Emerging Guiding Principles for Assessing Sustainability of Bio-Based Products

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What Makes A Product Sustainable?

- Biobased content is not adequate evidence
- Other factors need to be considered
  - Environmental
  - Economic
  - Social issues
- A framework is emerging
  - Drawing on existing and emerging mechanisms
  - For each product there is a maximum biobased content consistent with optimal product performance
- Biobased and fossil based products should be evaluated similarly

Planning for Sustainability Assessment

- Assessment of products should be on a cradle-to-grave basis
- Scope should include all products
- Best available (but not perfect) data needed
- Sustainability assessments should be
  - Open
  - Transparent
  - Accessible
  - Peer reviewed
- Assessments should be science based

Indicators To Be Measured

- Indicators used should be consistent with accepted international frameworks, transparent, and documented
- Examples of environmental measures:
  - Green house gases emissions
  - Water use
  - Direct land use
  - Human health effects
  - Habitat changes
  - Species diversity

To Summarize

- Consistency of life cycle assessment (LCA) procedures and measures across products and countries is a necessary goal
- While process, data, and measures will evolve over time, one should not wait for perfection to begin LCA assessments
- Science based data and stakeholder consensus in identifying measures are important
- Biobased content that results in optimum product performance differs across products; hence, optimal biobased contents will differ, as well