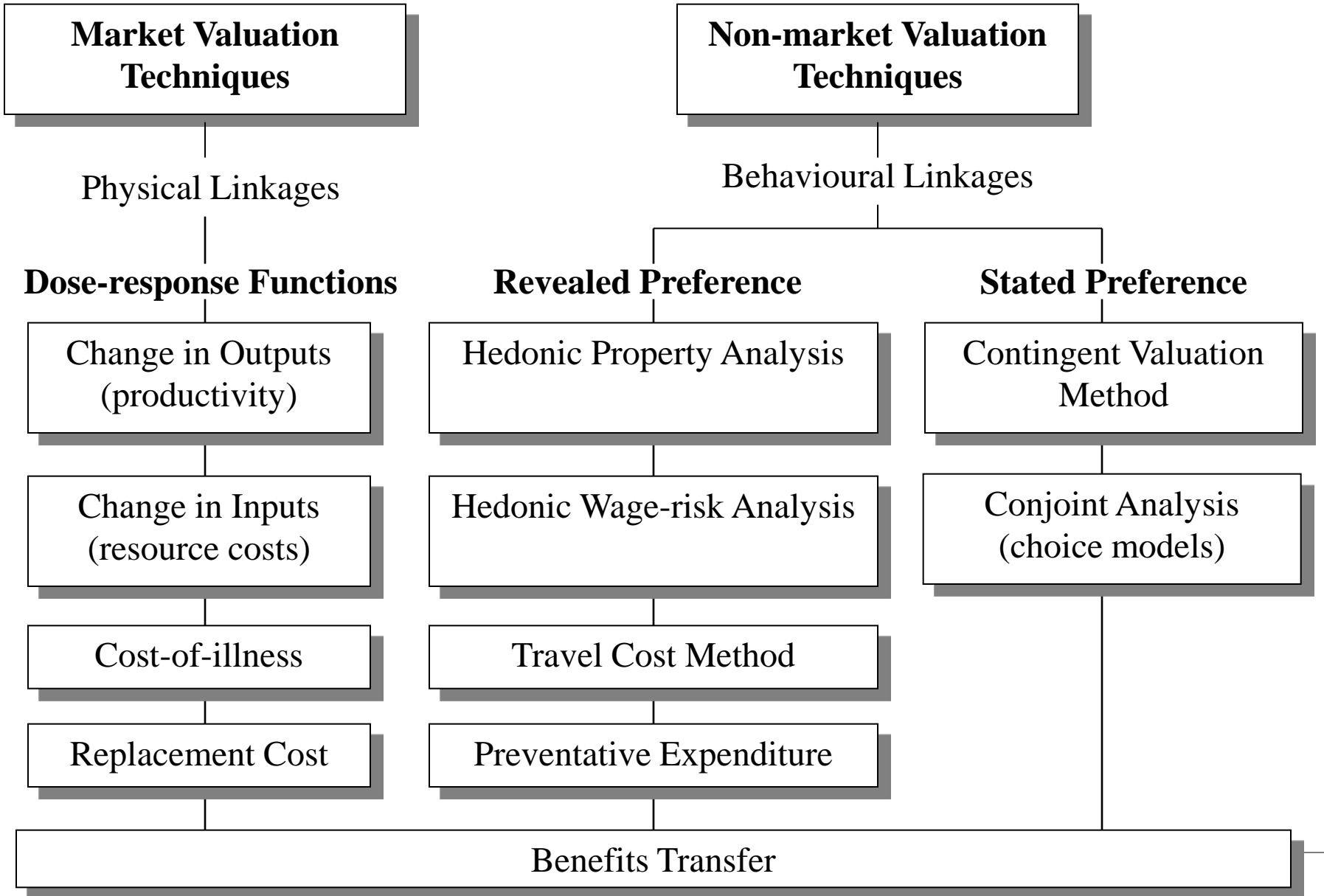


Why does biodiversity matter?





Valuing biodiversity & ecosystem services





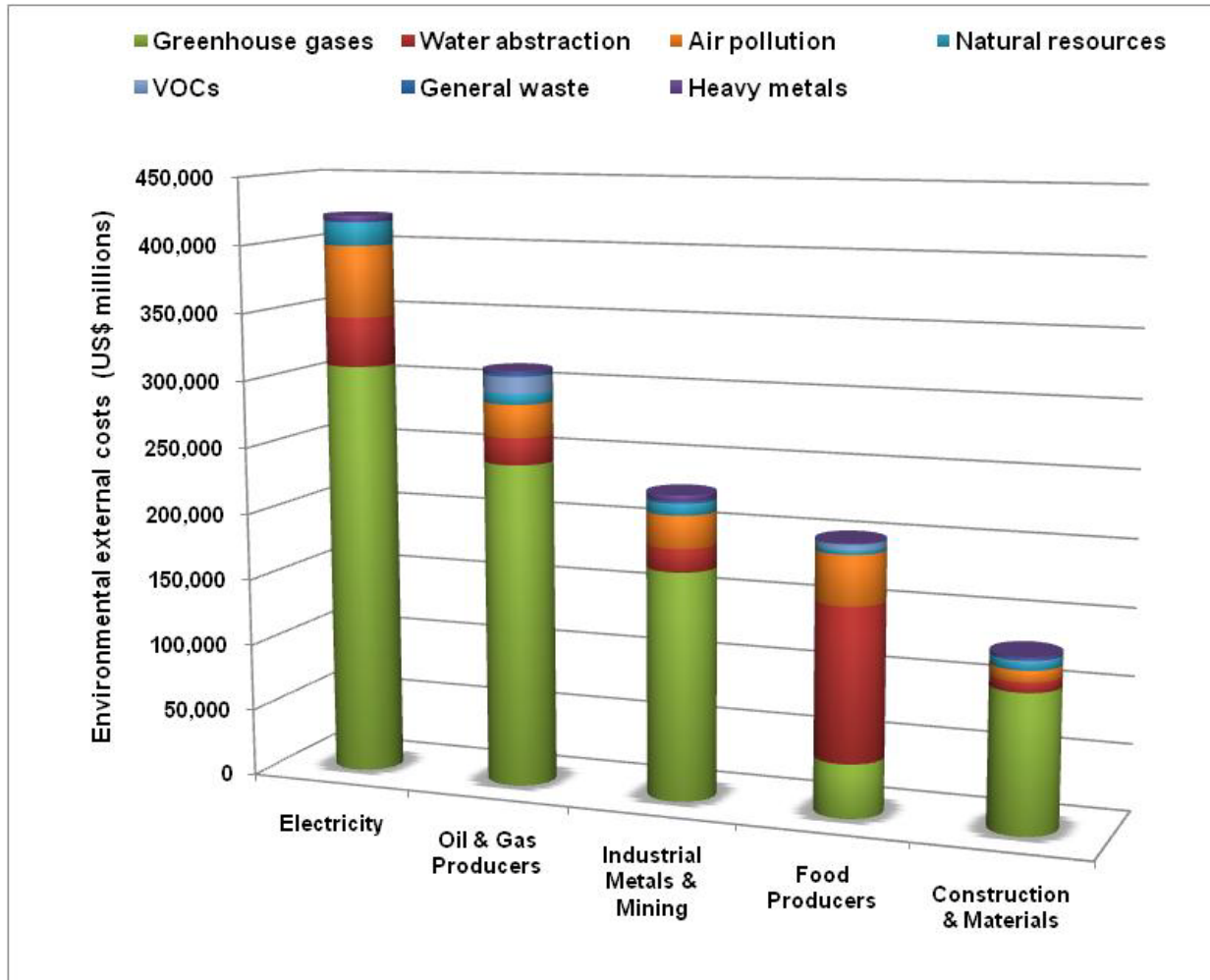
Valuing dependence on ecosystem services

- Value of insect pollination to food crops: €153 billion in 2005 = 10% of VA in the agriculture sector (Gallai et al. 2008)
- Example: Michigan USA blueberry crop worth US\$ 124 million/year; totally reliant on pollination by bees at cost of about US\$ 1.5 million/year (renting hives)
- Example: Wild pollinators increase coffee yields by 20% on farms within 1 km of forest in Costa Rica (Ricketts et al. 2004)
- Pollination services to agriculture are threatened by 'colony collapse disorder' mainly affecting domesticated bees





Valuing impacts on ecosystem services

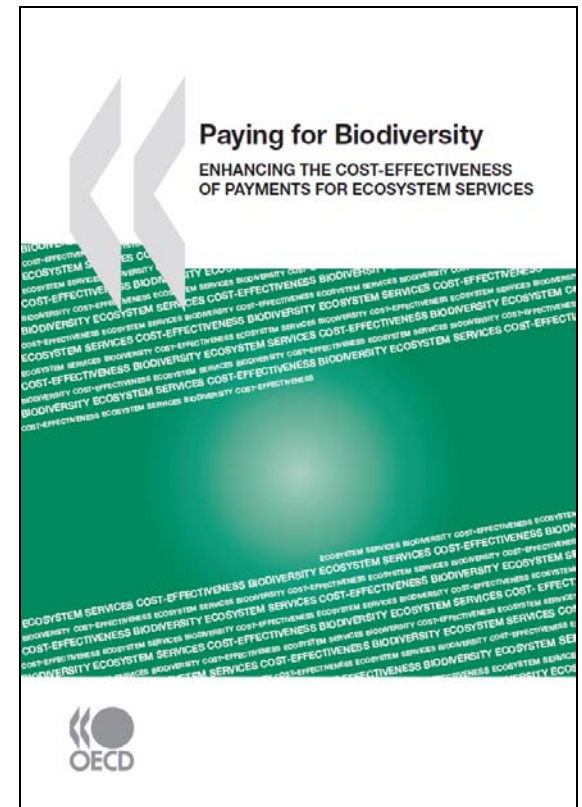


- US\$ 6.6 trillion/year estimated global environmental costs of economic activity (11% of 2008 GDP)
- Five sectors alone account for 60% of environmental damages



“Internalizing” biodiversity and ecosystem values in production and consumption

- Reform of harmful subsidies
- Tax credits and other incentives
- Voluntary certification and eco-labelling
- Payments for Ecosystem Services
- Environmental responsibility and liability
- Environmental trading schemes
- Public access to information





Voluntary commitments by business

- **BC Hydro:** “long-term goal of no net incremental environmental impact.”
 - **Coca Cola:** “Our goal is to safely return to communities and nature an amount of water equivalent to what we use in all of our beverages and their production.”
 - **Danone Group:** “Attain carbon neutrality for the major Danone brands, including Evian, by the end of 2011.”
 - **Marks & Spencer:** “Our goal is to become carbon neutral by 2012 in our UK and Republic of Ireland operations.”
 - **Rio Tinto:** “Our goal is to have a ‘net positive impact’ on biodiversity.”
 - **Sony:** “strives to achieve a zero environmental footprint throughout the lifecycle of our products and business activities.”
 - **Unilever:** “Today we source 10% of our agricultural raw materials sustainably. By 2012 we will source 30%; by 2015 50%; and by 2020 100%.”
 - **Walmart:** “Committed ... to permanently conserve at least one acre of priority wildlife habitat for every developed acre.”
-



What about the social impacts?

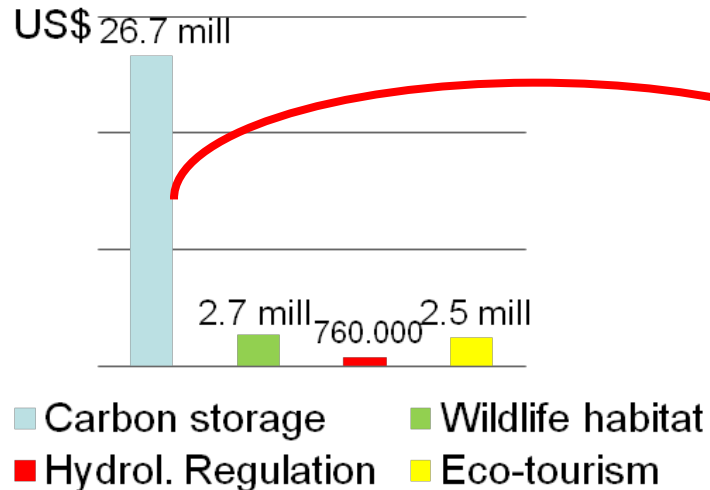




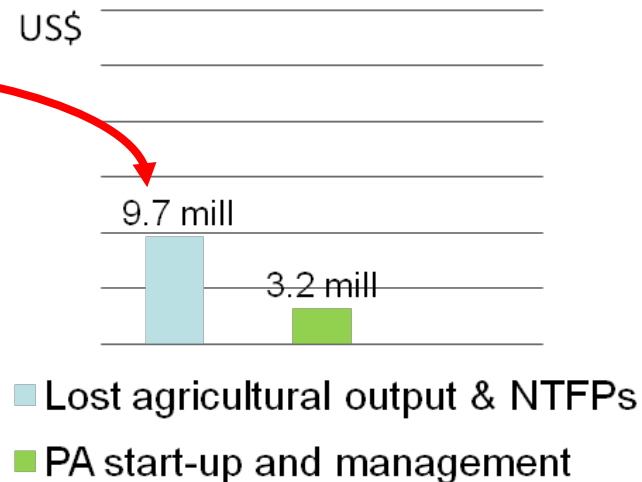
Case study: valuing the costs and benefits of business action on biodiversity

- Example: Rio Tinto mine in Madagascar
- Corporate goal: Net Positive Impact (NPI) on biodiversity
- Support for conservation project (60,000 ha lowland forest)

Potential benefits:



Potential costs:

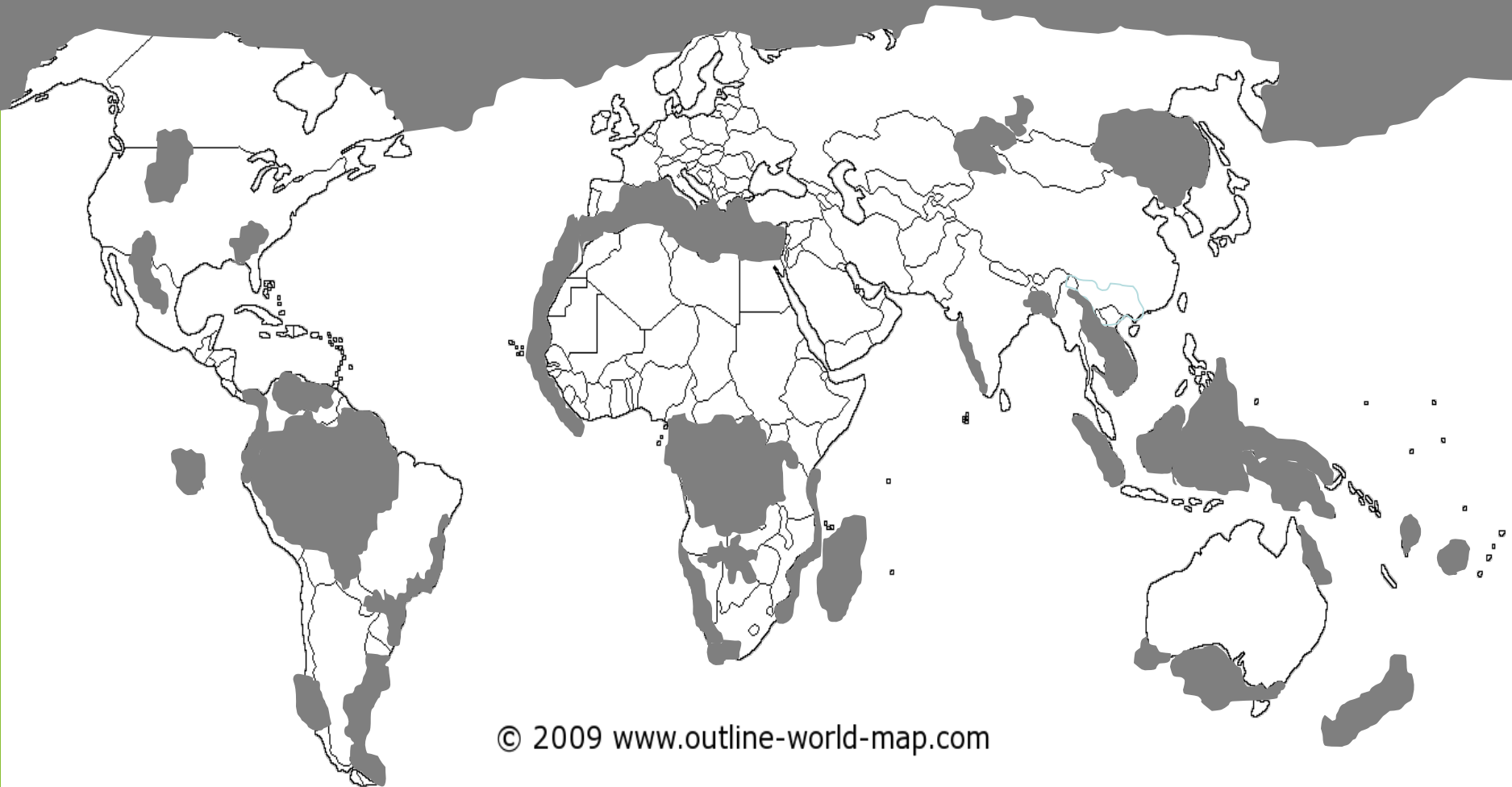


- **Benefit-sharing with communities (based on REDD revenues)**





WWF and Market Transformation: Focus on 35 Priority Regions



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PALM OIL

COTTON

BIOFUELS

SUGARCANE

PULP & PAPER

SAWN WOOD

DAIRY

BEEF

SOY

FISH OIL & MEAL

FARMED
SALMON

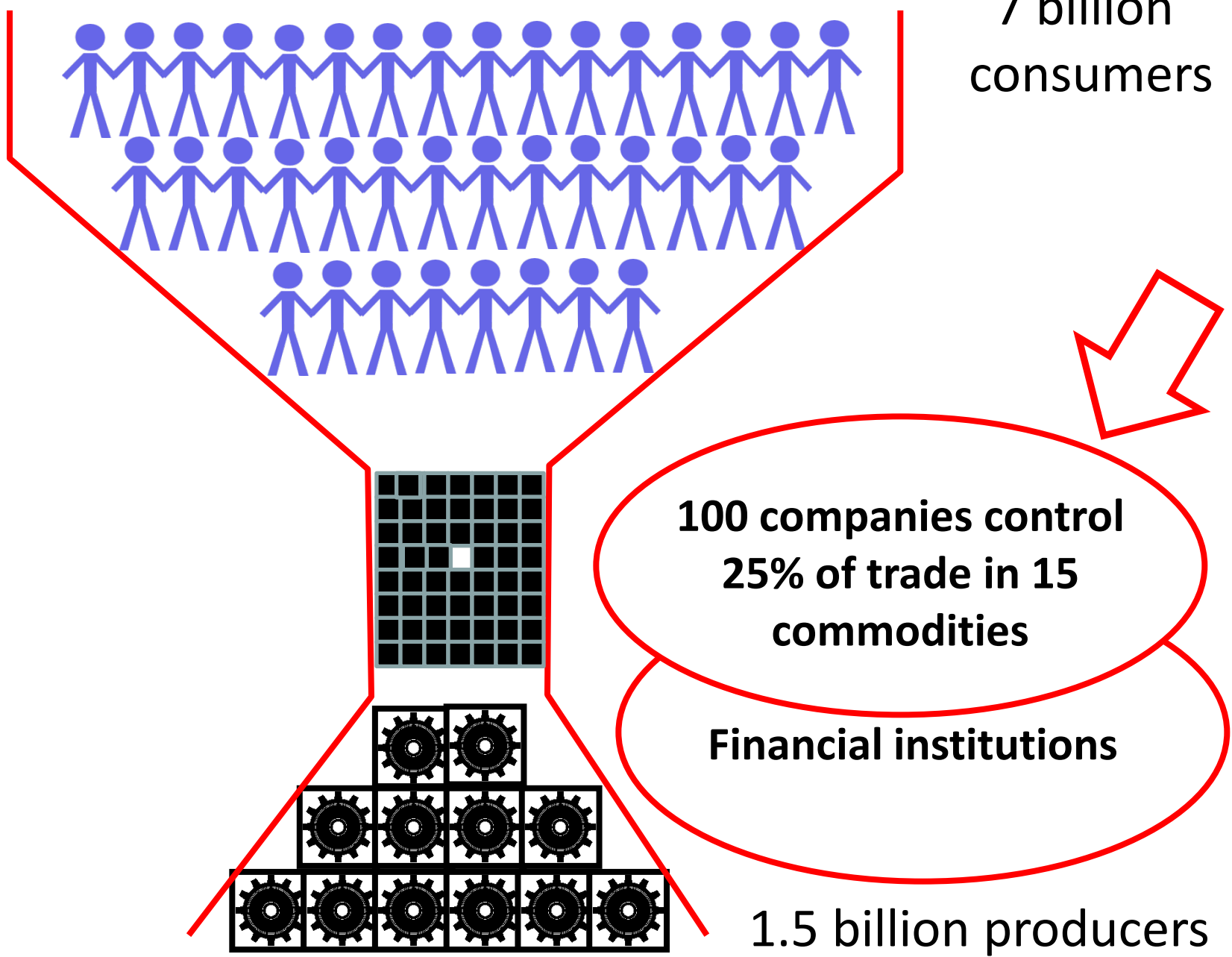
FARMEDSH
RIMP

TUNA

TROPICAL
SHRIMP

WHITEFISH

**15 Key
Commodities in
35 places**



7 billion consumers

100 companies control 25% of trade in 15 commodities

Financial institutions

1.5 billion producers



Up coming



Developing



Mature



PALM OIL **2**

COTTON **1**

BIOFUELS **4**

SUGARCANE **3**

PULP &
PAPER **1**

TIMBER **1**

DAIRY **3**

BEEF **3**

SOY **1**

FORAGE **1**

FARMED
SALMON **1**

FARMED
SHRIMP **1**

TUNA **1**

TROPICAL
SHRIMP **1**

WHITEFISH **1**

**China is
important
In ALL**





	Green Growth Models: Analyze growth scenarios based on natural capital and climate resilience
	Green Economy Roadmap: Define vision, practices and policies
	Green Growth Facility: Finance transition to a green economy
	Partnership Forum: Bring together policy makers, business, and donors
	Center of Excellence: Resources and skills for governments, businesses and communities
	Demonstration Projects: Implement “forest-based solutions” to demonstrate Green Growth



Stern Report on the Economics of Climate Change (2006) calls for co-operation:

- *‘to create carbon prices and markets,*
 - *to accelerate innovation and deployment of low-carbon technologies,*
 - *to reverse emissions from land-use change, and*
 - *to help poor countries adapt to the worst impacts of climate change.’*
-



Paraphrasing the Stern review, can we reach consensus on action:

- to create biodiversity prices and markets,
 - to accelerate innovation and deployment of biodiversity-friendly technologies,
 - to reverse (halt) biodiversity losses from resource-use, and
 - to help poor countries adapt to the worst impacts of ecosystem decline.
-