



FSC-US



Forest Certification
and
Chain of Custody
for
Biomass-derived
Fuels and Energy



Issues for FSC and Biomass Harvest

- **How does biomass harvest affect FSC-certified forest management?**
 - Whole tree harvest
 - Harvest of woody debris
 - **Concerns regarding maintenance of ecosystems**
 - Habitat
 - Soil Structure
 - Soil Fertility
 - Soil-based Carbon
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Certification Issues of Bioenergy and Biofuels

- **How can fuel and energy derived from well-managed forests be distinguished?**
 - Certification
 - Chain of Custody
 - **Concerns addressing unwanted inputs**
 - Uncontrolled wood
 - Non-wood controversial sources
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FSC Standards and Certification Goals

- **Goals of FSC Standards**
 - Present guidance for environmentally and socially sound forest management
 - **Goals of FSC Certification**
 - Offer a mechanism through which environmentally and socially sound forestry can be distinguished from other forestry practices
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Forest Management and Chain of Custody

- **Forest Management Standards**
 - Ensure environmentally and socially sound management of forest
 - **Chain of Custody Standards**
 - Ensure credible identification and distinction of certified forest products in the market
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Forest Management Certification and Biomass

- **Issues surrounding whole-tree harvest are addressed in FSC Principles and Criteria through their potential ecological effects.**
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Forest Management Certification and Biomass

- **Criterion 6.3.c:**
“Ecological functions and values shall be maintained intact, enhanced, or restored, including...natural cycles that affect the productivity of the forest ecosystem.”
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Examples from FSC standards

- **Indicator 6.3.c.1**
“Coarse woody debris is maintained in the form of large fallen trees, large logs, and snags of various sizes.” (NI)
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Examples from FSC standards

- **Indicator 6.3.c.2**
“Harvest and post-harvest management activities allow for the maintenance or restoration of soil fertility, structure, and functions...e.g. slash is broadly distributed across the harvest area.”
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Examples from FSC standards

- **Indicator 6.3. b.2**
“A diversity of habitat components for native species is protected, maintained, and/or enhanced...e.g. declining trees and snags; well-distributed large woody debris”



Adjustments to Standards

- **Standards were written without assumption that whole-tree and woody debris harvest was an option**
- **Adjustments**
 - Guidance documents to underscore the need for managers and certifiers to pay close attention to these requirements in cases of biomass harvest.
 - E.g. reference to Minnesota Biomass Guidelines



FSC Chain of Custody

- **Challenge: How to ensure distinction of biomass and derivations of biomass that source from sound forest management.**
 - **Solution: FSC Chain of Custody is in place (as it is for all certified forest products)**
 - Adjustment can be made for issues addressing percentage based claims
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The FSC Promise

- **Volume Credit System**
 - **FSC-Pure**
 - 100% FSC certified input
 - **FSC- Mixed**
 - FSC-certified, controlled non-certified, and recycled/reclaimed
 - **Controlled Wood avoids controversial sources with FSC label**
 - Legality, Violation of traditional rights, GMOs, threats to HCVF, Conversion
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FSC Certification of Bioenergy

- **Energy derived from 100% certified sources could be certified FSC-Pure by energy plant with FSC CoC certificate**
 - **Energy derived from mixed sources could be certified FSC-Mixed – as long as the non-certified portion was controlled or reclaimed**
 - One issue that would have to be addressed by the FSC board is cofiring of biomass with coal (can coal be controlled?)
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FSC Certification of Biofuels

- **Fuels derived from 100% certified sources could be labeled FSC-Pure by an energy plant with FSC CoC certificate**
 - **Fuels derived from mixed sources could be labeled FSC-Mixed – as long as the non-certified portion was controlled or reclaimed**
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What does certification need to be successful in the Biomass/Bioenergy/Biofuels marketplaces?



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- **Demand for sustainable biomass**
 - Renewable must be sustainable
 - **Pilot testing**
 - Especially CoC
 - **Guidance for land managers and certificate holders**
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