

Background Paper 1 for the Expert Panel on Conservation/Biodiversity

1. Objectives:

Because we have so many participants in the Working Group that in-depth conversations via teleconference will be difficult, the RSB secretariat has decided to form small groups of experts in order to prepare the discussions of the working group and formulate a certain number of recommendations based on an in-depth analysis and the experience of their members. Within the RSB Working Group on Environment, the Expert Panel on Conservation has been delegated the following tasks:

- Establish the exhaustive list of aspects that need to be taken into consideration under the “conservation” principle in order to cover all the possible adverse effects.
- Organise these aspects into a list of criteria that would be as simple and explicit as possible. These criteria will be suggested and discussed by the Working Group.
- Suggest the indicators needed to perform a complete assessment of whether these criteria are met along the biofuel value chain.
- During their recent meeting, the RSB Steering Board indicated that they would like the Working Groups to try to establish the red line below which a biofuel would not be eligible for the standards (even with a good score in other aspects). For instance, conversion of primary forest. The Sustainable Agriculture Network/Rainforest Alliance use the term “critical criterion”. If this particular one is not met, the biofuel would not meet the standard.
- Propose an appropriate wording to the principle in order to cover all the above-mentioned aspects.

2. Summary of the past discussions of the ENV WG:

The Steering Board had first suggested the following principle:

Biomass production should not lead to the destruction or damaging of areas of high biodiversity.

It has been however suggested that high biodiversity was not the only criterion that makes an area valuable (ecosystem services were missing for instance) and the “HCV areas” concept was recommended instead by some participants. Given that this concept is an official and well-known scheme, which is flexible and broad enough to cover most of our concerns, the secretariat has forwarded the suggestion to the rest of the group, suggesting the following wording:

Biofuel production should not directly or indirectly endanger wildlife species or areas of high conservation value.

However, the Working Group has not yet agreed on the HCV concept for the following reasons (quoting participants' remarks):

- In order to be applicable in the short term, the priority areas included in standards must have already been delineated and mapped. Most of the world has not yet been mapped through HVCAs.
- Not all native ecosystems will be captured by an HCV analysis, and a provision that production also not endanger (directly or indirectly) wildlife species may not prevent conversion either. Fragmented ecosystems (after human intervention) may no more be considered as HCV Areas.
- From the field perspective, HCV areas, as currently defined, are so broad that it would put every piece of land off limits for biofuel expansion.
- Better lessening the principle on HCV areas into a broader one on Ecosystem Biodiversity being preserved. HCV areas are a subset of areas that require federation in this principle.

Furthermore, the “should not endanger wildlife species” has been criticized for being too broad and unrealistic. Some participants had difficulties to understand what “wildlife” exactly covers. The popular thought is that it covers vertebrates only, whereas the scientifically accepted definition refers to any organism that has not been domesticated.

The working group has decided to leave this principle open until the work on criteria and indicators will be over, so that one can have a full picture.

3. Aspects that need to be taken into consideration:

As per the discussions held within the Working Group, on the bioenergy wiki website and the elements from the questionnaires, the important aspects to cover under the *conservation* principle are:

- Protect biodiversity. Rare, endangered, threatened species (also outside their habitats)
- No loss of ecosystem Services (incl. carbon sequestering soils)
- Protect registered areas such as IUCN, Ramsar, AZE, KBD...
- Protect ecological Corridors
- Protect native/pristine Ecosystems, including the fragmented ones
- Protect natural meadows
- Temporal considerations. (1) No conversion of important areas after a certain date (cut-off date for eligibility). (2) Historic burden of deforestation in Northern countries VS forbidding Southern countries to do the same.
- Encouraging restoration of degraded lands

- Do not make the requirements so strict that biofuel production is impossible

An important aspect of the discussion is whether to approach the conservation through a geographical criterion (habitats, HCV areas, gazetted areas, etc...) or through species and natural cycles (endangered/threatened/etc species, ecosystem services, food webs, etc...). It seems crucial for the wording and understanding of the principle and criteria to avoid mixing these two perspectives together but meanwhile, it looks quite difficult to cover everything with one only:

- The area-based criteria are strengthened by official schemes and a potential mapping but do not cover a possible impact on important species outside their habitat for instance.
- The value-based criteria would potentially be more exhaustive but more complicated as well, especially in the identification and implementation at the producer level.

4. Conservation criteria in the other existing standards: (Full list included in the annex)

4.1 Compliance with national laws on Conservation:

- RTFO (UK): *“Compliance with national laws and regulations relevant to biomass production and the area where biomass production takes place.”*

4.2 Protection of important (biodiversity) areas:

- RTFO: *“No conversion of high biodiversity areas after November 30, 2005”* Note: the indicators under this principle include HCV areas

- Rainforest Alliance/SAN: *“All existing natural ecosystems, both aquatic and terrestrial, must be identified, protected, conserved and restored through a conservation program.(...) The farm must maintain the integrity of aquatic or terrestrial ecosystems inside and outside of the farm, and must not permit their destruction or alteration as a result of management or production activities on the farm. (...)Production areas must not be located in places that could provoke negative effects on national parks, wildlife refuges, biological corridors, forestry reserves, buffer zones or other public or private biological conservation areas.”*

- Cramer (Netherlands): *“In new or recent developments, no deterioration of biodiversity by biomass production in protected areas.”*

- FSC: *“Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). (...) Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.”*

4.3 Identification of important areas and land management:

- RTFO: *“The status of rare, threatened or endangered species and high conservation value habitats, if any, that exist in the production site or that could be affected by it, shall be identified and their conservation taken into account in management plans and operations.”*

4.4 Ecosystem services:

- FSC: *Ecological functions and values shall be maintained intact, enhanced, or restored, including:*
a) *Forest regeneration and succession.* b) *Genetic, species, and ecosystem diversity.* c) *Natural cycles that affect the productivity of the forest ecosystem.*

4.5 Wildlife Protection:

- Rainforest Alliance/SAN: *An inventory of wildlife and wildlife habitats found on the farm must be created and maintained. (...) Ecosystems that provide habitats for wildlife living on the farm, or that pass through the farm during migration, must be protected and restored. The farm takes special measures to protect threatened or endangered species. (...) Hunting, capturing, extracting and trafficking wild animals must be prohibited on the farm.*

5. Proposition of criteria for the RSB

General comment: it is important to define, in the preamble, what we understand as “biofuel production” or “biofuel production site”, for it shall ideally include both the agricultural and industrial part of the production.

a) Identification of natural ecosystems and wildlife protection:

“Natural ecosystems must be identified on the production site and around. Nationally or internationally protected species identified on and up to 10 km (???) from the production site require a specific management system to be set in partnership with competent authorities, in order to avoid any harmful effect on them.”

b) High conservation value areas:

“HCV areas, intact or fragmented native ecosystems and biological conservation areas (*list of areas will be provided in annex or as indicators. Ex: KBD*) cannot be converted for biofuel production.” (*Cut-off date and compensation included in the indicators?*)

c) Ecosystem functions and services:

“Biofuel production must neither disrupt ecosystem functions nor hamper ecosystem services. Ecosystem functions include (1) ecosystem regeneration and succession; (2) genetic, species, and ecosystem diversity; (3) natural cycles that affect the productivity of the ecosystem. (*cf: FSC criterion 6.3*)”

d) Buffer zones:

“Buffer zones must be set between the production sites and surrounding natural areas to ensure that they remain unreachable by the emissions from the production.”

e) Ecological corridors:

“Biofuel production must not destruct or disrupt natural ecological corridors. A significant area (*10%???*) of the production site must be maintained in a natural state to allow undisrupted migrations of wildlife.”

f) Restoration of degraded lands:

“Biofuel production based on crops grown on degraded land shall be promoted and technically or financially supported.”

6. Annexes: Original wording of criteria and indicators in other initiatives

The Netherlands (Cramer commission)

(http://www.lowcvp.org.uk/assets/reports/070427-Cramer-FinalReport_EN.pdf)

Principle 4: Biomass production must not affect protected or vulnerable biodiversity and will, where possible, have to strengthen biodiversity.	
<p>Criterion 4.1: No violation of national laws and regulations that are applicable to biomass production and the production area.</p>	<p>Indicator 4.1.1 (minimum requirement) Relevant national and local regulations must be complied with, with regard to:</p> <ul style="list-style-type: none"> • Land ownership and land use rights; • Forest and plantation management and exploitation; • Protected areas; • Wildlife management; • Hunting; • Spatial planning; • National rules arising from the signing of international conventions CBD (Convention on Biological Diversity) and CITES (Convention on International Trade in Endangered Species).
<p>Criterion 4.2: In new or recent developments, no deterioration of biodiversity by biomass production in protected areas.</p>	<p>Indicator 4.2.1 (minimum requirement) Biomass production must not take place in recently cultivated areas that have been recognized as 'gazetted protected areas' by the government, or in a 5 km zone around these areas.</p> <p>The reference date is 1 January 2007, with the exception of those biomass flows for which a reference date already applies from other certification systems (currently under development).</p> <p>If biomass production does take place in the above areas, then only if this is a part of the management to protect the biodiversity values.</p>
<p>Criterion 4.3: In new or recent developments, no deterioration of biodiversity in other areas with high biodiversity value, vulnerability or high agrarian, nature and/or cultural values.</p>	<p>Indicator 4.3.1 (minimum requirement) Biomass production must not take place in recently cultivated areas that have been recognized as 'High Conservation Value' (HCV) areas by the parties involved, or in a 5 km zone around these areas.</p> <p>The reference date is 1 January 2007, with the exception of those biomass flows for which a reference date already applies from other certification systems (currently under development).</p> <p>The following areas are considered HCV areas:</p> <ul style="list-style-type: none"> • Areas with endangered or protected species or ecosystems, on the basis of the criteria of HCV categories 1, 2 and 3; • Areas with high vulnerability (e.g. slopes and wetlands), on the basis of the criteria of HCV category 4; • Areas with high nature and cultural values, on the basis of the criteria of HCV categories 5 and 6 and criteria for 'high nature value farmlands'. <p>By means of a dialogue with the local parties involved it must be determined where the HCV areas are to be found.</p> <p>If biomass production does take place in the above areas, then only if this is a part of the management to protect the biodiversity values.</p>
<p>Criterion 4.4: In new or recent developments, maintenance or recovery of biodiversity within biomass production units</p>	<p>Indicator 4.4.1 (minimum requirement) If biomass production is taking place in recently cultivated areas (after 1 January 2007), room will be given to set-aside areas (at least 10%).</p> <p>Reporting 4.4.2 If biomass production is taking place in recently cultivated areas (after 1 January 2007), it has to be indicated:</p> <ul style="list-style-type: none"> – In which land use zones the biomass production unit can be found; – How fragmentation is discouraged; – If ecological corridors are applied; – If the restoration of degraded areas is involved here.
<p>Criterion 4.5: Strengthening of biodiversity where this is possible, during development and by the management of existing production units.</p>	<p>Reporting 4.5.1 Good practices will be applied on and around the biomass production unit for the strengthening of biodiversity, to take into account ecological corridors and to prevent disintegration as much as possible.</p>

RTFO

<http://www.dft.gov.uk/consultations/closed/rtforeporting/sustainabilityreportingv2>

Principle 2: BIODIVERSITY CONSERVATION	Biomass production will not lead to the destruction or damaging of high biodiversity areas
Criterion	Indicators
2.1 Compliance with national laws and regulations relevant to biomass production and the area where biomass production takes place.	<ul style="list-style-type: none"> • Evidence of compliance with national and local laws and regulations with respect to: <ul style="list-style-type: none"> ○ Land ownership and land use rights ○ Forest and plantation management ○ Protected and gazetted areas ○ Nature and wild life conservation ○ Land use planning ○ National rules resulting from the adoption of CBD¹ and CITES². • The company should prove that: <ul style="list-style-type: none"> ○ It is familiar with relevant national and local legislation ○ It complies with these legislations ○ It remains informed on changes in legislation
2.2 No conversion of high biodiversity areas after November 2005	<ul style="list-style-type: none"> • Evidence that production does not take place in gazetted areas. • Evidence that production does not take place in areas with one or more HCV areas: <ul style="list-style-type: none"> ○ HCV 1, 2, 3 relating to important ecosystems and species ○ HCV 4, relating to important ecosystem services, especially in vulnerable areas ○ HCV 5, 6, relating to community livelihoods and cultural values. • Evidence that production does not take place in any of the areas of high biodiversity as listed in annex-1.
2.3 No production of biomass in areas adjacent to high biodiversity areas.	<ul style="list-style-type: none"> • Evidence that production does not take place within 5 km of the areas as defined above. • If production does take place within 5 km of the above defined areas, it must be shown that this positively contributes to the conservation of the above defined areas (e.g. restoration of degraded lands).
<i>Additional criteria for Plus standard</i>	
2.4 Preservation and/or improvement of biodiversity on production sites	<ul style="list-style-type: none"> • Evidence that a minimum of 10% of the production area is set aside for nature conservation and ecological corridors. • Evidence of good agricultural practices with respect to the conservation and improvement of biodiversity on and around the production site.

RSPO

Principle 5: Environmental responsibility and conservation of natural resources and biodiversity

Criterion	Indicators and Guidance	Guidance for National Interpretation
<p>Criterion 5.1 Aspects of plantation and mill management that have environmental impacts are identified, and plans to mitigate the negative impacts and promote the positive ones are made, implemented and monitored, to demonstrate continuous improvement.</p>	<p>Indicators:</p> <ul style="list-style-type: none"> • Documented impact assessment. • Appropriate management planning and operational procedures. • Where the identification of impacts requires changes in current practices, in order to mitigate negative effects, a timetable for change should be developed. <p>Guidance:</p> <p>Environmental impact assessment may cover the following activities:</p> <ul style="list-style-type: none"> • Building new roads, processing mills or other infrastructure. • Putting in drainage or irrigation systems. • Replanting or expansion of planting area. • Disposal of mill effluents (see criterion 4.4); • Clearing of remaining natural vegetation. <p>Environmental impacts may be identified on soil and water resources, air quality (see criterion 5.6), biodiversity and ecosystems, and people's amenity (see criterion 6.1 for social impacts), both on and off-site.</p> <p>Stakeholder consultation has a key role in identifying environmental impacts. The inclusion of consultation should result in improved processes to identify impacts and to develop any required mitigation measures.</p> <p>It is important that where activities, techniques or operations change over time, identifications of impacts, and any required mitigation, are updated as necessary.</p> <p>For smallholder schemes, the scheme management has the responsibility to undertake impact assessment and to plan and operate in accordance with the results. Individual smallholders would not be expected to undertake formal impact assessments (unless there is a legal requirement) but should have a good understanding of the potential negative impacts of their activities and appropriate mitigation techniques.</p>	<p>National interpretation should consider any national legal requirements together with any other issues that are not required by law but are nevertheless important.</p>
<p>Criterion 5.2 The status of rare, threatened or endangered species and high conservation value habitats, if any, that exist in the plantation or that could be affected by plantation or mill</p>	<p>Indicators:</p> <p>Information should be collated that includes both the planted area itself and relevant wider landscape-level considerations (such as wildlife corridors). This information should cover:</p> <ul style="list-style-type: none"> • Presence of protected areas that could be significantly 	<p>For national interpretation, appropriate sources of information include government or international lists of threatened species ('red data lists'), national wildlife protection legislation, authorities responsible</p>

<p>management, shall be identified and their conservation taken into account in management plans and operations.</p>	<p>affected by the grower or miller.</p> <ul style="list-style-type: none"> • Conservation status (e.g. IUCN status), legal protection, population status and habitat requirements of rare, threatened, or endangered species, that could be significantly affected by the grower or miller. • Identification of high conservation value habitats, such as rare and threatened ecosystems, that could be significantly affected by the grower or miller. <p>If rare, threatened or endangered species, or high conservation value habitats, are present, appropriate measures for management planning and operations will include:</p> <ul style="list-style-type: none"> • Ensuring that any legal requirements relating to the protection of the species or habitat are met. • Avoiding damage to and deterioration of applicable habitats. • Controlling any illegal or inappropriate hunting, fishing or collecting activities; and developing responsible measures to resolve human-wildlife conflicts (e.g., incursions by elephants). <p>Guidance:</p> <p>This information gathering should include checking available biological records, and consultation with relevant government departments, research institutes and interested NGOs if appropriate. Depending on the biodiversity values that are present, and the level of available information, some additional field survey work may be required.</p> <p>For individual smallholders, a basic understanding of any applicable species or habitats, together with their conservation needs, will be sufficient.</p>	<p>for protected areas and species, or relevant NGOs.</p>
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Sustainable Agriculture Network/Rainforest Alliance

(http://www.rainforest-alliance.org/programs/agriculture/certified-crops/documents/standards_2005.pdf)

2.1 *Critical Criterion.* All existing natural ecosystems, both aquatic and terrestrial, must be identified, protected, conserved and restored through a conservation program. The program must include the restoration of natural ecosystems or the reforestation of areas within the farm that are unsuitable for agriculture. The program must include the establishment and maintenance of shade trees for those crops traditionally grown with shade, in areas where the agricultural, climatic and ecological conditions permit, as established in the additional criteria and indicators for specific crops.

2.2 *Critical Criterion.* The farm must maintain the integrity of aquatic or terrestrial ecosystems inside and outside of the farm, and must not permit their destruction or alteration as a result of management or production activities on the farm.

2.3 Production areas must not be located in places that could provoke negative effects on national parks, wildlife refuges, biological corridors, forestry reserves, buffer zones or other public or private biological conservation areas.

2.5 There must be a minimum separation of production areas from natural ecosystems where chemical products are not used. A vegetated protection zone must be established by planting or by natural regeneration between different permanent or semi-permanent crop production areas or systems. The separation between production areas and ecosystems is indicated in the additional criteria and indicators for the specific crop; otherwise, the minimum distance must be five meters.

3.1 An inventory of wildlife and wildlife habitats found on the farm must be created and maintained.

3.2 Ecosystems that provide habitats for wildlife living on the farm, or that pass through the farm during migration, must be protected and restored. The farm takes special measures to protect threatened or endangered species.

3.3 *Critical Criterion*. Hunting, capturing, extracting and trafficking wild animals must be prohibited on the farm. Cultural or ethnic groups can hunt or collect fauna in a controlled manner and in areas designated for those purposes under the following conditions:

- a. The activities do not involve species in danger of or threatened with extinction.
- b. There are established laws that recognize the rights of these groups to hunt or collect wildlife.
- c. Hunting and collection activities do not have negative impacts on the ecological processes or functions important for agricultural and local ecosystem sustainability.
- d. The long-term viability of the species' populations is not affected.
- e. These activities are not for commercial purposes.

FSC

http://www.fsc.org/en/about/policy_standards/princ_criteria/8

Principle 6: Environmental Impact

Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.

Criteria:

6.1 Assessment of environmental impacts shall be completed -- appropriate to the scale, intensity of forest management and the uniqueness of the affected resources -- and adequately integrated into management systems. Assessments shall include landscape level considerations as well as the impacts of on-site processing facilities. Environmental impacts shall be assessed prior to commencement of site-disturbing operations.

6.2 Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Inappropriate hunting, fishing, trapping and collecting shall be controlled.

6.3 Ecological functions and values shall be maintained intact, enhanced, or restored, including: a) Forest regeneration and succession. b) Genetic, species, and ecosystem diversity. c) Natural cycles that affect the productivity of the forest ecosystem.

6.4 Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.

6.5 Written guidelines shall be prepared and implemented to: control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and protect water resources.

6.6 Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides. World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides; pesticides that are persistent, toxic or whose derivatives remain biologically active and accumulate in the food chain beyond their intended use; as well as any pesticides banned by international agreement, shall be prohibited. If chemicals are used, proper equipment and training shall be provided to minimize health and environmental risks.

6.7 Chemicals, containers, liquid and solid non-organic wastes including fuel and oil shall be disposed of in an environmentally appropriate manner at off-site locations.

6.8 Use of biological control agents shall be documented, minimized, monitored and strictly controlled in accordance with national laws and internationally accepted scientific protocols. Use of genetically modified organisms shall be prohibited.

6.9 The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.

6.10 Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion: a) entails a very limited portion of the forest management unit; and b) does not occur on high conservation value forest areas; and c) will enable clear, substantial, additional, secure, long term conservation benefits across the forest management unit.

Key Biodiversity Areas

(http://www.plantlife.org.uk/international/assets/data-zone/key_biodiversity_areas.pdf)

Key biodiversity areas: approach and criteria

The goal of the key biodiversity area approach is to identify, document, and protect networks of sites that are critical for the conservation of global biodiversity. Here, a 'site' means an area of any size that can be delimited and, potentially, managed for conservation. The challenge of this approach lies in how best to determine which areas qualify for conservation attention. One effective method is to select sites based on criteria that account for the distribution of (apparently viable) populations of species requiring conservation. Such species fall into two main and non-exclusive classes: species that are threatened or species that are geographically concentrated. These correspond to the two fundamental variables for planning networks of conservation sites: vulnerability and irreplaceability. In outline, these key biodiversity area criteria cover:

1. **Globally threatened species** that have been assessed following the IUCN Red List criteria as having a high risk of extinction.
2. **Restricted-range species** with small global distributions.
3. **Assemblages of species** confined to a particular broad habitat type, or biome.
4. **Congregations of species** that gather in large numbers at specific sites during some stage in their life cycle.

Alliance for Zero Extinction

(<http://www.zeroextinction.org/overview.htm>)

AZE uses the following criteria to identify priority sites (a site must meet all three to qualify):

1. **Endangerment.** An AZE site must contain at least one Endangered (EN) or Critically Endangered (CR) species, as listed on the IUCN Red List.

2. **Irreplaceability.** An AZE site should only be designated if it is the sole area where an EN or CR species occurs, contains the overwhelmingly significant known resident population of the EN or CR species, or contains the overwhelmingly significant known population for one life history segment (e.g. breeding or wintering) of the EN or CR species.

3. **Discreteness.** The area must have a definable boundary within which the character of habitats, biological communities, and/or management issues have more in common with each other than they do with those in adjacent areas.

IUCN Red list structure

