Commodities and Biodiversity: Impacts and standards

Sharon Brooks

Business, Biodiversity and Ecosystem Services Programme

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UNEP World Conservation Monitoring Centre

- Collaboration between UNEP and Cambridge based charity WCMC
- UNEP's specialist biodiversity assessment arm
- Mission statement:

  "To provide authoritative information about biodiversity and ecosystem services in a manner that is useful to decision-makers who are driving change in environment and development policy"

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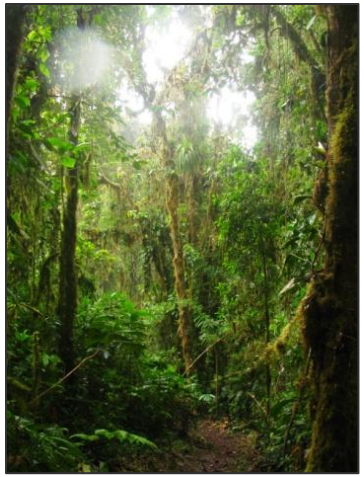
The impacts of commodity production on biodiversity

- Conversion of natural ecosystems
- Degradation of on-site habitats
- Habitat fragmentation
- Water pollution / diversion
- Spread of invasive species
- Greenhouse gas emissions
- Socio-economic change

- Loss of biodiversity (species, habitats)
- Loss of ecosystem function and services



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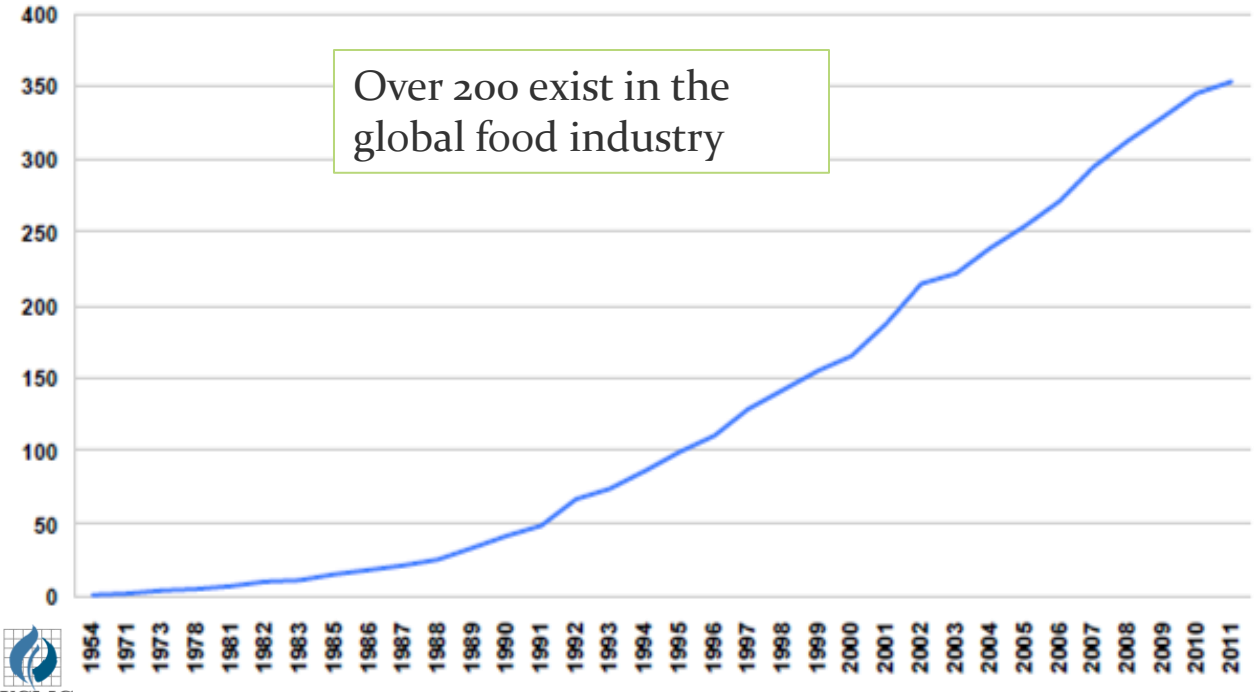
Growth in ecolabels

Total number of ecolabels by year of launch

Source: Ecolabel Index (www.ecolabelindex.com)



Over 200 exist in the global food industry

Currently 458 ecolabels in 197 countries

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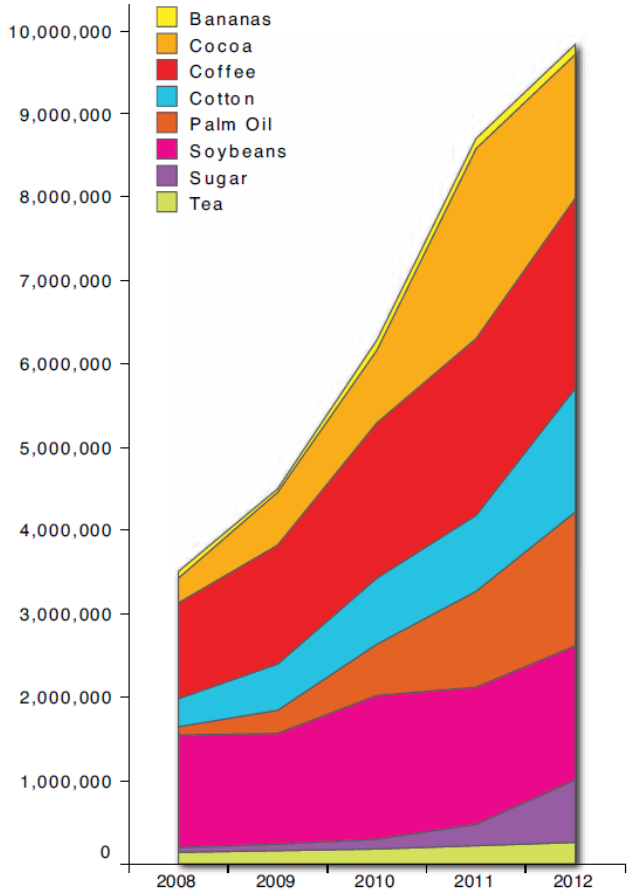
Standard compliant hectares



"the markets for standard-compliant products are substantially outpacing growth in production more generally"

The state of sustainability initiatives review, 2014

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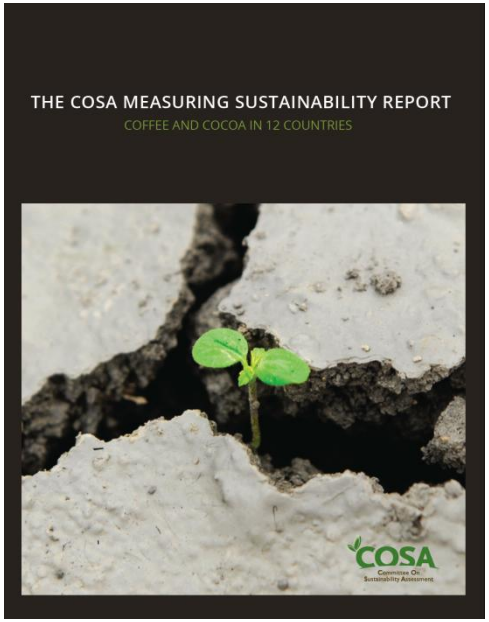
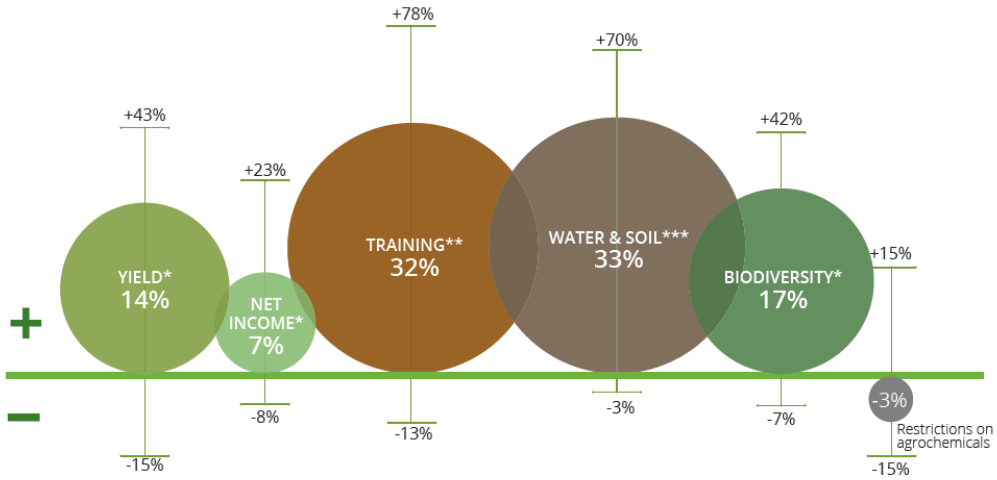
Are standards and certification benefiting biodiversity?





The use of proxy's – floral diversity and density on farms

	Positive effect	No effect	Negative effect
Access to education and training	•Access to skill/knowledge development due to training(11). • Improved educational situation of children (7).	• Low reading and writing skills make it challenging to successfully complete training (1).	
Working conditions	• Safer/better working practices (4). • Reduced child labor during school hours (2).	• Child labor during school hours persists in certai cases (1). • Pesticide application work carried out by childre occurs on 4C verified farms despite being classifi unacceptable practice by the scheme (1).	
Gender equality	• Increased participation of women in certified farms (2). • Empowerment of women (2).	• Social norms/traditional division of labor limit womens' participation in cooperatives(4). • Women seem to carry the heaviest/most time consuming workload (1)	
Farmer economy	• Reduced debt vulnerability (2) •Higher prices (7). • Higher yields (6). • Quality improvements (5). • Increased access to credit facilities (6). •Improved market opportunities (7). • Higher net income (4).	•Reasons for poverty (low yields, low educational and farmer's lack of entrepreneurial skills) not addressed (1). • Farm management problems not solved(1). • Net revenue Organic cotton below poverty line (• Prices received unchanged(2). • Yield level unchanged (2). • Net income unchanged (3).	
Local natural environment	• Less (toxic) pesticide/chemical use (5). • Safer environmental practices (7). • Regular controls by schemes help to protect the environment (1) • Wildlife protection by Rainforest Alliance (2)		• Higher water consumption compared to conventional cotton for CmiA (1).
Group level	• Strengthening communities (4). • Cooperatives provide better prices (1).	• Limited involvement of farmers in decision-making of cooperatives (1). • Only farm owners can participate in decision-making (1).	

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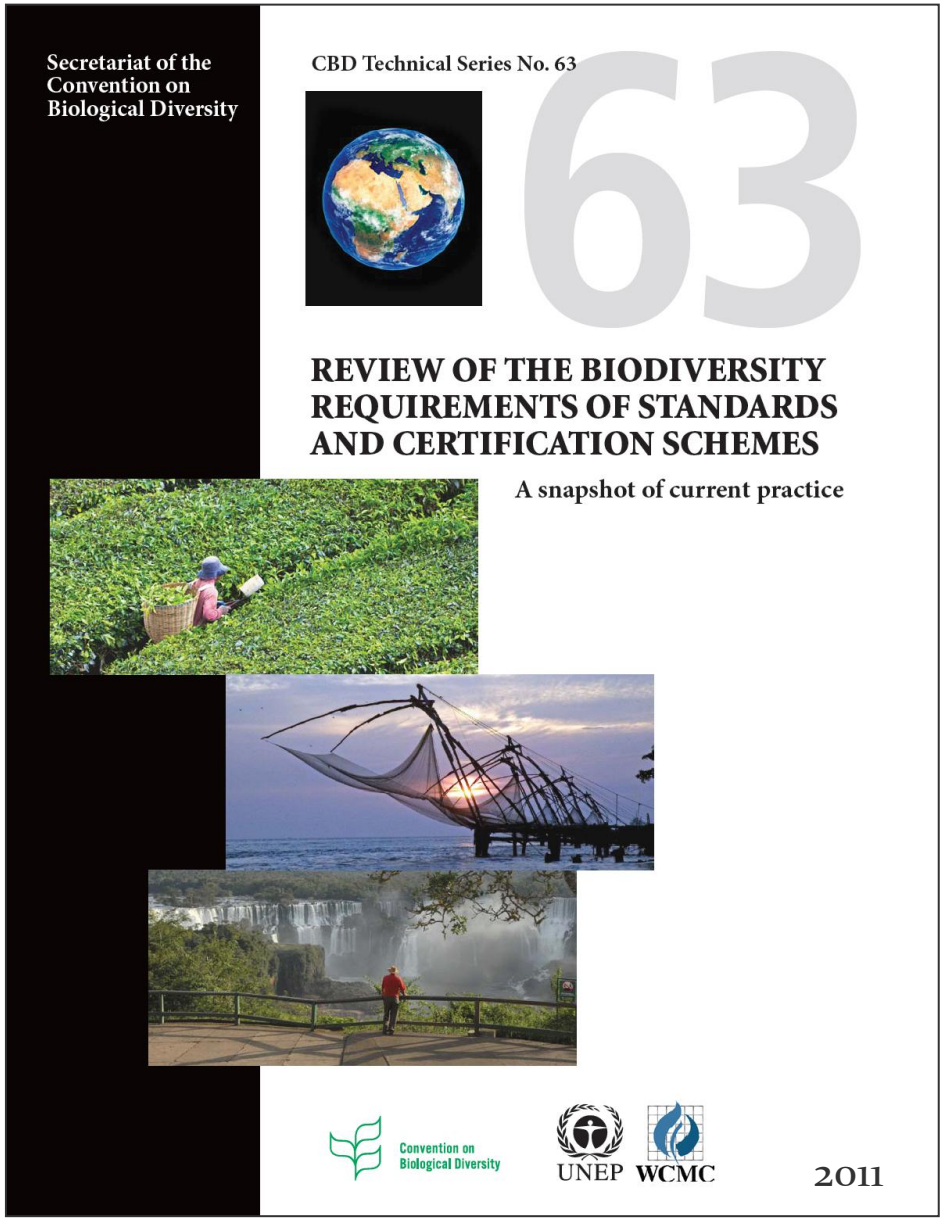
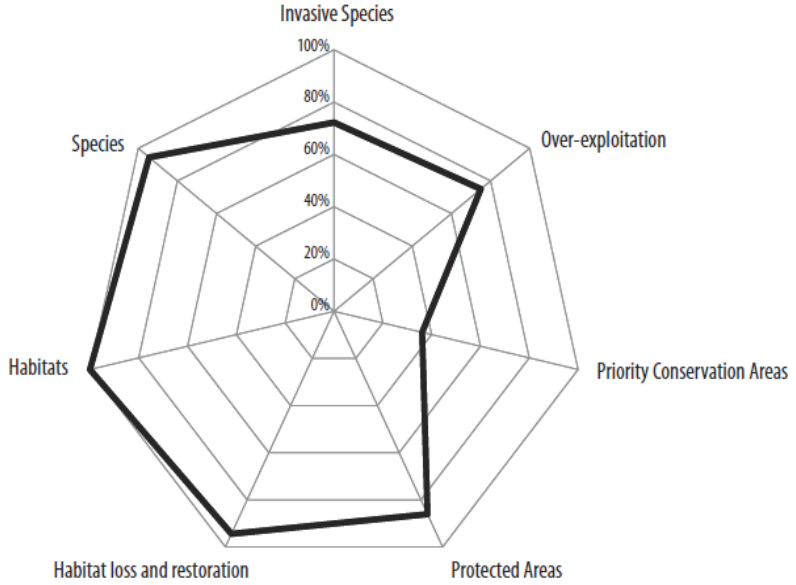
The biodiversity safeguards of sustainability standards



36 across 8 business sectors

- Agriculture (12)
- Bio-trade (2)
- Carbon (3)
- Finance (5)
- Fisheries (5)
- Forestry (4)
- Mining (2)
- Tourism (3)



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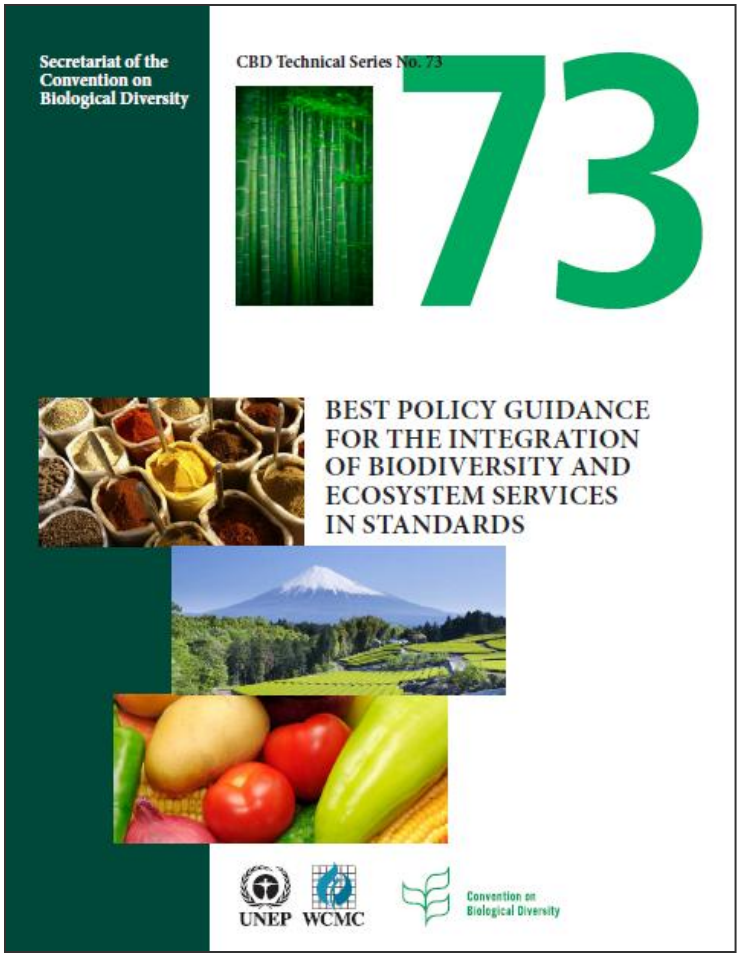
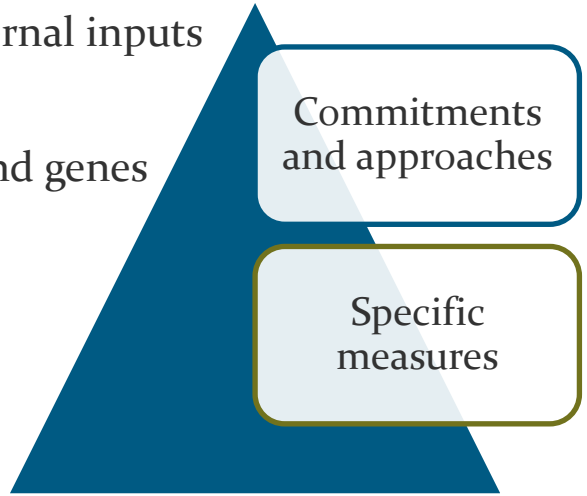
Key conclusions

- Good coverage of threatened species, habitats of importance, and protected areas
- Lack of clear and consistent terminology
- Lack of guidance around definitions of and operations in protected areas
- Lack of recognition of importance of modified or human dominated landscapes
- Strong focus on the protection of forests
- Limited use of recognised systems (e.g. KBAs) to prioritise areas of biodiversity importance

Best Policy Guidance



1. **High level considerations**
   - Commitments that support the CBD
   - Mitigation hierarchy
   - Ecosystem services approach
   - Landscape approach
2. **Address key pressures on BES**
   - Habitat and cover change
   - Harvest and resource consumption
   - Pollution and external inputs
   - Climate change
   - Invasive species and genes



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Criteria dimension	Index category	Indicators
Environmental	Soil	1. Soil conversion (erosion prevention) 2. Soil quality maintenance
	Biodiversity	3. Habitat set-asides 4. Flora densities/diversity 5. Prohibition of conversion of high conservation value land
	GMO prohibition	6. Prohibition of genetically modified organisms
	Waste	7. Waste disposal 8. Waste management 9. Pollution
	Water	10. Water practices in scarcity (dependencies) 11. Water use in management plan 12. Water reduction criteria 13. Wastewater disposal
	Energy	14. Energy-use and management 15. Energy reduction
	Greenhouse gas	16. Greenhouse gas accounting 17. Greenhouse gas reductions 18. Soil carbon sequestration
	Synthetic inputs	19. Integrated pest management 20. Enforcement of a prohibited list 21. Complete prohibition of synthetics

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Index	Indicator	Indicator Score	# of VSSs that scored 100%
Synthetic inputs	Enforcement of a prohibited list	88%	15
Water	Water use in management plan	82%	10
Soil	Soil conversion (erosion prevention)	78%	7
Waste	Waste management	75%	10
Soil	Soil quality maintenance	69%	9
Waste	Waste disposal	69%	8
Synthetic inputs	Integrated pest management	67%	7
Biodiversity	Prohibition of conversion of high conservation value land	61%	10
Water	Water reduction criteria	52%	5
Energy	Energy-use and management	48%	3
GMO prohibition	Prohibition of genetically modified organisms	47%	8
Water	Water practices in scarcity (dependencies)	47%	6
Water	Wastewater disposal	46%	6
Greenhouse gas	Greenhouse gas reductions	46%	5
Greenhouse gas	Greenhouse gas accounting	46%	6
Waste	Pollution	45%	6
Biodiversity	Flora densities/diversity	44%	6
Biodiversity	Habitat set-asides	42%	5
Energy	Energy reduction	26%	2
Greenhouse gas	Soil carbon sequestration	21%	2

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High biodiversity value assessment systems	Frequency
None	20
HCV	14
Primary forest	5
Areas of high biodiversity value	4
Key Biodiversity Areas	4
Critical Habitat	4
Primary ecosystem	3
Forest	2
Pristine ecosystem	1
Forests with Exceptional Conservation Value	1
Ecologically important forest areas	1
Natural ecosystem	1
High value ecosystems	1
IWRAs	1
IBAs	1
Conservation area	1
Sensitive wetland	1
Natural areas important to conservation of biodiversity values	1
Biological conservation areas	1
Areas of high ecological value	1

51 international standards with biodiversity criteria

Source: ITC Standards Map (141 standards)

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Comparing criteria

Biodiversity	CH	HCV	KBA
Species			
IUCN EN & CR species	Cr 1	HCV 1	Cr A1
National/regional CR & EN species	Cr 1	HCV 1	Cr A1
IUCN VU species	Gn56 (under uncertainty)	HCV 1	Cr A1
Endemic & range-restricted species	Cr 2	HCV 1	✓Cr B
Migratory & congregatory species	Cr 3	HCV1 (only if RTE)	✓Cr D2
Rare species		HCV 1	
CITES species		HCV 1	
Nationally protected species		HCV 1	
New or under studied species	GN56		
Evolutionarily distinct species	Cr 5		
Keystone species	GN56		
Species richness		HCV 1	
Species diversity	Gn56	HCV 1	

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Comparing criteria

Biodiversity	CH	HCV	KBA
Ecosystems			
Threatened ecosystems (IUCN Red List)	Cr 4	HCV 3	Cr A2
Small ecosystems	Cr 4		Cr B3
Rare and unique ecosystems	Cr 4	HCV 3	Cr E
Large Intact ecosystems		HCV 2	
Key sites for evolutionary processes	Cr 5		Cr D1
Isolated ecosystems (e.g. Islands)	Cr 5		
Sites important for climate change adaptation	Cr 5		
Primary/old/pristine forest	GN56		
Habitat buffer zones		HCV 2	
Ecological corridors	Cr 5	HCV 2	
Sites important for long term persistence of biodiversity			Cr D3
Areas of outstanding ecological integrity			Cr C1
Regionally distinct species assemblage			Cr C2

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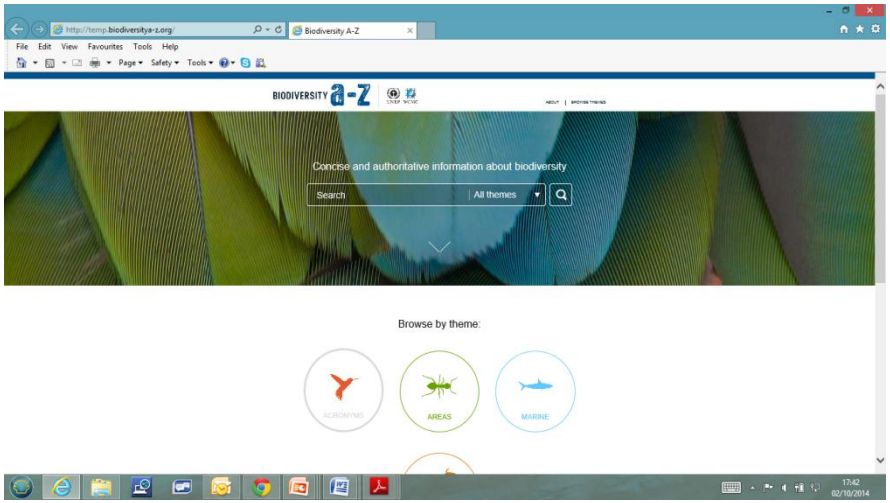
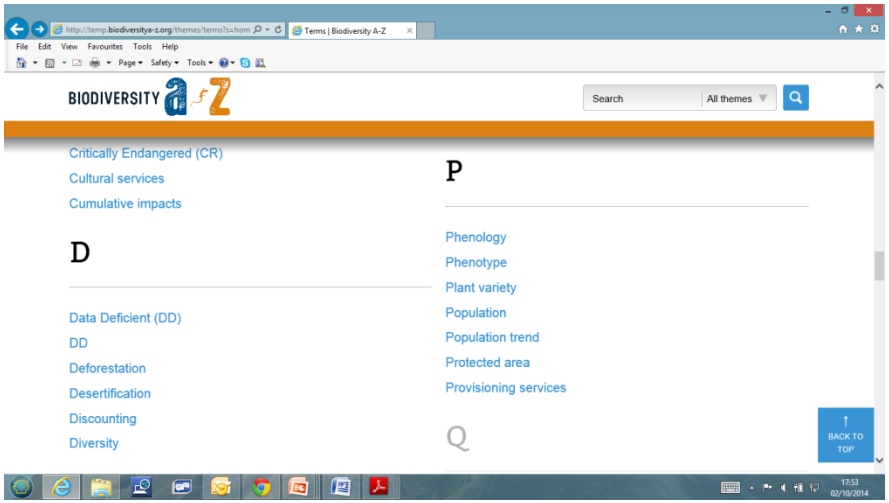
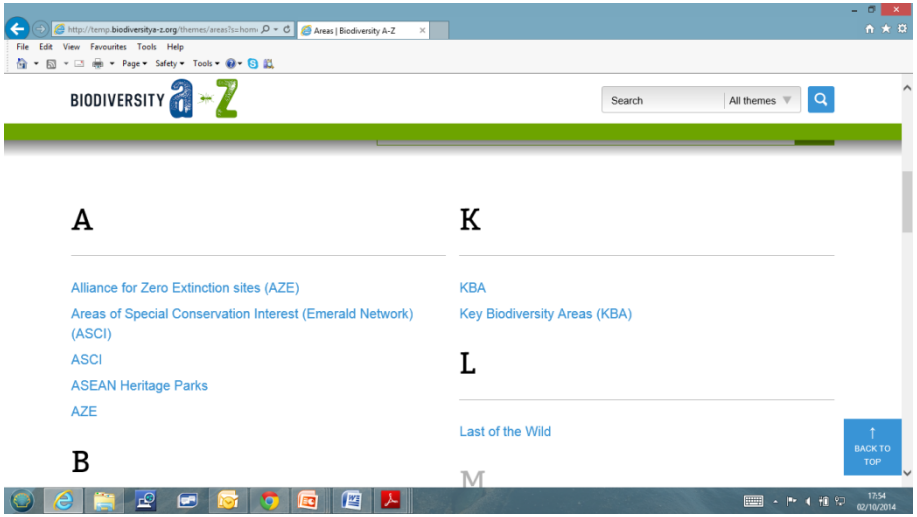
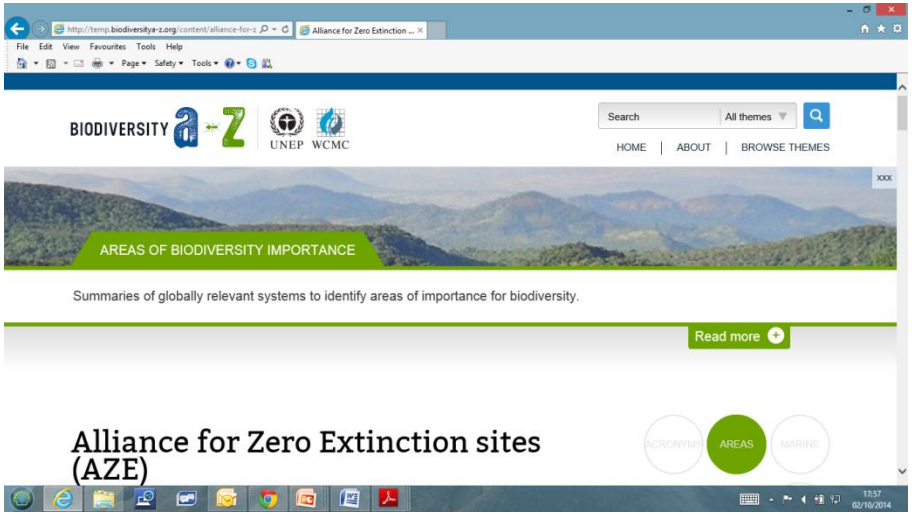
The Biodiversity A-Z



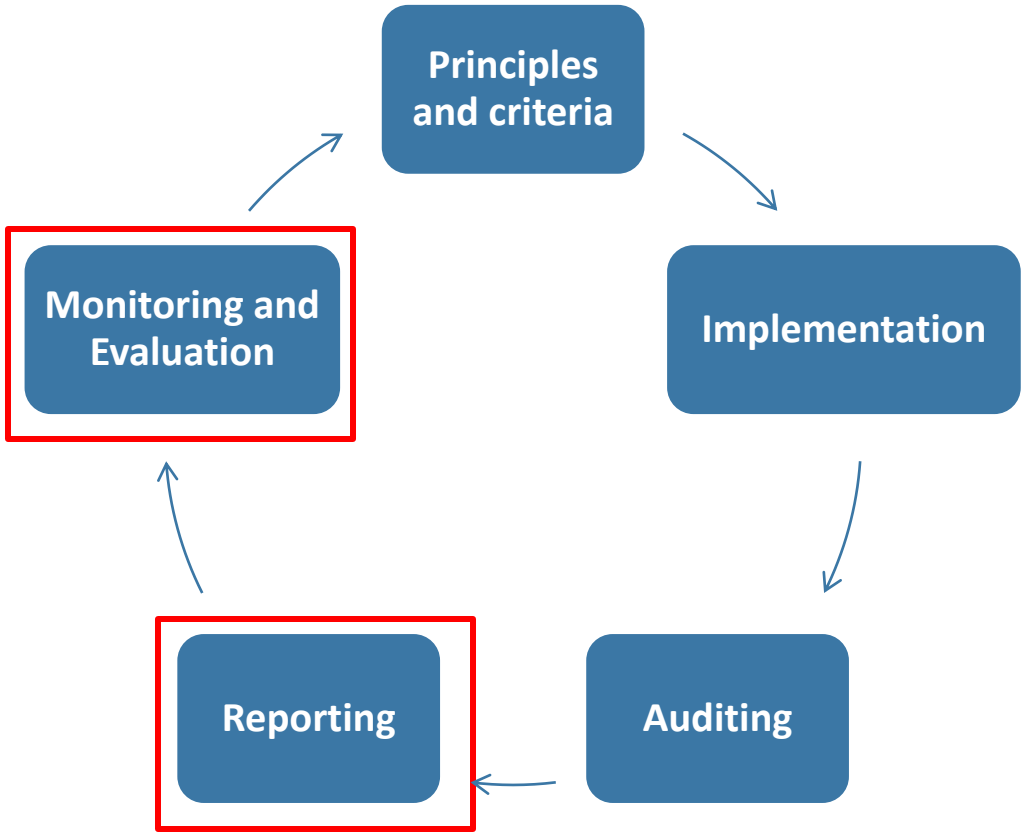






New website to be launched on the 15th October 2014

How can standards be improved?



- Monitoring and evaluation system and theory of change
- Indicators for ongoing monitoring

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Existing Criteria / Indicators

- **% of areas** legally protected / HCV (Bonsucro)
- **At least 5 %/ More than 10% of the total farm area** is set aside as a conservation emphasis area or as required by local law (Starbucks C.A.F.E)
- **Identify / avoid damage to HCV habitats**(RSPO)
- **Avoid** negative impacts to protected areas and HCVs (Fairtrade)
- **Identify and deliver measurable benefits** to KBAs (RJC)

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GRI environmental performance indicators

Environmental Performance Indicators

ASPECT: MATERIALS

CORE **EN1** Materials used by weight or volume.

CORE **EN2** Percentage of materials used that are recycled input materials.

ASPECT: ENERGY

CORE **EN3** Direct energy consumption by primary energy source.

CORE **EN4** Indirect energy consumption by primary source.

ADD **EN5** Energy saved due to conservation and efficiency improvements.

ADD **EN6** Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.

ADD **EN7** Initiatives to reduce indirect energy consumption and reductions achieved.

ASPECT: WATER

CORE **EN8** Total water withdrawal by source.

ADD **EN9** Water sources significantly affected by withdrawal of water.

ADD **EN10** Percentage and total volume of water recycled and reused.

ASPECT: BIODIVERSITY

CORE **EN11** Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.

CORE **EN12** Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.

ADD **EN13** Habitats protected or restored.

ADD **EN14** Strategies, current actions, and future plans for managing impacts on biodiversity.

ADD **EN15** Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.

ASPECT: EMISSIONS, EFFLUENTS, AND WASTE

CORE **EN16** Total direct and indirect greenhouse gas emissions by weight.

CORE **EN17** Other relevant indirect greenhouse gas emissions by weight.

ADD **EN18** Initiatives to reduce greenhouse gas emissions and reductions achieved.

CORE **EN19** Emissions of ozone-depleting substances by weight.

CORE **EN20** NO, SO, and othe type and weight.

CORE **EN21** Total water disch destination.

CORE **EN22** Total weight of w method.

CORE **EN23** Total number an

ADD **EN24** Weight of transp treated waste de terms of the Base and VIII, and perc shipped internat

ADD **EN25** Identity, size, pro biodiversity valu habitats significa organization's di

ASPECT: BIODIVERSITY

CORE **EN11** Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.

CORE **EN12** Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.

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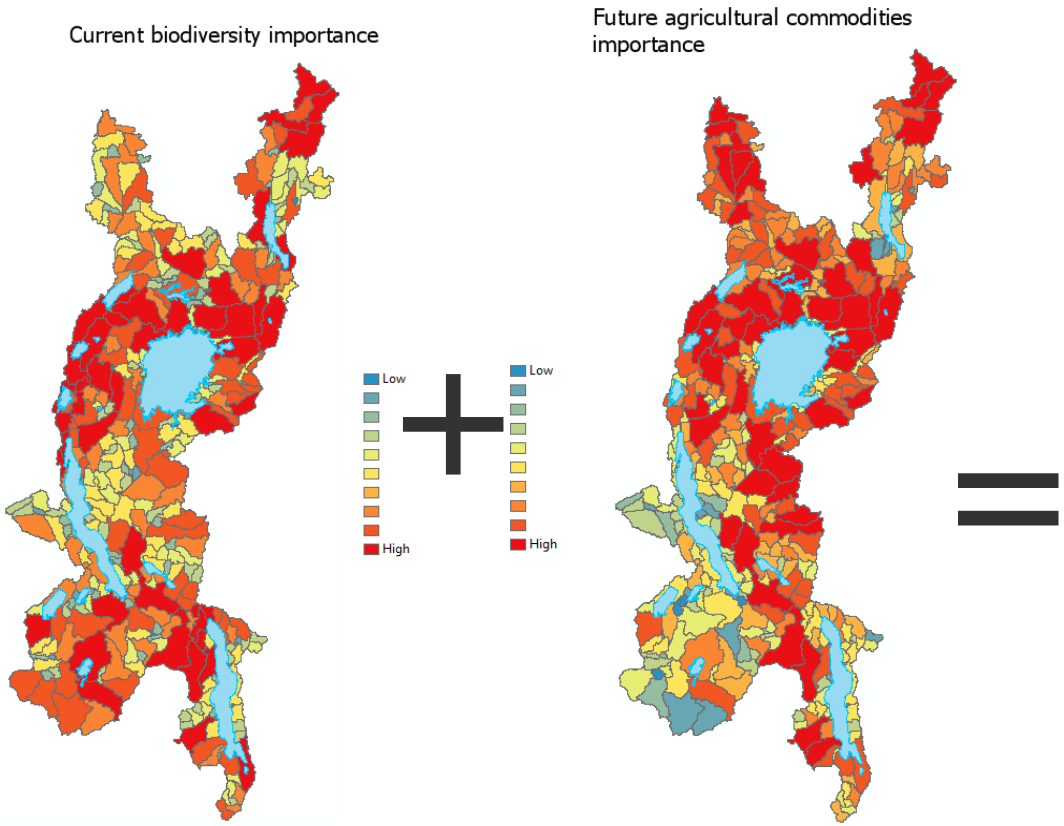
Site scale versus landscape scale

Best management practices to improve on-farm biodiversity

Prevent loss of important ecosystems and maintain connectivity of landscape

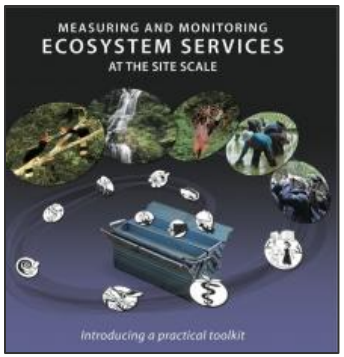
Landscape level planning and assessment

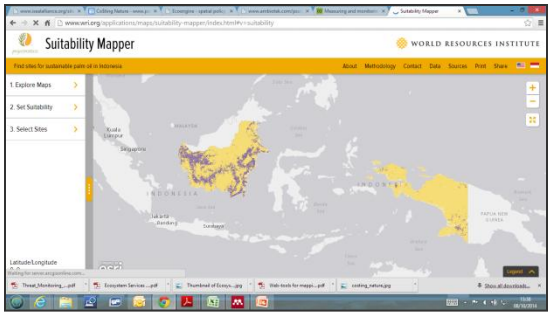
The Great Lakes Region of East Central Africa



Landscape level planning and assessment: Tools

- Co$ting nature and WaterWorld –Can support mapping impacts on BES at landscape scale
- Toolkit for measuring and monitoring ecosystem services at the site scale – CCI and BirdLife International
- ZSL HCV Threat Monitoring protocol – Palm oil
- WRIs Forest Cover Analyzer and Suitability Mapper – Palm oil





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Summary



- Little evidence on biodiversity benefits of sustainability standards
- Most studies focus on farm level benefits
- Content of many standards addresses greater range of potential impacts
- Very challenging to assess landscape level impacts and benefits but there are a range of tools that could support this
- Concerted and collaborative efforts needed for indicator development and evaluation

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