

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

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**Dr. Maria Michela Morese**

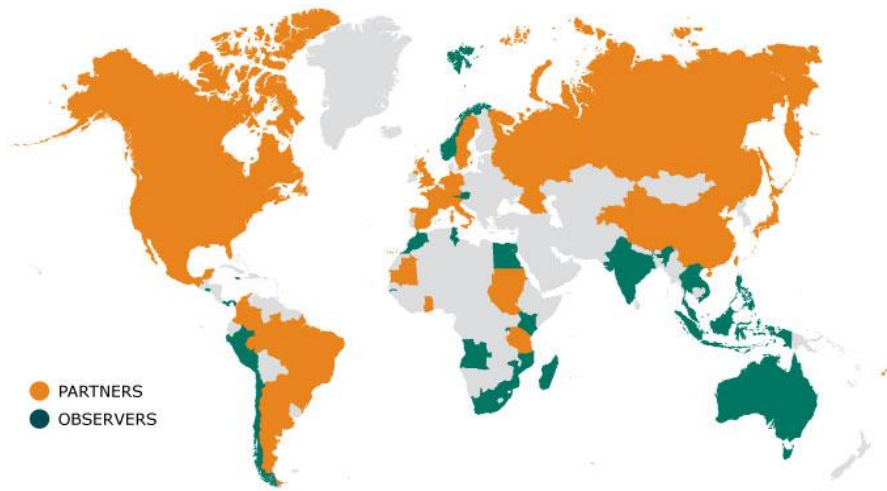
*Executive Secretary*

*Global Bioenergy Partnership*

*Food and Agriculture Organization of the United Nations (FAO)*



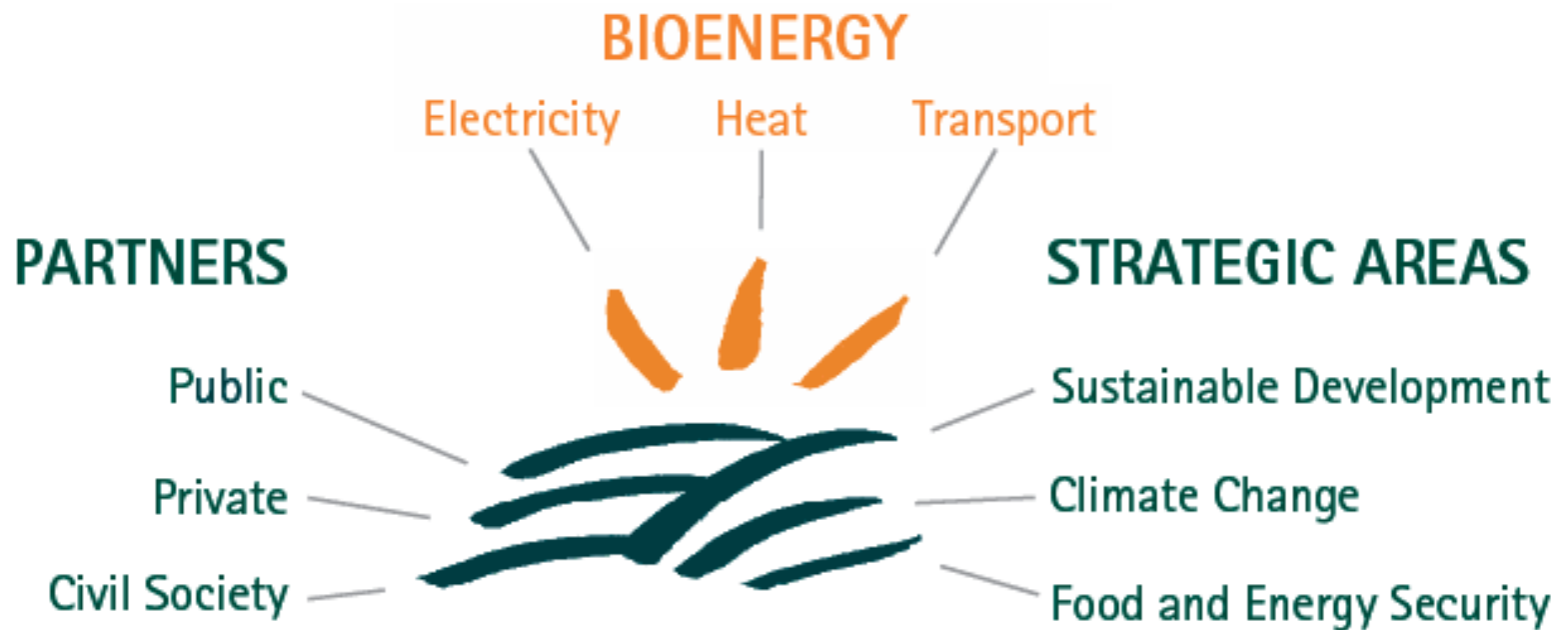
# The Global Bioenergy Partnership (GBEP) Membership



**38 Partners and 41 Observers**  
 (Governments and International Organizations)





# The GBEP focus

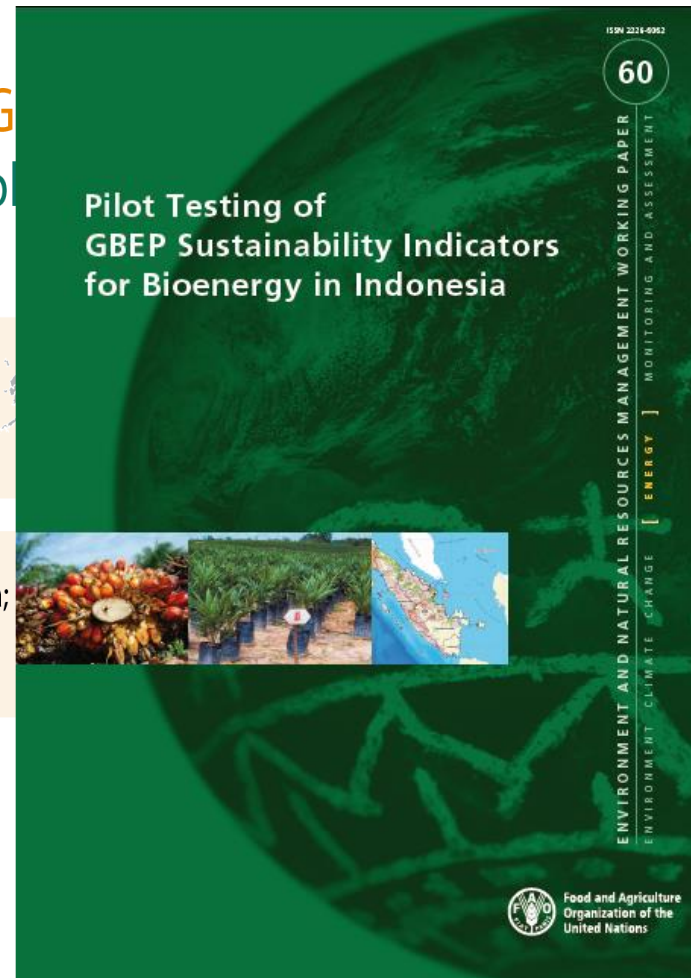
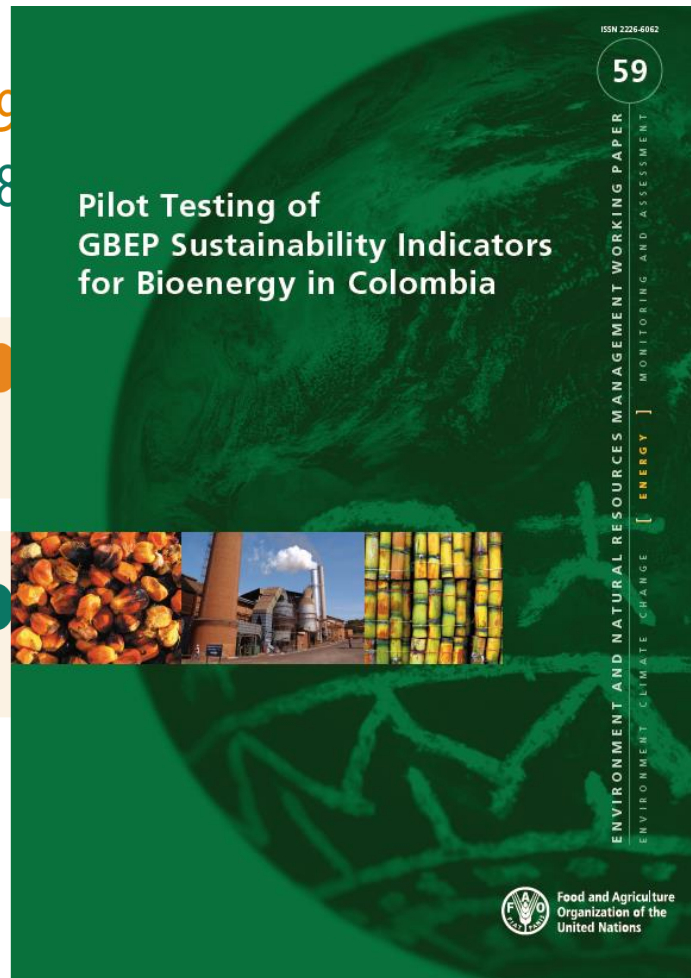


**Italy** and **Brazil** are currently Chair and co-Chair of the Partnership.  
The Secretariat is hosted at FAO in Rome.

# 1. GBEP sustainability indicators for all types of bioenergy

ENVIRONMENTAL		ECONOMIC
1. Lifecycle GHG emissions		Productivity
2. Soil quality		Net energy balance
3. Harvest levels of wood resources		Gross value added
4. Emissions of non-GHG pollutants, including toxics		Change in consumption of fossil fuels and traditional use of biomass
5. Water use and efficiency	<p data-bbox="608 792 1207 935"><b>THE GLOBAL BIOENERGY PARTNERSHIP SUSTAINABILITY INDICATORS FOR BIOENERGY</b> FIRST EDITION</p> 	Training and re-qualification of the workforce
6. Water quality		Energy diversity
7. Biological diversity in landscape		Infrastructure and logistics for distribution of bioenergy
8. Land use and land-use change related to bioenergy feedstock production		Capacity and flexibility of use of bioenergy

# Implementation of the sustainability indicators



# Further guidance on the GBEP indicators

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- 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

1. **Promoting Sustainable Modern Bioenergy in West Africa** (leading Partners: U.S. and ECOWAS) – Contributed to the development of the *Regional Strategy on Bioenergy – Final report in 2013*
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)
5. **Global Bioenergy Atlas** (leading Partner: IRENA) – Final report in 2015
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

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- 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



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<http://www.globalbioenergy.org>

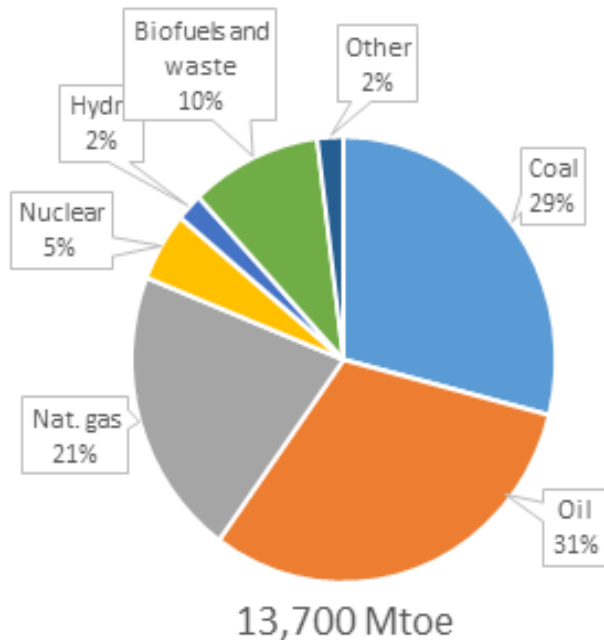


# Bioenergy production and use

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

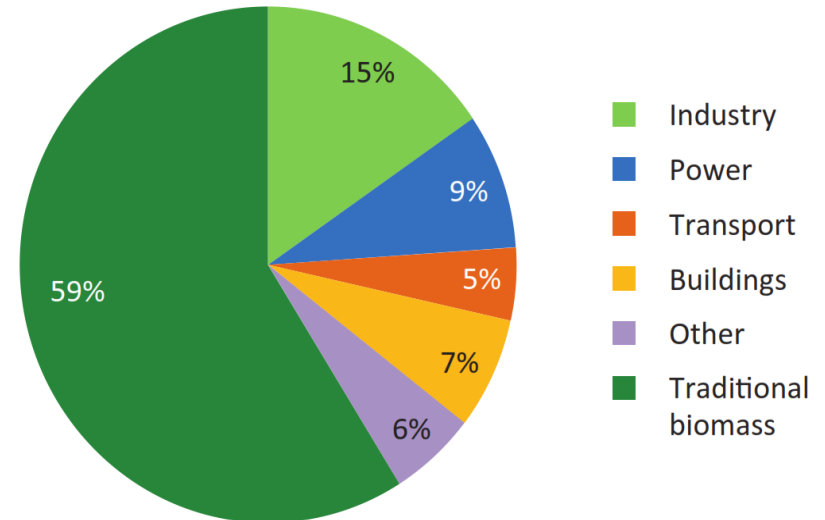
**TPES – 38% OECD, 35% Asia, 6% Africa**



Source: IEA, 2016

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

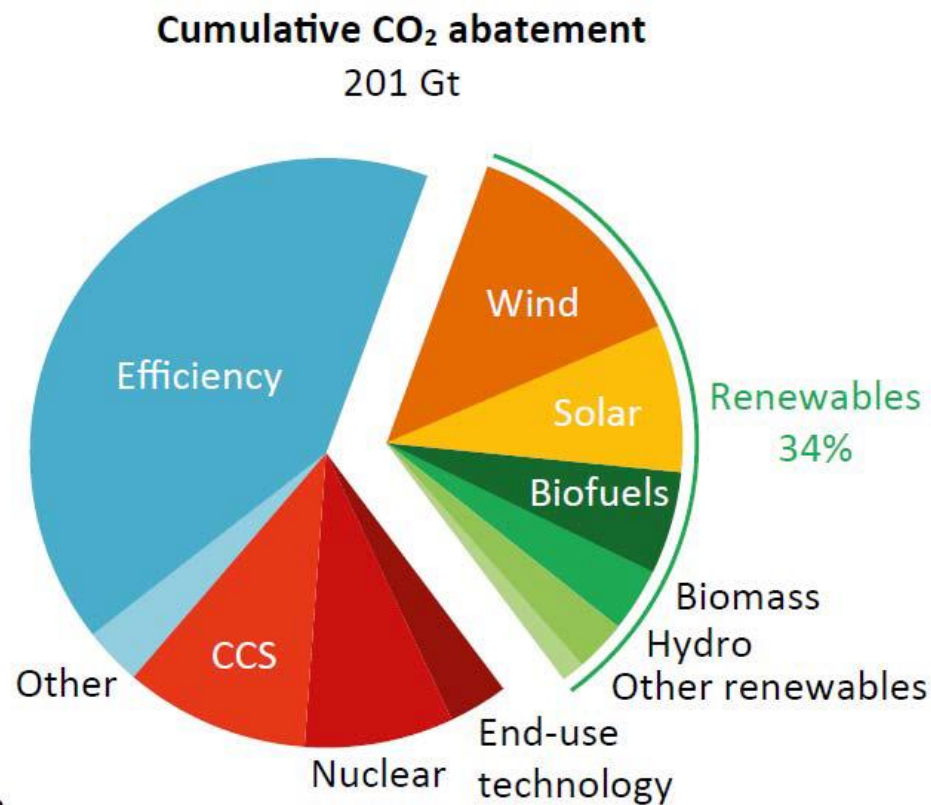
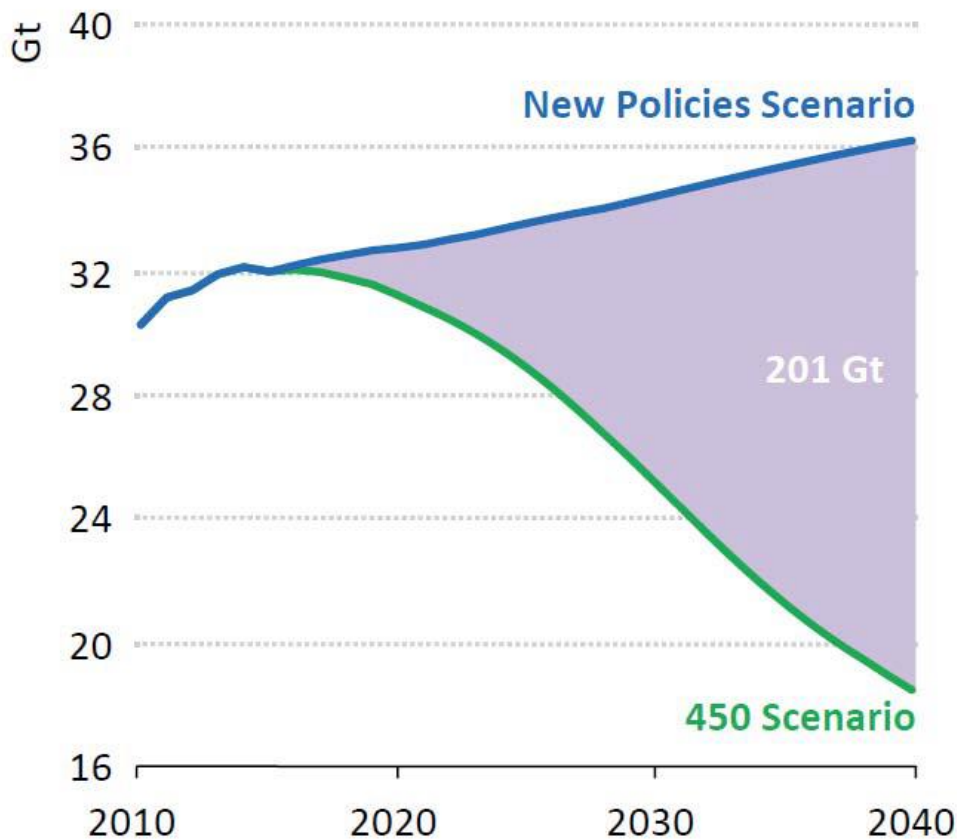
Only 5% of the energy from biomass produced worldwide is employed in the transport sector



Source: IEA, WEO 2012

# GHG emissions: data and projections

In the 450 ppm scenario, IEA foresees an important role for bioenergy



IEA long term scenarios → bioenergy accounting for almost 20% of global CO<sub>2</sub> emission reductions by 2060

Source: OECD/IEA 2016

# Global Biofuel Policies and Mandates



**EU** current mandate  
**10% renewables in transport sector**  
(up to 7% from food crops)

**CHINA** current mandate  
**Ethanol : 10%** in 9 provinces  
  
Target  
**Ethanol/Biodiesel: 10%**

**INDIA** current mandate  
**Ethanol : 5%**  
  
Target  
**Ethanol/Biodiesel: 20%**

**INDONESIA** current mandates  
**Ethanol : 3%**  
**Biodiesel: 10%**

Sources: Global Renewable Fuels Alliance, 2017 and Biofuels Digest, 2014

**USA**  
current mandate  
**136 billion liters by 2022**

**ARGENTINA**  
current mandate  
**Ethanol: 5%**  
**Biodiesel: 10%**

**BRAZIL** current mandate  
**Ethanol : 25%**  
**Biodiesel: 5%**

**SOUTH AFRICA**  
current mandate  
**Ethanol : 10%**

**MOZAMBIQUE**  
current mandate  
**Ethanol : 10%**

# 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.

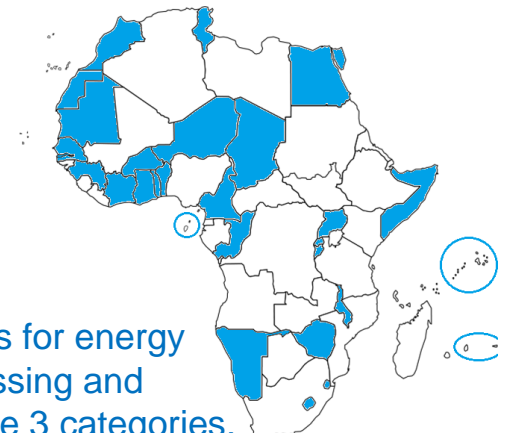
87 PAMs related to **modern bioenergy** from 41 countries: 28 related to liquid biofuel, 26 to biogas, 15 to solid biofuel & 18 to non specified biomass feedstock.



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.

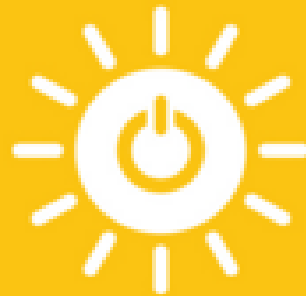


# SDGs relevant for bioenergy

2 ZERO HUNGER



7 AFFORDABLE AND CLEAN ENERGY



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



7 AFFORDABLE AND CLEAN ENERGY



13 CLIMATE ACTION



13 CLIMATE ACTION



10 REDUCED

15 LIFE ON LAND



12 RESPONSIBLE CONSUMPTION AND PRODUCTION

