

Roundtable on Sustainable Biofuels

An initiative of the EPFL Energy Center



ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

7th Virtual Meeting of the Working Group on Environment, 3 April 2008 Principle and Criteria on Conservation/Biodiversity and Technologies

[Due to unforeseen circumstances, the teleconference could not be recorded]

1. Background and Goals of this Teleconference

After almost 6 months of discussion on the principle and criteria on **Conservation and Biodiversity**, the RSB Working Group on Environment aimed to finalise a first draft. Similarly, the Expert Panel on Technologies (formerly called “Expert Panel on Biotechnologies”) had been intensively discussing for more than 3 months on the Principle and Criteria to develop to guarantee a **sustainable use of technologies**, including biotechnologies (e.g. Genetically Modified Organisms) and the 7th Virtual Meeting aimed to reach a first consensus on the table (Principle and Criteria) suggested by the Expert Panel.

2. News

- The organisation of a workshop regarding the **identification and mapping of biological conservation areas** (HCVs, HNVs,...) is still under discussion. The Öko-Institute, IUCN and several other organisations are interested. The implementation of conservation measures, including concrete compensation mechanisms (on-site and off-site mitigation, biodiversity offsets and biodiversity banking options) will need to be debated during this workshop as well. A first brainstorming on this theme might be held during the CBD-COP9 (to be confirmed).
- **Two regional outreaches** will be held in the oncoming weeks (**Colombia** in May, **India** in June). Working Group members are invited to send suggestions of local stakeholders (including neighbour countries) to invite.
- The **Steering Board** will virtually meet on the 30th of April and meet in person on the 9th and 10th of June 2008.

3. Principle and Criteria on Conservation and Biodiversity

The discussion was based on the **background paper #23** (http://cgse.epfl.ch/webdav/site/cgse/shared/Biofuels/ENV%20WG/Background%20papers/env_paper%2023%20-%20backgnd%20paper%20conservation%2003Apr08.pdf), which was sent by the RSB secretariat prior to the virtual meeting. It includes a proposition for the principle and criteria on conservation (synthesis table). Some participants send some edits and comments on the table prior to the conference.

3.1 General points of discussion:

- Several participants are concerned regarding the use of “**net effect**” in the principle, “as this could leave the impression that some intentional trade-offs would be acceptable between criteria.” This inclusion was suggested by some Steering Board members, based on their experience in other standards (e.g. FSC). The secretariat considers **it surely cannot lead to any trade-off** between HCVs and positive impacts on other aspects such as economy for instance. Furthermore, the verification of producers’ compliance will be against the criteria, not against the principle; hence the exact wording is not as critical in the principle as in the criteria.

Decision: Flag this aspect for the IMP Working Group in this guidance for certifiers.

- The Working Group agrees to replace “**should**” by “**shall**” in all the ‘requirements’ column.
- **Indirect impacts.** Producers cannot alone address this; following a precautionary principle on this aspect might end up certifying nothing except from wastes and ruling out potentially good biofuels. Governments need to play a strong role. As much work is going on regarding indirect impacts, the RSB wants to organise a more general reflection, beyond mere environmental consideration, probably through a joint meeting with other organisations dealing with this aspect.
- Illegal **fishing and hunting** on the plantation should be mentioned somewhere in the table. This is an issue frequently faced by organizations setting standards on forestry.

Suggestions from the secretariat [after the teleconference]: add a new criterion (based on the 4C – Coffee Community): “Hunting, fishing, ensnaring, poisoning and exploitation of endangered and protected species is prohibited on the production site. The traditional access to flora and fauna of indigenous people is tolerated as per the UN Declaration on the Rights of Indigenous People”

- In the table, “**private/public**” is replaced by “private **and** public” to avoid confusion
- The possibly substantial CO2 emissions due to land conversion are currently being discussed with the GHG group and the Expert Panel on Soils. Since Carbon sequestration is an ecosystem service, we may consider that C emissions from conversion are taken into consideration with the current wording.
- Some participants are concerned about prior cropland that could have been converted, abandoned and where forest may have grown. How is the land defined? Can we consider this as degraded?

Secretariat: The RSB has defined criteria to protect High Conservation Values. Whenever HCVs have appeared on a land that used to be exploited, these will need to be protected according to the same criteria. The **duty of identifying HCVs will not be the RSB’s**, but that of the national stakeholders involved in the interpretation and identification of HCV areas (local institutions, consultants, certification agencies...).

- Some participants suggest to set a sort of RSB "plus" -- give credit in areas where landscape-level planning including conservation areas (and trying to get at leakage) had been done. This in line with the **scorecard concept**: to be able to highlight those fuels with a better social promise, or environmental promise, or fewer indirect impacts.

3.2 Criterion 7a (Environmental Impact Assessment):

- The reference to **national procedures** might be inappropriate in countries with weak policies on EIA. An international reference, such as the EU, might be appropriate, although heavy. If stricter than national standards, producers may refuse to apply international requirements for EIA.

Decision: the Working Group on Implementation will need to discuss and agree on the basic requirements for an EIA. “and international” is added in the last bullet of requirements.

- There is an Integrated Biodiversity Assessment Tool (IBAT), used by Conservation International, the IUCN, Birdlife and others...Possible reference under guidance once more information is received.

3.3 Criterion 7b (Protection of HCV areas etc...):

- The “**no net loss**”, in reference to the Convention on Biological Diversity, may leave the impression that one might be able to degrade HCV’s in one area so long as they create an equal or greater amount in another. However, conversion of HCV areas is prohibited in any case and the concept of “no net loss” seems to apply to very few examples, not to every High Conservation Values. **A definition of “no net loss” from the biodiversity perspective is needed**, including the notion of temporality: There can be a net negative impact for a period of many years before the restored system has a similar conservation value to the original system

Secretariat: There was a mistake in the wording, which should in fact read “no net loss of High Conservation Value”. There are two perspectives; one is the area of production, which “contains” HCVs and cannot be converted. Full stop. The second perspective is the **high conservation value** itself, for

instance the religious use of a given area. Whenever the area is to be exploited, this traditional use could be maintained or partially moved to another area, with the agreement of local communities. In this precise case, we could consider there is **not net loss of this High Conservation Value**. The condition for implementing this part of the criterion would be that **the exact high conservation value should be maintained**, which looks impossible for pristine ecosystems or some of the most complex environmental services. Hence, the “no net loss” concept would not be applicable for all of the High Conservation Values and hence limited.

- In the responsibilities, “destructing” is replaced by “degrading”.
- It is important to define the **stakeholders that would have a valid claim to judge whether there is net loss or not**; these will likely be the same experts involved in the interpretation and identification of HCV areas within countries, and the verification of conservation criteria. To be further developed.
- **Cut-off date:** the secretariat firstly suggested the **1st of January 2008**, but one participant recommends using the RSPO cut-off date of **November 2005**, for ease of application and greater credibility. The approach of consistency with other roundtables or standards is supported by the group.
- The secretariat mentions that, in addition to a general one, **specific cut-off dates could also be considered for a given feedstock**. However, some participants consider that the cut-off date should not be feedstock dependent, as a producer could have multiple crops on the same land.
- In many countries, the **HCV and cut-off date are defined at national and provincial levels**. The RSB needs to enhance consultation at the local level to define HCV areas & the cut-off date for conversion. Sometimes, 3 years time can happen between the determination of HCV areas at national and provincial level. We should leave this point open to consultation.

Decision: the cut-off date is to be further developed over the implementation phase, in consultation with local stakeholders.

- 7b. “Responsibilities” 2nd bullet point. One participant found odd to include an RSB responsibility in this column since these standards apply to producers. **Suggestion: put it in the “guidance” column.**
- Some participants think we may be requiring too much of producers, especially small producers, on the mapping of HCVs especially. This is where we would need broad buy-in from governments.

3.4 Criterion 7d (Buffer Zones):

- Guidance. The question of what constitutes “clusters of individually-owned small agricultural parcels” will need to be taken-up by the Implementation Group to define standards for eligibility more clearly.

3.5 Definitions:

So far, the definitions included Degraded Lands, Ecological Corridor (EC), Ecosystem Functions (EF), Ecosystem Services (ES), the six High Conservation Values and Producers.

Additional terms to be defined (suggestions received from participants before the 7th Virtual Meeting):

1. **Biological Conservation Areas (IUCN):** “An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means”
2. **Native ecosystems**
3. **Conservation Areas** (public and private)
4. **Multi-stakeholder process**
5. **Conversion** (direct and indirect)
6. **Plantation**
7. **Exotic species**
8. **Invasive species**

9. Environmental Impact Assessment
10. Land Management plan
11. Waste products
12. Millennium Ecosystem Assessment
13. Buffer Zone (note: many countries have their own definition of BZ)
14. Small Landowner
15. Small agricultural parcel
16. Habitat connectivity
17. Environmental Performance
18. Net loss of High Conservation Value

4. Principle and Criteria on Technologies: Technology

4.1 Principle:

- The Working Group is supportive of the **second option proposed**, but the term “safety” is considered inappropriate and some participants suggest using “**performance**” instead, with an adequate definition. “Improve” is suggested instead of “increase”. Confusion might exist that environmental performance must be improved at each stage of the chain, which is not the case. The use of “along biofuel value chain” looks less confusing. Similarly, the use of “new” may create the confusion that existing technologies do not need to follow the same requirements.

Proposition: *The use of any technology must improve production efficiency and environmental performance along biofuel value chain*

4.2 Criterion 11a:

- Participants mention that some aboriginal communities might **face difficulties of access to the information about technology options**. This aspect is to be fully taken care of under the rural/social development principle.
- One remark came, requesting that **traditional use and rights on plants**, like mentioned by the Union for the Protection of New Varieties of Plants convention, should not be negatively influenced.

Secretariat: as long as it does not involve biofuel production, traditional uses of plants or biomass are not to be restricted by the standards.

4.3 Criterion 11b:

- Some participants consider **this criterion would not bind buyers from establishing their own requirements in contracts with suppliers**. Ex: a buyer that doesn't want a supplier to use GMO will just switch to another supplier. Similarly, whenever some purchasers may have higher requirements than those of the RSB, the dialog should still be possible with suppliers.
- Some participants do not understand **the intent and requirement** of the criterion. They find it irrelevant, as it is not binding and cannot prevent companies from following their business plan.

Secretariat: at the origin, this criterion aimed to avoid that some producers could be forced to use a given technology. It happened that producers discovered they are using GMOs without knowing for example or that they were under pressure from seed suppliers or bank to use one given technology.

Decision: as no consensus is reached on this criterion, it is kept under bracket for now.

4.4 Criterion 11c:

- **Guidance:** the first option proposed will lead to confusion and conflict; it is not a good rephrasing of the precautionary principle. **The second option looks relevant**, as in many countries have biotechnology committees already assessing the environmental impact of biotech releases. However, mitigation measures to be recommended by the national committees still need to be defined and other types of measures could also prevail. Hence, mitigation is left apart for now.

The group agrees on “Technologies must be applied following national or international risk assessment and recommended measures must be followed to avoid environmental damage.”

- Some participants are concerned that the **rights of farmers to use their own materials is limited**, and that they cannot keep their own seeds. On the other hand, do we need to impose plant sterility to ensure that there is no drift? Considering this controversial debate and that RSB cannot go beyond laws of IP, the Expert Panel considered we could only limit our wording to farmers having **all of the information to make decisions**.

4.5 Criterion 11d:

- The working group is supportive of the first option proposed for the criterion: **“Use of Genetically Modified Plants, Micro-organisms and Algae for biomass production.”**
- An environmental performance is not always equivalent to a reduction of the amount of inputs, but could also mean a reduction in the toxicity of inputs.

Suggestion: “Reduction in the required amount of land & water, as well as in the amount and toxicity of chemical application or any other input”. No disagreement from the group.

4.6 Criterion 11e:

- Some participants are concerned that the genetic contamination of native species is specifically addressed. As genetic diversity is part of biodiversity and an ecosystem function, this aspect is covered under the principle on conservation and biodiversity (criterion 7c).
- Although this criterion implies “no drift”, buffers and monitoring must be set to control contamination. Suggestion: add “Possible genetic contamination must be adequately monitored and buffered.” to criteria 11d and 11e.
- **Contained systems** to be defined.
- **The processing and field scales** need to be defined.

5. Conclusions:

As no members of the Working Group on Environment expressed major disagreement with the principle and criteria on Conservation/Biodiversity and Technologies, the secretariat considers a consensus has now been reached on the proposed tables, with several points of detail to be improved. The elements, comments and suggestions mentioned prior and during the 7th Virtual Meeting, and which received the working group’s support, are now included in the updated tables in annexes. Some minor aspects will request the group to give its agreement through emails. These points are:

- Criterion 7e: contradiction in the guidance: Suggestion to add “in absence of degradation of ecological corridors and habitat connectivity, “ and replace “restore” by “enhance”.
- 7e: Riparian corridors are needed within the productive landscape itself.
- Good practices (conservation): contradiction between the current definition of degraded land and the recommended good practice.
- Principle on Technologies and time dimension regarding the durable improvement of productivity.

Suggestion: add “Possible genetic contamination must be adequately monitored and buffered.” to criteria 11d and 11e.

THANKS TO ALL THE PARTICIPANTS FOR THEIR CONTRIBUTION!

The next Virtual Meeting of the Working Group on Environment will be held early May 2008.

Annex 1: Principle and Criteria on Conservation
[Related Indicators to be developed over the second semester 2008]

7. Biofuel production shall avoid net negative direct and indirect impacts on biodiversity and areas of High Conservation Values			
Criterion	Requirements	Responsibilities	Guidance for Implementation
7.a Environmental assessment	<ul style="list-style-type: none"> HCV areas, native ecosystems, ecological corridors and other public and private biological conservation areas shall be adequately identified and mapped through a participative and multi-stakeholder consultation process. This identification must be performed prior to any exploitation of the area of concern. No exploitation can occur before the formal identification of the area. Ecosystem functions and services shall be locally evaluated. 	<ul style="list-style-type: none"> The producer is responsible for collecting the necessary elements of information about a potential production area through an environmental impact assessment and land management plan appropriate to the scale and intensity of the production. Maps of HCV areas, native ecosystems, ecological corridors and other public/private biological conservation areas, as well as information about local ecosystem functions and services may be provided by competent authorities and/or producers, appropriate to the scale and intensity of the production. 	<ul style="list-style-type: none"> Producers or cooperatives unable to perform an environmental impact assessment and/or a land management plan will need support. Governments and conservation organisations should support and coordinate national identification of High Conservation Values (HCV) Areas, native ecosystems, ecological corridors and other biological conservation areas to provide producers with maps and other relevant data. Environmental Impact Assessments must involve local and/or indigenous communities, and be performed in accordance with national and international guidelines.
7.b Protection of HCV areas, native ecosystems, ecological corridors and other biological conservation areas	<ul style="list-style-type: none"> No direct conversion of HCV areas, native ecosystems and other public and private biological conservation areas into plantation or production site after the 1st of January 2008. No net loss of any High Conservation Value. Indirect conversion and loss must be assessed and mitigated. No use of exotic invasive species 	<ul style="list-style-type: none"> The producer is responsible for not converting HCV areas, native ecosystems and other biological conservation areas and not degrading any of the High Conservation Values. Government, inter-governmental agencies, NGOs, producers, and the private sector to monitor and mitigate indirect impacts on HCV areas, native ecosystems and public and private biological conservation areas. 	<ul style="list-style-type: none"> Limited exploitation, consistent with appropriate management plan can occur so long as HCVs are maintained. <i>[Conversion of areas having irreversibly been degraded after the 1st of January 2008 is allowed.]*</i> Indirect effects are less likely to occur if the biomass comes from waste products, degraded land, or from a significant improvement in yield compared to the regional average. The RSB work with government, inter-governmental agencies, NGOs, producers, and the private sector to monitor and mitigate indirect impacts on HCV areas, native ecosystems and public and private biological conservation areas.

* Cut-off date to be defined by the Implementation Working Group, in consultation with local communities and experts.

7.c Ecosystem Functions (EF) and Services (ES)	<ul style="list-style-type: none"> • Avoid, minimise or mitigate negative direct and indirect effects on EF and ES. 	<ul style="list-style-type: none"> • The producer is responsible for the preservation of EF and ES. 	<ul style="list-style-type: none"> • Impacts on local EF and ES and potential changes due to the production must be evaluated in accordance with the Millennium Ecosystem Assessment.
7.d Buffer Zones (BZ)	<ul style="list-style-type: none"> • The production site must not damage any existing BZ. • BZ to be set between production site and HCV areas, native ecosystems, ecological corridors or other public and private biological conservation areas. • Surrounding zones, including riparian areas and slopes, to be kept in their original state or restored if previously degraded. 	<ul style="list-style-type: none"> • The producer is responsible for collecting the information on the existing Buffer Zones and to avoid damaging them. • The producer is responsible for setting BZ between the production site and surrounding areas, as well as keeping surrounding buffer zones in their original state or restore these whenever possible. 	<ul style="list-style-type: none"> • Where necessary, BZ must be created on the production site, not outside. • Appropriate BZ must be set according to national requirements, the type of area that requests specific protection and/or the characteristics of the crop under cultivation (e.g. pesticide spray characteristics). • Clusters of individually-owned small agricultural parcels can be considered as a single production site.
7.e Ecological Corridors (EC)	<ul style="list-style-type: none"> • No disruption of existing Ecological Corridors • When possible, restoration of previously degraded Ecological Corridors • On production site, habitat connectivity and wildlife movement shall be enhanced 	<ul style="list-style-type: none"> • The producer is responsible for collecting information about Ecological Corridors in the potential area of production • Governments may provide necessary information and support/guide producers through a national ecological corridors management plan. • The producer is responsible for avoiding the disruption of ECs, restore previously degraded ECs when possible and enhance habitat connectivity and wildlife movement on production site. 	<ul style="list-style-type: none"> • If an EC is identified in the production site, it must be maintained in its original state. • If habitat connectivity or wildlife movement is reduced on the production site, a significant area of the production site must be set aside to restore an equivalent connectivity. • A part of the production site may be dedicated to restore habitat connectivity and wildlife movement on a voluntary basis.
7.f Illegal hunting and fishing	<ul style="list-style-type: none"> • Hunting, fishing, ensnaring, poisoning and exploitation of endangered and protected species are prohibited on the production site. • The traditional access to flora and fauna of indigenous people is tolerated in accordance with the UN Declaration on the Rights of Indigenous People 	<ul style="list-style-type: none"> • The producer is responsible for ensuring that no hunting, fishing, ensnaring, poisoning and exploitation of endangered and protected species happen on the production site. 	<ul style="list-style-type: none"> • Hunting, fishing and use of flora can be tolerated for local communities on the production site, if not of endangered or protected species, as per national laws and IUCN classification. • No endangered or protected species can be killed, damaged or harvested on the production site. • Traditional uses of fauna and flora by indigenous people are allowed in accordance with the UN declaration on the Rights of Indigenous People and/or national law.

Conservation Definitions (to be completed)

Degraded Lands are lands being highly and irreversibly damaged by anthropogenic activities from an ecological perspective (low biodiversity value).

Note: Definition to be reviewed after consultation of WWF's methodology on identification of degraded lands. Other definitions welcome.

Ecological Corridor (EC) is understood as “a thin strip of vegetation used by wildlife and potentially allowing movement of biotic factors between two areas”. (*European Environment Agency definition*).

Ecosystem Functions (EF) include ecosystem physico-chemical integrity, regeneration and succession; genetic, species, and ecosystem diversity; natural cycles that affect the productivity of the ecosystem.

Ecosystem Services (ES) are the benefits obtained by people from ecosystems. These include provisioning, regulating, cultural and supporting services, as defined by the Millennium Ecosystem Assessment.

The six High Conservation Values are those defined by the HCV network (www.hcvnetwork.org)

Producers are understood as farmers or land owners growing biomass, as well as any owner of biomass processing units.

Biological Conservation Areas (IUCN): “An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means”

Native ecosystems

Conservation Areas (public and private)

Multi-stakeholder process

Conversion (direct and indirect)

Plantation

Exotic species

Invasive species

Environmental Impact Assessment

Land Management plan

Waste products

Millennium Ecosystem Assessment

Buffer Zone (note: many countries have their own definition of BZ)

Small Landowner

Small agricultural parcel

Habitat connectivity

Environmental Performance

Net loss of High Conservation Value

Good practices in Conservation supported by the RSB

During the course of our discussions, many good practices have been identified that should not be considered minimum requirements but should somehow be encouraged in the Roundtable. The concept of a 'sustainability scorecard', with 'unacceptable', 'acceptable', and 'better' practices identified for each principle has been endorsed by the RSB Steering Board. The Implementation Working Group will be discussing how to encourage producers and suppliers to progress towards these practices (for instance, progress requirements, making markets for better practices, etc.). So far, the good practices related to conservation identified by the group include:

- Use of degraded and/or idle land (to avoid indirect conversion of HCV areas through displacing other agricultural activities)
- Use of native species
- Creating and using a regional landscape management system
- Avoiding monoculture (also relevant for some other principles, e.g. soil quality)

Implementing these practices would improve a producer's sustainability score, above their compliance with the minimum requirements. It is likely that the ENV Working Group will return to this definition once some implementation mechanisms have been drafted in the IMP Working Group.

Some other good practices have been mentioned during our discussions but are not related to conservation (e.g. no-till practices). They are likely to be moved under other principles or a separate category gathering all good practices together.

Annex 2: Principle and Criteria on Technologies
[Related Indicators to be developed over the second semester 2008]

11. The use of any technology must increase production efficiency and environmental safety along biofuel value chain			
Criterion	Requirements	Responsibilities	Guidance for Implementation
11a Information and Transparency	Information on the use of technologies along the biofuel value chain must be fully available in accordance with national and international legislation on Intellectual Property	The technology provider is responsible for providing any technical information to the buyer. The producer is responsible for providing relevant information on the technologies used along the biofuel value chain.	<ul style="list-style-type: none"> - The technology provider must not withhold any relevant information that might influence the choice of a producer to use a technology. - The producer must be able to provide information about any technology used along the biofuel value chain. - The use of hazardous technologies must comply with any relevant national and international legislation. - The use of biotechnologies must be in full compliance with the Cartagena Protocol on biosafety and relevant legislation. - The obligation to systematically indicate the presence of GMOs in the end-product must be defined in accordance with the consumer country's legislation.
11b* Freedom of choice and Ownership	All stakeholders in the value chain must respect the freedom over production and choice of technologies. The use of a given technology cannot be imposed on any stakeholder, except through legislation.	Producers, companies, banks, regulating authorities and all stakeholders involved in the biofuel value chain.	<ul style="list-style-type: none"> - At any time, any stakeholder must be able to freely decide whether or not to use a given technology along the biofuel production process, in accordance with the Free Prior Informed Consent (FPIC). - One stakeholder's business model and strategy cannot deprive another stakeholder of his or her freedom and control over production and choice of technologies. - The provision of technologies should not be obtained in counterpart of a financial/material dependency, such as debt and feudality.
11c Minimization of environmental risk	The choice of technologies used along the biofuel value chain must seek to minimize the risk of damages to environment	The responsibility of minimizing impacts on environment must be shared among all producers and providers. Regulating authorities are responsible for ensuring that least hazardous technologies remain financially competitive as compared with most hazardous	<ul style="list-style-type: none"> - Technologies must be applied following national or international risk assessment and recommended measures must be followed to avoid environmental damage. Environmentally damaging technologies are understood as any practice or material with a known risk of physical, chemical or biological damage to ecosystems.

* This criterion has not yet received the Working Group's consensus.

		technologies.	
11d Use of Genetically Modified Plants, Micro-organisms and Algae for biomass production.	The use of Genetically Modified Plants, Micro-organisms and Algae for biomass production must improve the productivity and maintain or increase social and environmental performance, as compared to the common practices and materials under local condition. Possible genetic contamination must be adequately monitored and buffered.	Producer, companies	<ul style="list-style-type: none"> - An improved productivity is understood as a higher amount of biomass obtained per hectare/acre of cultivated crop. - An increased environmental performance is a reduction in the required amount of land & water, as well as in the amount and toxicity of chemical application or any other input. - An improved social performance is a reduction of the risk of crop failure/economic losses and/or an increased income for producers relative to available conventional technologies under local conditions, and a more equitable distribution of profit in the value chain. - Common practices are the conditions under which non GM Organisms of the same species are produced locally.
11e Use of Genetically Modified Organisms (GMOs) in biomass processing	Genetically Modified Organisms (GMOs) for biomass processing must be used in contained systems only. Possible genetic contamination must be adequately monitored and buffered.	Producer and process unit owners.	<ul style="list-style-type: none"> - The release of genetically modified material outside the biomass processing unit must receive the approval of national health and safety regulating authorities. In absence of enforced legislation on dissemination of genetically modified material outside processing units, this material can not be disseminated outside the contained systems of the biomass processing unit. This includes the treatment of water effluents and wastes.

Technologies Definitions (to be completed)

The technologies involved in biofuels production are:

- **Biomass Production:** agricultural technologies (Use of Genetically Modified Organisms, tilling technologies, seedling technologies, harvesting technologies, use of fertilizers, use pesticides, etc...)
- **Biomass Process:** Physical, Chemical and Biological Technologies involved in the transformation of raw biomass into biofuels, including bioengineering (use of enzymatic processes, Genetically Modified Organisms and others).
- **Biofuel Transport and Storage**

The terms to be defined are:

1. **Environmental Performance**
2. **Intellectual Property**
3. **Biofuel Value Chain**
4. **Cartagena Protocol on Biosafety**
5. **Free Prior Informed Consent**
6. **Risk Assessment**
7. **Genetically Modified Plants/ Algae/ Micro-organisms**
8. **Biomass production**
9. **Biomass processing**
10. **Contained system**
11. **Health and Safety regulating authorities**
12. **Water effluent**