FSC® General Assembly 2017

Vancouver, Canada, 8–13 October

How does FSC ensure climate benefits and prevent negative impacts from woody biomass energy

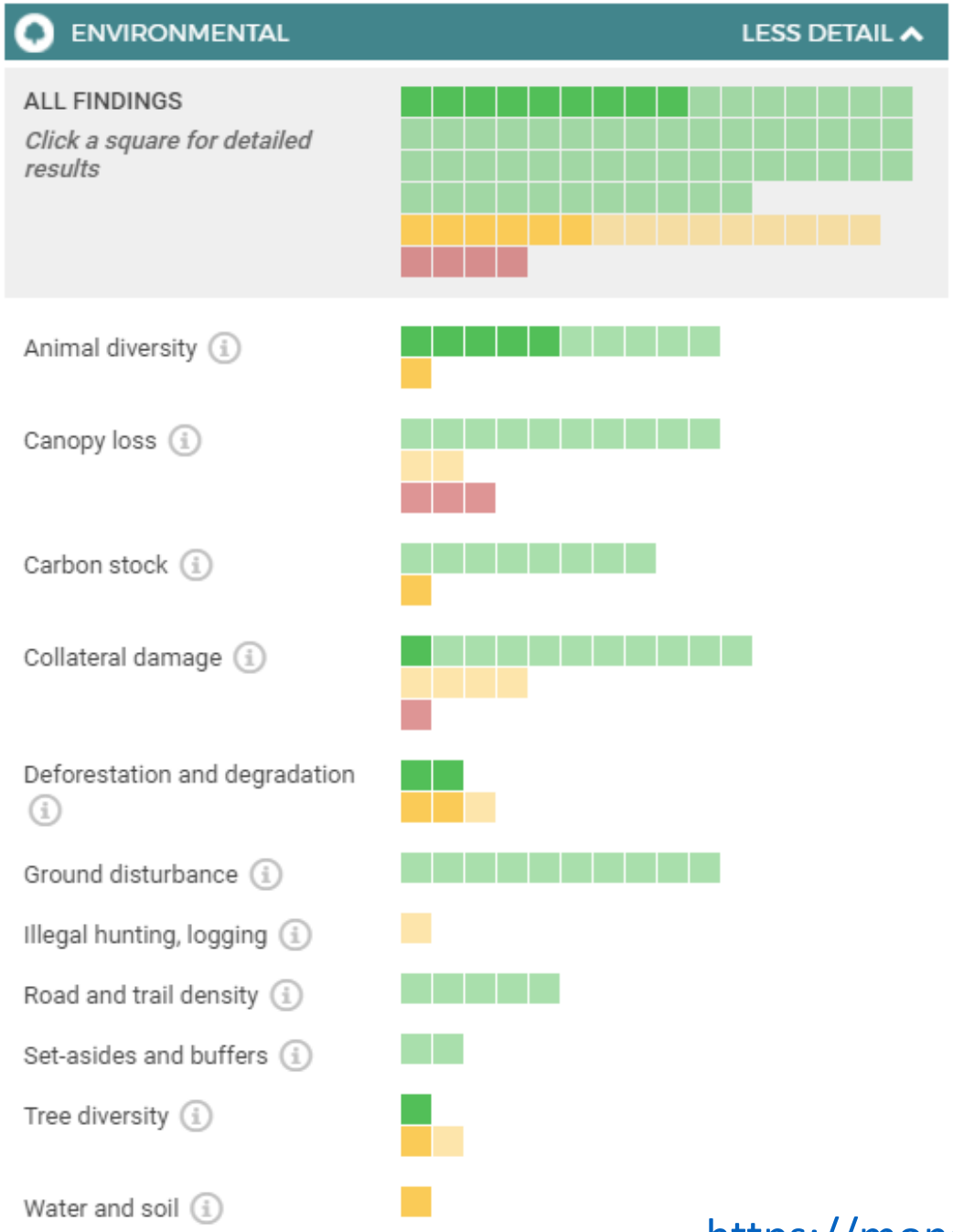
FSC FORESTS™ FOR ALL FOREVER

FSC® General Assembly 2017
Vancouver, Canada, 8–13 October

FSC FORESTS™ FOR ALL FOREVER

Climate benefits related to FSC forest management certification

Reforestation Restoration	Avoided degradation	Ecosystem restoration (including watershed function)	Avoided deforestation	Fires and other hazards avoided / mitigated	Extended rotation	Enhanced structural complexity (silviculture, retention)	Reduced chemical use
6.5.3, 6.6.2, 10.1.1, 10.1.2	6.6.3, 9.3.1, 10.11.1, 10.11.2, 10.11.3, 10.11.4	6.5.4, 6.6.2, 6.6.3, 6.7.2; 6.7.3, 6.8.2, 9.3.3	6.5.2, 6.5.5, 6.6.1, 6.9.1, 6.10.1, 9.3.1, 9.3.2, 9.3.3	10.9.1; 10.9.4	6.8.1, 6.8.2	6.6.3, 6.8.1, 6.8.3	10.6.1, 10.6.2, 10.6.3



Bottom-line:

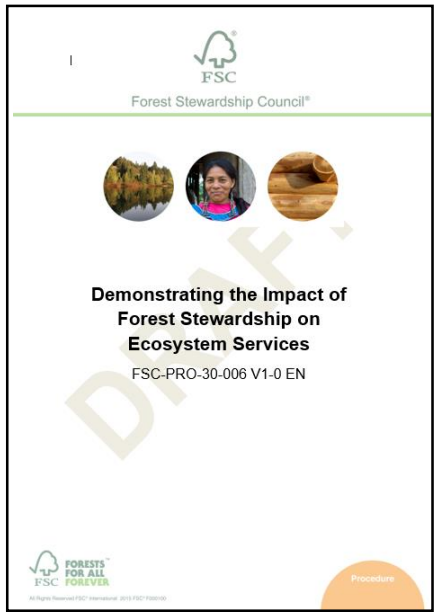
- *Some* studies show positive impacts, but…
- More research needed:
  - mixed results
  - few study locations
  - short time windows

https://mongabay-imgs.s3.amazonaws.com/vz/fullscreen/index.html?fsc

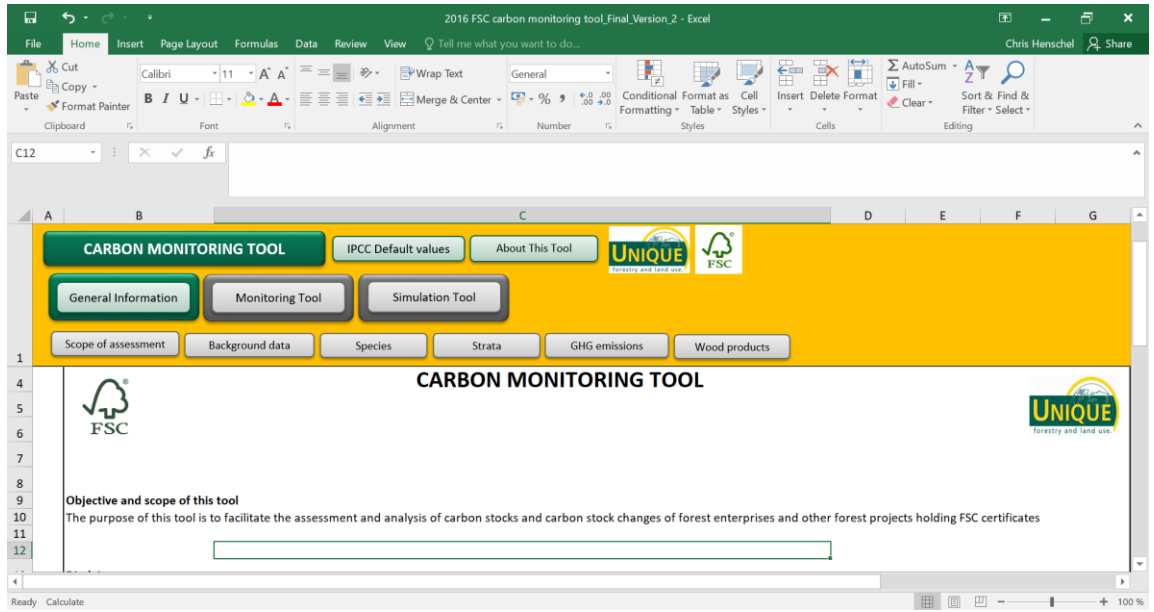
FSC® General Assembly 2017
Vancouver, Canada, 8–13 October

FORESTS FOR ALL FOREVER™ FSC

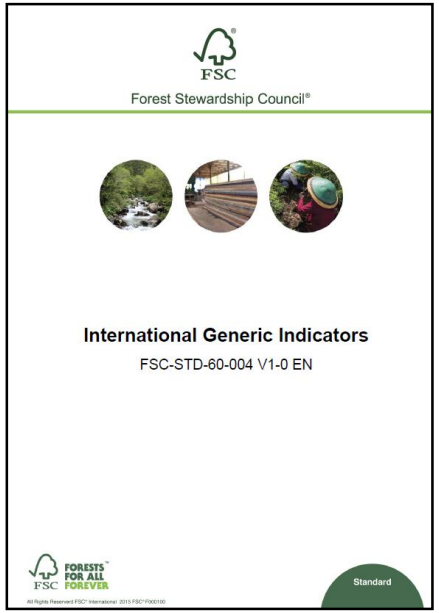
Verify maintenance of carbon stocks



Measure changes in carbon stocks



Maintain ecosystem function



Provide data inputs for GHG calculators

Ensuring real climate benefits

6.3 The Organization shall identify and implement effective actions to **prevent negative impacts of management activities on the environmental values**, and to mitigate and repair those that occur, proportionate to the scale, intensity and risk of these impacts.

6.6 The Organization shall **effectively maintain the continued existence of naturally occurring native species and genotypes, and prevent losses of biological diversity**, especially through habitat management in the Management Unit. The Organization shall demonstrate that effective measures are in place to manage and control hunting, fishing, trapping and collecting.

INSTRUCTIONS FOR STANDARD DEVELOPERS: The projected future growth in demand for energy derived from forest biomass may be accompanied by scrutiny on the forest management requirements to maintain carbon sequestration and storage. Indicators 6.3.1 – 6.3.3 require the prevention, mitigation and repair of impacts on environmental values, which include carbon sequestration and storage. Standard Developers should consider whether national socio-economic and environmental circumstances require specific indicators related to this environmental value.

Preventing negative impacts

FSC® General Assembly 2017
Vancouver, Canada, 8–13 October

FSC FORESTS FOR ALL FOREVER™

Finland NFSS V4

- Retain 20 dead trees per hectare
- Retain 10 living trees per hectare
- 30% of woody biomass residual retained
- Retain minimum of 25 stumps per hectare

Sweden NFSS V4

- Retain all dead trees
- 10 living trees per hectare
- Retain all trees with high biodiversity value
- Retain 2 windthrows per hectare
- Create three high stumps or girdled trees per hectare

USA NFSS V4

- Maintain/enhance/ restore natural levels of habitat components including:
- a) large live trees, trees with decay, snags, and well-distributed coarse down and dead woody material. Legacy trees where present are not harvested; and
- b) vertical and horizontal complexity.

Preventing negative impacts

UK NFSS V5

- Take action to accumulate a diversity of both standing and fallen deadwood over time
- Identify areas where deadwood is likely to be of greatest nature conservation benefit…take action to accumulate large dimension standing and fallen deadwood and deadwood in living trees in those areas.

Conclusions

- FSC probably has climate benefits
- FSC is developing tools to measure carbon stocks/losses and these could feed into supply chain carbon calculators
- FSC has safeguards for habitat features potentially affected by harvest for woody bioenergy... these safeguards vary between standards… we don’t have evidence of effectiveness.