The Global Bioenergy Partnership (GBEP) and its contribution to the sustainable development of bioenergy

Dr. Maria Michela Morese
Executive Secretary
Global Bioenergy Partnership
Food and Agriculture Organization of the United Nations (FAO)
The Global Bioenergy Partnership (GBEP) Membership

38 Partners and 41 Observers
(Governments and International Organizations)
Italy and Brazil are currently Chair and co-Chair of the Partnership. The Secretariat is hosted at FAO in Rome.
1. **GBEP sustainability indicators for all types of bioenergy**

Below is a table listing the indicators developed by the GBEP for assessing and monitoring bioenergy sustainability at the national level. The indicators cover three pillars of sustainability and address the production and use of all liquid, solid, and gaseous biofuels for heating and cooking, electrification, and transport.

### Environment

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<tr>
<td>3. Harvest levels of wood resources</td>
<td>11. Change in income</td>
<td>19. Gross value added</td>
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<td>4. Emissions of non-GHG air pollutants, including toxics</td>
<td>12. Jobs in the bioenergy sector</td>
<td>20. Change in consumption of fossil fuels and traditional use of biomass</td>
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<td>5. Water use and efficiency</td>
<td>13. Change in unpaid time spent by women and children collecting biomass</td>
<td>21. Training and re-qualification of the workforce</td>
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<td>6. Water quality</td>
<td>14. Bioenergy used to expand access to modern energy services</td>
<td>22. Energy diversity</td>
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<td>7. Biological diversity in landscape</td>
<td>15. Change in mortality and burden of disease attributable to indoor smoke</td>
<td>23. Infrastructure and logistics for distribution of bioenergy</td>
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### Economic

- Productivity
- Net energy balance
- Gross value added
- Change in consumption of fossil fuels and traditional use of biomass
- Training and re-qualification of the workforce
- Energy diversity
- Infrastructure and logistics for distribution of bioenergy
- Capacity and flexibility of use of bioenergy
Implementation of the sustainability indicators
Further guidance on the GBEP indicators

- Development of an **Implementation Guide**, based on lessons learnt from measurement of the GBEP indicators at country level

- To provide guidance on **methodological** and **practical issues** related to the implementation of certain indicator methodologies

- Further guidance on:
  - **Attribution** of impacts to bioenergy production and use – identifying a range of suitable approaches for each indicator
  - Linkages with international processes, such as monitoring of progress towards the **Sustainable Development Goals**
2. GBEP work on capacity building

Activity Groups


2. **Raising awareness, and sharing of data and experience on the implementation of GBEP indicators** (leading Partners: Germany and Indonesia)

3. **Study tour for capacity building and training** (leading Partner: Brazil) – 5 Bioenergy Weeks so far, in different regions of the world. 2018 Bioenergy Week in Argentina.

4. **Sustainable modern wood energy development** (leading Partner: FAO)


6. **Bioenergy and Water** (leading Partner: IEA/IEA Bioenergy) – Final report in 2017

7. **Biogas** (leading Partners: Viet Nam and ECOWAS) – Just established

8. **Advanced Biofuels** (leading Partner: U.S.) – Under discussion
Conclusions

- Bioenergy has the potential to reduce GHG emissions and offer opportunities to agriculture and forestry sectors.
- **Sustainability** is key.
- Monitoring sustainability is a necessary step in order to understand, evaluate and improve the performances of the sector.
- GBEP is actively working on the diffusion of sustainability in the processes of production and use of bioenergy resources with several activities and tools, including the GBEP Sustainability Indicators for Bioenergy.
- Particularly for **policymakers**, GBEP represents an important forum for discussion and harmonization of policies.
Thank you

GBEP-Secretariat@fao.org

http://www.globalbioenergy.org
In 2014 bioenergy production reached 1.37 billion tons of oil equivalent or about **10% of world primary energy supply** (IEA, 2016).

Bioenergy is the fourth most important energy source worldwide and the first among the renewables.

About **60%** of bioenergy produced is in the form of **traditional biomass**.

Only 5% of the energy from biomass produced worldwide is employed in the transport sector.

**TPES – 38% OECD, 35% Asia, 6% Africa**

Source: IEA, WEO 2012
In the 450 ppm scenario, IEA foresees an important role for bioenergy. IEA long term scenarios show bioenergy accounting for almost 20% of global CO2 emission reductions by 2060.

Source: OECD/IEA 2016
Global Biofuel Policies and Mandates

Argentina
- Current mandate: 5% Ethanol, 10% Biodiesel

Brazil
- Current mandate: 25% Ethanol, 5% Biodiesel

China
- Current mandate: 10% Ethanol in 9 provinces
- Target: Ethanol/Biodiesel = 10%

India
- Current mandate: 5% Ethanol
- Target: Ethanol/Biodiesel = 20%

Indonesia
- Current mandate: 3% Ethanol, 10% Biodiesel

South Africa
- Current mandate: 10% Ethanol

USA
- Current mandate: 136 billion liters by 2022

EU
- Current mandate: 10% renewables in transport sector (up to 7% from food crops)

Indonesia
- Current mandate: 3% Ethanol, 10% Biodiesel

Sources: Global Renewable Fuels Alliance, 2017 and Biofuels Digest, 2014
Policy and measures related to energy in and from agriculture in the African (I)NDCs

243 Policy and Measures (PAMs) related to energy in and from agriculture, representing 47 African countries.

87 PAMs related to modern bioenergy from 41 countries: 28 related to liquid biofuel, 26 to biogas, 15 to solid biofuel & 18 to non specified biomass feedstock.

95 PAMs related to traditional bioenergy from 41 countries: 24 countries combine more sustainable wood to energy systems with more efficient cook stoves; 15 countries support efficient stove programs only; and 2 countries support more sustainable wood to energy systems only.

61 PAMs related to energy use in agriculture from 30 countries: 33 PAMs for energy use at the production stage; 16 PAMs for food value added through processing and marketing; and 12 PAMs for post-harvest handling. 6 countries combine the 3 categories.
SDGs relevant for bioenergy