IEA Bioenergy

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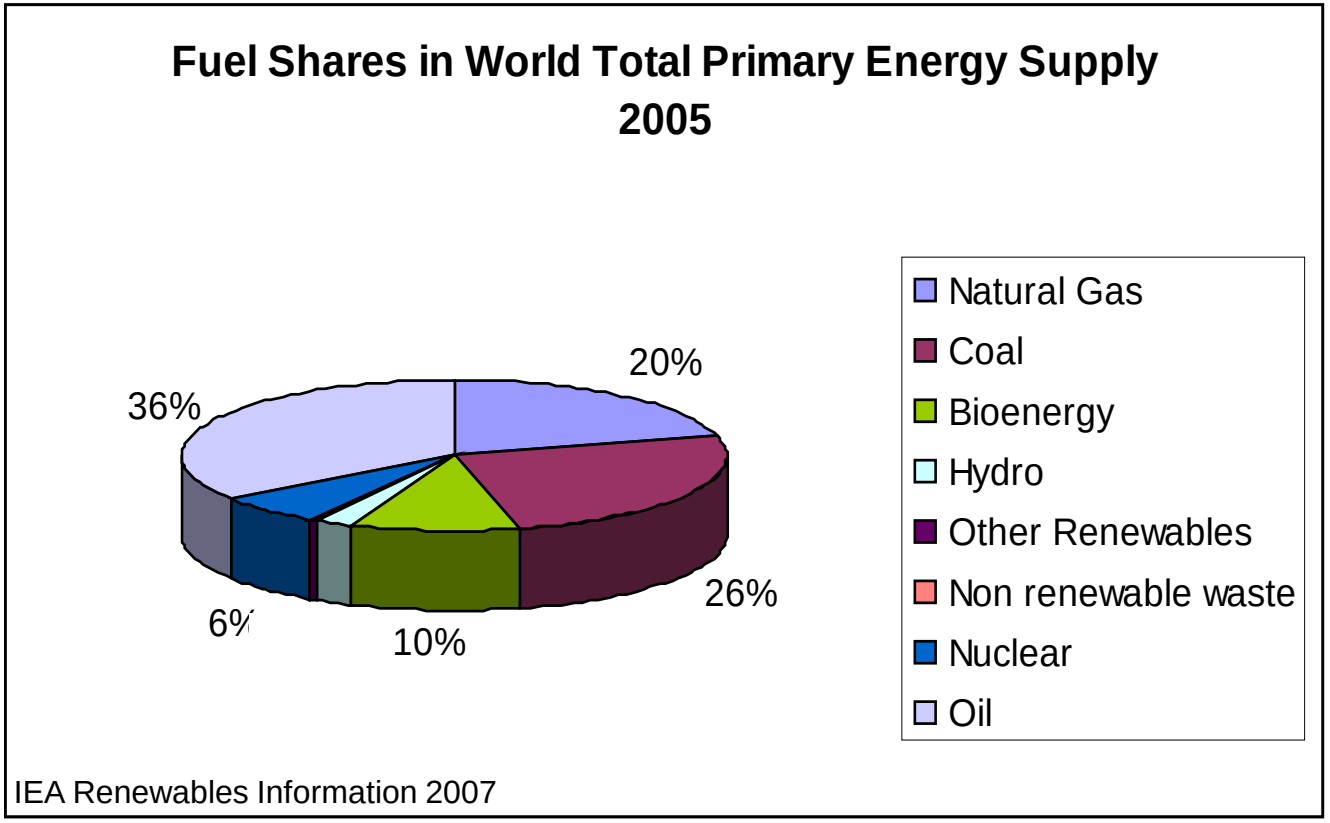
Facilitating commercialisation and market deployment of environmentally sound, sustainable and cost-competitive bioenergy technologies……

Bioenergy

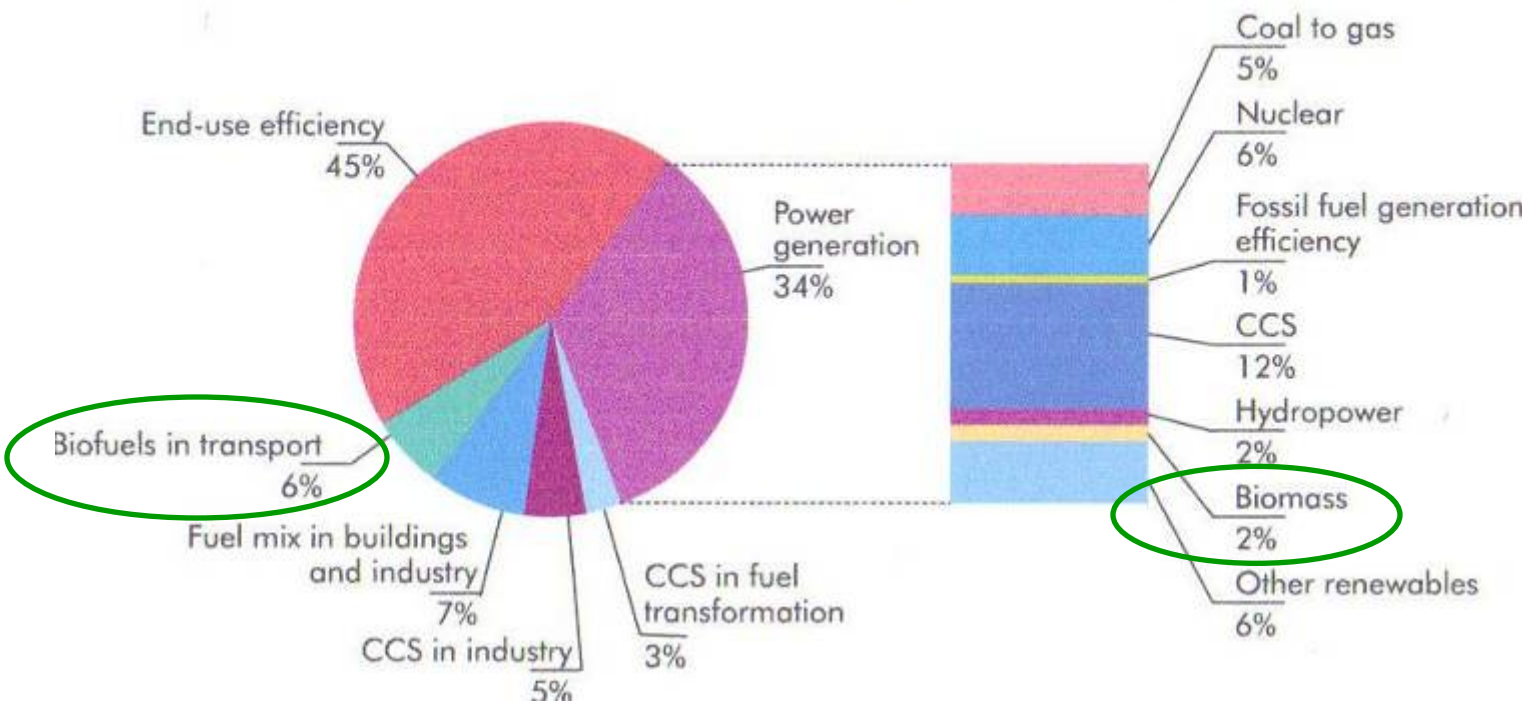
- ***already plays a major role supplying ~10% of world primary energy supplies***



Bioenergy

- has significant scope to make a greater contribution to secure and sustainable energy provision

Figure 2.3 ▶ **Reduction in CO_2 emissions in the Map scenario by technology area**
(share of reduction below Baseline Scenario in 2050)

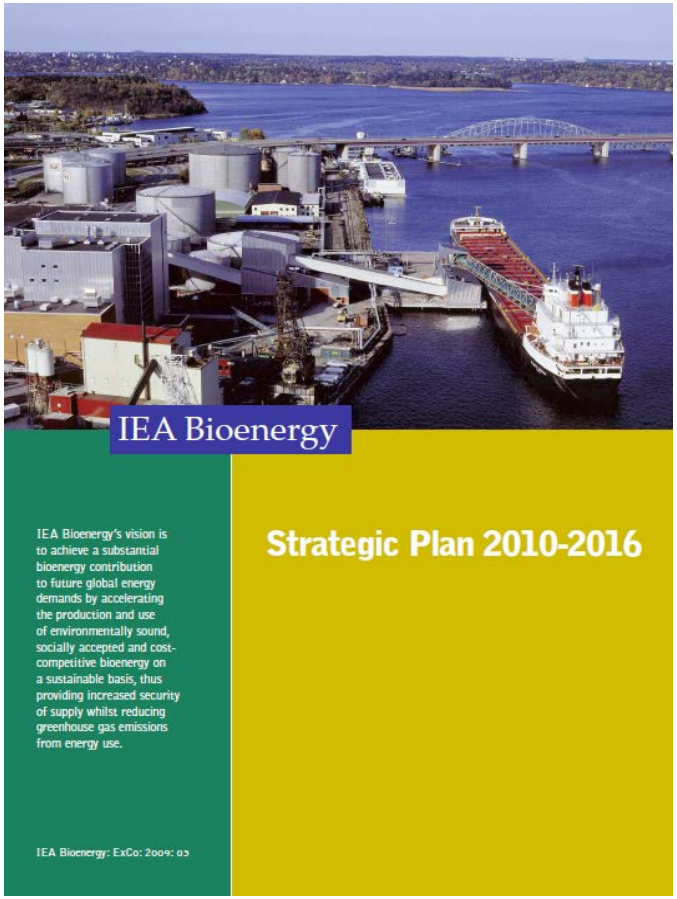


Vision and Mission

Vision:
To achieve a substantial bioenergy contribution to future global energy demands by
-accelerating the production and use of
- environmentally sound,
- socially accepted and
- cost-competitive bioenergy
on a sustainable basis

Mission:
To facilitate the commercialisation and market deployment of
-environmentally sound,
-socially acceptable,
-and cost-competitive bioenergy systems and technologies,
-and to advise policy and industrial decision makers accordingly.

www.ieabioenergy.com



IEA Bioenergy……..

- Provides an international forum for sharing information and developing best practice on
  - Technology development
  - Non-technical barriers and issues
  - Regulatory and legislative issues

- Produces authoritative information on key strategic issues affecting deployment

24 Contracting Parties

- Australia
- Austria
- Belgium
- Brazil
- Canada
- Croatia
- Denmark
- European Commission
- Finland
- France
- Germany
- Ireland
- Italy
- Japan
- Korea
- Netherlands
- New Zealand
- Norway
- South Africa
- Sweden
- Switzerland
- Turkey
- United Kingdom
- United States

Agreement Activities

Executive Committee

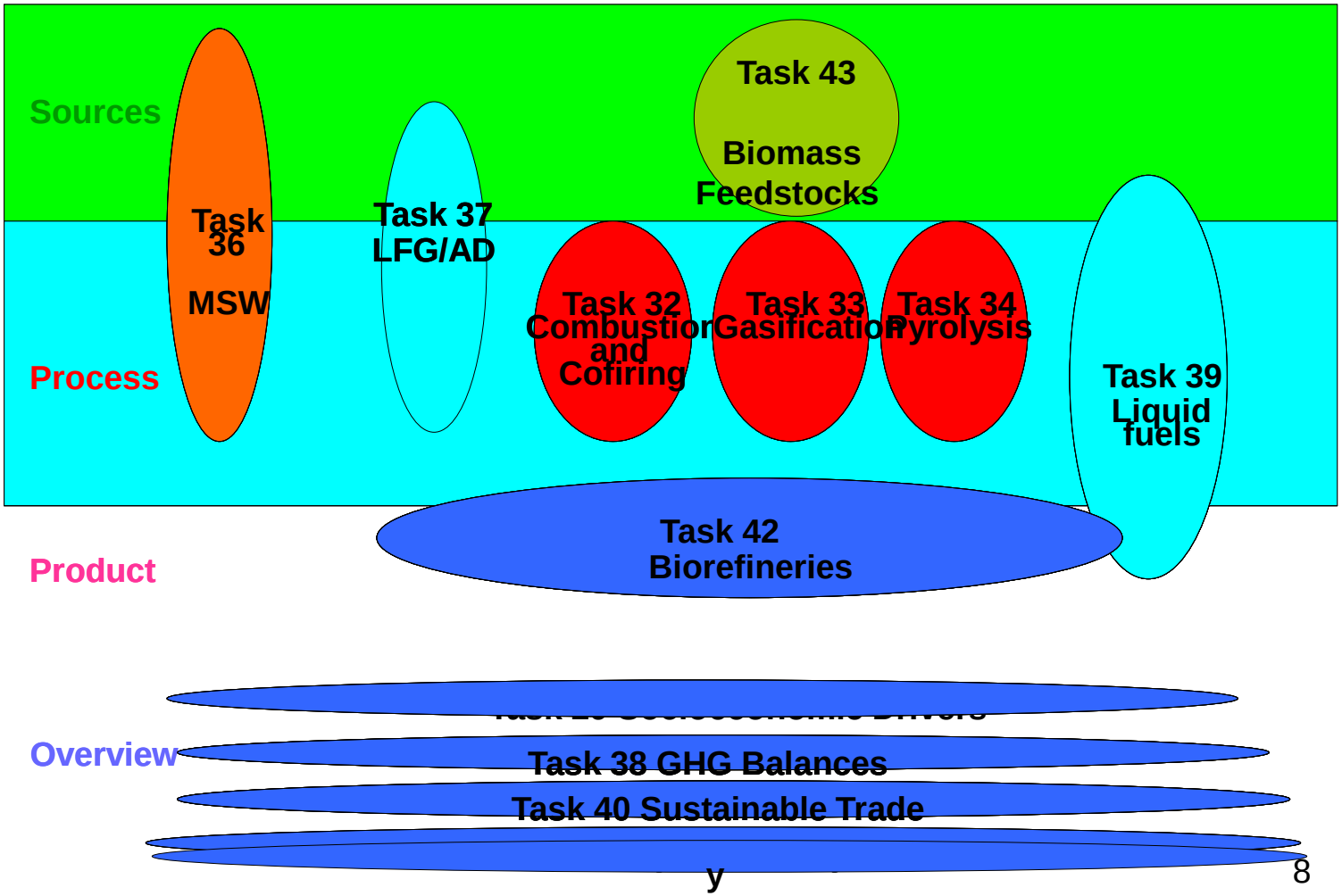
- Bi-annual ExCo meetings/management of the IA
- ExCo Workshops
- Annual report, newsletters, website
- Strategic Position Papers
- Technical Coordinator

Tasks

- Coordination of national RD&D programmes, information exchange and joint projects
- Task meetings, study tours and workshops
- Publications, reports, newsletters, websites
- Networking with industrial and other stakeholders

Task Structure

- *12 active Tasks*



Strategic Studies: Monitoring Sustainability Certification of Bioenergy

1. **Implementation process** of sustainability certification of bioenergy
2. **impact** on worldwide bioenergy **trade**
3. **Recommendations** for improvement of sustainability certified markets

Intertask project between IEA Bioenergy Task 40, Task 43 and Task 38 experts

Strategic Studies 2: Mobilising Sustainable Biomass Supply chains

Participation Netherlands

IEA Bioenergy

Nederlandse deelname 2013 – 2015			Financiering			deelname
		Cost	TKI-BBE	DEN	andere	Door:
Task		US$	€	€	€	
32	Combustion/Cofiring	15000	12500			Procede/ DNVKema
33	Gasification	15000	12500			ECN
34	Pyrolysis	20000	16667			BTG
36	Waste Treatment	0				
37	Digestion& Green Gas	13000		10833		AgNL
38	GHG	16000			12500	PBL
39	Biofuels	15000			12500	AgNL
40	Trade	17500	14583			UU/Essent
42	Biorefinery	17500	14583			WUR/FBR
43	Biomass Production	15000			12500	EZ
scr	Secretariate	15700		13083		AgNL
	TOTAAL		**70833**	**23916**	**37500**	

Results:
Strategic Position Papers

- Using a LCA Approach to Estimate the Net GHG Emissions of Bioenergy
- Bioenergy Land Use Change and Climate Change Mitigation
- Bioenergy - a sustainable and reliable energy source. A review of status and prospects
- Sustainable Production of Woody Biomass for Energy
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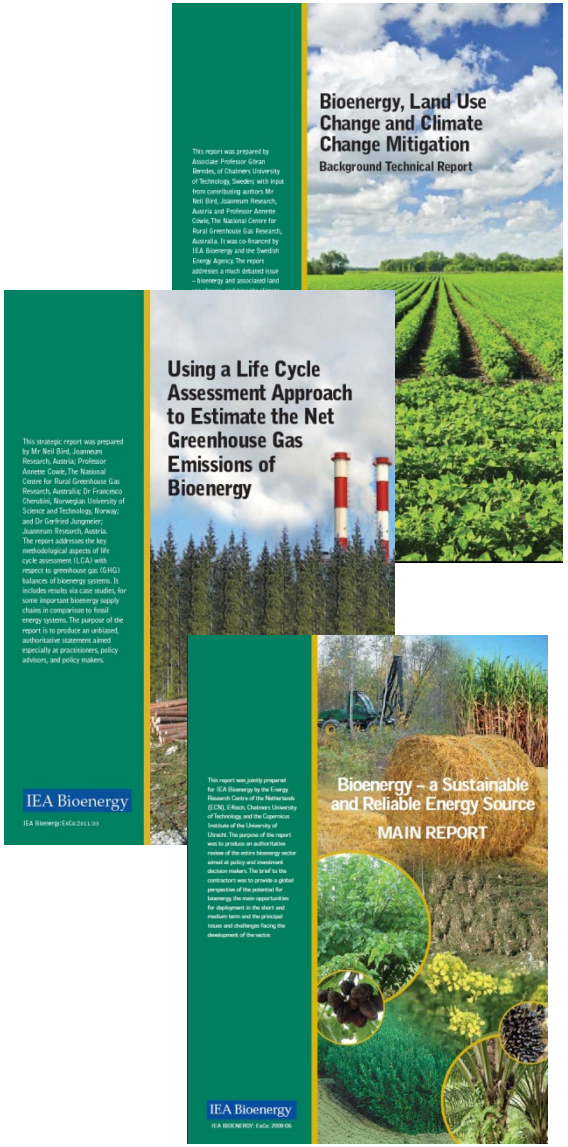
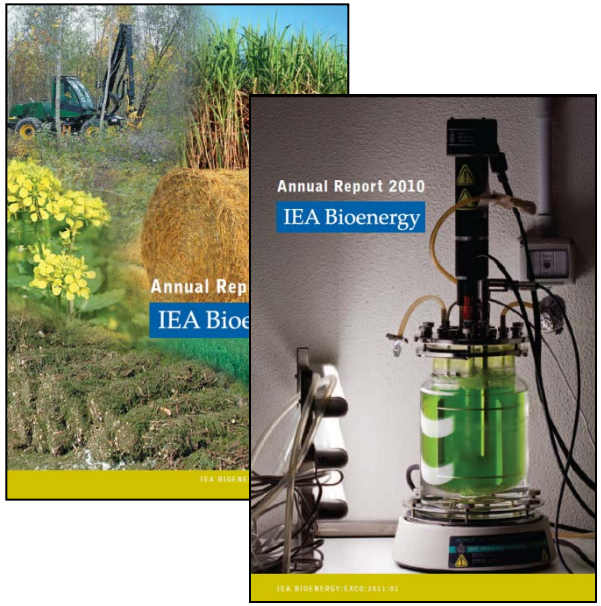


Annual Reports and Newsletters

- The Annual Report (122 pp) contains a report from the Executive Committee and a detailed progress report on each of the Tasks. It also includes key information such as Task participation, Contracting Parties, budget tables, and the reports and papers produced by the Implementing Agreement. A feature article based on the work of a Task is also included.



- IEA Bioenergy News covers the most recent ExCo meeting and workshop. It also features an editorial from a Member Country, news from the Tasks recent publications and upcoming events.

Task 32: Biomass Combustion and Co-firing

Focus on:

Combustion and co-firing of biomass for the production of usable energy.

Aims to:

Stimulate further expansion of biomass combustion.

Generate and disseminate information on technical and non-technical barriers and solutions for dedicated biomass combustion systems and biomass co-firing in existing coal-fired power stations.

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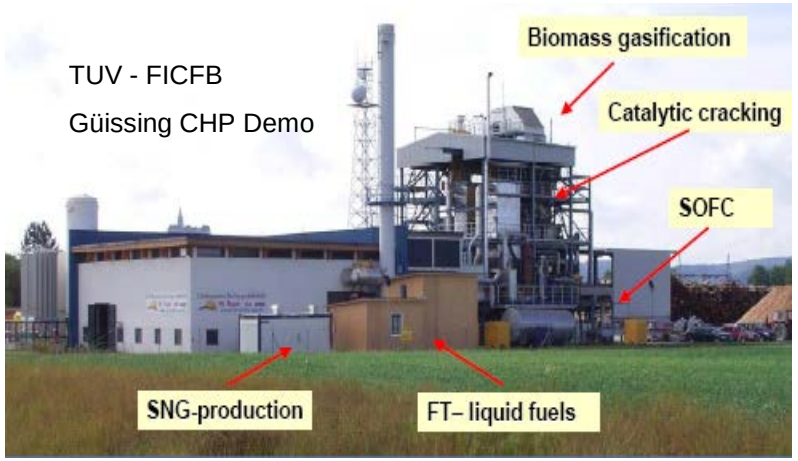
Task 33: Thermal Gasification of Biomass

Focus on:

Production of substitute fuel gases from biomass for utilisation in energy conversion systems.

Aims to:

Exchange information and promote co-ordinated RD&D among the participants to eliminate technological impediments to the commercialisation of thermal gasification of biomass.



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Task 34: Pyrolysis of Biomass

Focus on:

The controlled thermal degradation of biomass in any form to derive energy and chemical products.

Aims to

Study biomass pyrolysis and its role in an integrated bioenergy scheme.

Provide a forum for all aspects of biomass fast pyrolysis including preparation of feedstock, the fast pyrolysis process and utilisation of the liquid product for energy, electricity and chemicals production.

Task 36: Integrating Energy Recovery into Solid Waste Management

Focus on:

Conversion of Municipal Solid Waste (MSW) by thermal processes for the production of usable energy, including heat and electricity.

Aims to:

Collate research and policy information and case study material to produce best practice guidelines for policy makers

Task 37: Energy from Biogas

Focus on:

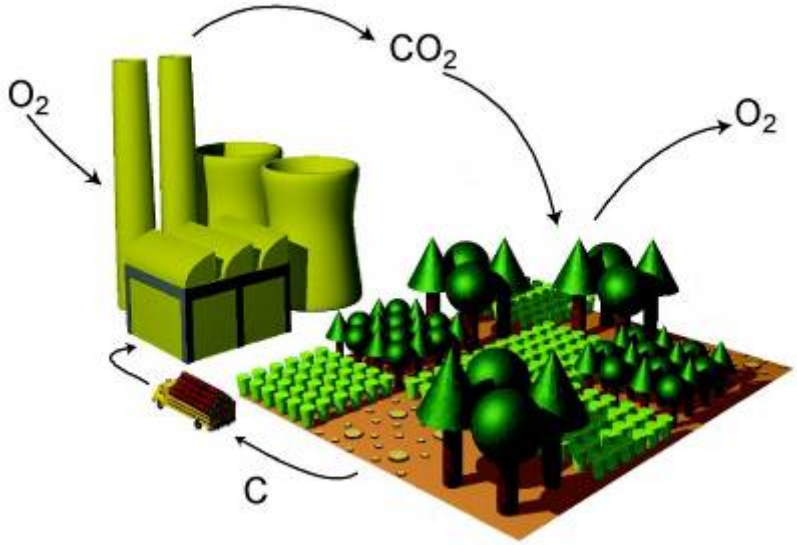
Biological treatment of the organic fraction of municipal solid waste and the anaerobic treatment of organic rich industrial waste water to produce biogas and a digestate of high quality.

Aims to:

Exchange and disseminate information on biogas production and energy utilisation and promote deployment of AD plants

Task 38: GHG Balances of Biomass and Bioenergy Systems

Focus on:
Investigation of all processes involved in the use of biomass and bioenergy systems on a full fuel-cycle basis to establish overall GHG balances.



Aims to:
Improve understanding of bioenergy and GHG issues.

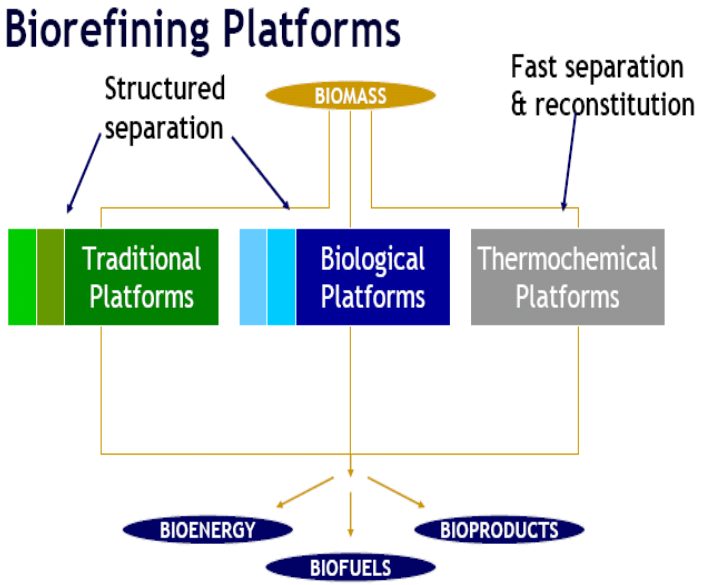
Develop and improve tools for assessing GHG balances.

Disseminate best practice in biomass GHG reduction and aid decision makers in defining optimal mitigation strategies

Task 39: Commercialising Liquid Biofuels from Biomass

Focus on:
Policy, market and implementation issues that must be address in commercialisation of biofuels and the technical challenges of 2nd-generation biofuel production.

Aims to:
Identify and eliminate non-technical, environmental and institutional barriers. Identify remaining technological barriers to liquid biofuels technologies. Formulate a deployment strategy.



Task 40: Sustainable International Bioenergy Trade

Focus on:
Supporting development of a sustainable international bioenergy trading system while recognising the diversity of resources and applications.

Aims to:
Review the development of biomass markets in various parts of the world and existing trade experiences.

Analyse the effects of existing markets (e.g., pulpwood) on bioenergy trade.

Review the barriers hampering development of a global commodity market and identify strategies to overcome them.

Identify sustainability criteria and their local influence on the biomass market.

Task 42: Biorefineries

Focus on:

Biorefinery as a facility that optimises the integrated production of materials, fuels, energy and chemicals and so maximises the value derived from the biomass feedstock.

Aims to:

Assess the worldwide position and potential of biorefineries.

Gather new insights of the possibilities for the simultaneous manufacture of transportation fuels, added value chemicals, heat, power and materials.

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Task 43: Biomass Feedstocks for Energy

Objectives:

To promote sound bioenergy development through timely analyses of all matters relating to biomass feedstock, including biomass markets and the socio-economic and environmental consequences of feedstock production.

The work programme has a global scope and includes production systems in both agriculture and forestry. The primary focus is on land use and bioenergy feedstock systems.

Strategic Studies: Monitoring Sustainability Certification of Bioenergy

Goals of the study

1. **Implementation process** of sustainability certification of bioenergy
2. How are **stakeholders** affected by certification initiatives
3. Anticipated **impact** on worldwide bioenergy **trade**
4. **Recommendations** for improvement of sustainability certified markets

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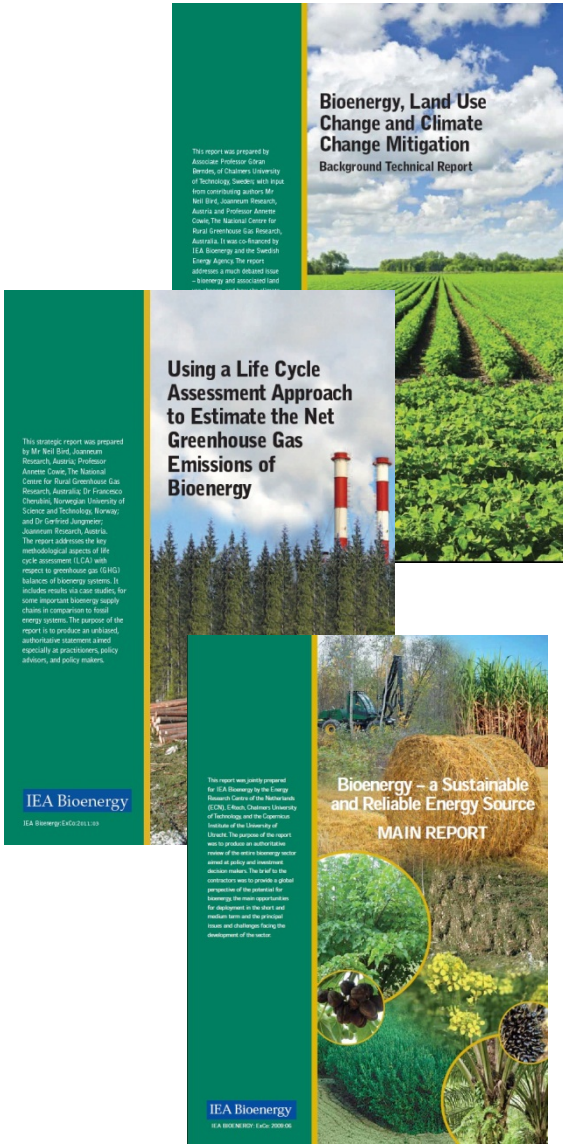

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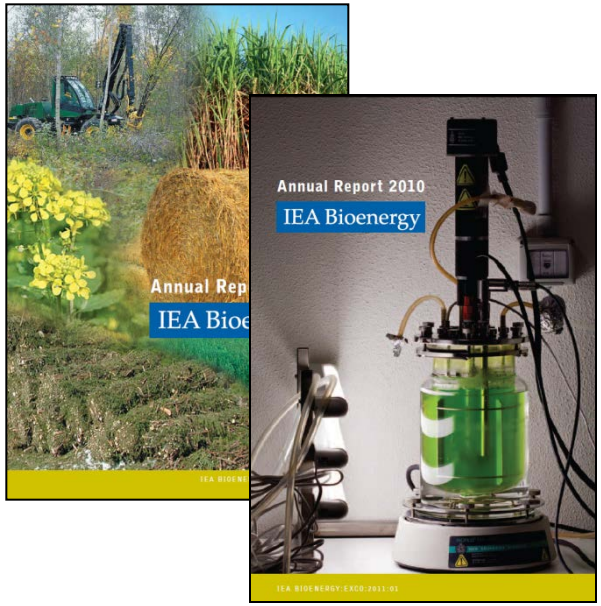

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