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# **RSB Guidance on Principles & Criteria for Sustainable Biofuel Production**

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## **Introduction**

This guidance document helps the operator to develop an understanding of the RSB Principles & Criteria (RSB-STD-01-001). In particular, it is intended to:

- explain the significance of the minimum and progress requirements under each of the 12 RSB Principles;
- give additional details and guidance about a specific criterion;
- show examples of measures, practices or plans to achieve compliance;
- indicate technical or regulatory references and sources to be further consulted.

## **Note on the use of this document**

This guidance document should be equally used by the auditor and other actors involved in the verification of compliance, in order to get a better understanding of key-aspects to be considered during certification process. Under no circumstances should this document serve as the basis for verification of compliance and audits of operators. This guidance document is only intended to give operators and auditors a more elaborate description of the requirements and in some cases, transpose technical aspects into lay language. No aspect of this document is normative.

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## **Principle 1: Legality**

### **General guidance**

- Applicable laws include those related to the social and environmental sustainability criteria outlined in this standard, including but not limited to regulations and measures governing land tenure and land rights, labor, waste disposal, chemical use, and environmental protection. Applicable laws also include any national or sub-national laws and regulations. Relevant international conventions and treaties include, but are not limited to: the ILO's core labor conventions, the ILO's Convention concerning Indigenous and Tribal Peoples in Independent Countries (No. 169), the Universal Declaration of Human Rights, the Convention on Biological Diversity, the Ramsar Convention on Wetlands, the UN Framework Convention on Climate Change, and the UN Fourth World Conference on Women's Beijing Declaration.
- In case of conflicts among supra-national, national, regional, and/or local laws, regulations and the RSB standard, laws and regulation should always prevail. An RSB requirement going beyond existing laws (i.e. being more constraining) is not considered a conflict in this sense, unless the implementation of the RSB requirement contravenes the law.
- Some measures operators take to comply with the applicable laws, regulations and relevant international conventions and treaties identified under Principle 01 can also be used to show full or partial compliance with the RSB Principles & Criteria.

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## **Principle 2: Planning, Monitoring and Continuous Improvement**

### **General Guidance**

- The RSB Impact Assessment Guidelines (RSB-GUI-01-002-01), the Screening Guidelines (RSB-GUI-01-002-02), the ESIA Guidelines (RSB-GUI-01-002-03), the RESA Guidelines (RSB-GUI-01-002-04), the ESMP Guidelines (RSB-GUI-01-002-05) and the guidelines for specialized impact assessments are based on internationally-recognized and best practice standards for impact assessments and ensure the quality of the screening process, ESIA, RESA and/or ESMP.
  - The RSB Impact Assessment Guidelines (RSB-GUI-01-002-01) has different requirements depending on the nature, intensity and scale of the operations.
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### **Guidance on Criterion 2a**

- The screening exercise may be done by the Operator but its results have to be audited by an independent third party as determined by the RSB certification system.
  - An ESMP may be developed by the operator but has to be audited by an independent third party as determined by the RSB certification system.
  - The RESA does not normally require any specialist studies, but if the scoping exercise identifies one or two important aspects that require in depth analysis and study, the specialist studies for these areas can be added to the RESA without the operator having to undergo a full ESIA.
  - The ESMP requires that baseline data be collected as part of the management and monitoring activities in the plan, if this data is not already collected as part of the ESIA or RESA.
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### **Guidance on Criterion 2b**

- The key objectives of stakeholder engagement in regions of poverty will be those adopted by IFAD in its broad vision of poverty reduction and the Millennium Development Goals: (i) enhancing the capabilities of the poor and their organizations to: control their own development in a context of growing inequality and vulnerability, influence public policies and institutions, and exercise greater negotiating power in the market and with other social actors; (ii) improving access by the poor to productive natural resources and technologies and promoting decentralized management of those resources; and (iii) increasing access by the poor to financial services and markets.
- RSB Criterion 2b requires that Free, Prior and Informed Consent (FPIC) form the basis for any stakeholder engagement process and that this process should result in gender sensitive and consensus-driven negotiated agreements. This means that the stakeholder engagement process for an impact assessment process must seek to build consensus and strive to ensure that the final recommendations of the impact assessment process are acceptable to and supported by the directly affected stakeholders. If this is not achieved then a Stakeholder

Engagement Report needs to be provided to the RSB auditor, explaining the engagement process that was followed, who participated and indicating who is opposed to the proposals and for what reasons. When making a decision on whether to award accreditation for the biofuel operation then the auditor will take into consideration the extent of stakeholder agreement and/or opposition, the types of stakeholders opposed the proposal(s) and for what reasons, and whether the proposal complies with the RSB Principles & Criteria or not. There should be a significant majority of directly affected stakeholders in support of the project; it is the responsibility of the Participating Operator to demonstrate that this is the case to the auditor. Dissenting opinions should be noted in the stakeholder engagement report for the auditor to assess and view. If such agreement is established, the auditor may consider the project in compliance with Criterion 2b.

- The auditor may decide, based on documents submitted for certification, whether any dissension among stakeholders is significant and/or contravenes the RSB standard.

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## **Principle 3: Greenhouse Gas Emissions**

### **Guidance on Criterion 3a**

- Examples of biofuel policy and regulations include the European Union Renewable Energy Directive (EU RED) for biofuels sold or produced in the European Union market; the California Low Carbon Fuel Standard (LCFS) for biofuels sold in the California market; and the U.S. Renewable Fuel Standard (RFS2) for biofuels sold or produced in the U.S. market.
  - Lifecycle GHG emissions of biofuel have to be calculated using the methodology prescribed by the applicable policy or regulation.
  - The criterion requires biofuel to meet minimum lifecycle Greenhouse Gas (GHG) emission reduction thresholds mandated by such policy and regulations.
  - Where the governmental policy or regulation requires for GHG emission reductions for biofuels to qualify for a specific incentive, the minimum lifecycle GHG emission reduction to qualify for such incentives has to be met.
  - Examples of incentives include tax exemptions, qualifying for minimum volume quotas, and market incentives within cap-and-trade systems. For example, a biofuel sold in the European Union market has to meet the minimum GHG reduction requirements to be counted towards the quota of 10% target for energy from renewable sources in transport.
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### **Guidance on Criterion 3b**

- The aim of this criterion is to establish a global standard methodology for comparing the GHG benefits of different biofuels in a way that can be enforced in standards.
  - During the pilot test period and afterwards, lifecycle GHG calculations will be conducted using the RSB GHG Calculation Methodology (RSB-STD-01-003-01).
  - RSB will revise this methodology as new scientific data become available and as technological advances lead to new biofuel pathways.
  - A fuel “pathway” is a given supply chain of feedstock, fuel, production method, and geographical origin. For example: “E.U. rapeseed biodiesel with natural gas as process fuel in CHP plant”, “Indonesian palm oil biodiesel with methane capture at oil mill”, or “U.S. dry mill corn ethanol with natural gas as process fuel in CHP plant”.
  - The treatment of co-products, residues and waste in biofuel GHG accounting is specified in the RSB GHG Calculation Methodology (RSB-STD-01-003-01).
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### **Guidance on Criterion 3c**

- “Biofuel blend” refers to a blend of different biofuels, not to a blend of biofuel with fossil fuel.
- “Biofuel blender” refers to the blender, distributor or retailer of the fuel, i.e., the last chain of custody element before the end user of the fuel.

- A neat biofuel at the point of blending with fossil fuel, sale for end use, or end use is considered a 100% biofuel blend and therefore has to meet the 50% GHG reduction threshold.
- The fossil fuel baseline, determined using RSB calculations and indicated in the RSB Fossil Fuel Baseline GHG Calculation Methodology document (RSB-STD-01-003-02), encompasses a gasoline baseline, a diesel fuel baseline and a jet fuel baseline.
- The fossil fuel baseline is re-calculated periodically every 5 years to reflect the changing carbon intensity of fossil fuels.
- The fossil fuel baseline is a global, average baseline.
- Biofuel GHG emissions have to be compared to the gasoline baseline for substitutes of gasoline, to the diesel fuel baseline for substitutes of diesel fuel and to the jet fuel baseline for substitutes of jet fuel.
- RSB will review the minimum GHG requirements on a 5-year basis to ensure that they are realistic and technologically feasible.
- The minimum GHG emission reduction threshold is expressed as a percentage below the relevant fossil fuel baseline.
- Biofuel that contributes to the minimization of overall GHG emissions is biofuel produced using certain practices, including, but not limited to, the use of certain types of feedstock (e.g. certain wastes or residues), feedstock that avoids the use of land, or feedstock with co-products that avoid the use of land. Other examples may include production of feedstock on land with few provisioning services, agricultural intensification, or the integration of food, feed, and fuel production with overall higher efficiencies and yields.

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## **Principle 4: Human and Labor Rights**

### **General Guidance**

- Employees, contracted labor, small outgrowers, self-employed farmers, and employees of outgrowers, as well as all workers included in the RSB biofuel production value chain, should all be guaranteed the rights described in this principle
  - Key international conventions such as the ILO's core labor conventions and the UN Declaration on Human Rights have to form the basis for this principle
  - This principle aims to promote the UN goal of 'Decent work', which consists of four pillars: 1) employment generation and enterprise development; 2) social protection; 3) standards and rights at work; and 4) governance and social dialogue.
  - All of the rights provided for in this principle have to apply equally to men and women.
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### **Guidance on Criterion 4a**

- This criterion aims to address the fact that agricultural and informal workers are often excluded from labor law protection.
  - The ILO's Freedom of Association and Protection of the Right to Organise Convention (No. 87) and the ILO's Right to Organise and Collective Bargaining Convention (No. 98) should provide the basis for the definitions under which this criterion is implemented.
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### **Guidance on Criterion 4b**

- The ILO's Forced Labor Convention (No. 29) and the ILO Abolition of Forced Labor Convention (105) should provide the basis under which this criterion is implemented.
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### **Guidance on Criterion 4c**

- The ILO's Minimum Age Convention (No. 138) and Worst Forms of Child Labor Convention (No. 182) should provide the basis under which this criterion is implemented.
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### **Guidance on Criterion 4d**

- The ILO's Discrimination (Employment and Occupation) Convention (No. 111) and Equal Remuneration Convention (No. 100) shall provide the basis for the definitions under which this criterion is implemented.

#### **Guidance on Criterion 4e**

- The ILO's Equal Remuneration Convention (100) should provide relevant definitions for this criterion.
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#### **Guidance on Criterion 4f**

- The ILO's Occupational Safety and Health Convention (No. 155), the ILO's Safety and Health in Agriculture Convention (184), ILO Sectoral Activities Program on conditions for wage workers in agriculture, and the World Health Organization's London Declaration from the 3<sup>rd</sup> Ministerial Conference on Environment and Health should form the basis under which this criterion is implemented.

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## **Principle 5: Rural and Social Development**

### **General Guidance**

- Human poverty indices should be used in the socio-economic baseline survey, for instance, the Human Poverty Index (HPI) as developed by the UNDP. The HPI incorporates such human development indicators as life expectancy, knowledge (literacy, education, school enrolment ratios), and standard of living, as well as capturing social exclusion. Local Human Poverty Indicators can be developed as part of the social impact assessment process, using existing tools available (UNDP, Development Banks, FAO).
  - The risks to livelihoods and opportunities for rural and social development should be documented and clear and measurable targets for mitigation measures negotiated through free prior and informed consent.
  - Small scale operators that employ workers should comply with this principle.
  - Operators should work closely with national, provincial and/or local governments and programs to apply this principle.
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### **Guidance on Criterion 5a**

- The socio-economic baseline survey completed as directed in the ESIA guidelines will determine if the target area of biofuel production is a region of poverty.
  - In areas where the social impact assessment process indicates that local livelihoods could be negatively impacted upon by biofuel operations, mitigation plans should include options to address this as suggested in the RSB Social Impact Assessment Guidelines (RSB-GUI-01-005-01).
  - Best practice (such as that from Brazilian sugar cane) on dealing with the transition from labor intensity to mechanization should be used as a source of information for a proposed transition to mechanizations.
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### **Guidance on Criterion 5b**

- This criterion should be implemented using the tools described in the RSB Social Impact Assessment Guidelines (RSB-GUI-01-005-01) that ensure a gender sensitive approach to participatory planning and disaggregation of data for these groups during social assessments baseline studies.
- Special measures can include, but are not limited to, the following:
  - a. Development of value added industries that are operated and managed by women and youth
  - b. Specification of jobs that are suitable for workers that are considered vulnerable and/or unable to do hard manual labor
  - c. Ensuring that women, youth and the vulnerable are given ample opportunity to apply for work, through careful attention to the ways jobs are advertised and interviews are conducted.

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## **Principle 6: Local Food Security**

### **General Guidance**

- The RSB Food Security Assessment Guideline (RSB-GUI-01-006-01) provides details on how to do food security assessments and provides strategies for the mitigation of negative impacts and enhancement of food security.
  - This principle primarily addresses local impacts of biofuel production on the food insecure and those vulnerable to food insecurity. These impacts can be at a farm level and also within communities or even regions where goods are exchanged locally.
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### **Guidance on Criterion 6a**

- During the screening exercise it will be determined if the Participating Operator is in a region of food insecurity.
- During the scoping exercise the Participating Operator will determine the extent of the study required to maintain and enhance food security.
- The Food Security Assessment Guideline (RSB-GUI-01-006-01) will assess how each of the four pillars of food security as defined by FAO (accessibility, availability, utilization and stability) is negatively or positively impacted by the biofuel operations. Access impacts should be assessed in terms of the local people's ability to purchase food and will reflect any local pricing changes as a result of the biofuels operations. Availability of food may be negatively impacted if, for instance, food and/or animal feed is removed from the local area/region as a result of the biofuel operations. The impacts on utilization should be assessed based on the ability of local people to utilize the available food due to changes in availability of cooking fuels. For instance, biofuel co-products may be usable as local energy sources and thus improve people's ability to cook food, or they may remove energy sources (e.g. wood residues) from the region and decrease utilization. Stability impacts will be assessed by analyzing the impacts the biofuel operations may have over a longer time period based on periodic weather events or potential shocks the region may suffer that are of a reasonably predictable nature based on historical events.
- Both access and availability might also be positively affected if the biofuel operation provides an increase in production of staple foods preferred by local people. The impacts on utilization should be assessed based on the ability of local people to utilize the available food due to changes in availability of cooking fuels. For instance, biofuel co-products may be usable as local energy sources and thus improve people's ability to cook food, or they may remove energy sources (e.g. wood residues) from the region and decrease utilization. Stability impacts will be assessed by analyzing the impacts the biofuel operations may have over a longer time period with due consideration to the periodic weather events, the influence of other activities in the region or potential shocks the region may suffer that are of a reasonably predictable nature based on historical events.

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## **Principle 7: Conservation**

### **General Guidance**

- The aim of this principle is to promote the use of areas with the lowest possible risk of impacts to people and the environment, i.e. those that are considered “degraded”, “abandoned” or “marginal”. Over the long term, biofuel operators should strive to use ecosystems through sustainable management practices without converting them or losing their conservation values.
  - If conservation values (e.g. biodiversity, ecosystem services, or cultural importance) are found on a potential area for biofuel production, these have to be maintained by the operator.
  - Impacts on conservation values also include any decrease in connectivity between the various ecosystems surrounding the area of production.
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### **Guidance on Criterion 7a**

- Ecosystems host ecological communities, and support numerous species by providing habitat, mating areas and subsistence for example, essential ecological processes and ecosystem services. These properties are collectively referred to as **conservation values** and are important to maintain in order to ensure long-term ecological sustainability. Some potential production areas contain conservation values of local, regional or global importance and require special protection and management in order to maintain these values.

The notion of conservation values of local, regional or global importance is largely inspired by the concept of “High Conservation Values (HCV)”, as developed by the HCV Network<sup>1</sup>.

Following the definitions provided by the HCV Network, conservation values of local, regional or global importance include, but are not limited to:

1. The presence of **rare, threatened or protected species**, including any species included in IUCN red list under the categories “vulnerable”, “endangered” and “critically endangered”.
2. Pristine ecosystems
3. The presence of viable populations of natural species in natural pattern of distribution and abundance, i.e. natural ecosystems, with a limited influence from human activities.
4. An important stock of Carbon under solid, liquid or gaseous forms, such as, but not limited to, peatlands and primary forests.
5. An outstanding biodiversity level, as per the definition provided in the glossary.
6. Important ecosystem services, i.e. those local, regional or global services received by human populations from ecosystems (see criterion 7b and glossary), with an importance for their survival, subsistence and livelihood.
7. Critical resources for local population’s subsistence, health and livelihood.
8. Cultural importance from a local, regional or global perspective.

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<sup>1</sup> [www.hcvnetwork.org](http://www.hcvnetwork.org)

- This criterion should be used to **identify the most suitable area for biofuel operations and to ensure the maintenance of existing conservation values and ecosystem services of this area.**
- The screening exercise allows the operator to identify whether some conservation values exist on the area of operations (both for new and existing projects).
- If some conservation values exist, or if the operator is unable to determine whether or not they exist, a complete land use impact assessment will be triggered to precisely identify the nature of the conservation value(s) in the area of operations and the impact of operations on these conservation values.
- The land use impact assessment is a top-down combination of desk and field work, in consultation with local experts and communities, and takes both conservation and economic aspects into consideration. The land-use impact assessment includes at least: 1) screening, i.e. review of publicly available data and maps (non small-scale operators only), 2) landscape-level assessment, i.e. the consultation of national/regional experts and institutions, 3) site-level mapping, i.e. a detailed site-level assessment and planning through the consultation of local communities, and 4) responsible management, i.e. the implementation of responsible land management practices (e.g. conservation agriculture).
- For existing projects, the operator should demonstrate that these or equivalent steps were followed prior to the implementation of operations.
- The land-use impact assessment allows determining “no go” areas, i.e. those areas which can in no case be used for biofuel production. In some specific cases, a limited use of this area for agriculture, forestry or other operations might be authorized as part of a legal conservation management plan.
- The possibility to use higher risk areas may only be explored when no areas with a lesser risk of impact to the environment or people are available and under specific conditions that allow the conservation values of the production area to be maintained (e.g through sustainable biomass harvesting).
- Land conversion cannot lead to the loss of conservation values.
- Earlier cut-off dates established for mainstream feedstock sustainability standards and/or national or regional legislation (e.g. US Renewable Fuel Standard or EU Renewable Energy Directive) include but are not limited to: Forest Stewardship Council<sup>2</sup> for wood products (November 1994) and the Roundtable on Sustainable Palm Oil<sup>3</sup> (November 2005).

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#### Guidance on Criterion 7b

- The **definition of ecosystem services and functions can be found in the glossary.**
- This criterion aims at maintaining **important ecosystem services and functions** in the area of production and the surrounding areas, as identified in criterion 7a
- Specific ecosystem functions and services relevant to an area of production have to be identified by operators as part of the land-use impact assessment. Ecosystem functions may include, but are not limited to, the following: the maintenance of natural regeneration and

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<sup>2</sup> <http://www.fsc.org>

<sup>3</sup> <http://www.rspo.org>

succession processes within and around the farm area and the maintenance of genetic, species and ecosystem diversity within and around the farm area. The ecosystem services considered may include, but are not limited to, the following: water quality and quantity regulation; soil protection, especially with reference to erosion control; protection from fire and wind; and maintenance of a supply of natural goods (e.g. non-timber forest products) to local populations who have identified such goods as important to their livelihood.

- Through an appropriate management plan and sustainable practices, the operator monitors these ecosystem services and functions and ensure they are maintained.

<b>Reference documents for Criterion 7b</b>
<ul style="list-style-type: none"> <li>• Millennium Ecosystem Assessment – Ecosystems and Human Well Being<sup>4</sup></li> </ul>



### **Guidance on Criterion 7c**

- The definition of buffer zones can be found in the Glossary of Terms (RSB-DOC-01-001).
- This principle refers both to the protection or the creation of buffer zones within and outside the production site to minimize impacts from biofuel operations on the surrounding areas or sensitive areas located within the production site itself.
- Buffer zones are crucial to ensure that no impacts emerging from the production site reach the surrounding areas or water courses/tables located on the production site.
- Buffer zones may already exist between the production area and the surrounding areas (e.g. roads, idle lands, natural transition zones). These shall be maintained and sustainably managed.
- Unless buffer zones already exist between the production site and the surrounding ecosystems, the operator should create these buffer zones to prevent negative impacts on these surrounding ecosystems (e.g. runoffs). For example, the operator may leave a strip of her/his land under fallow at the hedge of the operation site. This strip will act as buffer between the operation site and the surrounding areas.
- The size, layout and quality features of the buffer zones to be created should be adapted to the type of areas they separate and the practices implemented on the production site on a case-by-case basis. If no national guidelines exist for the size and features of buffer zones, operators may use international guidelines, such as those of the FAO.

<b>Reference documents for Criterion 7c</b>
<ul style="list-style-type: none"> <li>• FAO Code of Practice for Forest Harvesting in Asia-Pacific (Section 5)<sup>5</sup></li> </ul>



### **Guidance on Criterion 7d**

- The definition of ecological corridors can be found in the Glossary of Terms (RSB-DOC-01-001).

<sup>4</sup> <http://www.millenniumassessment.org/documents/document.356.aspx.pdf>

<sup>5</sup> <http://www.fao.org/docrep/004/ac142e/ac142e00.htm#Contents>

- Ecological corridors are crucial to ensure that wildlife circulate between different habitats without obstacles, as a key requirement for their survival and genetic diversity.
- In some countries (e.g. Brazil), official maps of ecological corridors exist and should be consulted. If not the case, the four-step land-use planning process (see 7a) should allow the operator to identify any potential ecological corridor on and around the production site.
- When ecological corridors exist on the production site they cannot be destroyed. A buffer zone has to be created between the production area and the corridor in order to avoid any disturbance for wildlife using it.
- As a progress requirement, the operator has to create ecological corridors on the production site whenever evidence shows that this could increase the connectivity between the habitats which surround the production site.
- The size, layout and quality features of the corridors are adapted to the species and other environmental features they are aimed to promote and conserve.

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### **Guidance on Criterion 7e**

- Alien invasive species can become highly problematic as they rapidly spread over the ecosystem and unfairly compete with local species, which are then threatened with disappearance. For this reason, it is not acceptable to use a crop with a significant risk of invasiveness in the region of production.
- In the case a species is prohibited because of its invasiveness, if it has been recorded as highly invasive under similar climate, ecosystem types and soil conditions (e.g. in the Global Invasive Species Database), or if the Weed Risk Assessment identifies a high risk of invasiveness for this species, the operator is not allowed to use this crop.
- The operator is required to implement the IUCN Guidelines on Biofuels and Invasive Species or any equivalent national guideline that exists in the country of operation.
- When importing a crop, Participating Operators have to comply with all related national regulations of the importing country, including the gain of an official approval or a suitable import certificate.
- Feedstock processors are specifically responsible for ensuring mitigation and monitoring measures are implemented during the transport of feedstock to the processing unit.

<b>Reference documents for Criterion 7e</b>
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- IUCN Guidelines on biofuels and invasive species<sup>6</sup>
- Global Invasive Species Database (GISD)<sup>7</sup>
- Invasive Species Assessment Protocol<sup>8</sup>
- Pest Risk Analysis developed by the EPPO<sup>9</sup>
- Australian Weed Risk Assessment process<sup>10</sup>
- Weed Risk Assessment for Hawaii and Pacific Islands Process<sup>11</sup>

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<sup>6</sup> <http://data.iucn.org/dbtw-wpd/edocs/2009-057.pdf>

<sup>7</sup> <http://www.issg.org/database>

<sup>8</sup> <http://www.natureserve.org/library/invasiveSpeciesAssessmentProtocol.pdf>

<sup>9</sup> [http://www.eppo.org/QUARANTINE/Pest\\_Risk\\_Analysis/PRA\\_intro.htm](http://www.eppo.org/QUARANTINE/Pest_Risk_Analysis/PRA_intro.htm)

<sup>10</sup> <http://www.daff.gov.au/ba/reviews/weeds/system>

<sup>11</sup> <http://www.botany.hawaii.edu/faculty/daehler/WRA/>

## **Principle 8: Soil**

### **General Guidance**

- The baseline condition of the production site's soil will be determined during the the impact assessment process and Soil Impact Assessment (RSB-GUI-01-008-01) described under Principle 2.
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### **Guidance on Criterion 8a**

- Impacts on soil should be assessed through the Soil Impact Assessment (RSB-GUI-01-008-01).
- The optimal level of organic matter should be assessed through the Soil Impact Assessment (RSB-GUI-01-008-01).
- The soil management plan (only for participating operators that trigger the Soil Impact Assessment) includes practices that prevent or reverse soil degradation and maintain the level of organic matter deemed optimal to the local system for sustained productivity and ecological services.
- Consultation with local experts may be useful to establish the optimal level of soil organic matter, taking into account crop specificities as well as local economic, climatic, geologic and ecologic conditions.
- Realistic targets should be described in the ESMP and set in accordance with the producers' capacities, the context of production, the feedstock in use and on a reasonable timeline.
- Follow-up indicators have to focus on the implementation of good practices, unless the operator is able to undertake periodic sampling, which allow determining whether the objectives are fulfilled.
- The mentioned practices are examples intended to serve as guidance. However, the operator may demonstrate that the requirements are fulfilled through the implementation of practices of their choice.
- Sustainable practices that minimize soil erosion include crop rotation, direct planting (no-till), maintaining vegetative ground cover, terracing, and maintaining or creating tree hedges.
- This criterion applies to the production site's soils and any soil outside the production site which is directly impacted by the production (e.g. through runoff).
- Diversion of agrarian and forestry residue products may be compensated by mitigation practices (see below) whenever their implementation ensures that the stability and organic matter content of the soil are not negatively impacted over the long term.

#### Reference documents for Criterion 8a

- FAO Conservation Agriculture<sup>12</sup>
- Mitigation practices for diversion of residues, as in the “Sustainable Forestry for Bioenergy and Bio-based Products” toolkit from the US National Learning Center for Private Forest and Range Landowners<sup>13</sup>
- Soil and Water Assessment Tool (SWAT)<sup>14</sup>

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<sup>12</sup> <http://www.fao.org/ag/ca/>

<sup>13</sup> <http://forestandrange.org/Biomass/Modules/Module%206/Final%20soils%20table%20April%209.pdf>

<sup>14</sup> <http://www.brc.tamus.edu/swat/>

## **Principle 9: Water**

### **Guidance on Criterion 9a**

- This criterion applies to freshwater, wetlands, and seawater.
  - The objective of this process is to identify downstream or groundwater users and determine the formal or customary water rights that exist.
  - Legitimacy of the dispute will be determined by the auditor against the RSB Water Assessment Guidelines (RSB-GUI-01-009-01).
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### **Guidance on Criterion 9b**

- This criterion applies to freshwater, wetlands, and seawater.
  - The water management plan required under 9.b.1 is part of the ESMP developed by the operator.
  - The water management plan should:
    - a. Identify all steps where water withdrawal, discharge and potential runoff occur over the operation, with a description of the techniques used related to water extraction, transport, and discharge, and the most critical steps where these activities occur.
    - b. Include an estimate of any water volume received from the public provision system or withdrawn from the water table or a tank through the production chain, and identifies the source of withdrawal.
    - c. Include an estimate of potential runoff nature and volumes through the production chain and the natural compartment (e.g. soils, water tables or water courses) or collectors (i.e. existing drainage infrastructure) affected by these runoffs.
    - d. Include measures to reduce water consumption and contamination at the most critical steps.
  - The water management plan has to be adapted to the scale and intensity of operations. Small-scale operators may focus on steps a and d only, as described in the preceding point.
  - Where watershed impact assessments or similar approaches are required by law, the criterion requires these legal requirements to be met and should be used as far as possible as the basis for meeting the requirements of this criterion. However, where the requirements of this criterion exceed legal requirements, additional actions are required in order to comply with the criterion.
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### **Guidance on Criterion 9c**

- This criterion applies to freshwater and wetlands (not seawater).
- The agreed use and share of water resources for biofuel operations includes, for example, the maximum volume to be annually withdrawn from the water table.
- To ensure a sustainable use of water resources, the amount of water withdrawn from a given source cannot create a negative water balance for this source.

- In the case where an aquifer or a water course is used by many operators, the contribution of biofuel operations to the overall impacts will be assessed by the auditor in charge of certification.
  - Criterion 9c does not address directly the issue of dam construction. This is covered in parts under Principles 2, 5, 6, 7, and 9 (water quality and quantity related aspects).
  - Withdrawing water from a watercourse is not by nature in contradiction with this criterion and does not necessarily constitute a change in the natural course the watercourse had before the beginning of operations.
  - water-saving practices include, for example, rainwater harvesting.
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#### **Guidance on Criterion 9d**

- This criterion applies to freshwater, wetlands, and seawater.
- For participating operators which trigger the Water Assessment (RSB-GUI-01-009-01), the optimal quality level of water resources used for biofuel operations should be determined through the consultation of local experts, communities and producers, taking into account local economic, climatic, hydrologic and ecologic conditions.
- The quality of surface and ground water resources is described by their physical, chemical and biological parameters. Possible contaminations of water resources include: microbial and organic contamination; contamination by pesticides or fertilizers (e.g. nitrates, phosphate); contamination by metals, contamination by acids or bases, thermal contamination, sedimentation; and eutrophication.
- Operators are expected to contribute to enhance the quality of water resources whenever they are already degraded. When the quality of water resources is already deemed optimal, operators are expected to contribute to maintain this level but not necessarily to enhance it.
- Further guidance regarding waste management and use of chemicals are outlined in principle 11).

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## **Principle 10: Air**

### **General Guidance**

- This principle aims to identify and minimize sources of pollution along the supply chain, with regards to the availability of technologies in the local context and the operator's ability to use them.
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### **Guidance on Criterion 10a**

- The availability and affordability of technologies for air pollution reduction in the country of operation will be considered by the auditor in charge of certification to assess compliance with this criterion.
  - Some examples of possible air emission sources include, but are not limited to, open burning and boiler stacks.
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### **Guidance on Criterion 10b**

- Any open-air burning has to be taken into account in the Greenhouse Gas lifecycle analysis conducted under Principle 3.
- Where appropriate, the guidelines for the implementation of the ASEAN Policy on Zero Burning should be consulted.
- An example of when workers health and safety should be taken into consideration is during manual harvesting of crop.
- Situations where no viable alternative to open burning is available or affordable in the local context will be determined by the operator and evaluated by the auditor in charge of certification.
- Alternatively, operators may use residues to produce biogas through the fermentation of residues. Such process will be taken into account in the Greenhouse Gas lifecycle analysis.

<b>Reference documents for Criterion 10b</b>
<ul style="list-style-type: none"><li>• Guidelines for the implementation of the ASEAN Policy on Zero Burning<sup>15</sup></li></ul>



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<sup>15</sup> [http://www.rspo.org/resource\\_centre/ASEAN%20Zero%20Burn%20Guidelines.pdf](http://www.rspo.org/resource_centre/ASEAN%20Zero%20Burn%20Guidelines.pdf)

## **Principle 11: Use of Technology, Inputs, and Management of Waste**

### **General Guidance**

- The purpose of this principle is to address the use of technologies in biofuel production that might pose a risk to people or the environment.
  - In the specific case of chemicals, guidance may be found in the Overarching Policy Strategy established within the Strategic Approach to International Chemicals Management (SAICM)<sup>16</sup>.
  - The RSB makes no recommendation regarding the use of specific technologies, but requires that the use of technologies along the value chain improve production efficiency and exhibit social and environmental benefits, while minimizing the risk of damages to the environment and people.
  - The continuous improvement of production efficiency and/or environmental and/or social performance is expected up to the point after which it would impact long-term economic viability of the project.
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### **Guidance on Criterion 11a**

In order to demonstrate compliance with this criterion Participating Operators should list technologies in use with hazardous or unknown effect.

The categories of potentially hazardous technologies to be considered are:

1) Feedstock production :

- Heavy machines and vehicles (production and transport)
- Specific crops (e.g. potentially invasive species, GMOs)
- Biological agents (e.g. mycorrhiza, nitrogen fixing plants)
- Chemicals (fertilizers, pesticides, herbicides)
- Water harvesting, withdrawal and distribution (e.g. irrigation)

2) Feedstock processing, biofuel production and biofuel blending:

- Technologies for storage, transfer, processing and disposal of raw material, chemical ingredients, final products, by-products, co-products and wastes.
- Chemicals used for feedstock processing, biofuel production and blending.
- Biological agents used for feedstock processing, biofuel production and blending.
- Heavy machines and vehicles (production and transport).

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<sup>16</sup> <http://www.saicm.org>

### Guidance on Criterion 11b

- Improved environmental performances include, for instance, lower water consumption or decreased use of chemical inputs (fertilizers, pesticides), as compared to common practices in the local context.
- Improved social performances include, for instance, a better income for small-scale producers and a lower dependency of operators on other actors (e.g. technology providers, banks).
- Potential damages to the environment caused by GMOs include, but are not restricted to, the involuntary selection of weeds, plants or pests that are resistant to biocides; the spread of antibiotic-resistant bacteria because of the use of antibiotic-resistant marker genes; damages to beneficial insects; and threats to the viability of certified organic production.
- Potential damages caused by GMOs to people include, but are not restricted to, impaired business reputation due to lawsuits and campaigns of intimidation against farmers charged with theft of a company's patented seed as a result of an involuntary contamination in the field; and the loss of control and autonomy by agricultural producers over decisions regarding their production chains.
- Whenever there are no specific regulations regarding the use of GMOs, the use of GMO technologies should only occur following the completion of a risk assessment and the setting of an appropriate mitigation strategy.
- Documentation of a qualified scientific risk assessment and risk management guidelines may be sought from the company providing the biotechnology, from legislation or guidelines in other countries, and from the Biosafety Clearinghouse (see URL in footnote). Operators may also report on individual countries' decisions regarding a GMO, as listed in the BCH.

Reference documents for Criterion 11b
<ul style="list-style-type: none"><li>• Biosafety Clearinghouse (BCH)<sup>17</sup></li></ul>



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### Guidance on Criterion 11e

- Examples of measures to convert wastes into energy include, but are not limited to, collecting biogas or heat from fermentation and burning wastes or byproducts to generate electricity or heat.

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<sup>17</sup> <http://bch.cbd.int/database/decisions>



## **Principle 12: Land Rights**

### **General Guidance**

- The UN Comprehensive Human Rights Guidelines on Development-Based Displacement should provide a basis for the implementation of this principle.
  - Court rulings regarding legitimacy of disputers have to be respected, but the fact that a dispute is in legal process does not necessarily define it as legitimate
  - Particular attention should be made to impacts on women and their land use rights (even if not listed on the title) and other vulnerable groups such as pastoralists or landless people.
  - Ensuring compliance with the criteria under Principle 12 should be part of the impact assessment process described under Principle 2, which ensures participatory processes.
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### **Guidance on Criterion 12a**

- Legitimacy of the dispute will be determined by the auditor using the Land Rights Assessment Guidelines (RSB-GUI-01-012-01).
  - Particular attention shall be made to impacts on women and their land use rights within the broad definition of land use and tenure, and other vulnerable groups such as pastoralists or landless people.
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### **Guidance on Criterion 12b**

- The World Bank Operational Policy on Involuntary Resettlement Complaints (OP4.12) should be used for determining the basis for compensation if resettlement is required.
- RSB Stakeholder Engagement Process described in the Impact Assessment Guidelines (RSB-GUI-01-002-01) described under Principle 2 should define the process that is to be carried out for identifying stakeholders, for reaching negotiated agreements, and for dealing with land rights and land use right disputes.
- Compensation practices as defined by the World Bank and FAO should be the reference for internationally-accepted standards.

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