

Interconnectedness of Forest Ecosystem Services, Environmental corporate impacts, and Corporate Social Responsibility activities in the Amazon rainforest.



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Relevance of the study



X



=



POPULATION

X

CONSUMPTION

=

THE PLANET

7

X

1

=

7



9

X

2

=

18



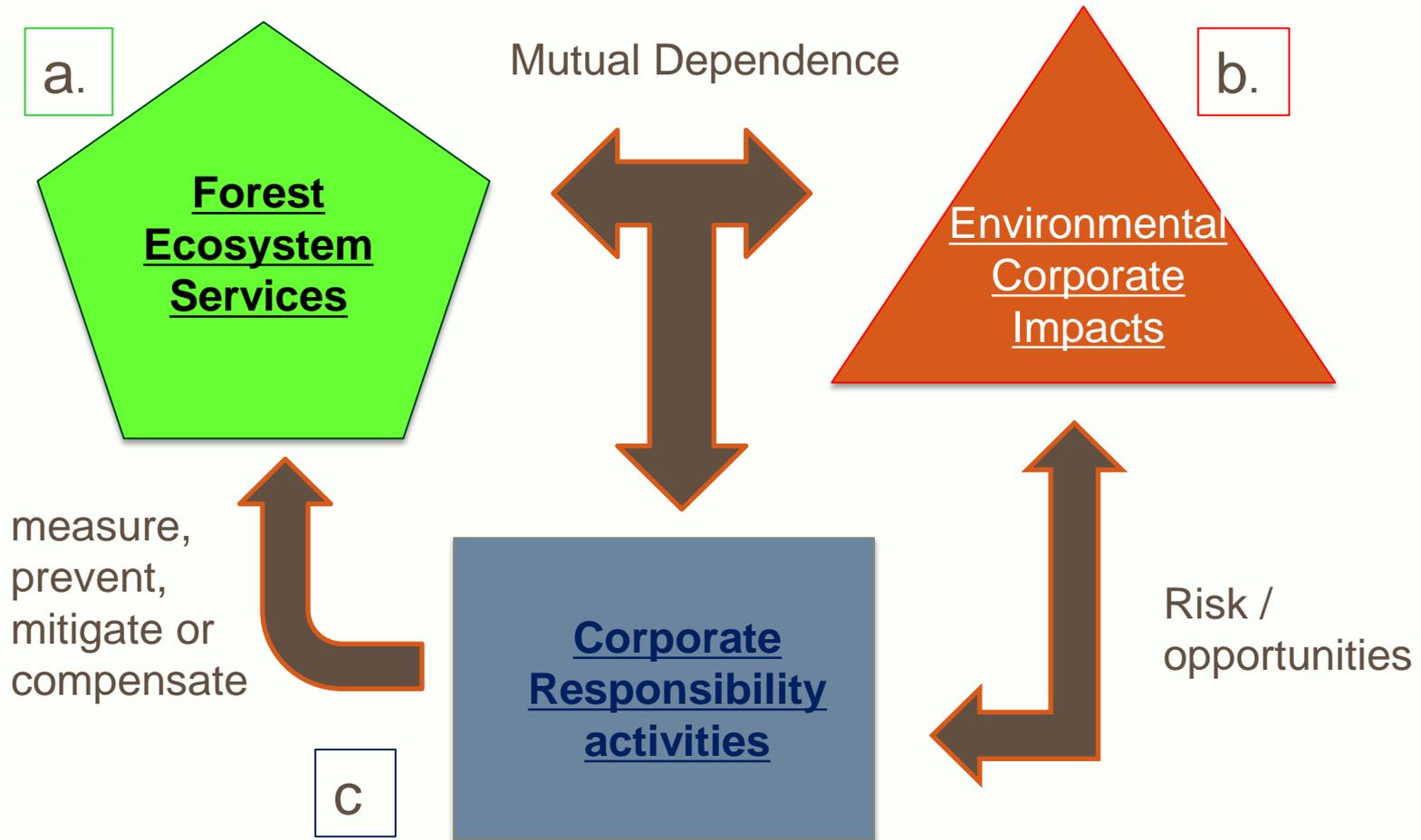
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In race for sustainability ...

Do we still have the chance of winning?

Oregon State
UNIVERSITY

Interconnectedness of :



... in the Amazon rainforest.

Goal of the research

Analyze if the Corporate Social Responsibility activities carried out by Corporations are addressing their impacts on Forests Ecosystems Services in the Amazon rainforest.

Forest Ecosystem Services

Provision Services

- Food
- Wood & Fiber
- Fresh water
- Genetic resources
- Bio-chemicals
- Medicinal products

Regulating Services

- Climate regulation
- Disease regulation
- Water regulation
- Water purification
- Pollination

Cultural Services

- Recreation & ecotourism
- Spiritual religious
- Educational
- Cultural heritage

Supporting Services

- Habitat
- Soil formation
- Nutrient cycling
- Primary production (biological Material)



Source: Millennium Ecosystem Assessment. 2005

Drivers of Deforestation

Deforestation

Crops, Cattle & Plantations	68%
Agriculture (Subsistence)	28%
Infrastructure	2%
Mining	1%
Urban expansion	1%

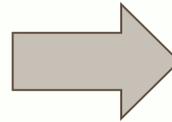
- FAO- FRA reported that net loss of forest, 40 million hectares in the last decade (an area about the size of Germany)



Source: Hosonuma, N. et al 2012

FOREST RISK COMMODITIES

- 500 largest companies in Latin America
- 30 Economic Sectors

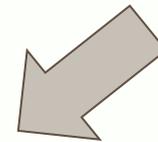


Economic Sectors:

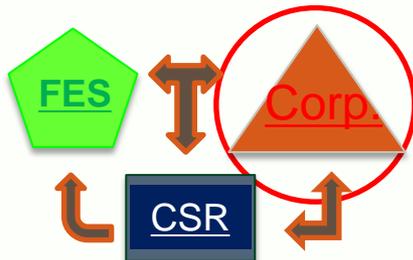
- Crops
- Animal Breeding
- Plantations

Four commodities

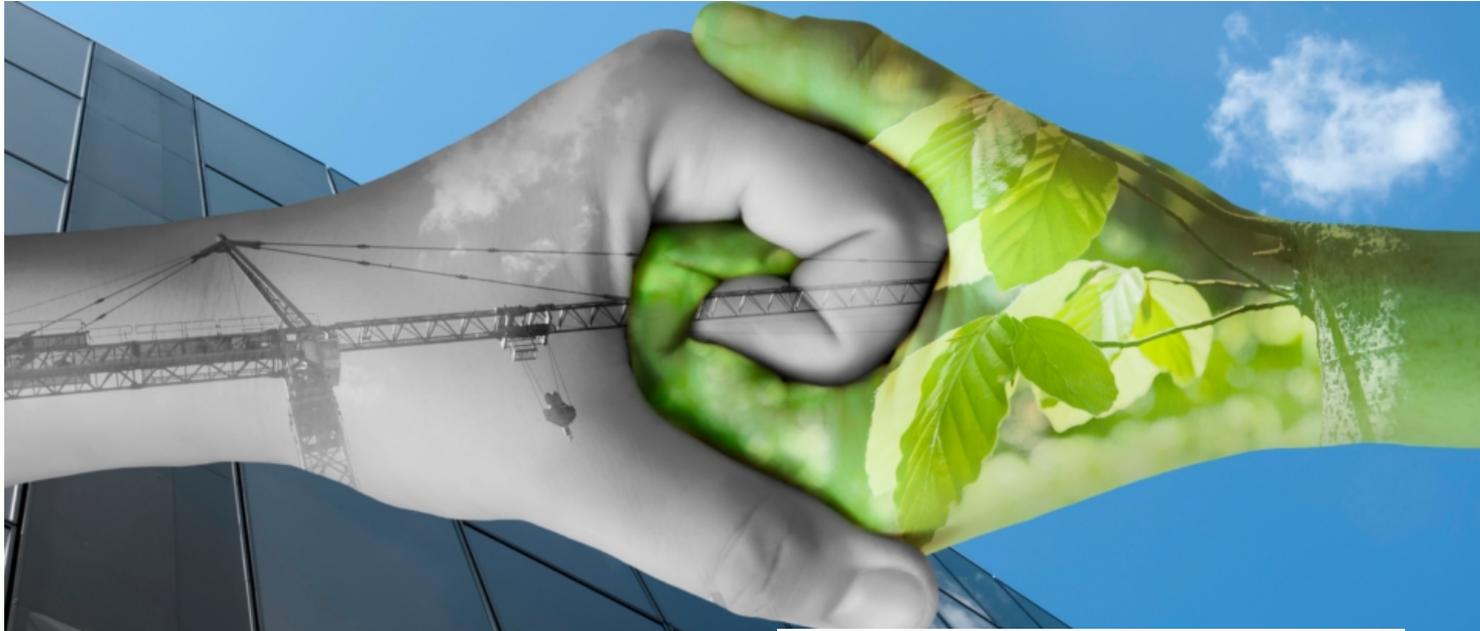
- Soy (7)
- Beef (7)
- Paper/pulp (3)
- Palm oil (8)



25
Corporations



Corporate Social Responsibility - CSR

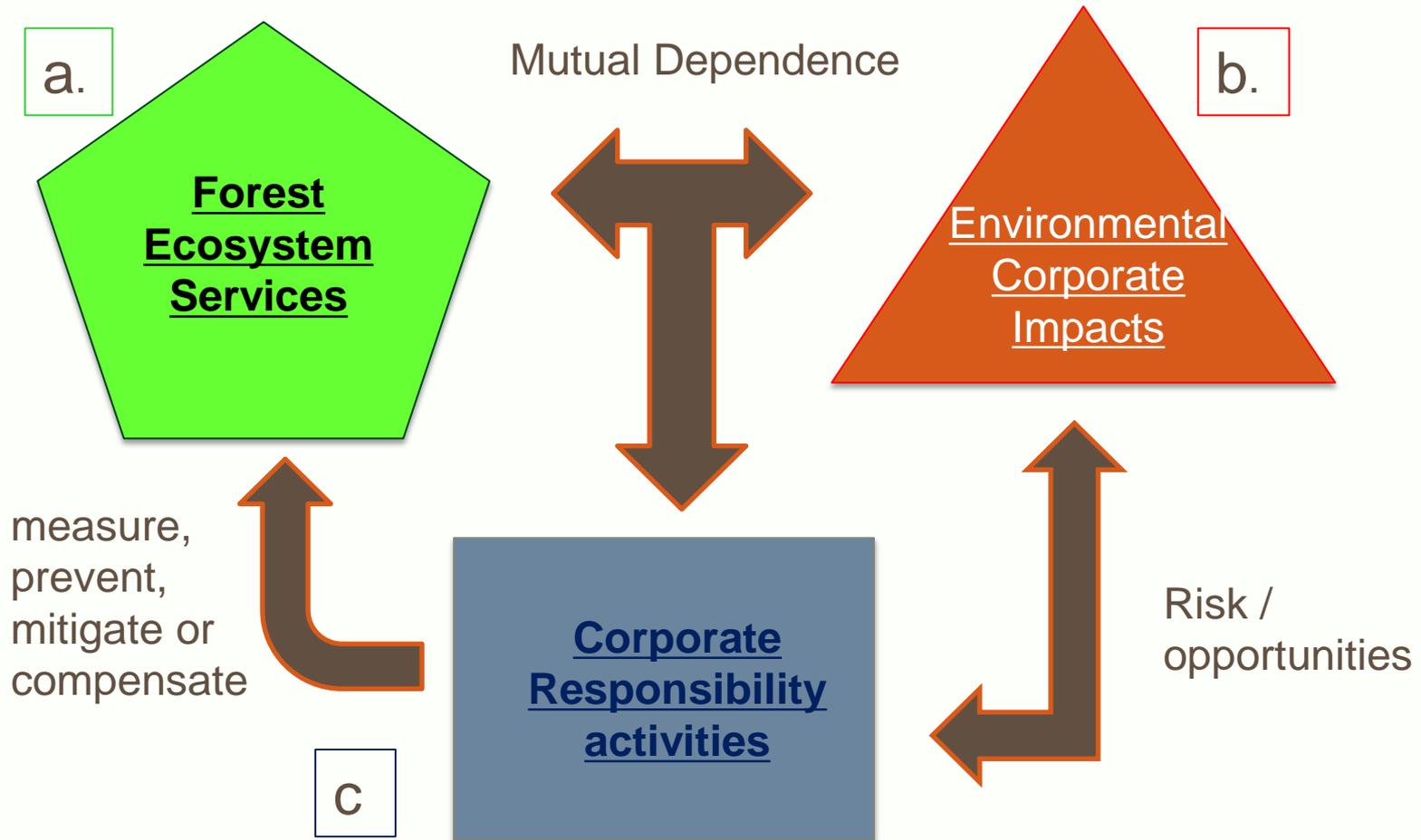


CSR: Performance and Standards

CATEGORIES AND ASPECTS IN THE GUIDELINES		
Category	Economic	Environmental
Aspects III	<ul style="list-style-type: none"> • Economic Performance • Market Presence • Indirect Economic Impacts • Procurement Practices 	<ul style="list-style-type: none"> • Materials • Energy • Water • Biodiversity • Emissions • Effluents and Waste • Products and Services • Compliance • Transport • Overall Expenditures • Supplier Assessment • Env. Grievance Mechanisms
Category	Social	
	<ul style="list-style-type: none"> • Labor Practices • Human Rights • Society • Product Responsibility 	

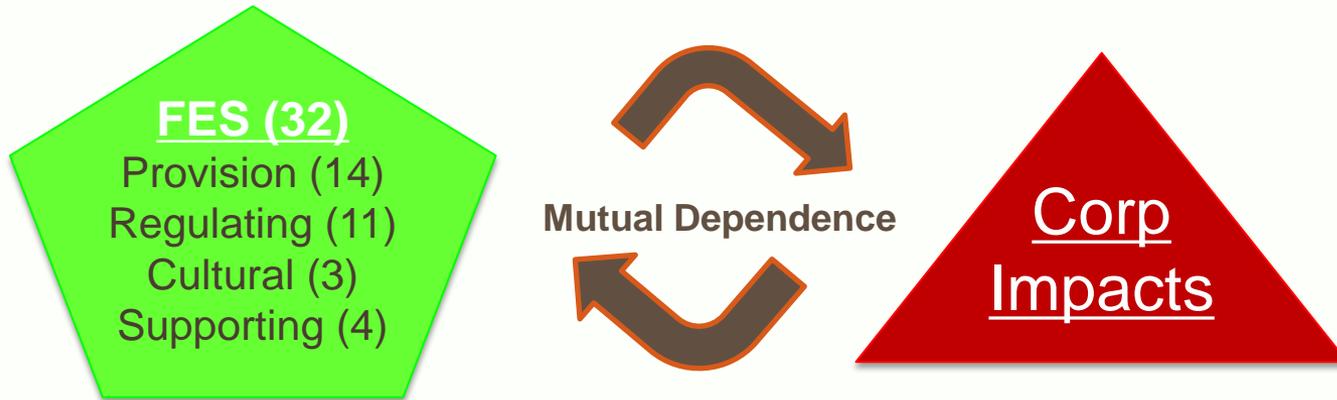


Interconnectedness of :



... in the Amazon rainforest.

a. *The **Dependence and Impact Assessment tools.**
Corporate Ecosystem Service Review (ESR).*

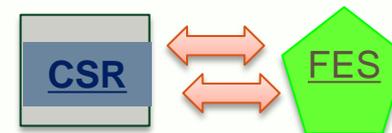


SECTOR	DEPENDENCE	IMPACT	
		Negative (-)	Positive (+)
Crops	44%	69%	9%
Beef	38%	75%	9%
Plantations	47%	66%	28%
Mining	25%	66%	3%

Mutual dependence between CROPS and FES

CROPS		IMPACTS	
Eco-Services	DEPENDENCE	Negative (-)	Positive (+)
Provision	Freshwater Genetic resources	Capture fisheries Wild foods Timber and other wood fiber Fibers and resins Genetic resources	Crops Biomass fuel
Regulating	Maintenance of air quality Global climate regulation Regional/local climate regulation Regulation of water timing and flows Water purification and waste treatment Maintenance of soil quality Pest mitigation Pollination	Maintenance of air quality Global climate regulation Regional/local climate regulation Regulation of water timing and flows Erosion control Water purification and waste treatment Maintenance of soil quality Pest mitigation Pollination	Pollination
Cultural		Recreation and ecotourism Ethical and spiritual values Educational, heritage and inspirational values	
Supporting	Nutrient Cycle Primary production (biological Material) Water cycling	Habitat Nutrient Cycle Primary production (biological Material) Water cycling	

b. The **connections** between the environmental activities reported by Corporations in their CSR Sustainability Reports and the Forest Ecosystem Services
(Pacific Sustainability Index Scores)



ANIMAL BREEDING		
CORPORATION	SCORE	Grade
BRF FOODS	129	A-
MARFRIG	128	A-
G.NUTRESA	126	A-
NESTLÉ	120	B+
JBS	113	B+
MC DONALD`S	113	B+
ALICORP	101	B
(Over 150)		79%

CROPS		
CORPORATION	SCORE	Grade
NIDERA	136	A-
BUNGE	129	A-
SYNGENTA	120	B+
CARGIL	106	B
LOUIS DREYFUS	104	B
C. VALE	101	B
COAMO	88	C+
(Over 150)		75%

CONCLUSIONS

Dependence and Impact Assessment

- High level of corporation dependence **(43%)** 14 of the 32 FES for production inputs.
- High level of negative impacts on almost all the FES **(70%)**, positive impact **(15%)**
- Corporations are putting in risk their own business.

CSR reporting performance

- Decent level of compliance with CSR standards in all selected economic sectors (Crops: 75%, Beef: 78%, Plantations: 72%)
- The CSR activities related with the improvements of Biodiversity conditions are one of the weakest in compliance. **(65%)**
- Only those businesses facing serious reputational risk have chosen to be in the vanguard of change. **(60%)**
- Strong evidence suggests that more efforts are needed to guarantee the sustainability of the forest ecosystem services in the Amazon basin.



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Questions?

THANKS!!