Sustainable Bioenergy and the RSB

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Biomass and Bioenergy



Neither good nor bad by category

It all depends – on how and where produced

There are valid concerns – inadequate legislation

- Land use change and conservation of biological diversity
- Water availability

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- Invasive species as new energy crops
- Real carbon benefit
- Social concerns land and water rights, and others

That's why credible, practical, and affordable certification is crucial

NWF supports RSB for this

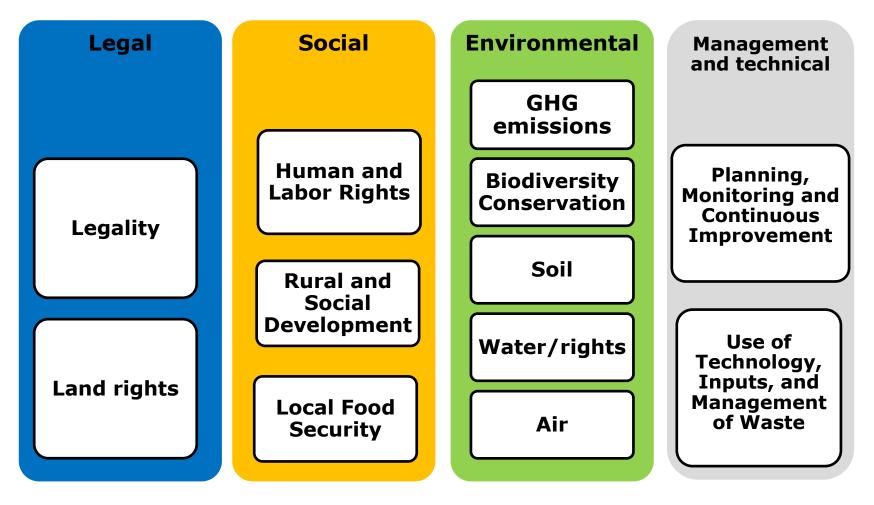






RSB Principles and Criteria







RSB Approach to ILUC – Low Risk Biomass

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<u>*Problem*</u>: Indirect impacts occur when land or raw materials are switched from traditional use as food/feed/fiber to a new use – for bioenergy or biomaterials.

One result may be that the market demands replacement products, which raises the price and induces invasion of additional production areas - the famous *"Indirect Land Use Change*."

RSB's Solution: The Low Risk Biomass Approach

- Developed jointly with WWF International and Ecofys
- Encourages biomass production/processing which decreases the risk of displacement and competition with the food, feed and fiber sectors
- Designed as a built-in complementary module for RSB-certified companies who wish to demonstrate a low risk of creating indirect impacts.



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Low ILUC Risk



3 scenarios

- 1. Yield increase beyond the baseline/no additional land conversion
- 2. Unused or degraded land/avoid shifting cultivation and natural habitats
- 3. Wastes and residues/not requiring dedicated production from arable land



Food versus Fuel is a Red Herring – Much Too Simplistic #I



The real controversy is conflict over LAND and its many uses

• Nature conservation, human habitation, etc.

Land may be available

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Low productivity/degraded pastures and cropland can be restored

But humans don't have a good history of using land carefully

- Costs of land restoration often discourage investment
- Native prairies and rangelands are being turned into monocultures



Food versus Fuel is a Red Herring – Much Too Simplistic #II



Food security can be INCREASED via biomass and biofuels

- Diversify crops and markets
- Give value to cover crops and residues
- Provide non-food, seasonally staggered sources of income
- Provide energy for value-added products (critical for smallholders and local communities)
- Stabilize grain prices <u>IF</u> mandate for fuels is variable





Residues can be Carefully Harvested – but Potential Impacts Remain



Forestry and agriculture residue harvests should protect wildlife and habitat from

Harvesting during nesting, cutting stubble too short, chemicals

Soil structure and carbon should be conserved

How much residue should be left on the land?

Use of cover crops and no till practices could maximize carbon retention

- But most farmers don't use these yet
- Rules for these are uncertain/uneven



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Biomass for Energy – More Controversies



Threats

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- Habitat loss Bottomland Hardwoods and Longleaf Pine chipped up/for co-firing with coal
- Whole trees carbon debt for decades masquerading as 'carbon neutral' (during precisely the near-term period where emissions must come down)
- Large scale power plants may depend on huge "woodsheds" that exceed local residue capacity

Solutions

- Small diameter thinnings or residues from harvest
- Short time to sequester 5-7 years
- Additional sequestration more carbon in the forest, not less
- Good forest management FSC standard is RSB selection



Final Message – Do More than One Thing at a Time



So many smart projects solve more than one problem

- Waste treatment service and get fuel
 - MSW/Sewage/Algae-choked lakes
- Restore land to productivity and gain fuel
- Cover crops and intercropping several crops from the same land
- Numerous ways to produce food and fuel from the same land and resources
 - Moderate intensification of cattle and sugarcane in Sao Paulo, Brazil

RSB recognizes these projects



Thank you!

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