

Bioenergy Implementing Agreement – Results and Future Challenges

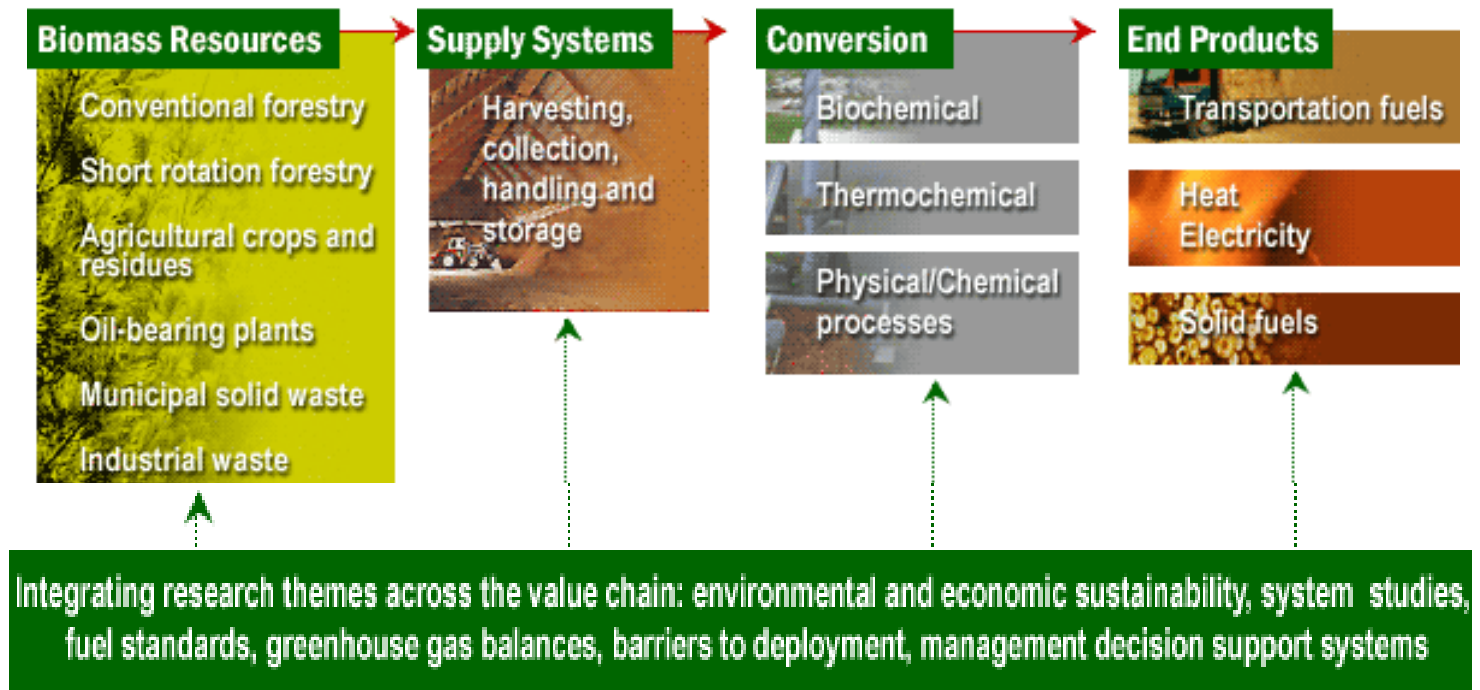
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"Technology, Market and Policy Trends for Renewables"
IEA Renewable Energy Side Event at the
„International Conference for Renewable Energies“
Bonn, 3 June 2004



Structure of the Network



www.ieabioenergy.com

IEA Bioenergy

„International Conference for Renewable Energies“ - IEA Side Event: "Technology, Market and Policy Trends for Renewables", Bonn, 3 June 2004

IEA Bioenergy in Figures

- **Foundation: 1978**
- **Current participation**
 - ➔ Europe: 14 countries, EC
 - ➔ Overseas: 7 countries
- **Number of Tasks**
 - ➔ 11 Tasks
- **Budget**
 - ➔ 1Mio US\$/a

The Tasks of IEA Bioenergy

- **Resources:** Forestry and agricultural products and production residues, municipal solid waste and recovered fuels.
- **Conversion:** Thermochemical (combustion, gasification, pyrolysis), and biochemical processes (anaerobic digestion, fermentation).
- **Utilization in markets:** Heat and power production, solid & transportation fuels.
- **Integrating themes:** Socio-economic impact, Greenhouse gas balances, international trade

Current use and future potential of bioenergy

- **Current use: 50 EJ/a of 450 EJ/a total world energy consumption (2002)**
- **Future potential (EJ/a)**

Scenario	Year		
	2025	2050	2100
Shell (1996)	85	200 – 220	–
IPCC (1996)	72	280	320
Greenpeace (1993)	114	181	–
Johansson et al. (1993)	145	206	–
WEC (1993)	59	94 – 157	132–215
Dessus et al. (1992)	135	–	–
Lashof and Tirpak (1991)	130	215	–
Fischer and Schratzenholzer (2001)	350 – 450		–

Contribution to Technology Development

- **Network of bioenergy R&D programmes in 21 countries and EC**
- **Technology development for all end-use sectors: heat, electricity and transport fuels**
- **Consideration of entire chain: feedstock, conversion, end-use**
- **Environmental effects including global warming**
- **Policy related conclusions**

Future Work Directions

- **Support understanding of bioenergy options and potential**
- **Emphasise “high volume – low cost” options, e.g. transport fuels**
- **Explore opportunities resulting from land use change**
- **Increase policy related output**
- **Improve co-operation among Implementing Agreements**
- **Enhance co-operation with FAO (MoU)**

Future Challenges

- **Produce facts for policy measures in partner countries**
- **Involve industry: feedstock, conversion, end-use**
- **Increase flexibility in combining feedstock, conversion and end-use options**
- **Analyse opportunities for climate protection**
- **Co-ordinate with other international R&D programmes and networks**