The Corporate Ecosystem Services Review

– Guidelines for Indentifying Business Risks and Opportunities Arising from Ecosystem change

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mondi

Introduction and background

Mikkel Kallesoe

WBCSD

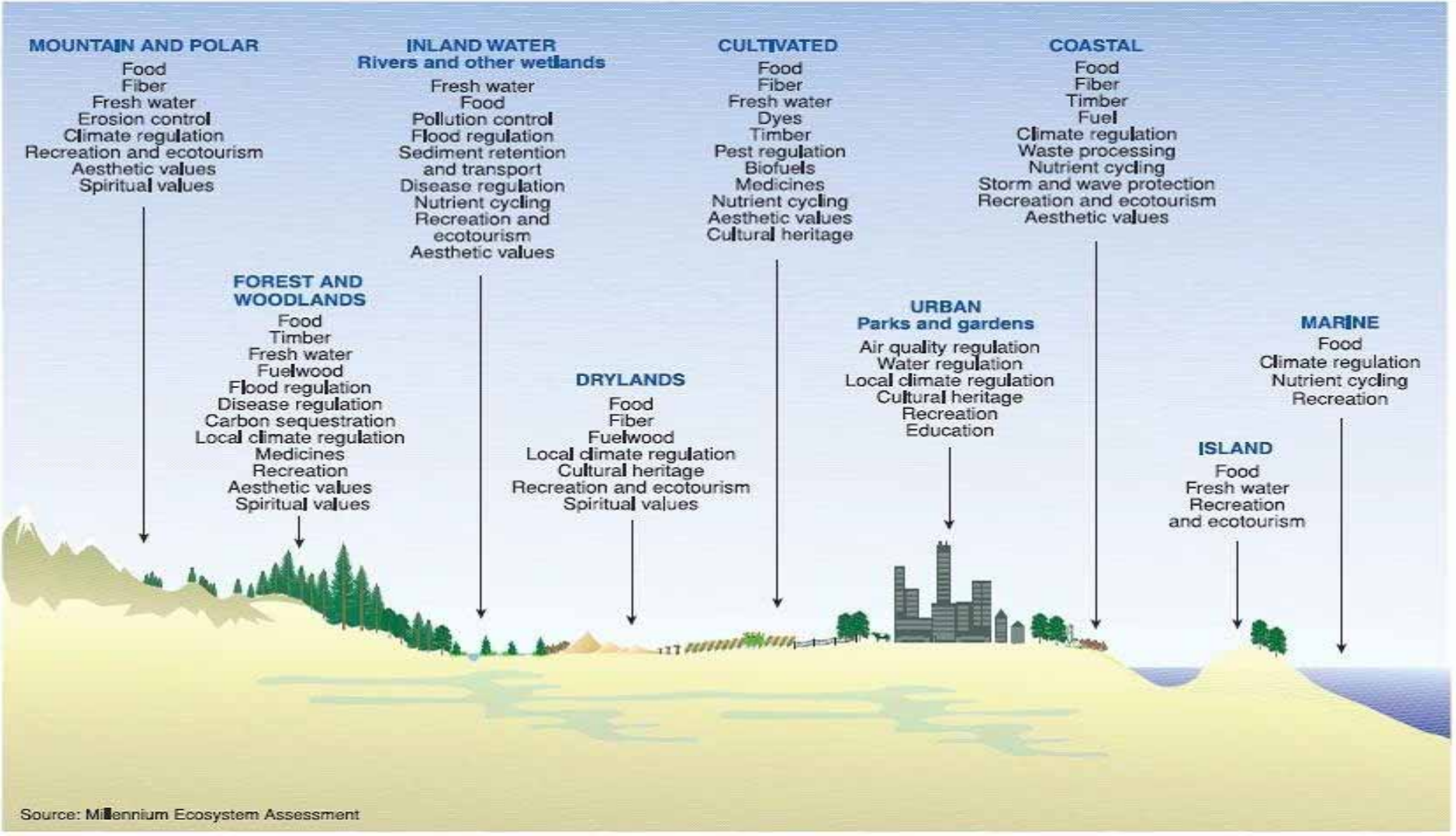
What is the WBCSD?

A CEO-led coalition of some 200 companies with a shared commitment to Sustainable Development via the three pillars of economic growth, ecological balance and social progress.

Premise – Why ecosystems and business?

- All businesses **depend** and **impact** on ecosystems and their services – either as part of their core operations or through their supply chain
- Ecosystem degradation can undermine the business license to operate by posing significant **risks** to companies, their suppliers, customers and investors
- Sustainable ecosystem management can create new business **opportunities** and **markets**

Somewhere in the ecosystem landscape



Some type of ecosystem service

- Provisioning services:
  - ✓ Goods produced or provided by ecosystems (e.g. food, fiber, fresh water
- Regulating services:
  - ✓ Benefits obtained from natural processes regulated by ecosystems (e.g. erosion regulation, flood control, climate regulation, pollination, Water flow regulation and water purification and waste treatment)
- Cultural services:
  - ✓ Non-material benefits obtained from ecosystems (e.g. recreation, ecotourism, spiritual and religious values and ethical and “existence” values)

Status of the world's Ecosystems – Millennium Ecosystem Assessment

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

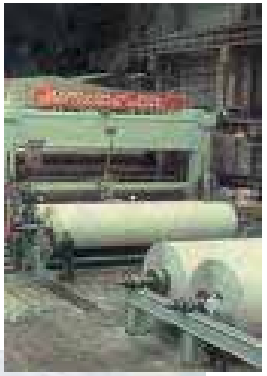
- 20% of the world's coral reefs have been lost and more than 20% are degraded
- 35% of mangrove area has been lost in the last several decades
- Amount of water in reservoirs quadrupled since 1960
- Withdrawals from rivers and lakes doubled since 1960

Status of the world's Ecosystem Services – Millennium Ecosystem Assessment

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 • Fresh water	· 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	

What does it mean for business?



Businesses impact on ecosystems and ecosystem services

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

Businesses rely and depend on ecosystems and ecosystem services

Risks and Opportunities

Type	Risk	Opportunity
Operational	• Increased scarcity / cost of inputs • Reduced quality of inputs • Disruption to business operations	• Increased resource use efficiency
Regulatory and legal	• Stricter environmental policies & legislation • Fines • Permit or license suspension	• License to expand operations • Ability to shape government policy
Reputational	• Damage to brand or image • Challenge to “license to operate”	• Improved or differentiated brand
Market and product	• Changes in customer preferences	• New products or services • Markets for certified products • Markets for ecosystem services
Financing	• Higher cost of capital • More rigorous lending requirements	• Green banking

Next step – helping companies address their risks and opportunities

- Developing the Corporate Ecosystem Services Review (ESR)

Collaborating organizations

Road testers

ESR methodology

John Finisdore

WRI


JAHRE VIKING

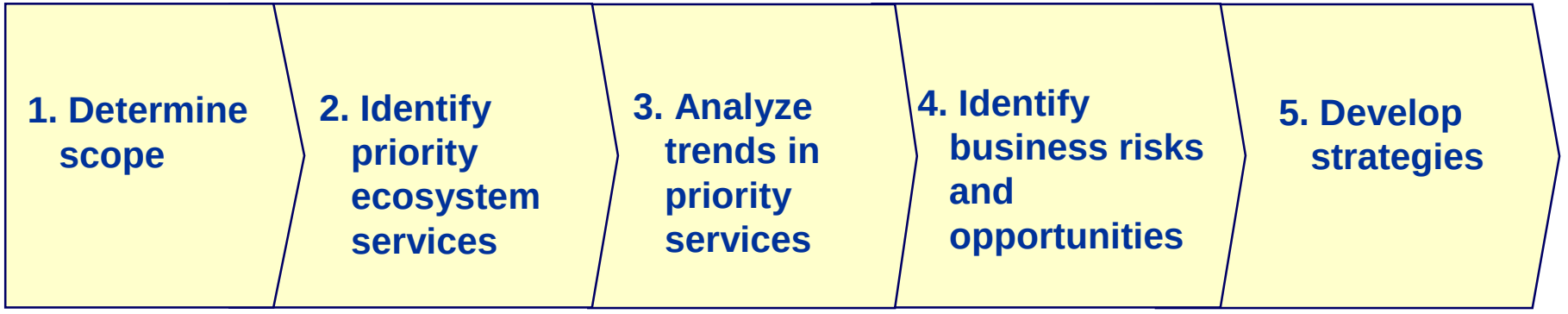

Potlatch


E G I
Energía Global
International, Ltd.

The Corporate Ecosystem Services Review

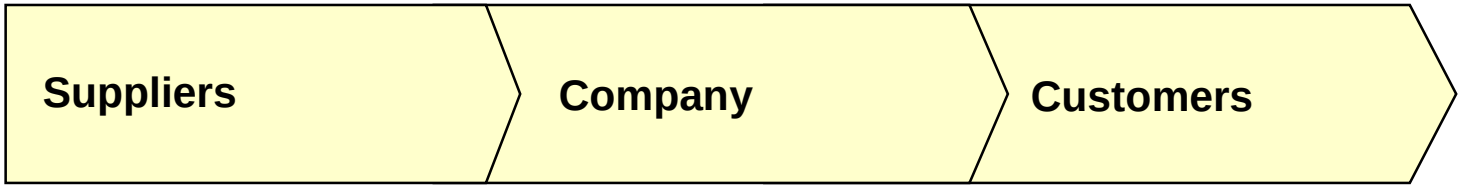
Structured methodology for helping corporate managers *proactively* identify business risks and opportunities arising from their company's dependencies and impacts on ecosystems.

Steps in a corporate ecosystem services review



Step 1.
Considerations when selecting scope

1. Which stage of the supply chain?



2. Who and where specifically?

- Which supplier(s)?
- In which geographic market(s)?

- What aspect of the business?
  - Business unit
  - Product line
  - Facility
  - Project
  - Landholdings

- Which customer(s)?
- In which geographic market(s)?

3. Is it strategic, timely, and supported?

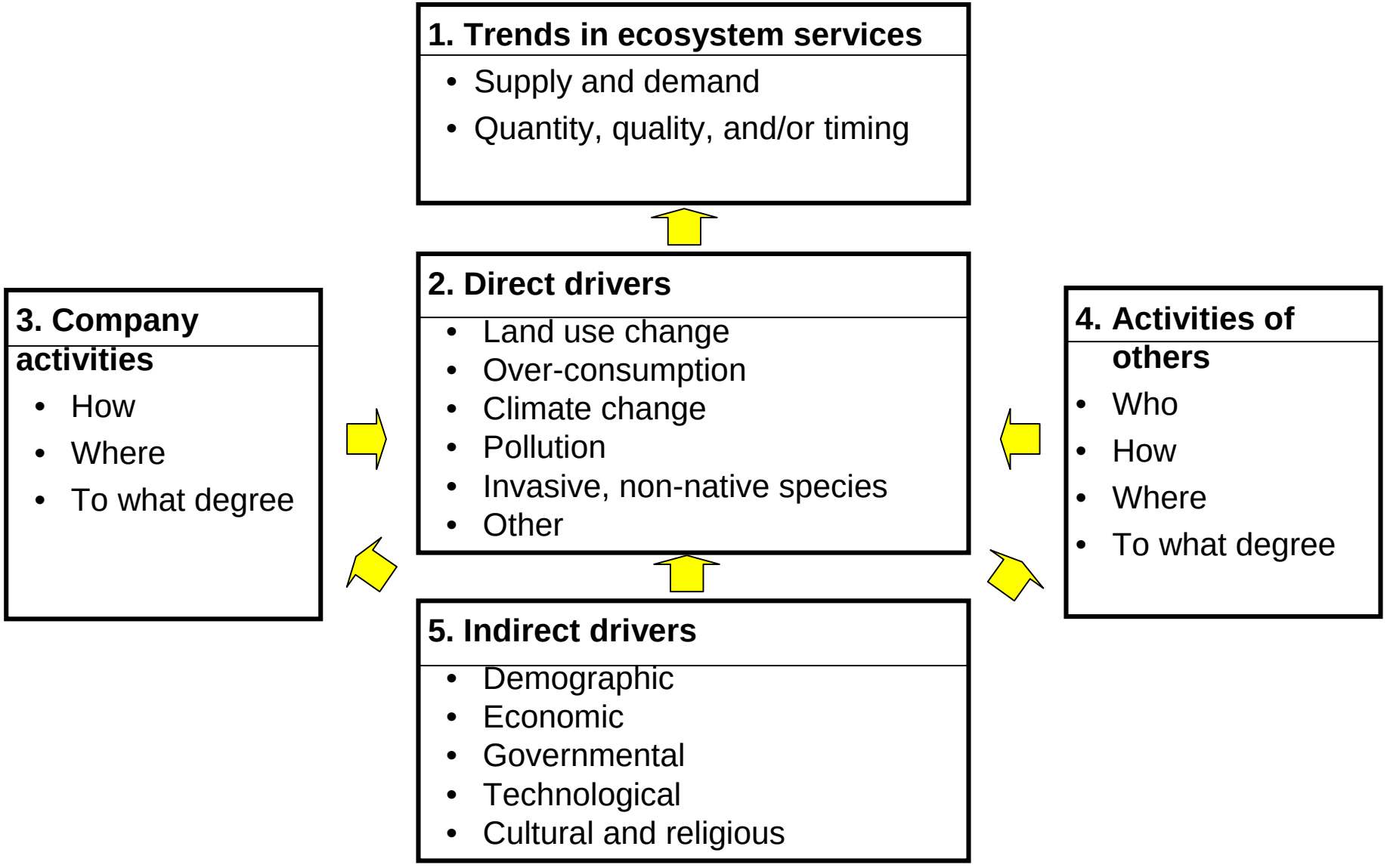
Step 2.
Identifying priority ecosystem services

Ecosystem services	Key input suppliers: Dependent upon	Key input suppliers: Impact	Company operations*: Dependent upon	Company operations*: Impact	Major customers: Dependent upon	Major customers: Impact
Provisioning						
Crops				○ -		
Livestock				○ -		
Capture fisheries						
Aquaculture						
Wild foods				○ +		
Timber				● +		
Cotton, hemp, silk, etc						
Biomass fuel				○ +		
Fresh water			●	● -		
Genetic resources			○	○ ?		
Biochemicals, natural medicines and pharmaceuticals				○ +		
Regulating						
Air quality regulation				? ?		
Climate regulation				○ +		
Water regulation			●	● -		
Erosion regulation			○	○ -		
Water purification and waste treatment				○ -		
Disease regulation						
Pest regulation						
Pollination						
Natural hazard regulation						
Cultural						
Spiritual, religious, or cultural heritage values				○ +/-		
Recreation, ecotourism, or aesthetic values				● +/-		

○ Some impact or dependence
● Significant impact or dependence
+ Positive impact
– Negative impact

* The business unit, facility, geographic operations, or product line being reviewed in the ESR

Step 3. Evaluate trends



Step 4:
Risks and Opportunities -- Brainstorming

Type	Risk	Opportunity
Operational	• Increased scarcity or cost of inputs • Reduced quality of inputs • Reduced output or productivity • Disruption to business operations	• Increased resource use efficiency • Integrated ecosystem/manufacturing processes
Regulatory and legal	• Extraction moratoria • Lower quotas • Fines • User fees • Permit or license suspension • Permit denial • Lawsuits	• License to expand operations • Ability to shape government policy
Reputational	• Damage to brand or image • Challenge to “license to operate”	• Improved or differentiated brand
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International Bananaman Inc.

Ecosystem service	Risk	Opportunity
Pollination		
Water regulation		

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Pollination	• Decreased yields	• Change pesticide spraying timing • Breed new pollinators
Water regulation		

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Water regulation	• Poor water regulation reduces amount of arable land and therefore reduces market size	

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Risks and Opportunities -- Brainstorming

International Bananaman Inc.

Ecosystem service	Risk	Opportunity
Pollination	• Decreased yields	• Change pesticide spraying timing • Breed new pollinators
Water regulation	• Poor water regulation reduces amount of arable land and therefore reduces market size	• Develop partnerships among communities and water authorities to improve watershed management • Advocate for improved regulation of private water pumps

Step 5. Develop strategies

1. Internal strategy or operational changes

2. Industry peer or other sector engagement

3. Policymaker engagement

Use to build on existing efforts…

- Strategic planning
- Organizational support for a strategy
- Infusing ecosystem services thinking
  - Strategic Planning
  - Existing EIAs, EMS, etc.
  - Better address stakeholder concerns

ESR company experience

Peter Gardiner

Mondi


23 5:23AM

Mondi: Business Opportunities Identified through ESR

1. Implement additional water efficiency improvements, making Mondi “best practice”
2. Use invasive species for biomass fuel
3. Acquire additional water entitlements by (co)financing water efficiency improvements of upstream landowners
4. Promote woodlots on marginal agricultural lands
5. Promote coppiced woodlots for biomass fuel
6. Partner with park to capture eco-tourism value
7. Engage policymakers to improve fresh water resource use policies

Wetland/riparian delineation and rehabilitation


Zohar Wetland 1 Year after rehabilitation

Invasive Alien Species: Biofuel potential

Before Clearing

After Clearing


Ecotourism potential

Mondi: Prioritizing the Opportunities

H High
M Medium
L Low

Opportunity	Possible ROI	Other benefits	Ease of imple-mentation	Timing
1. Implement additional internal water efficiency improvements	H	M	H	Implement year 1
2. Use invasive species for biomass fuel	H	M	H	Implement year 2
3. Acquire additional water entitlements by (co)financing water efficiency improvements of upstream landowners	M	H	L	Scope year 2
4. Promote woodlots on marginal agricultural lands	M	H	M	Scope year 2
5. Promote coppiced woodlots for biomass fuel	M	H	M	Scope year 2
6. Partner with park to capture eco-tourism value	L	H	M	Scope year 2
7. Engage policymakers to improve fresh water resource use policies	M	H	L	Implement year 3 onwards


Thank You

For more information:

www.wri.org/ecosystems/esr

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Sources and sinks of carbon