

Development of standards and criteria for biofuels production



Regional Workshop on Promoting Sustainable Biofuels Production and Use In Central & Eastern Europe (CEE)

CAVTAT, 12 -13 November 2007



Outline

- Biofuels development drivers
- Drawbacks
- Sustainability criteria – part of the solution
- Update on current initiative

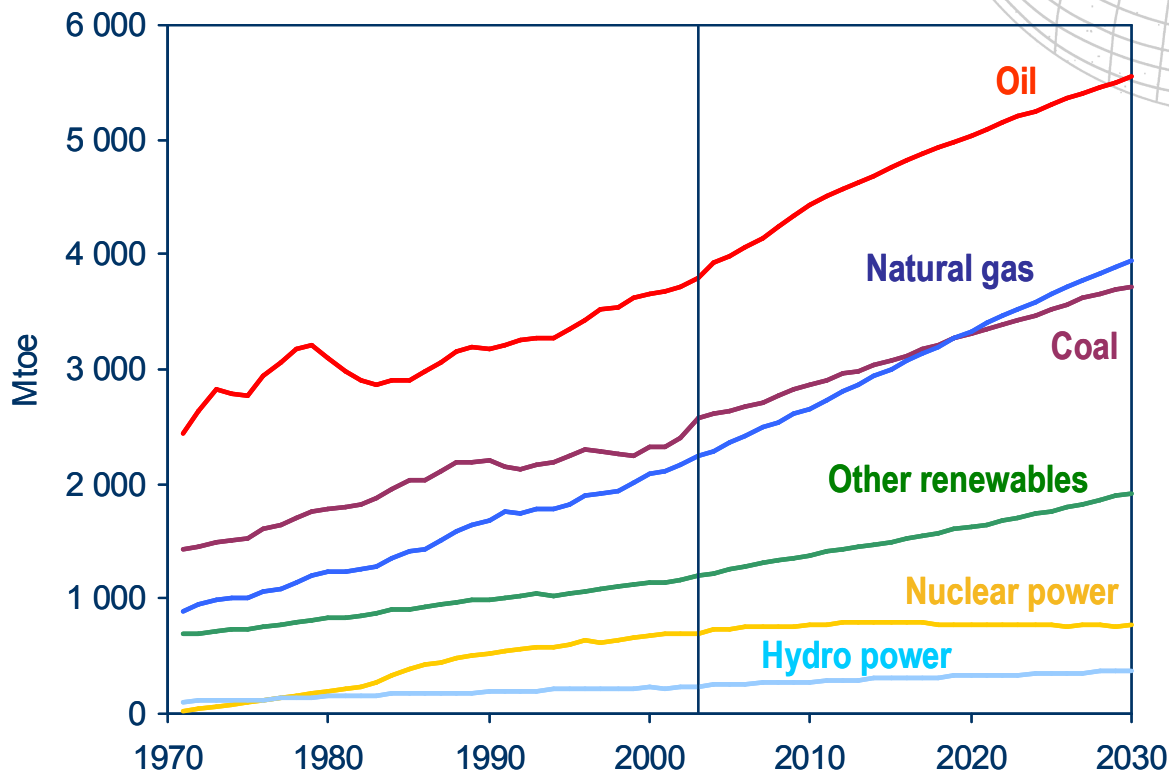


Trajectory without change

World primary energy demand

Global energy demand is projected to grow by more than half by 2030, with oil, gas and coal together accounting for 83% of the growth in energy demand between now and 2030.

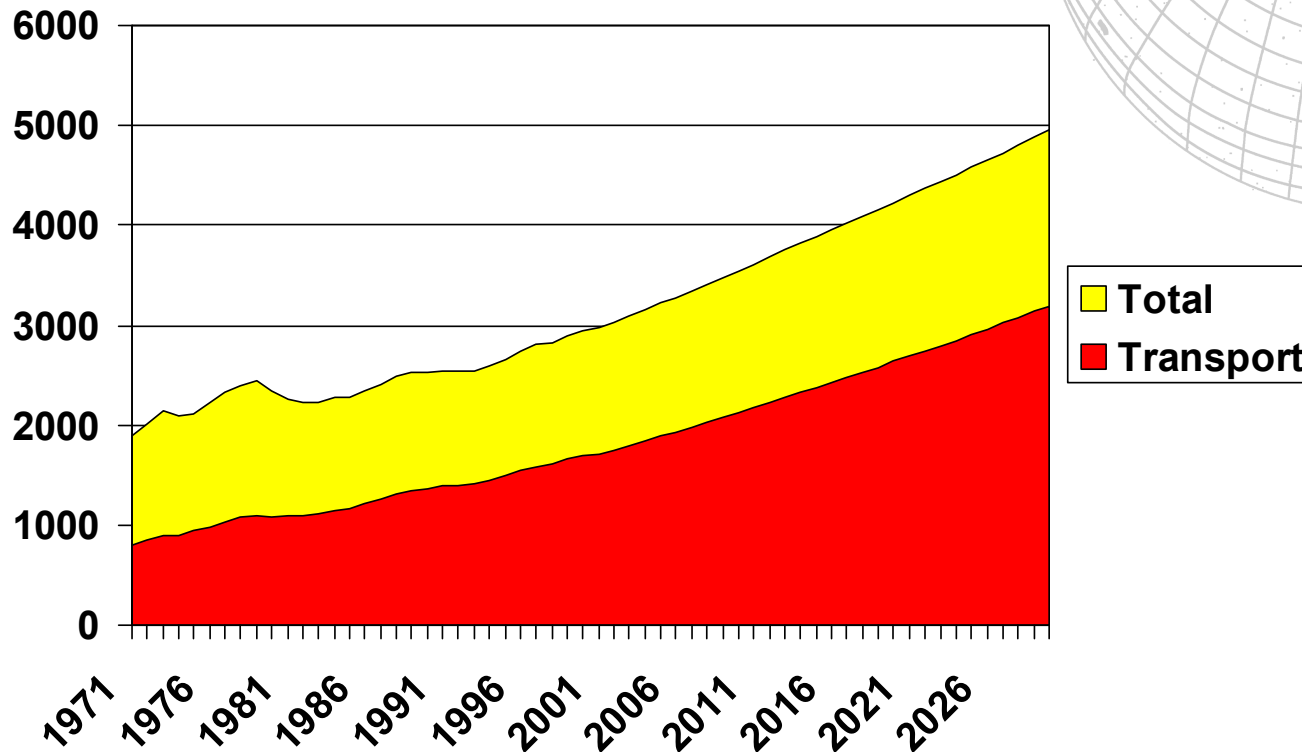
Almost 2 billion people are still without access to modern energy services – and this number is expected to grow.



Source: IEA
World Energy Outlook
Reference Scenario

Dependence on fossil fuels of the transport sector

World Oil Consumption, 1971-2030
(Final Consumption, Mtoe)



Source: IEA historical data and projection from World Energy Outlook 2002

Biofuels Drivers

- Energy Security
 - Diversify Energy Supply
 - Reduced Oil Import Spending
- Development
 - Rural development
 - MDG achievement
- Job Creation
- Large Biomass Potential in the Developing regions



Too good to be true – No energy source without drawbacks?

- Risk that the potential benefits don't materialise
- Risk that new problems are created



Environmental risks

- Climate impacts can be positive or negative depending on:
 - Feedstock
 - Management Practices
 - Land Use Change (deforestation; leakage)
 - Process Energy
- Biodiversity - Expansion of Cropland onto Sensitive Areas
- Water - Overstressed Water Supplies
- Soil - Soil Degradation and Erosion
- Local Air Pollution



Social Risks

- Land Conflicts
- Water
- Increased Food Prices for the Poor
- Human and Labour Issues (wages, safety, working hours)



Maximising benefits and minimising drawbacks...

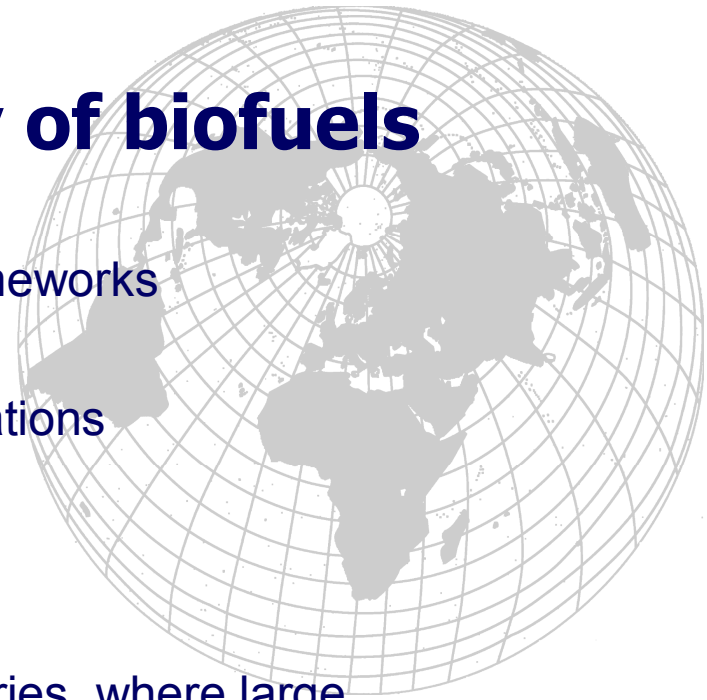
... is about good biofuels planning and management, taking a life cycle perspective covering:

- Producing feedstock
- Converting the feedstock into biofuel (including co-products)
- Transporting feedstock and the final fuel
- End-use (e.g. fueling a vehicle - evaporative and tailpipe emissions)

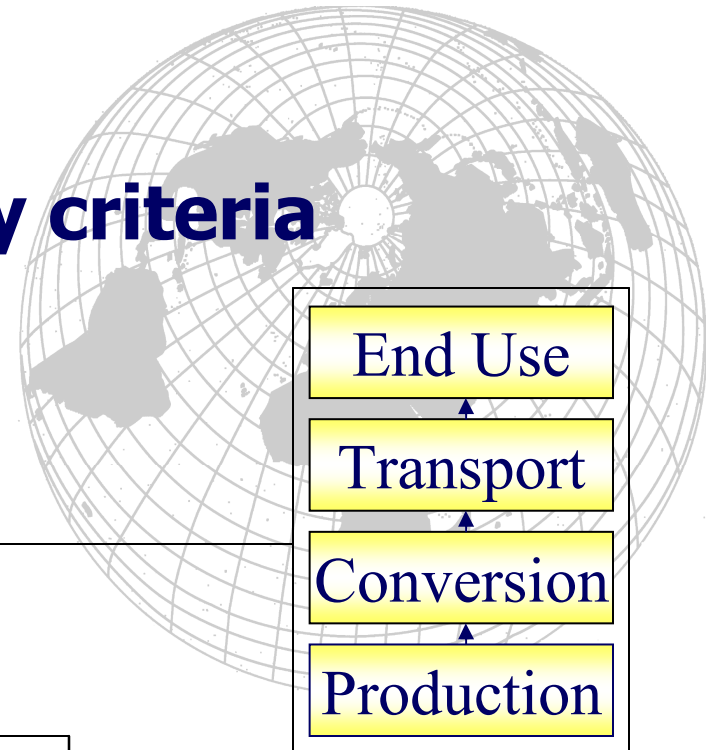


Tools to ensure sustainability of biofuels

- appropriate policies, institutional and legal frameworks
- enforcement of environmental laws and regulations
- institutional capacity building
- near-term research involving developing countries, where large production potentials exist
- knowledge and technology transfer
- **an internationally agreed system (standard, certification or other assurance) to ensure sustainability of biomass intended for biofuels production**



Approach – Development of sustainability criteria



- 3 pillars of sustainable development
- Life cycle approach
- Building on existing initiatives as to avoid duplication and build synergies

National/Internat.

- Netherlands
- UK
- Germany
- EU
- EPFL RSB
- UNEP/ DC Biofuels Int

Commodity based

- RSPO
- Sugarcane
- Soy
- Jatropha (UNEP)

Certification schemes

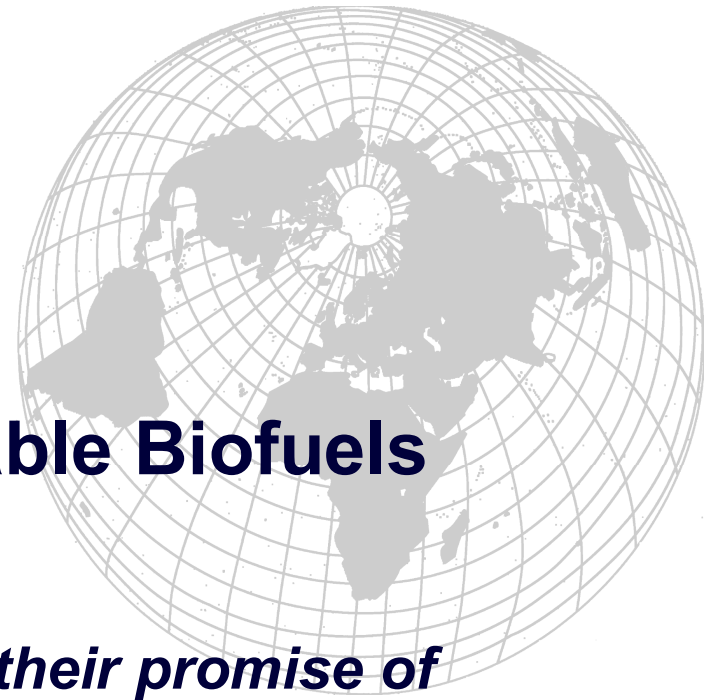
- Fair Trade
- FSC
- RA

- Multi-stakeholder outreach in the different regions

Development of standards and criteria :

- Roundtable on Sustainable Biofuels (RSB)
- Roundtable on Jatropha
- Biofuels initiate with DaimlerChrysler





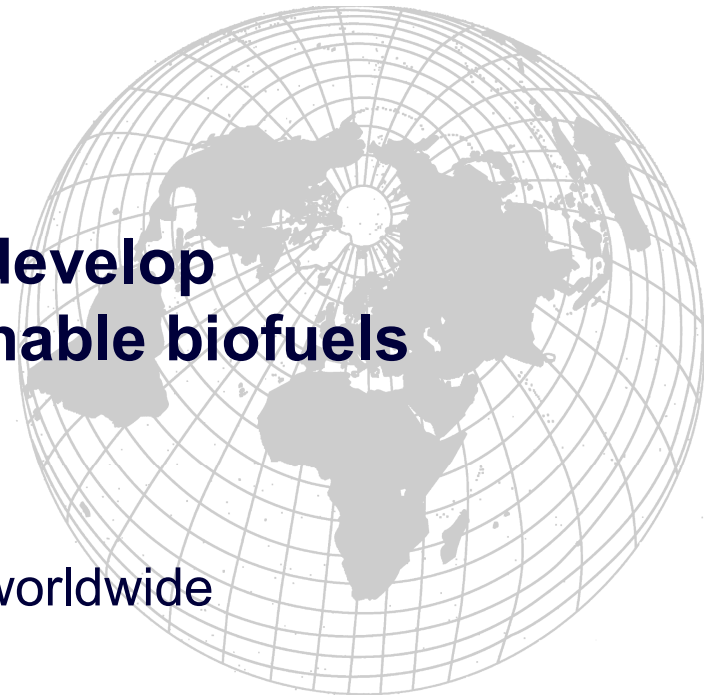
1. Roundtable on Sustainable Biofuels

Ensuring that biofuels deliver on their promise of sustainability

Concept

A multi-stakeholder initiative to develop principles and criteria for sustainable biofuels production that are:

- **Simple, accessible** and implemented worldwide
- **Generic** to all crops
- **Adaptable** to new information
- **Efficient and cheap** to measure
- **In line with WTO rules** (use ISEAL code)



Governance

- One **Steering Board** composed of international stakeholders
- One **secretariat** based at EPFL. Coordination of the RSB.
- Four **Working Groups** + expert panels to make recommendations to the Steering Board. 170 participants from international organisations, NGOs, private sector and academic institutions.
- **Global stakeholder** feedback at every step (blogs, meetings, wiki technology, pilot projects, regional outreaches)



The Steering Board

- **Steering Board members** include WWF, BP, Shell, National Wildlife Fed, FSC, Petrobras, Mali Folkecenter, Univ. Cal Berkeley, TERI India, Toyota, UNEP
- **Chair:** Mr Claude Martin (former CEO of WWF)
- **Mission:** Via a thorough consultation of the working groups, final validation of principles, criteria and implementation plan.



Development of criteria and indicators

Principles

- legality
- Consultation
- Climate Change & GHG
- Human & labour rights
- Socio-economic development
- Food security
- Conservation
 - Soil
 - Water
 - Air
- Biotechnology

Criteria

1. Greenhouse gasses efficiency
2. Environment
3. Social
4. Implementation

Indicators

Elements that enables evaluation whether a farmer, manufacturer, producer meet a particular criteria



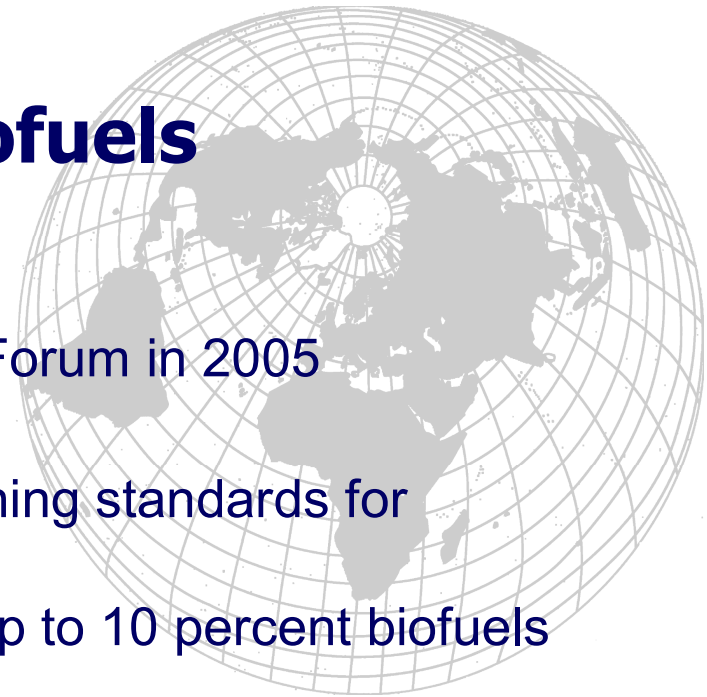
Timeline



- 2nd draft of principles is available for comments (www.bioenergywiki.net)
- Working Groups recommend text for criteria to meet these principles (in progress)
- By end 2007, consensus on principles
- By June 2008, good draft of criteria, next steps defined (governance system, developing tools for implementation)

2. UNEP/ DaimlerChrysler Biofuels Initiatives

- Outcome of 4th Magdeburg Environmental Forum in 2005
- **Objective** : to set up a process for establishing standards for biofuels used in vehicles:
 - standards for fuel blends consisting of up to 10 percent biofuels (both bio diesel and bio ethanol)
 - **developing sustainability criteria for the cultivation biomass used for biofuels**
- **Working group members** : DaimlerChrysler, WWF Germany, Ministry of Nutrition and Rural Affairs from the German State of Baden-Württemberg and UNEP
- **Duration** : Apr 2006 to June 2007



Activities

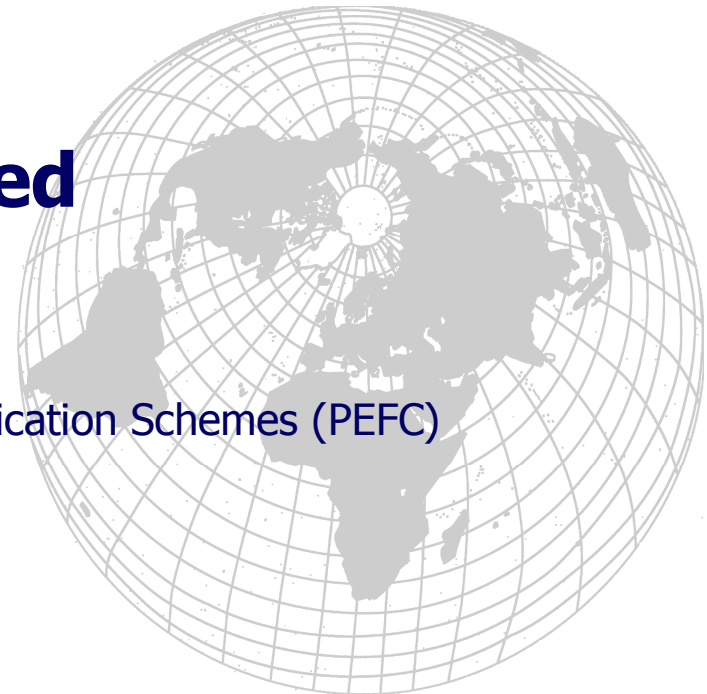
Support an international process of establishing a voluntary minimum set of criteria and measurable indicators defined through multi-stakeholder Consultations (...RSB)

Working paper that includes compilations:

- Certification schemes -12 labels
- Ongoing bioenergy initiatives
- National biofuels policies
- Energy cops for biofuels – 18 crops



Certification schemes reviewed



Forestry Labels

- Forest Stewardship Council (FSC)
- Program for Endorsement of Forest Certification Schemes (PEFC)
- Canadian Standards Association (CSA)
- Sustainable Forestry Initiative (SFI)

Bioenergy and Palm Oil Labels

- Green Gold Agriculture Label (GGLS2)
- Green Gold Forest Label (GGLS5)
- Roundtable for Sustainable Palm Oil (RSPO)

Agriculture Labels

- Rainforest Alliance Certified (RA)
- Utz Certified
- Euro-Retailer Produce Working Group (EUREPGAP)
- International Federation of Organic Agriculture Movements (IFOAM)
- Naturland Association for Organic Agriculture

Trade Labels

- Fairtrade Label Organization (FLO)

Social criteria

No	Sector → Social Criteria	FORESTRY				AGRICULTURE					Bio energy		TRADE
		FSC	PEFC	CSA SFM	SFI	RA	UTZ Certified	EUREP GAP	IFOAM	Naturland	GGL	RSPO	FLO
1	Labour conditions	X	X	X	X	X	X	X	X	X		X	X
2	Protection of human safety & health	X	X	X	X	X	X	X	X	X		X	X
3	Rights of indigenous people	X	X	X	X		X		X			X	
4	No discrimination against gender, race, etc	X	X	X	X	X	X		X	X		X	X
5	Elimination of child labour	X	X	X	X	X	X		X	X		X	X
6	Protection of women and reproductive rights	X		X	X	X	X		X	X		X	X
7	Access to resources ensuring adequate quality of life	X	X	X	X	X	X	X	X	X			X
8	Food and energy supply safety			X			X	X	X	X	X		
9	Capacity building	X	X	X	X	X	X	X	X	X		X	X
10	Combating poverty	X	X	X	X	X			X	X			X
11	Democratic participation of multi-stakeholders	X	X	X	X	X			X	X		X	X
12	Land ownership being equitable	X		X					X			X	X
13	Community well-being	X	X	X	X	X	X	X	X	X			X
14	Fair trade conditions			X		X		X	X				X
15	Allow employees to unionize	X	X	X	X	X	X		X	X		X	X
16	Promote educational benefits for employees and their families	X	X	X		X	X		X	X			X
17	Provide healthcare access for employees	X	X	X	X	X	X		X	X			X
18	Dispute resolutions mechanism for locals	X											
19	Social impact evaluations conducted and used to improve management planning	X											
20	Research				X								
21	Training of workers on safety and basic hygiene						X						



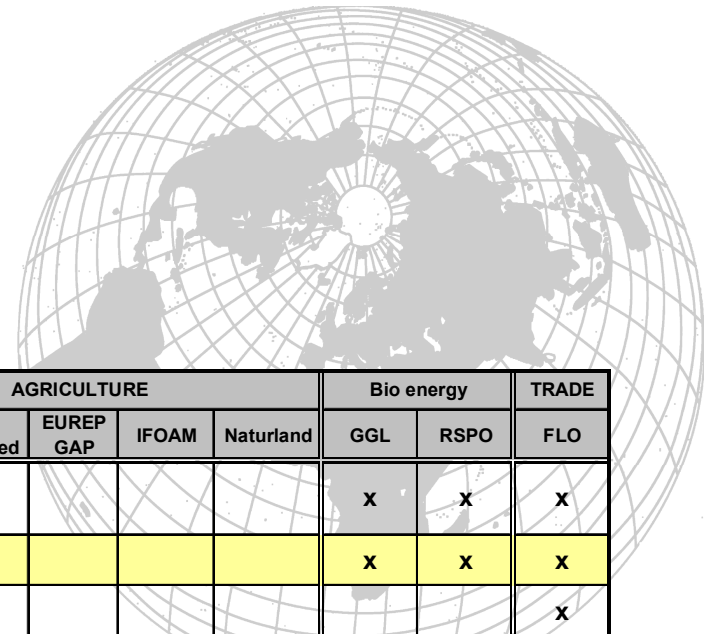
Source : UNEP, DaimlerChrysler and Ministry of Nutrition and Rural Affairs of the State of Baden-Württemberg, Germany

Environment criteria

No	Sector → Ecological criteria	FORESTRY				AGRICULTURE					Bio energy		TRADE
		FSC	PEFC	CSA SFM	SFI	RA	UTZ Certified	EUREP GAP	IFOAM	Naturland	GGL	RSPO	FLO
1	Protection of the atmosphere		X		X	X	X	X	X	X	X		
2	Preservation of existing sensitive ecosystems	X	X	X	X	X	X	X	X	X	X	X	X
3	Conservation of biodiversity	X	X	X	X	X	X	X	X	X	X		X
4	Conservation and improvement of soil fertility - avoidance of soil erosion	X	X	X	X	X	X	X	X	X	X	X	X
5	Conservation of ground and surface water	X	X	X	X	X	X	X	X	X	X	X	X
6	Combating deforestation	X	X	X	X	X	X		X	X	X	X	X
7	Combating desertification and drought	X	X		X	X	X			X	X		
8	Improve or preserve landscape	X	X	X	X	X	X	X	X	X	X	X	X
9	Conservation of non-renewable resources		X				X		X	X	X		X
10	Waste management and minimisation	X	X		X	X	X	X		X		X	X
11	Proper use of agrochemicals/ record keeping of its use	X	X		X	X	X	X			X	X	X
12	Reduce pollution and emissions						X	X	X	X	X	X	X
13	Prohibit or record genetically modified plants	X	X		X	X	X	X	X	X	X		X
14	Pest management control system	X	X		X	X	X	X	X	X	X	X	
15	Control and monitor exotic species	X			X								
16	Protection of rare, threatened, endangered species and their habitats / animals rights	X								X			
17	Prohibit or control the conversion of natural forest to plantation or non forest land use	X											
18	Fire management	X											
19	Re-use of process by-products as source of energy						X						
20	Prohibit the use of agrochemicals banned by the USA, EU and/or Japan and country of production						X						
21	No use of agrochemicals									X			

Source : UNEP, DaimlerChrysler and Ministry of Nutrition and Rural Affairs of the State of Baden-Württemberg, Germany

Economic Criteria



No	Sector → Economic Criteria	FORESTRY				AGRICULTURE					Bio energy		TRADE
		FSC	PEFC	CSA SFM	SFI	RA	UTZ Certified	EUREP GAP	IFOAM	Naturland	GGL	RSPO	FLO
1	Viability of the business (business minimizes costs to ensure competitiveness and has adequate funding to sustain operations)	X	X			X					X	X	X
2	Long-term commitments, contracts, management plans	X	X		X	X					X	X	X
3	Strengthen and diversify local economy	X	X	X	X	X	X						X
4	Reliability of resources (guards against supply disruptions)	X	X		X			X			X		
5	Sustainable harvesting and yields (agricultural yields should be maintained on an economically viable and stable level)	X	X	X	X	X	X		X	X	X	X	X
6	No blocking of other desirable developments	X		X		X							X
7	Wage regulations		X		X	X	X		X	X		X	X
8	Fairtrade minimum price for most products (cost covering and giving market access)												X
9	Fairtrade premium (in addition to the minimum price)												X

Thank you



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