DOE Sustainable Landscape Design
Argonne National Laboratories

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Roundtable on Sustainable Biomaterials
Established in 2007 at the Swiss Federal Institute of Technology (EPFL) as the “Roundtable on Sustainable Biofuels (RSB)”

- Grant Funded by the Packard Foundation
- Set up as a forum to discuss biofuels sustainability issues: Expert Groups on Environmental & Social Issues, GHG Accounting, indirect Land Use Change, etc...
- Set up a virtual membership comprised of 7 different “chambers” for global participation by NGOs and companies
- Held workshops throughout the world on key bioenergy sustainability topics
- Joined the ISEAL Alliance to follow codes of good practice in transparency and participation
- Expanded to all “Biomaterials”
Diverse Participation of Different Organizations

1. Farmers and growers of biomass
2. Industrial biofuel/biomaterial producers
3. Retailers/blenders, the transportation industry, banks/investors
4. Human and Labor Rights Organizations & Trade Unions
5. Rural development & food security organizations
6. Environment or conservation organizations
7. Intergovernmental organizations (IGOs) & governments
Launch of Certification Program

Membership Chambers  Certification Program
Bioenergy sustainability is largely driven by public policy

- EU RED: GHG and Biodiversity Requirements – Must be Certified
- US RFS: GHG & Land Use Change Requirements
- California LCFS: GHG & Sustainability Reqs (Still in development)
- Others: Alberta RFS, British Columbia LCFS, German FQD etc...

Aviation Sector: Airlines need low carbon biofuels to meet ETS targets – priority on sustainability

Leading brand names increasingly require certified sustainable suppliers for food, feed, fiber and now biomaterials.
Understanding the drivers for certification and operating in distinct supply chains

- RSB materials certified to date
  - Carinata: Distinct farmer groups selling to one company
  - Camelina: Distinct farmer groups selling to one company
  - Jatropha: Individual (discrete) plantation
  - Sugarcane: Individual (discrete) plantations
  - Quick Coppicing Poplar: Individual (discrete) plantation
  - Various wastes & residues

- Drivers: EU Market Access & Demand from Aviation Sector
Advanced biofuels have unique sustainability risks, and characteristics that may create opportunities.
Issues for Consideration

- How to deal with the commodity agriculture challenge?
  - *Is that less of a concern with cellulosic and novel feedstocks?*

- What are the appropriate drivers for sustainability?
  - *Policy?*
  - *Market driven?*

- How do supply chain certification and sustainable landscape design integrate?
  - *Is there a mechanism by which we can envision sustainable landscape design principles being integrated into sustainability certification? What would that look like?*
Thank you!

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