

## Bioenergy and Water Nexus

*IEA Bioenergy Task 43 in collaboration with GBEP*



**Robert Sandoli, DOE, On behalf of  
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Jim Speath, Chair IEA Bioenergy**

# IEA Bioenergy TCP

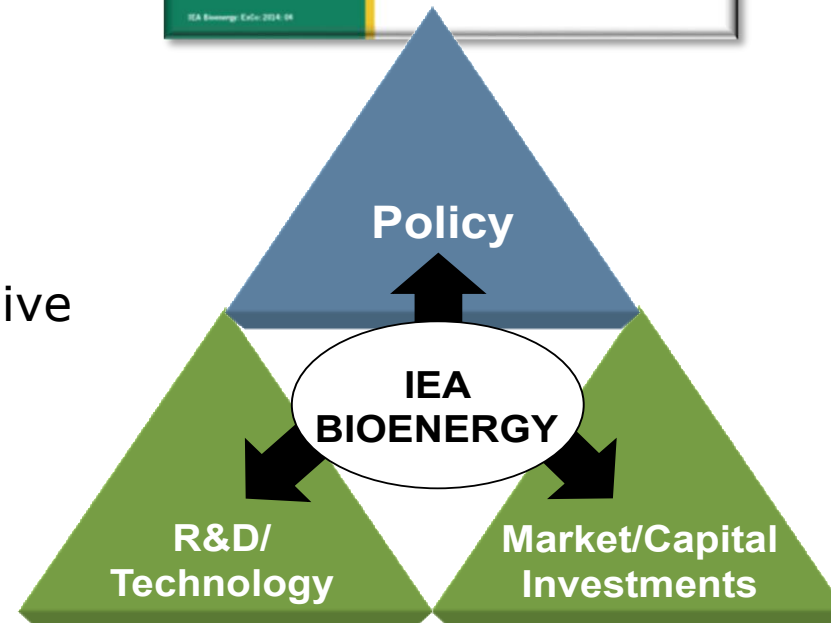
## Technology Collaboration Programme (TCP),

functioning within a framework created by **IEA**

**Goal:** Facilitate the commercialisation and market deployment of:

- **environmentally sound,**
- **socially acceptable and**
- **cost-competitive bioenergy systems**

**Key Role:** Independent body to give clear and verified information on bioenergy



# IEA Bioenergy TCP: Membership - 24 Contracting Parties

## ASIA/OCEANIA/AFRICA

- Japan
- Korea
- Australia
- New Zealand
- South Africa

## EUROPE:

- Austria
- Belgium
- Croatia
- Denmark
- European Commission
- Estonia
- Finland
- France
- Germany
- Ireland
- Italy
- Netherlands
- Norway
- Sweden
- Switzerland
- United Kingdom

## AMERICA'S

- Brazil
- Canada
- United States

## IEA Bioenergy TCP

Budget in 2017:  
1,76 Million US\$

Tasks: 11

Task participation: 98

*Direct participation:*  
> 200 persons

## Collaboration with GBEP

### Bioenergy and Water



# IEA Bioenergy Task 43 and GBEP jointly Activity Group 6

**Vision: Good management of resources**

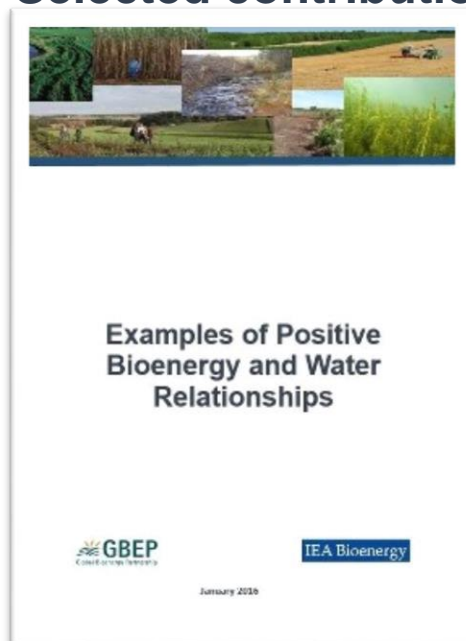
- benefiting from complementarity of different land use systems
- can deliver food, materials and bioenergy AND improve the state of water.

**Goal: Identify Best Examples**



# Result: Examples of Positive Bioenergy and Water Relationships

- Contributions from 11 countries across six continents
- Selected contributions presented at workshop in August 2015
- All contributions presented in report that was published in February 2016
- Selected contributions also published in scientific journals



Available at:

[www.globalbioenergy.org](http://www.globalbioenergy.org)

IEA Bioenergy

[www.ieabioenergy.com](http://www.ieabioenergy.com)

# Key Messages from AG6

- AG6 work showed **encouraging variety** of water-efficient and positive-water-balance bioenergy options, both in terms of supply, and geographical distribution
- There **are significant barriers** to “mainstream” such practices, though
- A prerequisite is a repository of data on these practices by “**trusted**” actors. GBEP has a role here, together with e.g. FAO, IEA, IEA Bioenergy, IRENA

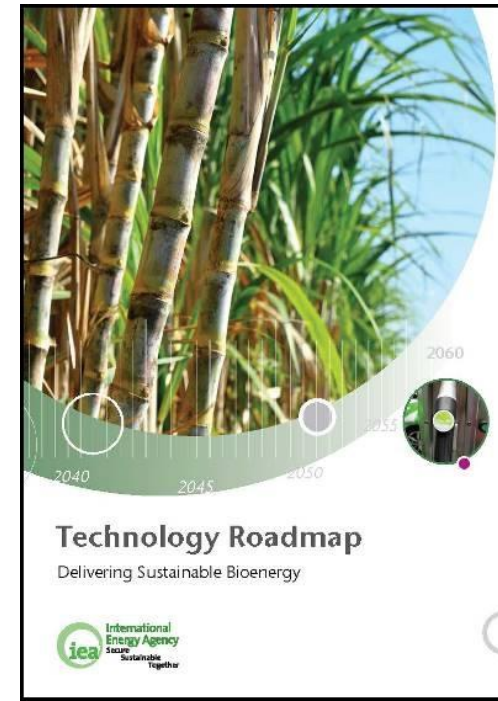
# IEA Bioenergy Roadmap to the future

- Exploit immediate opportunities
  - Landfill gas, biogas, waste treatment, industrial residues, heating market
- Innovate and commercialise new technologies
  - Densification (Torrefaction, pyrolysis, ..)
  - Advanced biofuels
  - System integration into biorefineries
- Develop sustainable biomass supplies
  - Smart Agriculture, efficiency improvement
  - Sustainability Governance
- Mobilise investment
- A Concerted International action

<http://www.ieabioenergy.com/publications/technology-roadmap-delivering-sustainable-bioenergy/>

IEA Bioenergy

[www.ieabioenergy.com](http://www.ieabioenergy.com)





# A collaborative way forward

- IEA Bioenergy TCP :

- → central working force with:

- ***Mission Innovation Biofuel Challenge*** for R&D strategy and financing

- ***Biofuture Platform***: Vision and political support

- ***GBEP***: sustainability assessment

- ***FAO: Food and Agriculture (MoU)***: agro sector

- ***IRENA***: global outreach

- ***SEforALL/ Below50;*** collaboration with industry



# Conclusion

- Country specific approach
  - (climate, resources, markets)
- Innovation
  - Smart agriculture, improved efficient production
  - Efficient and integrated water use
  - Supportive Sustainability Governance
    - Long term view, incentivise good practice
    - Communicate to policy and public (Biofuture Vision!)
  - Markets for low carbon products and fuels
    - > Carbon pricing, Biobased Procurement
    - > Business Case



*Thank you for  
your attention*

IEA Bioenergy



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