IEA Bioenergy

WEBINAR

IEA BIOENERGY TCP

Global Collaboration on Sustainable Bioenergy

20 May 2020

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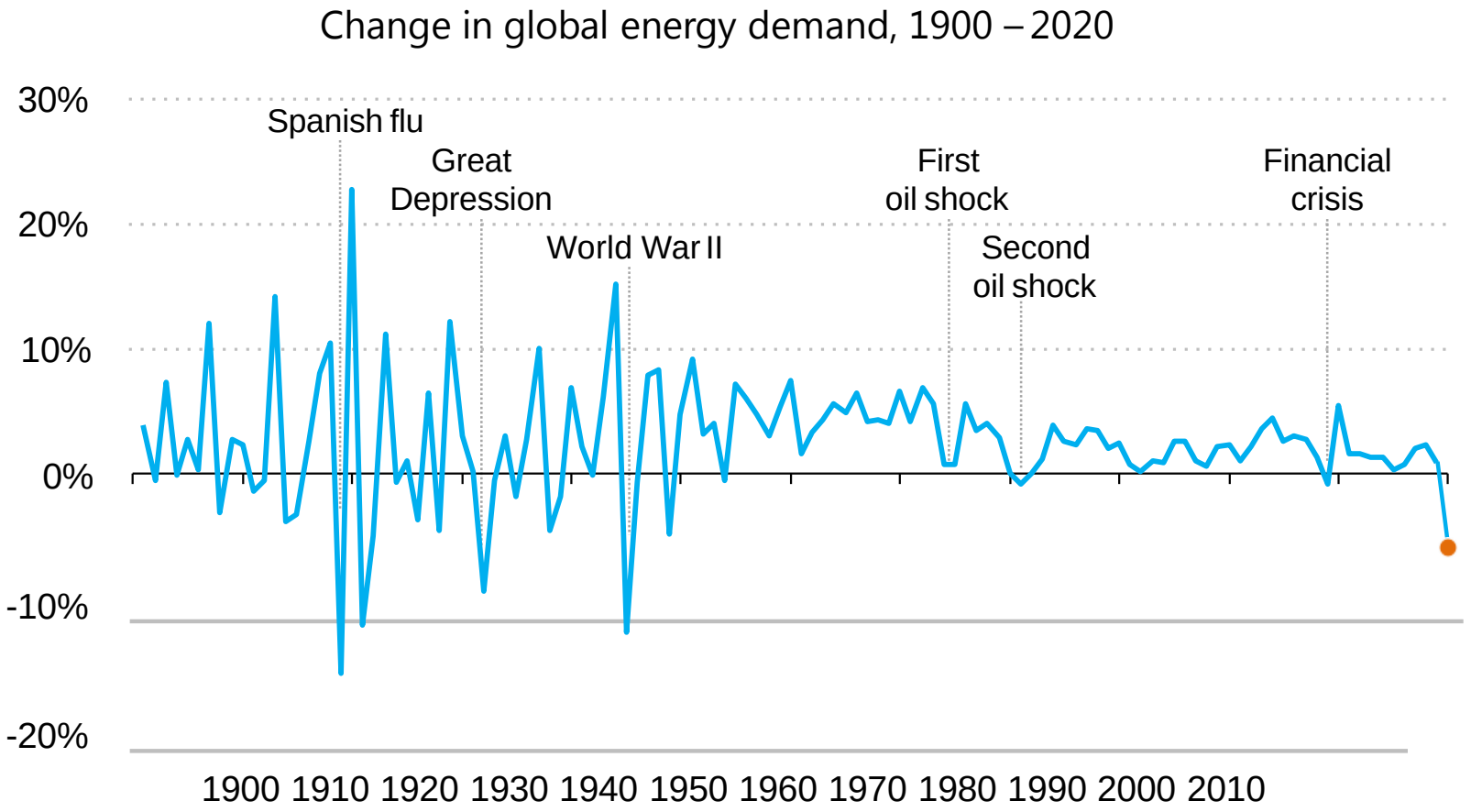
Agenda

- Impact Coronavirus?
- Introduction to IEA Bioenergy
- New Strategic Plan
- IEA Bioenergy Tasks – key working areas
- International Collaboration
- Communications
- New Branding
- Tour of the new Website
- Questions

Coronavirus: a once in century event for energy demand



The shock to energy demand in 2020 is set to be the largest in 70 years. In IEA's estimate, global energy demand declines by 6%, a fall seven times greater than the 2009 financial crisis.

Source: IEA Global Energy Review, 30 April 2020

The impacts of the COVID-19 crisis on global energy demand and CO_2 emissions

Impact of Covid-19 on Bioenergy?

- Lower overall fuel demand => lower biofuels demand
- Cheap oil prices => more difficult to compete
- Economic problems for companies and governments
    => Potential waivers for renewable energy obligations
    => Or delay investments in green transitions

+ Flexibility (e.g. ethanol diverted to use as disinfectant)
+ Attention for green recovery / requirements for company support
+ Higher focus on regional / local value chains / security
    ⇒Improve system resilience and local economy

+ A time to consider opportunities

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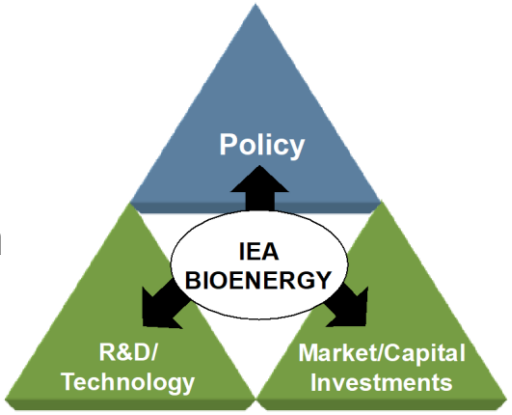


Technology Collaboration Programme (TCP) functioning within a framework created by the **International Energy Agency** (IEA)

Goal:

- International **collaboration** and **information exchange** on bioenergy research, technology development, demonstration, and policy analysis
- Facilitate the commercialization and market deployment of **environmentally sound**, **socially acceptable** and **cost-competitive** bioenergy systems

Key Role: Independent collaborative body focused on delivering clear and verified information on bioenergy

Work programme carried out through **Tasks** and **Special Projects**, covering the full value chain from feedstock to final energy product

26 members: *15 European countries + European Commission, United States, Canada, Brazil, China, India, Japan, Korea, Australia, New Zealand and South Africa*

IEA Bioenergy Members

Budget in 2020: 2 Million US$

Tasks: 11 + Special projects

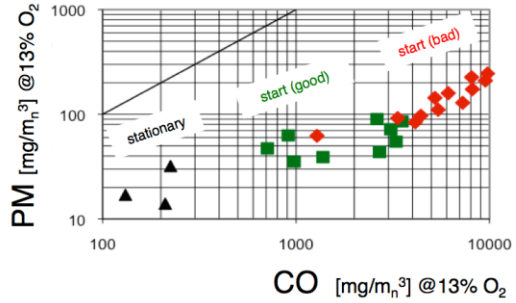
Direct participation: > 200 persons

IEA Bioenergy TCP Objectives: 2020-2025

1. Enable the development and application of **innovative bioenergy technologies** to provide **substantial contributions to future global energy demand**; and **serve a major role in decarbonising** transport, heat, power and electricity.
2. Support **increased sustainable biomass production** and establishing efficient biomass supply chains based on transparent, science-based criteria.
3. Fully explore bioenergy's potential to **deliver significant greenhouse gas savings** across all energy sectors, and its capacity to **deliver negative emissions**, e.g., through BECCS/U.
4. Engage stakeholders and **expand collaboration** to pursue objectives and enhance and **optimise communication channels** to disseminate outputs widely and **increase engagement with emerging and developing countries**.

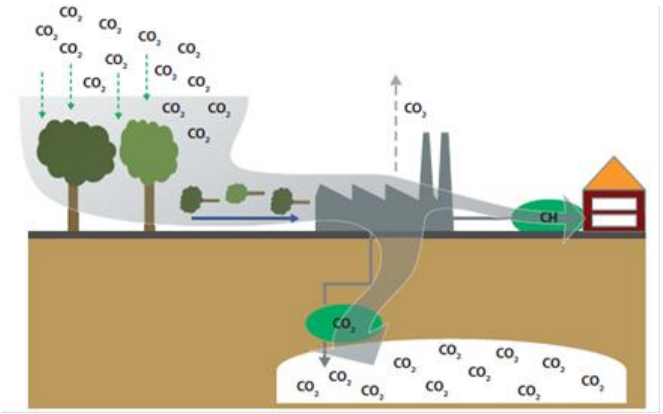
IEA Bioenergy Tasks
Collaborating Globally

Tasks: Key Work Areas



Task 32: Biomass **Combustion**

- Improvement of small scale biomass combustion systems
- Biomass for generation of high temperature heat in industry
- Flexibility of large scale biomass combustion systems



Task 33: **Gasification** of Biomass and Waste

- Implementation of bio-CCS in biofuels production
- Emerging gasification technologies
- Application of gasification in (bio)-refineries

Task 34: Direct thermochemical **liquefaction**

- Facilitate market entry of DTL products (support of standards development)
- Technical notes on unpublished DTL experience (material compatibility, process balancing, bio-oil storage and safety)
- PyNe newsletter on scientific progress and market developments

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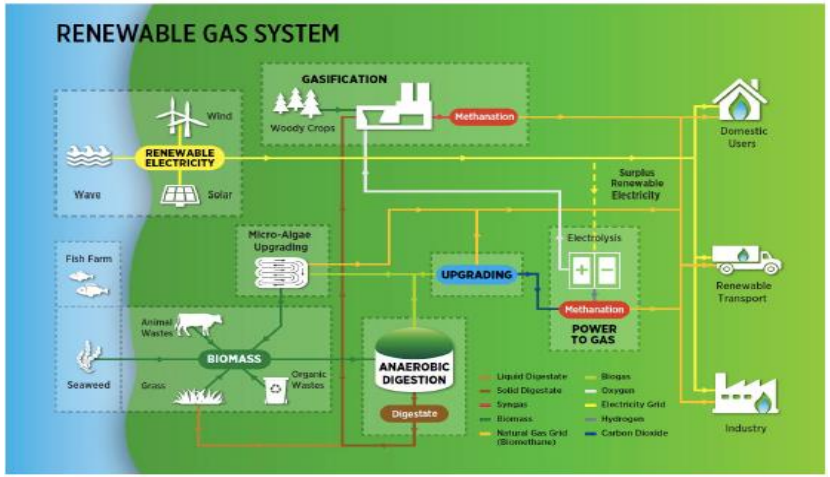
Tasks: Key Work Areas

Task 36: Material and energy valorisation of **waste** in a circular economy

- The role of Waste-to-Energy in a circular economy
- Technology pathways for waste to energy
- Waste as a feedstock for recycling

Task 37 – Energy from **biogas**



*Task 38 - **Climate Change** effects of biomass and bioenergy systems*

- Reference systems for evaluating climate effects of bioenergy
- Quantifying the climate effects of forest-based bioenergy
- Harmonizing tools for biofuel assessment
- Challenging misconceptions

From 2019 this topic is continued in Task 45

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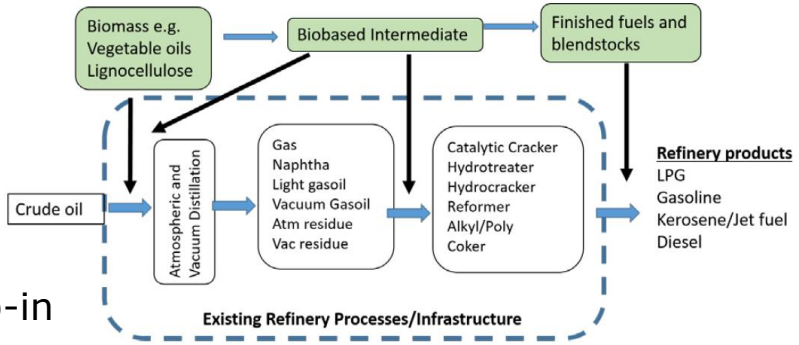
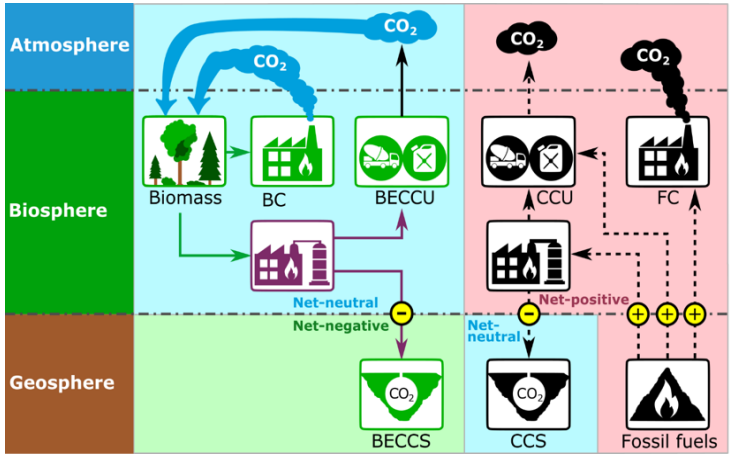
Tasks: Key Work Areas



Task 39: Commercializing conventional and advanced **transport biofuels**

- Decarbonising long-distance transport sectors, with focus on drop-in biofuels and co-processing
- Compare and contrast international biofuel policies
- Sustainability assessment of biofuels



Task 40: **Deployment** of biobased value chains

- Regional biomass mobilization strategies and their transition effects on existing bioenergy markets
- Deployment of BECCS
- Renewable Gas and hydrogen in the grid

Task 42: **Biorefining** in a circular economy

- Biorefinery factsheets
- Technical, economic and ecological (TEE) analysis of biorefining to co-produce bioenergy and bio-products
- Global biorefineries implementation status, major deployment barriers and market data

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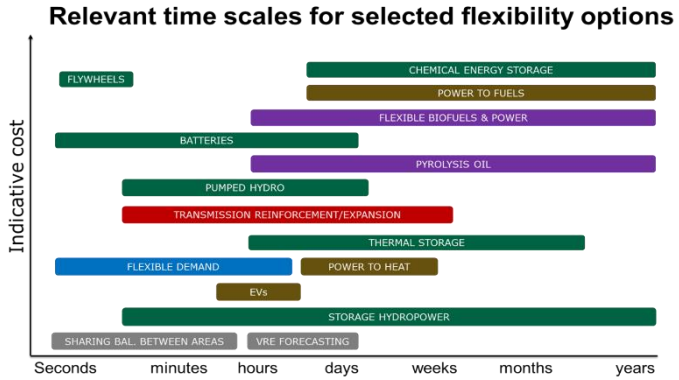
Tasks: Key Work Areas

Task 43: Sustainable **biomass supply**

- Biohubs to establish, develop and extend sustainable biomass supply chains
- Evidence based policy around biomass supply in the emerging bioeconomy
- Biomass supply opportunities in post Covid-19 economic recoveries



Task 44: Flexible bioenergy and **system integration**

- Flexible bioenergy concepts for supporting low-carbon energy systems
- Implementation of flexible bioenergy concept
- System requirements for bioenergy concepts

Task 45 - **Climate and sustainability** effects of bioenergy within the broader bioeconomy

- Assessing climate change effects of bioenergy
- Assessing sustainability effects of bioenergy (beyond climate)
- Sustainability governance: stakeholders and implementation approaches

Inter-Task Projects

= Collaboration between different Tasks

- The role of **bioenergy in a WB2/SDG world**
- **Renewable gas** - deployment, markets and sustainable trade
- Bioenergy for **high temperature heat** in industry
- **BECCS/U** - Bioenergy with Carbon Capture & Sequestration / Utilization

Special Projects

= Initiative of 2 or more IEA Bioenergy member countries

- The potential for **cost reduction** for novel and advanced renewable and **low carbon fuels**
- The contribution of Advanced Renewable Transport Fuels to **transport decarbonisation** in 2030 and beyond
- **Renewable Gas / Hydrogen** in the grid

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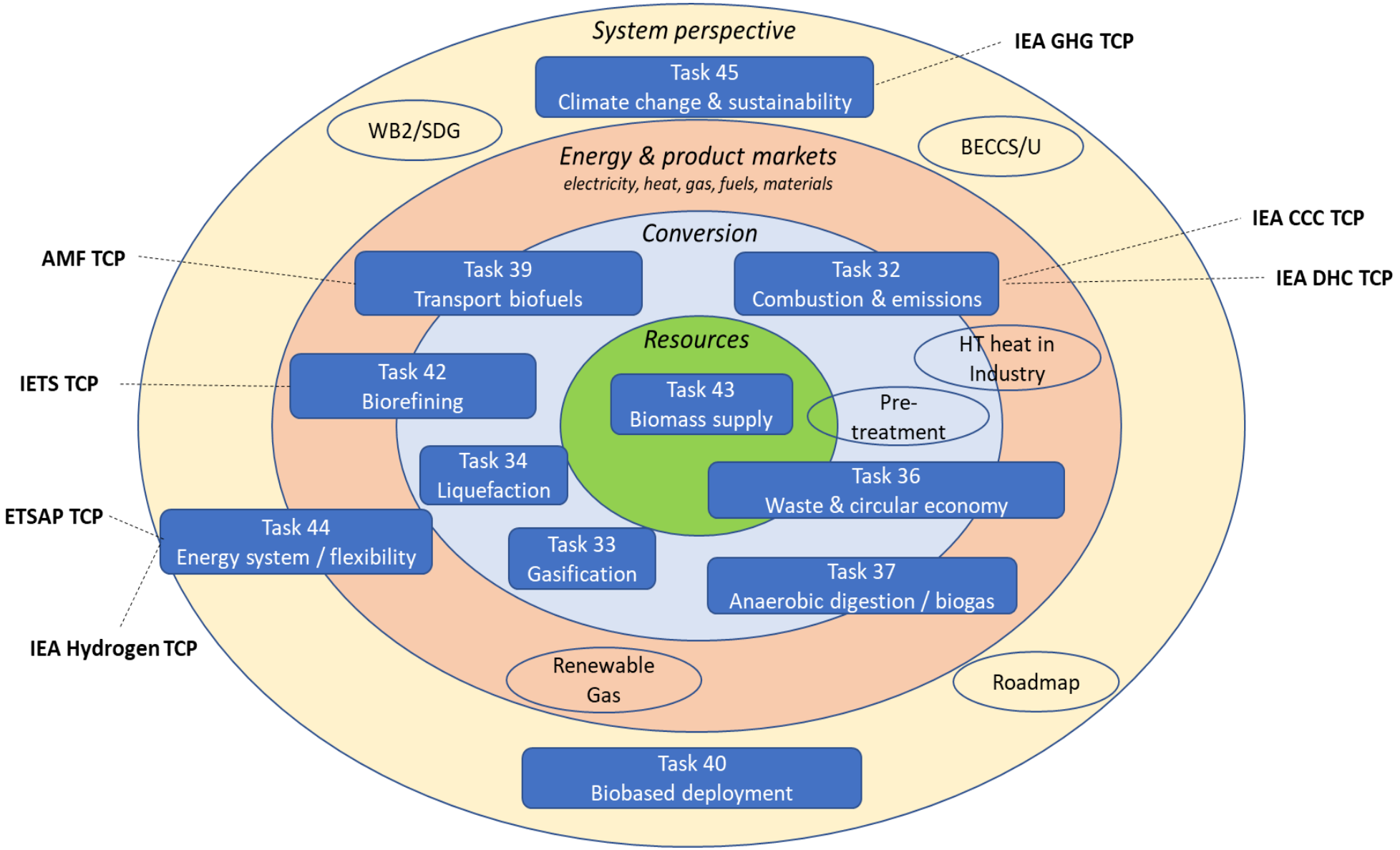
Overview (Including collaboration with other TCPs)



Working with International Organizations

Policy debate, country ownership, advanced bioeconomy	biofuture platform	Energy analysis, knowledge
Sustainability, capacity building, cooperation	GBEP Global Bioenergy Partnership	Renewable energy deployment, development cooperation
Agricultural and biomass practices	FAO	Research and innovation promotion, colaboration
Scientific and Technical collaboration	IEA Bioenergy	Private sector link
		Finance, green bonds

A collective effort of international initiatives. Source: Biofuture Platform

Communication is Key !

Provide clear and verified information on bioenergy

- Inform policy makers, industry and experts
- Fact based input to debates

Approach

- New website
- Bi-monthly webinars
- Presentations
- Workshops & conferences
- Technical reports, with summaries and highlights
- Searchable library

- Position papers / FAQ, e.g.
  - Bioenergy for Sustainable Development
  - Is there enough room for bioenergy in agriculture?
  - Is energy from woody biomass positive for the climate?
- Social media (Twitter, LinkedIn)
- Cooperation with other international organizations
- Assistance of communication experts

Our Logo and Visuals: Time for an update !

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IEA Bioenergy

Technology Collaboration Programme

Design:

etaflorence renewableenergies

IEA Bioenergy

Technology Collaboration Programme

COLOR

Green is associated with nature, biomass and renewables.
Orange is the color of energy and knowledge, and it is often associated with fuels.
Blue is for the globe.

PICTOGRAM

The stylized leaf creates a strong association with several aspects related to nature, from which bioenergy derives.

The leaf turns around a globe, in order to create dynamism and worldwide connection.

Tour of the new Website

https://www.ieabioenergy.com/

Thank you! Questions?

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Technology Collaboration Programme