

Global Bioenergy Partnership

Working together to promote bioenergy for sustainable development

Criteria for sustainability of biofuels: mandatory and voluntary approaches

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OUTLINE OF PRESENTATION

1. Sustainability criteria for biofuels – why?
 - Well, we don't do it for fossil fuels...
2. Sustainability criteria for biofuels – what?
 - Examples of issues covered
3. Sustainability criteria for biofuels – how?
 - Examples of their use
4. Important issues and lessons to be learned
 - From the experience of biofuel schemes and other sectors
5. Outstanding biofuel-specific issues
 - Beyond sustainability criteria?
6. GBEP's work on sustainability criteria and indicators for bioenergy
 - The SE Asian perspective needs to be heard in the inter-governmental discussion

Disclaimer: any views expressed on non-GBEP matters do not necessarily reflect those of the GBEP Partners.

SUSTAINABILITY CRITERIA FOR BIOFUELS – WHY?

Sustainability criteria and indicators for biofuels are a means of:

- **defining** and **agreeing** amongst a certain set of stakeholders what good performance in biofuel production (and use) looks like and how it will be measured;
- **measuring** and **communicating** the performance of biofuels; and
- **incentivising** good performance (achieving policy objectives) and **mitigating** bad performance (limiting unwanted side effects).

The application of sustainability criteria to biofuels has primarily arisen in order to:

- **target and justify government support**, given that biofuels are normally more costly to produce than their fossil fuel equivalents;
- **satisfy consumer/civil society concerns** and **create demand** for a (sustainable) product; and
- allow **informed decision-making**.

SUSTAINABILITY CRITERIA AS A FILTER FOR SUBSIDIES

Use of sustainability criteria to target government support:

- biofuels depend on subsidies and policy to create demand
- policy drivers include energy security/independence, climate change, economic development (national and rural) and air quality
- evidence of meeting these objectives is demanded
- governments must identify their policy objectives behind biofuel support and put in place smart subsidies (i.e. targeted and time-limited)

- associated risk 1: they can also act as a filter for trade, i.e. a technical barrier to trade
- associated risk 2: subsidies do not reach the actor in the value chain who deserves the incentive/reward

SUSTAINABILITY CRITERIA TO RESPOND TO PUBLIC CONCERNS

Use of sustainability criteria to respond to consumer/civil society concerns and create demand for a (sustainable) product:

- biofuels are normally substitutes for fossil fuels and are therefore expected by many to be “better”
- biofuels came to prominence in a changed climate compared to fossil fuels: sustainability is higher on the agenda
- often considered less important where the main driver is reduction of oil imports or increased access to energy
- some of the potential negative impacts of biofuels are high profile, more visible than the impacts of offshore petroleum, and emotive
- e.g. food insecurity, deforestation, displacement of people, slave labour, large-scale water use and pollution and biodiversity loss (orang-utans)
- associated risk 1: they are impractical and poorly enforced
- associated risk 2: they do not change the status quo due to leakage, lack of demand for products compliant with criteria or high implementation costs

SUSTAINABILITY CRITERIA TO GATHER DATA

Use of sustainability criteria to allow informed decision-making:

- to inform policy-makers and industry
- to create public awareness
- to provide information to consumers in a transparent manner (also applies to government procurement, where an example can be set)

- associated risk 1: they can also become a large administrative burden on producers and suppliers
- associated risk 2: this information is not used to inform policy-making or improve behaviour

SUSTAINABILITY CRITERIA FOR BIOFUELS – WHAT?

Common sustainability criteria in existing and emerging schemes are:

- GHG balance
- Biodiversity
- Water, Air, Soil
- Labour conditions
- Consultative planning/impact assessment

Less common ones include:

- Food security (often mentioned, not often developed)
- Economic development
- Economic viability
- Access to technology/innovation

SUSTAINABILITY CRITERIA FOR BIOFUELS – HOW?

1. Certification

- specific feedstocks: Roundtable on Sustainable Palm Oil, Roundtable on Responsible Soy, Better Sugarcane Initiative;
- biofuel meta-standards: ISCC, Roundtable on Sustainable Biofuels

2. Regulation

- UK, Netherlands, Germany, EU, US, California; to a limited extent e.g. China and Japan (non-staples and non-food standard corn, wheat)

3. Financing decisions

- Inter-American Development Bank, Global Environment Facility, World Bank, Clean Development Mechanism

4. Intergovernmental consensus-building and data collection to inform domestic policy development

- GBEP

5. Standards

- CEN, ISO

CERTIFICATION SCHEMES: THE ROUNDTABLE ON SUSTAINABLE PALM OIL

The RSPO is a multi-stakeholder not-for-profit association, with the objective of promoting the growth and use of sustainable oil palm products through credible global standards and engagement of stakeholders.

Formed in 2004 in response to the urgent and pressing global call for sustainably produced palm oil.

The RSPO certification scheme (in operation) is based on 8 principles, 39 criteria and accompanying indicators and guidance. The 8 principles are:

1. Commitment to transparency

2. Compliance with applicable laws and regulations

3. Commitment to long-term economic and financial viability

4. Use of appropriate best practices by growers and millers

5. Environmental responsibility and conservation of natural resources and biodiversity

6. Responsible consideration of employees and of individuals and communities affected by growers and mills

7. Responsible development of new plantings

8. Commitment to continuous improvement in key areas of activity

CERTIFICATION SCHEMES: THE ROUNDTABLE ON SUSTAINABLE BIOFUELS

The RSB is an international multi-stakeholder initiative developing a sustainability certification programme for biofuels production.

Version Zero of the standard was published in August 2008 for consultation and Version One is due to be published later this year. Latest draft of principles, Version 0.4, covers the following areas. Indirect effects to be addressed later.

1. Legality (especially land, labour, water rights)
2. Planning, monitoring, and continuous improvement (through transparent and consultative Environmental and Social Impact Assessment, economic viability)
3. GHG significantly better over lifecycle than fossil fuel
4. Human and Labor rights (protect workers' rights)
5. Rural and Social Development (focus on regions of poverty)
6. Local Food Security (only direct impact)
7. Conservation (conserve and protect high conservation values)
Conserve and protect Soil (P 8) , Water (P 9) , Air (P 10)
11. Management of Technology, Inputs and Waste – (esp. biotech) should be used responsibly and transparently.
12. Land Rights (respect land rights and land use rights)

REGULATION: UK RENEWABLE TRANSPORT FUEL OBLIGATION

The UK's RTFO is an example of a hybrid of mandatory and voluntary approaches to the use of sustainability criteria for biofuels.

Mandatory targets are set for the volume share of biofuels each year; obligated fuel suppliers can meet these targets through supplying renewable fuels or purchasing certificates from suppliers with an excess.

Not mandatory to comply with sustainability criteria, but mandatory for fuel suppliers to provide information (which is made publicly available) on the sources and sustainability of biofuels supplied.

The scheme relies heavily on naming and shaming and the corporate social responsibility of the fuel suppliers.

The UK Renewable Fuel Agency uses a meta-standard and publishes data regarding which biofuels meet qualifying standards for environmental and social performance.

The voluntary nature was partly due to concerns about compatibility with WTO rules. Will now be adapted to comply with EU Directives.

REGULATION: EU RENEWABLE ENERGY AND FUEL QUALITY DIRECTIVES

The EU's Renewable Energy Directive (in force May 2009) establishes a mandatory **national target of 10% renewable energy in transport** (including biofuels) in 2020 for each Member State.

The Fuel Quality Directive (also in force May 2009), establishes an obligation on fuel suppliers to **reduce the life-cycle GHG emissions of their fuels by up to 10% by 2020** compared to the EU-average level of life-cycle GHG emissions per unit of energy from fossil fuels in 2010 through the use of biofuels, alternative fuels and reductions in flaring and venting at production sites.

- 6% is mandatory, with additional currently non-binding 2% targets for GHG savings from i) energy/fuel supply or use of carbon capture and storage and ii) CDM projects in the transport fuel supply sector

In order to count towards these targets and qualify for financial support from Member States, biofuels must comply with sustainability criteria.

SUSTAINABILITY CRITERIA OF THE EU DIRECTIVES

GHG savings

Minimum threshold of savings in GHG (CO₂, N₂O, CH₄) emissions throughout the life cycle, compared to those caused by conventional fossil fuel corresponding reference, equal to:

- 35% on entry into force of the Directive (2009)
- 50% from 1 January 2017 and 60% from 1 January 2018 for biofuels produced in plants that start production after 2017. (Subject to review in 2014.)

SUSTAINABILITY CRITERIA OF THE EU DIRECTIVES

Protection of biodiversity and carbon stocks

Raw materials for biofuels shall not be taken from:

- land with high biodiversity value: undisturbed forests, protected areas, highly biodiverse grassland
- land of high carbon stocks: wetlands and certain forested areas
- peatland

These land-use change criteria apply if the land had one of the statuses as at 1 January 2008 or later and did not continue to have this status at the time of harvesting the raw materials for biofuels. (Other terms and conditions also apply.)

Cross-compliance conditions (applicable to all agriculture) also apply to producers of raw materials for biofuels in the European Union.

SUSTAINABILITY CRITERIA OF THE EU DIRECTIVES

Reporting on additional issues

Economic operators must also report on measures taken

- **for soil/water/air protection,**
- **restoration of degraded land,**
- **the avoidance of excessive water consumption where water is scarce.**

The European Commission shall report every two years on the above and other matters such as:

- wider social issues, such as impact on food prices and availability, whether major third country suppliers have ratified ILO conventions, the Cartagena Protocol on Biosafety and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

REGULATION: MANDATORY APPROACHES AND THE WTO

- Sustainability criteria must not be used as a barrier to trade, and should be applied in a manner consistent with international trade law.
- Some argue that the inclusion of sustainability criteria within the EU's biofuel sustainability scheme is incompatible with WTO law. Social criteria in particular are more controversial in this discussion.
- Both the General Agreement on Tariffs and Trade (GATT) and the Agreement on Technical Barriers to Trade (TBT Agreement) are relevant.
- Under the GATT, WTO members are obliged not to treat products of foreign members less favourably than “like products” produced domestically or imported from other foreign members.
- Some argue that all biofuels are “like” products, given that they compete in the same market. Others suggest that consumer preferences can make products “unlike”.
- There are exceptions to the GATT that mean that measures that treat products differently based on their production method are not *per se* prohibited. These include public morals, and the protection of human, animal and plant health. A measure that differentiates between products on their production method must be deemed necessary to achieve the policy objective covered by the exception.
- The TBT Agreement prohibits unnecessary obstacles to international trade and requires the use of internationally agreed standards where they exist.

REGULATION: US RENEWABLE FUEL STANDARD 2

The US Energy Independence and Security Act 2007 set new specific volume mandates for cellulosic biofuel, biodiesel, advanced biofuel and total renewable fuel:

- total renewable fuel target for 2008 increased from 5.4 Bgal to 9 Bgal
- total rises and reaches 36 Bgal in 2022, of which 16 Bgal must be cellulosic biofuel.

New definitions of renewable fuel categories and criteria in order to count towards mandate – currently only GHG emission thresholds:

Renewable fuel	20%
Advanced biofuel (essentially all biofuels other than conventional ethanol from corn starch)	50%
Biomass-based diesel	50%
Cellulosic biofuel (renewable fuel produced from cellulose, hemicellulose, or lignin e.g. cellulosic ethanol, BTL diesel)	60%

This approach is different from that of the Californian Low Carbon Fuel Standard, which simply demands a reduction over time in the GHG intensity of fuel of 10% by 2020.

SUSTAINABILITY CRITERIA AS A TOOL FOR PROJECT FINANCING DECISIONS – IDB

Part of the Inter-American Development Bank's Biofuels Sustainability Scorecard – new version soon to be released.

This scorecard is to be completed by those seeking financing for biofuel projects.

Relative yield performance ⓘ (view example) [clear](#)

Performance ≥ 10% greater than Average	<input type="radio"/>
Average ≤ Performance < 10% greater than average	<input type="radio"/>
10% less than Average ≤ Performance < Average	<input type="radio"/>
Performance < 10% less than average	<input type="radio"/>
N/A	<input type="radio"/>

Biodiversity ⓘ [clear](#)

Assessment conducted, no threatened species	<input type="radio"/>
No assessment required given prior land use	<input type="radio"/>
Threatened species adequately addressed	<input type="radio"/>
Threatened species, no plan	<input type="radio"/>
N/A	<input type="radio"/>

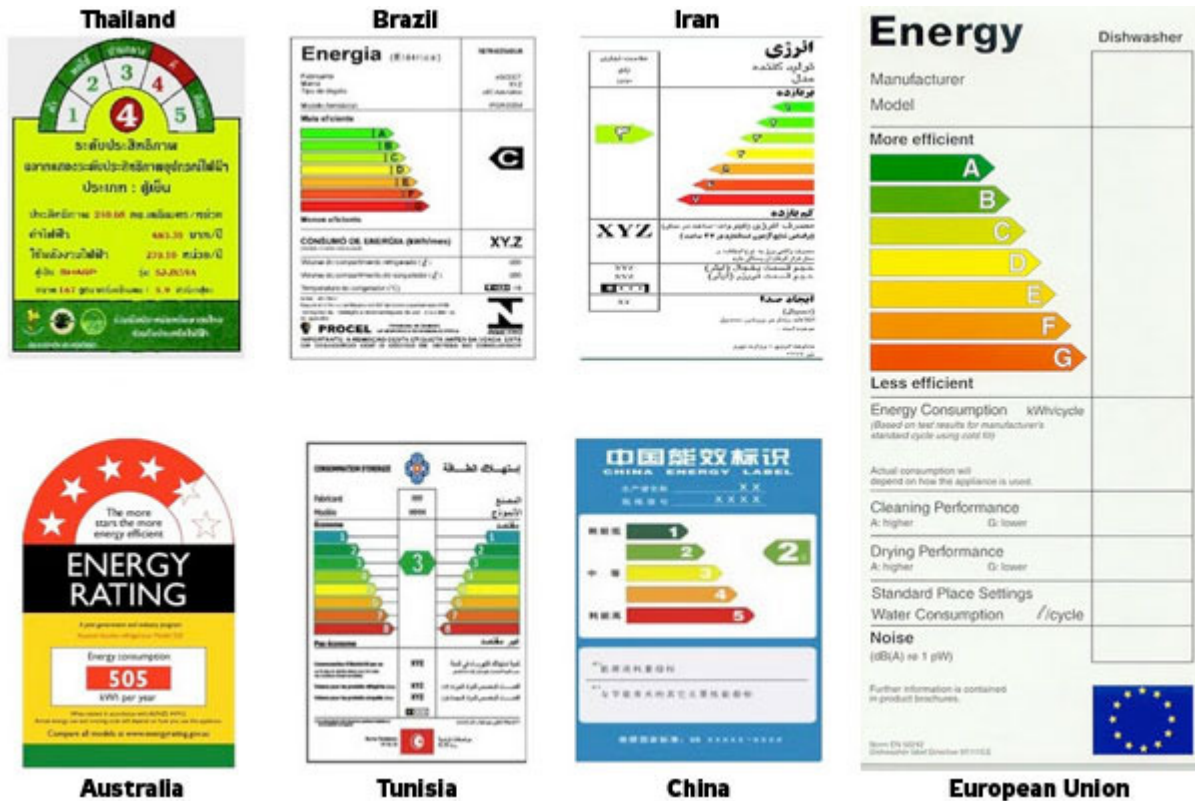
Cultivation

Former land use ⓘ [clear](#)

No land area required	<input type="text"/>	%
Degraded land	<input type="text"/>	%
Marginal land	<input type="text"/>	%
Under-utilized land	<input type="text"/>	%
Fallow fertile land	<input type="text"/>	%
Productive land	<input type="text"/>	%
Rain forest or primary forest	<input type="text"/>	%
Peatland	<input type="text"/>	%
Wetlands	<input type="text"/>	%
High conservation value areas (HCVAs) and protected areas	<input type="text"/>	%
N/A	<input type="text"/>	%

LESSONS LEARNED FROM OTHER SECTORS: ELECTRO-DOMESTICS

Energy efficiency labelling for electro-domestic appliances etc.



Categorical grading schemes seem to be more effective than simple pass/fail schemes in changing consumer behaviour and improving the energy efficiency of products sold.

LESSONS LEARNED FROM OTHER SECTORS: FORESTRY

Forestry: a marked geographical skew in sustainability certification

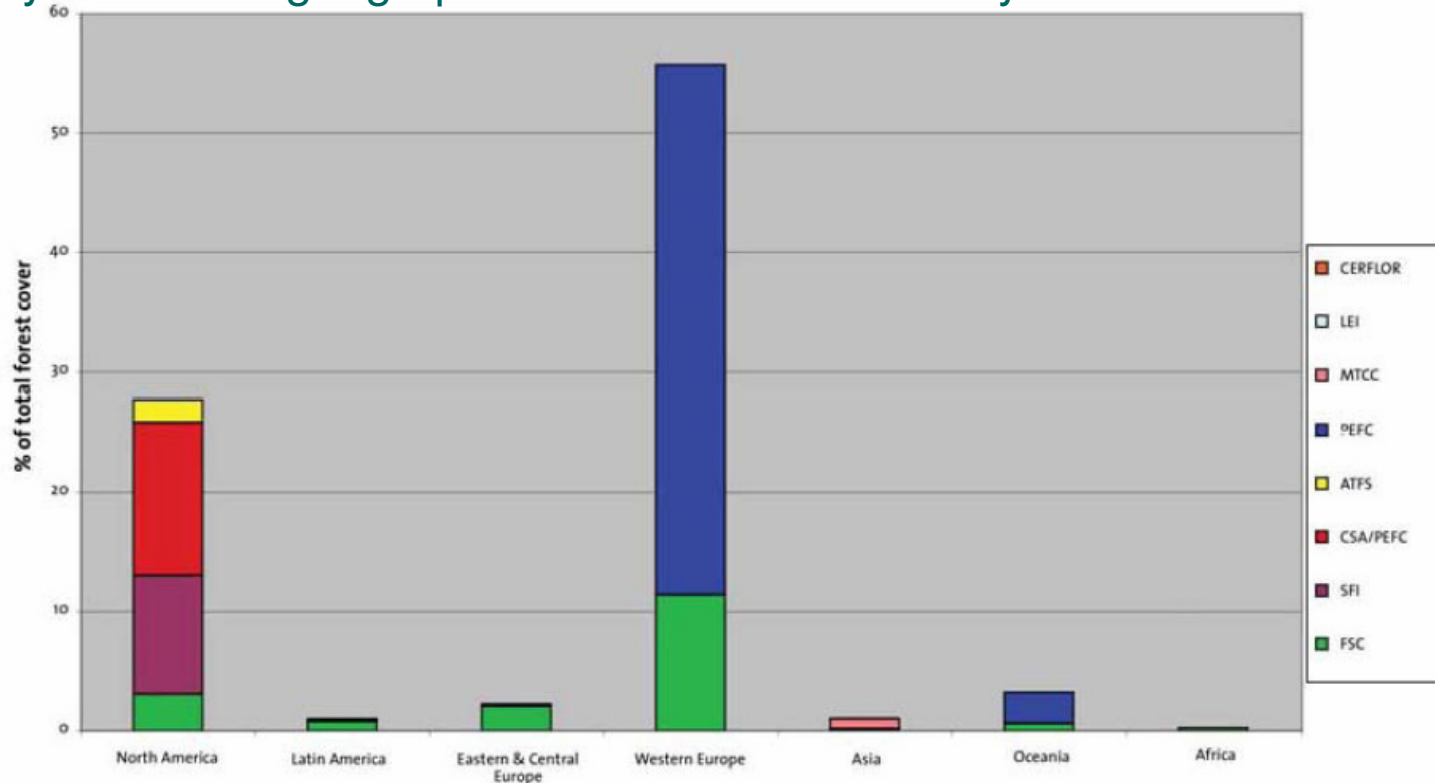


Figure 2 Area certified under each system as a percentage of the total regional forest cover in 2005. Source (Cashore, Gale et al. 2006)

Factors for slow uptake in developing countries cited as: non-resolution of indigenous rights matters, indifference of foreign-owned companies, focus on less-ecosensitive markets, illegal logging providing a cheap alternative, poverty, political instability *etc.*

(biomass technology group, *Sustainability Criteria & Certification Schemes for Biomass Production*, 2008)

BIOFUEL-SPECIFIC ISSUES: BEYOND SUSTAINABILITY CRITERIA?

- Ensuring that biofuels maintain or enhance local and international food security
- Land/natural resource use planning
- Leakage between biofuel, food, timber etc. markets: can sustainability criteria for biofuels be effective if similar measures are not applied to all agriculture?
- Changing consumption behaviour – fuel efficiency and appropriate prioritisation of biomass uses
- Competitiveness – subsidies must be time-limited and efficiencies along the value chain must be encouraged (government support may be more effective at the RD&D rather than production or supply stages)

BIOFUEL-SPECIFIC ISSUES: FOOD SECURITY AND LAND-USE PLANNING

Which policy tools are available to address impact of biofuels on food security?

Local food security impacts, i.e. direct displacement of food production or other livelihood (esp. small-scale, family or subsistence farming) plus impacts on local markets, including land prices:

- consultative agro-ecological zoning and economic-ecological zoning and landscape/community-level resource use planning that takes into account fringe/spillover effects;
- compensation for displacement;
- focus on use of wastes and residues and integration of bioenergy production into existing agricultural, forestry, fisheries etc. activities;
- biofuel projects that set aside land to meet local food needs

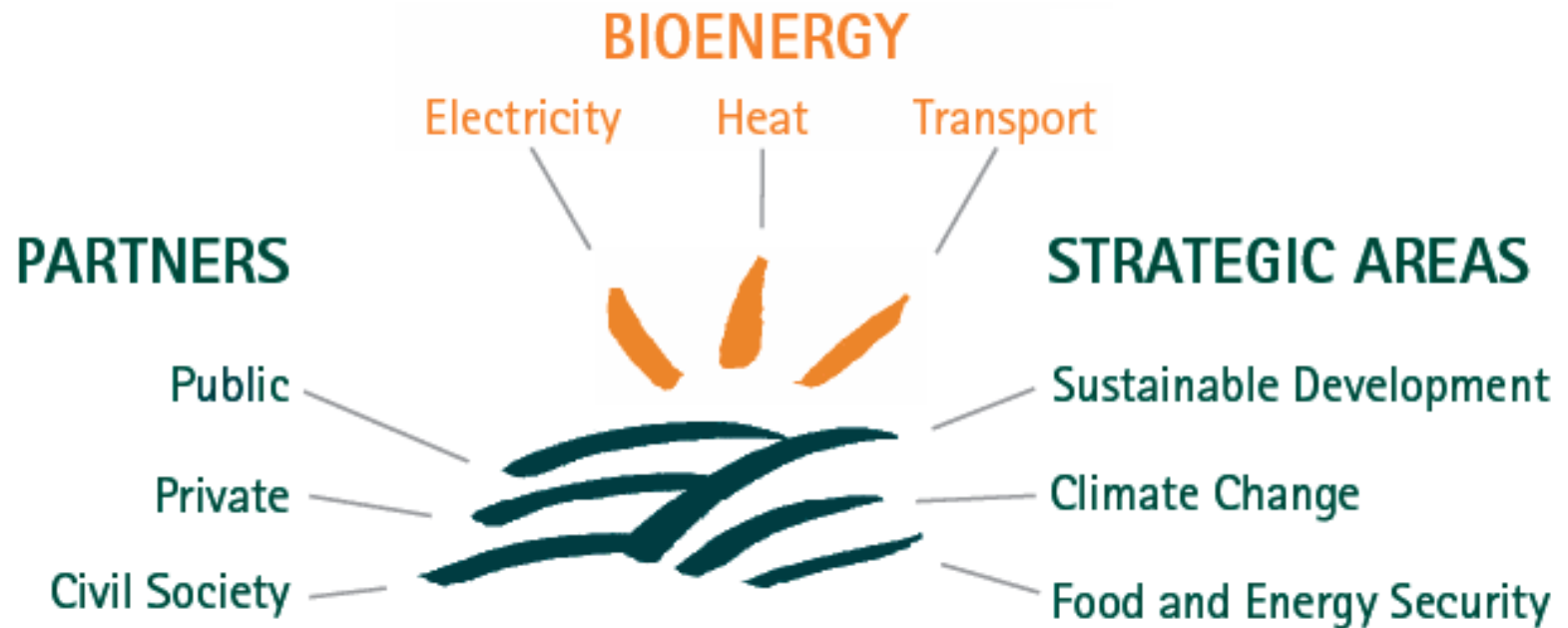
International market-mediated effects, e.g. due to change in demand for product or diversion of end use:

- national biofuel policies that do not imply reduction of exports of feedstocks from non-biofuel baseline – additional production to meet additional biofuel demand;
- national biofuel blending levels adjusted in line with harvests and non-biofuel demand-side factors;
- buffers in stocks (national and global) of staples

SUMMARY OF KEY POINTS SO FAR

- Sustainability criteria should be used to ensure government support (which should be time-limited) achieves policy objectives
 - therefore criteria not just about protection but also helping biofuels make a positive contribution to sustainable development;
- Criteria and indicators can also enable informed decisions – by policy-makers, industry and consumers;
- Criteria should not be used as a technical barrier to trade;
- Need to create public awareness to create demand for sustainable products and need to ensure that additional cost of producing sustainable is met by government support/premium price and passed on to appropriate actor in the value chain;
- When it comes to labeling, communicating information and changing consumer behaviour, categorical grading systems seem to work better than pass/fail test;
- Criteria cannot address all issues and other policy tools are required.

THE GLOBAL BIOENERGY PARTNERSHIP



GBEP: LAUNCHED BY THE G8, FOUNDED AT CSD14

2005 Gleneagles Plan of Action:

*“We (the G8) will promote the continued development and commercialisation of renewable energy by: [...] d) launching a **Global Bioenergy Partnership** to support wider, cost effective, biomass and biofuels deployment, particularly in developing countries where biomass use is prevalent”.*

- The Global Bioenergy Partnership (GBEP) was launched during the Ministerial Segment of the 14th session of the Commission on Sustainable Development (CSD14) in New York on 11 May 2006, with a signing ceremony of the Terms of Reference.
- On 18 January 2007, GBEP was registered as a CSD Partnership for Sustainable Development.

WHAT ARE CSD PARTNERSHIPS FOR SUSTAINABLE DEVELOPMENT?

- Voluntary multi-stakeholder initiatives contributing to the implementation of Agenda 21, Rio+5 and the Johannesburg Plan of Implementation (JPOI)
- Partnerships for sustainable development were an important complementary outcome of the World Summit on Sustainable Development (WSSD).
- At its 11th Session in May 2003, the Commission on Sustainable Development (CSD) reaffirmed that these partnerships contribute to the implementation of intergovernmental commitments, recognizing that partnerships are a complement to, not a substitute for, intergovernmental commitments.

GBEP: RENEWED G8 COMMITMENTS AND MANDATES

2007 Heiligendamm Summit Declaration:

*“We invite the **Global Bioenergy Partnership (GBEP)** to continue its work on biofuel best practices and **take forward the successful and sustainable development of bioenergy**”*

2008 Hokkaido Toyako Summit:

*“We support the work of the **Global Bioenergy Partnership (GBEP)** and invite it to work with other relevant stakeholders **to develop science-based benchmarks and indicators for biofuels production and use**”*

2009 L’Aquila Summit:

*“We welcome the work of the **Global Bioenergy Partnership (GBEP)** in developing a common methodological framework to measure greenhouse gas emissions from biofuels and invite **GBEP to accelerate its work in developing science-based benchmarks and indicators for sustainable biofuel production and to boost technological cooperation and innovation in bioenergy**”*

GBEP PARTNERS AND OBSERVERS

Partners:

Brazil, Canada, China, Fiji Islands, France, Germany, Italy, Japan, Mexico, Netherlands, Russian Federation, Spain, Sudan, Sweden, Switzerland, Tanzania, United Kingdom, United States of America, FAO, IEA, UNCTAD, UN DESA, UNDP, UNEP, UNIDO, UN Foundation, WCRE and EUBIA.

Observers:

Angola, Argentina, Australia, Austria, Colombia, Gambia, Ghana, India, Indonesia, Israel, Kenya, Madagascar, Malaysia, Mauritania, Morocco, Mozambique, Norway, Peru, Rwanda, South Africa, Tunisia, European Commission, EEA, IFAD, World Bank and the WBCSD.

Italy is currently Chair and Brazil co-Chair. The Secretariat is based at the FAO, in Rome.

GBEP: THE INTERGOVERNMENTAL DISCUSSION FORUM FOR BIOENERGY

GBEP is a forum where voluntary cooperation works towards consensus amongst governments, intergovernmental organizations and other partners in the areas of the sustainable development of bioenergy and its contribution to climate change mitigation. It also provides a platform for sharing information and examples of good practice.

GBEP is unique in bringing a large number of national governments together specifically to discuss bioenergy issues of international relevance.

One of GBEP's roles is to help build synergies between ongoing international bioenergy initiatives and avoid unnecessary duplication. For example, GBEP works closely with IEA Bioenergy, the Roundtable on Sustainable Biofuels, REEEP and UN Energy, as well as the individual UN agencies and programmes of relevance.

GBEP'S OBJECTIVES

The main objectives of the Global Bioenergy Partnership are to:

- promote global high-level policy dialogue on bioenergy and facilitate international cooperation;
- support national and regional bioenergy policy-making and market development;
- favour the transformation of biomass use towards more efficient and sustainable practices;
- foster exchange of information, skills and technologies through bilateral and multilateral collaboration; and
- facilitate bioenergy integration into energy markets by tackling barriers in the supply chain.

GBEP PROGRAMME OF WORK

GBEP's current priorities are:

- 1. facilitating the sustainable development of bioenergy** (Task Force on Sustainability);
- 2. formulating a common methodological framework on GHG emission reduction measurement from the use of biofuels for transportation and from the use of solid biomass** (Task Force on GHG Methodologies); and
- 3. raising awareness and facilitating information exchange on bioenergy.**

GBEP is now discussing how to take forward work in a new focus area of **technology cooperation** and the **deployment of technologies for sustainable bioenergy**.

THE GBEP TASK FORCE ON SUSTAINABILITY: A BRIEF HISTORY

- Task Force established in June 2008; led by the UK
- To help build **consensus** on a practical way to achieve sustainable bioenergy production and use
- Priority – to provide **relevant, practical, science-based, voluntary** sustainability criteria and indicators to guide any analysis undertaken of bioenergy at the domestic level
- To be used with a view to informing decision making and facilitating the sustainable development of bioenergy
- **Not to be applied so as to limit trade in bioenergy in a manner inconsistent with multilateral trade obligations.**

RECENT PROGRESS

- Task Force held its 4th meeting in Heidelberg, Germany, 19-20 March 2009
- Provisional draft sustainability criteria drawn up
- Agreement to commence work on science-based indicators

- 5th meeting of the Task Force held in Paris, 8-9 July 2009
- Process for developing and selecting indicators agreed
- Discussion of components (the most important areas of the criteria) and nomination of experts now taking place
- Proposals for candidate indicators due to be invited in the next week or two

PROVISIONAL CRITERIA

- Organized into four baskets:
 - Environmental
 - Social
 - Economic
 - Energy Security
- A fifth category for cross-cutting issues, e.g. institutional and policy frameworks, which are not a good fit with the baskets but important

ENVIRONMENTAL CRITERIA

- Greenhouse gas emissions
- Productive capacity of land and ecosystems
- Land use change, including indirect effects
- Air quality
- Water availability, use efficiency and quality
- Biological diversity

Note these are provisional.

SOCIAL CRITERIA

- Food security
- Access to land, water and other natural resources
- Labour conditions
- Rural and social development
- Access to energy
- Human health and safety

Note these are provisional.

ECONOMIC CRITERIA

- Resource availability
- Resource use efficiency in bioenergy production, conversion, distribution and end-use
- Economic development
- Economic viability and competitiveness of bioenergy
- Access to technology and technological capability

Note these are provisional.

ENERGY SECURITY CRITERION

1. Energy security

Note this is provisional.

DEVELOPMENT OF INDICATORS

- Three sub-groups established
 1. **Environmental** sub-group, led jointly by UNEP and Germany
 2. **Social** sub-group, led by FAO
 3. **Economic and energy security** sub-group, led jointly by IEA and UN Foundation
- A work stream on **indirect land-use change** within the Environmental sub-group, led by Germany, due to produce a briefing paper on the subject, an inventory of applicable policy measures and other work to support the development of relevant indicators

NEXT STEPS

- Task Force members to make proposals for indicators and discuss them until agreement reached – through GBEP online discussion forum, workshop and Task Force meetings;
- revisit and refine the sustainability criteria in light of the outcome of the work on indicators;
- elaborate the cross-cutting recommendations, such as on policy and institutional frameworks, which provide the essential context for the effective application of sustainability strategies and measures; and
- draft a report containing the agreed criteria and indicators, with methodological descriptions and other explanatory notes, for publication around May 2010 and submission to the G8 Summit in Canada.

NEXT STEPS (cont'd)

- Work with the possible new GBEP Task Force on Deployment of Technologies for Sustainable Bioenergy to identify suitable examples of best practice in bioenergy production, use and policy-making, in relation to the GBEP sustainability criteria, for dissemination;
- Give further consideration to how the criteria and indicators could be used, and in doing so, seek the views of a wide range of interested parties and stakeholders.

GBEP TASK FORCE ON GHG METHODOLOGIES

- Established in October 2007 and co-led by United States and the UN Foundation
- Developed and published (in June 2009) a common methodological framework for the use of policy makers and stakeholders when assessing GHG emissions associated with bioenergy
- The Task Force will now go on to implement the framework as a tool for comparing the results of various methodologies for assessing GHG emissions from bioenergy systems, communicating the results in a transparent way and also building capacity in GHG lifecycle analysis (LCA) for bioenergy.
- Important to work towards improvement and harmonisation of GHG LCA since such analysis underpins regulatory tools for the incentivisation of biofuels, certification schemes, criteria for project financing, CDM methodologies, and evaluation of bioenergy as a climate change mitigation tool.

GBEP COMMON METHODOLOGICAL FRAMEWORK FOR GHG LCA OF BIOENERGY

The methodological framework comprises ten steps in the full lifecycle analysis of GHG emissions from bioenergy production and use:

1. GHGs covered
2. Source of biomass
3. Land-use changes due to bioenergy production
4. Biomass feedstock production
5. Transport of biomass
6. Processing into fuel
7. By-products and co-products
8. Transport of fuel
9. Fuel Use
10. Comparison with replaced fuel

For each step, a set of questions was developed to ascertain which sources of emissions (or sinks) were considered and through which methods, and which assumptions were made.

DEPLOYMENT OF TECHNOLOGIES FOR SUSTAINABLE BIOENERGY

- Proposal for a new GBEP Task Force to be further discussed at the 6th Technical Working Group meeting, with a recommendation for the consideration of the 8th Steering Committee meeting (18 November 2009, Jakarta).
- Focus on technology cooperation to accelerate the research, development, deployment, transfer and diffusion of technologies for sustainable bioenergy – particularly for rural energy services in developing countries and transportation; may also include compilation and dissemination of best practices, and capacity-building in policy-making.
- Aim to determine enabling conditions to promote the deployment of technologies for sustainable bioenergy and appropriate frameworks for technology cooperation in bioenergy and, subsequently, also pilot collaborative field projects.

DEPLOYMENT OF TECHNOLOGIES FOR SUSTAINABLE BIOENERGY (cont'd)

The following work plan has been proposed and is being discussed:

- First phase: workshops, information exchange and publications on available funding options for bioenergy projects and guidance on how to access these funds; examples of good practice in bioenergy production, use and policy-making; analytical tools which build country capacity to assess sustainable bioenergy potential and to devise and implement a strategy for realization of this potential; and principles, conditions and institutional frameworks to facilitate the development and deployment of technologies for sustainable bioenergy.
- Second phase: atlas of bioenergy potential with a focus on developing countries and a step-by-step national sustainable bioenergy policy guide.
- Third phase: pilot activities among GBEP Partners that promote the deployment of technologies for sustainable bioenergy.

ASEAN PARTICIPATION IN GBEP

Next GBEP event is a workshop on sustainability indicators in Buenos Aires from 18-21 October 2009. After that, the Task Force on Sustainability meets in Jakarta, 16-17 November 2009.

We hope to welcome officials and other experts from across the ASEAN region in particular to ensure the perspectives of these countries are built into the international definition of the most important aspects of the sustainability of bioenergy production and use and of a framework to enable these aspects to be measured in order to guide policy development. Also a chance to exchange good practices in bioenergy production, use and policy-making.

There will also be meetings of the Technical Working Group and Steering Committee in Jakarta (18 November 2009). These are an opportunity to shape the work of GBEP on sustainability, technology cooperation and put new items on our agenda.

FOR FURTHER INFORMATION

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