



# Toward a Global Sustainability Approach for Alternative Jet Fuels

Kickoff Briefing for Evaluating Sustainability Session

October 25, 2016

# Sustainability Components

- \* Environmental – e.g.,
  - \* Greenhouse gases (GHG) life cycle assessment (LCA)
  - \* Land use
  - \* Water quality/quantity
  - \* Air quality
  - \* Biodiversity, invasive species, etc.
- \* Social – e.g.,
  - \* Legality
  - \* Land/water/indigenous rights
  - \* Human health
- \* Economic - e.g.,
  - \* Viability
  - \* Net energy balance
  - \* Energy diversity
  - \* Workforce training

# Existing Sustainability Assessment Systems

- \* Regulatory Schemes, e.g.,
  - \* US Renewable Fuel Standard (RFS)
  - \* EU Renewable Energy Directive (RED)
  - \* EU Fuel Quality Directive (FQD)
- \* Voluntary Sustainability Certification Schemes for Bioenergy
  - \* International Sustainability & Carbon Certification (ISCC)
  - \* Roundtable on Sustainable Biomaterials (RSB)
  - \* ...
- \* Voluntary Sustainability Certification Schemes for Feedstocks
  - \* Bonsucro (sugar certification)
  - \* Forest Stewardship Council (FSC)
  - \* Roundtable for Responsible Soy (RTRS)
  - \* Roundtable for Sustainable Palm Oil (RSPO)
  - \* Sustainable Agriculture Network (SAN)
  - \* Sustainable Forestry Initiative (SFI)
  - \* ...

# Sustainability Assessment Systems – Reciprocity/Cross-Acceptance

- \* Regulatory Schemes may accept Voluntary Certification Schemes
  - \* E.g., EU RED has 19 accepted voluntary certification schemes
- \* Voluntary Schemes May Accept Other Schemes
  - \* E.g., RSB accepts Bonsucro, FSC, SAN certification for feedstocks
- \* Metastandards
  - \* Set a suite of minimum criteria that can be met by any voluntary scheme and thereby be accepted

# Mechanism for internationally-agreed approach: ICAO Global Market Based Measure

- \* Sustainability approach currently being developed
- \* In addition to agreed approach to LCA GHG assessment

## Requirements

- \* Alternative jet fuels have life cycle GHG emissions less than conventional petroleum
- \* Alternative jet fuels also need to meet sustainability requirements

# Possible Approaches for an Internationally-Agreed Approach

- \* International agreement is incredibly hard to achieve
  - need to carefully consider why we want an agreement and what we want to achieve with it
- \* Considerable benefits exist if one could utilize existing sustainability regulations and schemes.
- \* Options:
  - \* Accept fuels that qualify for existing regulations
  - \* Accept fuels that are certified under existing voluntary sustainability schemes
  - \* Accept fuels that are certified under an existing scheme that meets the requirements of a metastandard
    - \* ISO Bioenergy Standard
    - \* IATA Metastandard proposal

# Challenges

- \* Cost to producers (want to minimize additive requirements, minimize market distortions toward small/large landowners, corporations, etc.)
- \* Cost / resources for any global body (e.g., ICAO) to supervise accepted schemes and ensure ongoing verification/compliance
- \* Implementation occurs at State (country) level – how will a global standard/body ascertain environmental performance?
- \* Geographic variations in laws, regulations, and ecosystem sensitivity and structure.

# Other considerations

- \* Are there laws that already regulate certain aspects in the region of interest?
- \* Environmental tradeoffs do exist – what carries most weight depends on societal or programmatic decisions
- \* Best practices have been defined by UN and others for a variety of these resource areas and should be leveraged

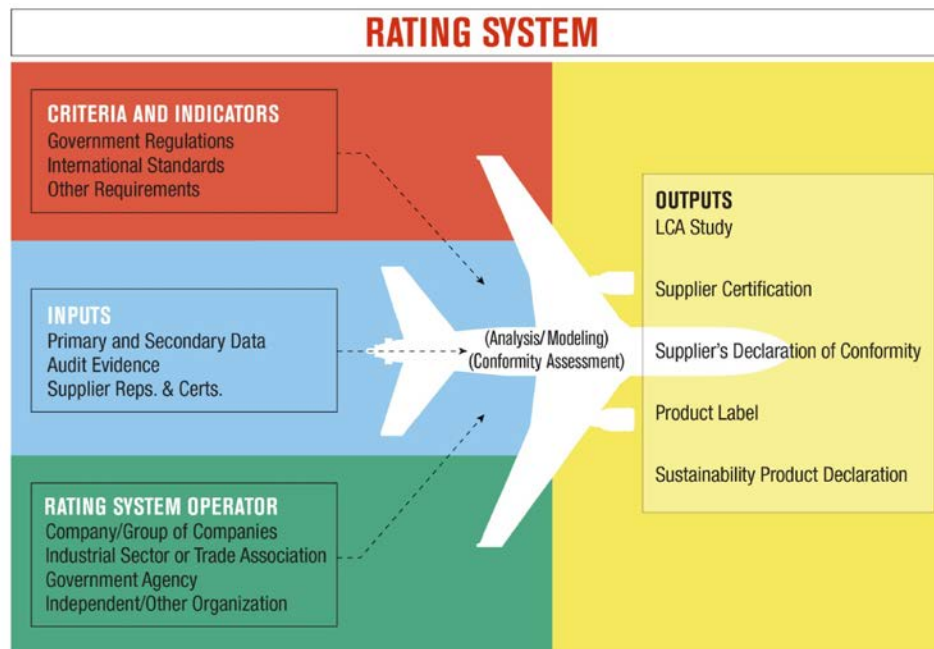


# Discussion with CAAFI Environment Team – We want your input!

- \* What is best approach from producer/member perspective for harmonization among sustainability approaches?
  - \* A new standard/approach?
  - \* Reciprocity?
  - \* What would people/producers like to see done/used?
  - \* Is harmonization needed? Possible? Burdensome?
  - \* What outstanding challenges are there for evaluating sustainability well?

# Other possible slides

# What is structure of sustainability evaluations?



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