RSB PRINCIPLES & CRITERIA

RSB
Roundtable on Sustainable Biomaterials
www.rsb.org

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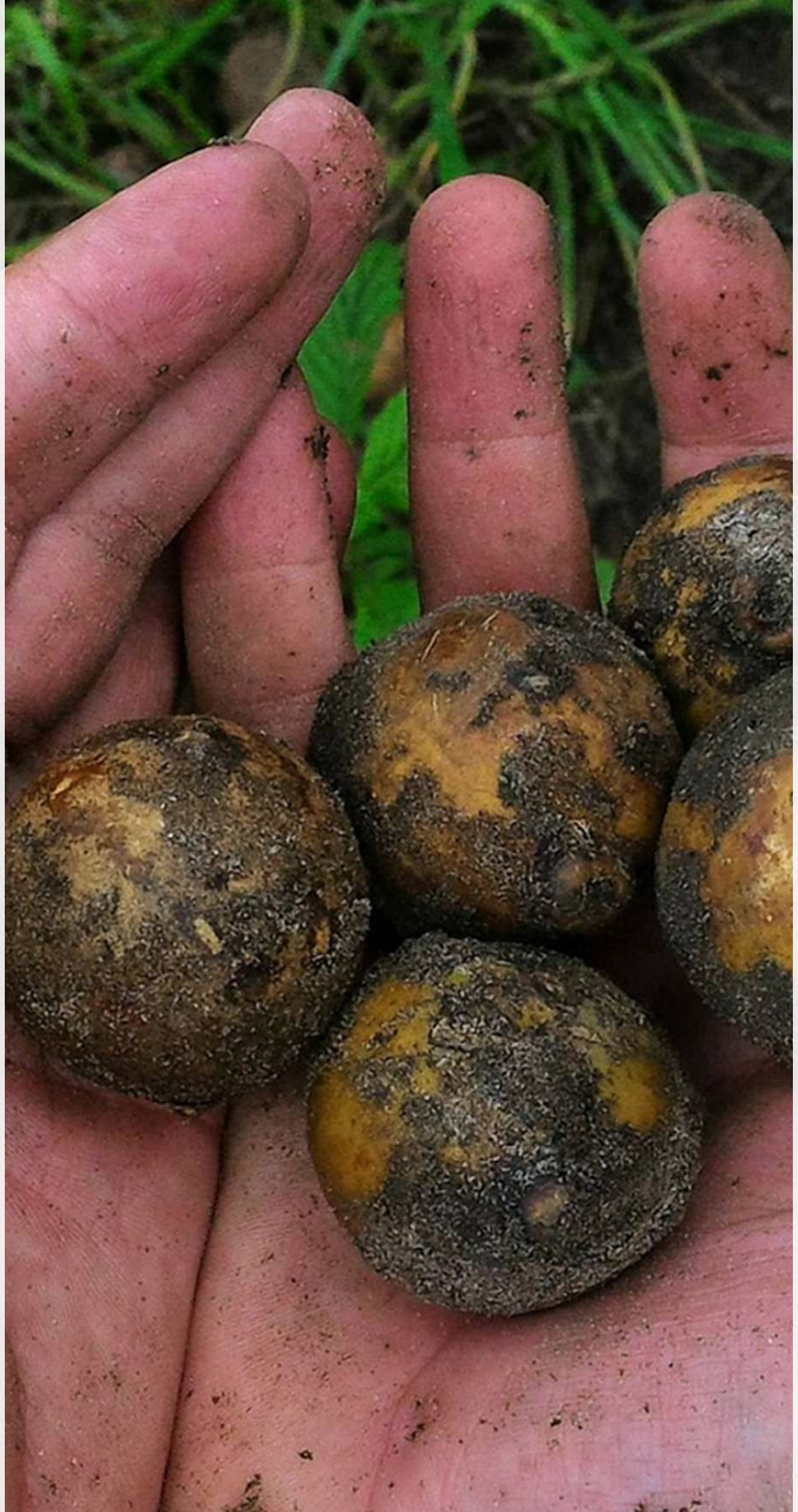

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INTRODUCTION

The Roundtable on Sustainable Biomaterials (RSB) is an independent and global multi-stakeholder coalition which works to promote the sustainability of biomaterials, including biomass and biofuels.

The RSB Principles & Criteria describe how to produce biomass, biofuels and biomaterials in an environmentally, socially and economically responsible way.

Because of the RSB's unique decision-making structure based on consensus among all relevant stake-holders, the RSB Principles & Criteria are recognised as best-in-class in addressing key sustainability issues in comprehensive way.

The RSB Principles & Criteria are based on a management and risk-oriented approach. Together with RSB's online tools and related guidance documents, the RSB Principles & Criteria help operators to identify and manage sustainability issues in a specific context and therefore reduce risks for operators, brand owners and investors.

In June 2007, the RSB launched a global discussion to develop principles for sustainable biofuels production. More than one thousand individuals contributed to the multi-stakeholder consultation, which resulted in the publication of the RSB Principles & Criteria (Version 2.0) in 2010.

Since 2011, the RSB Principles & Criteria are implemented through a third-party certification system. In 2013, RSB expanded the scope of its standard and certification system to include all biomaterials (including biofuels, bio-based chemicals, bioplastics, etc.).

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During the course of the development of the RSB Standard, it has become increasingly clear that while changing individual operators' behavior and improving the sustainability of biofuel operations is possible, many large-scale or macro-scale impacts are less easy to address at an individual operator's level. In order to minimise the occurrence of indirect Land Use Change, the RSB developed an additional module for *low iLUC Risk Biomass* which can be found at the end of this document.

The RSB Principles are general tenets of sustainable production and processing, while the RSB Criteria describe the conditions to be met to achieve these tenets, either immediately (minimum requirements) or over time (i.e. three years - progress requirements). Compliance is verified by RSB-accredited certification bodies at the level of criteria and minimum/progress requirements (not at the level of principles).

As a full ISEAL Member, the RSB follows the ISEAL Standard-Setting Code[1], which defines good practices for an equitable, open and transparent standard-setting process. It also follows ISO/IEC Guide 59:1994 (Code of Good Practice for Standardisation)[2] , WTO Agreement on Technical Barriers to Trade (TBT) (Annex 3: Code of good practice for the preparation, adoption and application of standards)[3], and the WTO TBT Second Triennial Review (Annex 4, Principles for the Development of Inter-national Standards, Guides and Recommendations with Relation to Articles 2, 5 and Annex 3 of the Agreement)[4].

[1] http://www.isealalliance.org/our-work/defining-credibility/codes-of-good-practice/standard-setting-code

[2] http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=23390

[3] https://www.wto.org/English/docs_e/legal_e/17-tbt_e.htm

[4] https://www.wto.org/english/tratop_e/tbt_e/tbt_triennial_reviews_e.htm

THE RSB STANDARD

The RSB Principles & Criteria are complemented by a set of standards, procedures and guidance documents, which constitute the RSB Standard.[5] The components of the RSB Standard are designed to ensure the whole system works smoothly and effectively.

Chain of Custody Standard

Ensuring sustainability claims can be traced back throughout the supply chain, using various models

GHG Calculation Methodology

How to calculate lifecycle greenhouse gas emissions

Requirements for Certification Bodies and Auditors

Describes the RSB`s system to ensure the implementation of the RSB Standard

Communication & Claims Procedure

Requirements for using RSB Trademarks and for compliance claims

> It's (RSB's) credibility and usefulness derive from its commitment to strong, hard, measurable standards, along with its remarkable support by many players from different sectors, including agriculture, environmental and social advocacy, industry (manufacturing, transportation, banking), as well as intergovernmental and non-governmental groups. The RSB is an absolutely unique organisation, not in what it sets out to do, but in its singular success in doing it.
>
> ***"Will Sustainability Fly?" by Walter Palmer***

Compliance Indicators

The checklist auditors use to assess compliance with the Principles & Criteria

Risk Management Standard

Identification of risk levels, resulting in adaptation of audit intensity and frequency

Participating Operators Standard

How to design the scope of certification, and manage compliance

Standard for End-of-life-products, by-products and residues

How biofuel and biomaterial supply chains may use end-of-life-products, by-products and residues and the sustainability issues that apply

Bio-Product Standard

Addendum for non-energy products derived from biomass

Smallholder Standard

Enables small-scale farmers to access RSB-certified supply chains

[5] http://rsb.org/sustainability/standard-documents/

A. The aim of this standard

The RSB Principles & Criteria for the Sustainable Production of Biomass, Biofuels and Biomaterials (RSB-STD-01-001) describe best practices in the production and processing of biomass, and in the production of biofuels and biomaterials. The standard described herein specifies requirements for the certification of sustainable operations along the entire supply chain.

B. What this standard covers

This standard is an international standard and is valid worldwide. It sets out the general requirements for operations producing, converting and processing biomass, biofuels or biomaterials in the RSB certification system.

This standard applies to all operators taking part in the RSB certification system as individual or groups of economic operators (e.g. a group of farmers).

The RSB Principles & Criteria identify two types of operators subject to different sustainability requirements within the standard:

• 'Biomass Producers': farmers and plantation or forest managers

• 'Industrial Operators': Feed-stock processors, intermediary
producers, biofuel or biomaterial producers

The requirements that apply to each of the operators listed above are identified throughout the standard.

Note:

Traders[6] applying for certification, whose scope of certification does not include any operation involved the production, processing or transformation of biomass or any of its derivatives are not required to comply with the RSB Principles & Criteria.

Traders are therefore only required to comply with the RSB Standard for Participating Operators, the RSB Chain of Custody Standard, the RSB Standard for Risk Management and the RSB Standard for Communication and Claims.

[6]Trading companies (including companies selling to end-consumers), biofuel blenders

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C. Version and date

Version 3.0 of this standard came into effect on 9 November 2016. Modalities for the phase-in of existing Participating Operators are detailed in the RSB Phase-in Procedure (RSB-PRO-01-001). This standard may be revised any time upon need, following the RSB Procedure on Development and Modification of Standards (RSB-PRO-15-001), and no later than 5 years from its date of approval.

D. Note on using this standard

All parts of this standard are considered to be normative, including its aim, scope, effective date, notes on its use, references, terms and definitions, requirements and annexes, unless it says otherwise. When putting this standard in place, operators shall make sure that all of the requirements specified in this standard, and any other measures necessary to achieve its aim are met.

F. References

Please see RSB-DOC-10-001 RSB List of Documents and References for the full list of RSB Standards and references.

E. Terms and definitions

For the purposes of this standard, the terms and definitions given in RSB-STD-01-002 RSB Glossary of Terms shall apply.

Verbal forms for the expression of provisions

"shall": indicates requirements strictly to be followed in order to conform to the standard.

"should": indicates that among several possibilities one is recommended as particularly suitable, without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required.

"may": indicates a course of action permissible within the limits of the document.

"can": used for statements of possibility and capability, whether material, physical or causal

Main changes from the previous version (Version 2.1)

A.
The title of the standard was changed to “RSB Principles & Criteria for the Sustainable Production of Biomass, Biofuels and Biomaterials”.

B.
There have been several changes to the introduction. The note on greenhouse gas emissions has been moved to Principle 3; and the note on indirect vs direct impacts has been shortened and integrated in the introduction. An additional module for low iLUC has been created at the end of the document.

C.
Section B now defines three types of operators (biomass producers, industrial operators, traders) instead of four (feedstock producers, feedstock processors, biofuel producers, blenders). The new types of operators are used throughout the document.

D.
Section B defines the scope of the standard (biomass, biofuels and biomaterials) which is used throughout the document.

E.
Principle 1: Legality
a. Minimum requirements were defined and added.

F.
Principle 2: Planning, Monitoring and Continuous Improvement

a. Context specific specialist impact assessments are now required instead of the more general Environmental and Social Impact Assessment (ESIA) or Rapid Environmental and Social Impact Assessment (RESA).

b. New criterion 2c requires a grievance mechanism for local communities.

c. Criterion 2d (former 2c) focuses now on resource allocation for implementing
and ensuring ongoing compliance with the RSB.

G.
Principle 3: Greenhouse Gas Emissions

a. Criterion 3a was rewritten to improve clarity and minimum requirements were added.

b. Criterion 3b now allows operators various options to calculate GHG emissions including Biograce, GREET, GHGenius and EU Default values.

c. Criterion 3b specifies GHG calculation requirements for energy products derived from forestry.

d. The GHG emission reduction threshold in criterion 3c now refers to biofuel producers instead of blenders.

e. The EU emission reduction goal (60% for new installation) was added.

H.
Principle 4: Human and Labour Rights

a. Minimum requirements for criterion 4b were defined.

b. Minimum requirements for criterion 4f were added (from the indicators).

c. Criterion 4h was added which requires operators to implement and maintain a grievance mechanism for all workers.

I.
Principle 7: Conservation

a. Criterion 7a: Lists of no-go areas and no-conversion areas were added (from the screening), highly biodiverse grassland (following the EU definition) was included in the list of no-go areas, forests (following the FAO definition) were included in the list of no-conversion areas, and the reference year was changed to 1.1.2008 (as per EU reference date).

b. Criterion 7c: The notion of riparian areas was added, and a timetable is now required for the re-storation and creation of buffer zones as part of the ESMP.

J.
Principle 8: Soil

a. Practices to be implemented also include measures that protect soil structure and prevent compaction.

b. A new minimum requirement was added that requires operators to maintain and improve the soil nutrient balance and reduce nitrate pollution.

c. Conservation agriculture was changed from a progress requirement to a minimum requirement. More details were added.

K.
Principle 9: Water

a. More details on the content of the water management plan were added.

b. The progress requirement to implement water-saving practices was changed into a minimum requirement.

L.
Principle 11: Use of Technology, Inputs, and Management of Waste

a. A minimum requirement was added that the operators shall demonstrate that the use of GMO plants has clear environmental or social benefits compared to non-GMO alternatives and does not result in an increased use of pesticides.

b. The minimum requirement to implement and monitor Integrated Pest Management techniques was added.

c. Chemicals listed in the Montreal Protocol on Substances that Deplete the Ozone Layer were added to the list of chemicals to phase out within three years.

d. A minimum requirement on records of the pesticides used was added.

e. A recommendation to use waste and co-products was added.

THE 12 RSB PRINCIPLES

Principle 4: Human and Labour Rights

Operations do not violate human rights or labour rights, and promote decent work and the well-being of workers.

Principle 5: Rural and Social Development

In regions of poverty, operations contribute to the social and economic development of local, rural and indigenous people and communities.

Principle 6: Local Food Security

Operations ensure the human right to adequate food and improve food security in food insecure regions.

Principle 7: Conservation

Operations avoid negative impacts on biodiversity, ecosystems, and conservation values.

Principle 8: Soil

Operations implement practices that seek to reverse soil degradation and/or maintain soil health.

Principle 9: Water

Operations maintain or enhance the quality and quantity of surface and groundwater resources, and respect prior formal or customary water rights.

Principle 1: Legality

Operations follow all applicable laws and regulations.

Principle 2: Planning, Monitoring & Continuous Improvement:

Sustainable operations are planned,implemented, and continuously improved through an open, transparent, and consultative impact assessment and management process and an economic viability analysis.

Principle 3: Greenhouse Gas Emissions

Biofuels contribute to climate change mitigation by significantly reducing life-cycle GHG emissions as compared to fossil fuels.

Principle 10: Air Quality

Air pollution shall be minimised along the whole supply chain.

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

The use of technologies shall seek to maximise production efficiency and social and environmental performance, and minimise the risk of damages to the environment and people.

Principle 12: Land Rights

Operations shall respect land rights and land use rights.

PRINCIPLE 1: LEGALITY

Operations follow all applicable laws and regulations.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
1. Operations shall comply with all applicable laws and regulations of the country in which the operation occurs and with relevant international laws and agreements.	1. The operator shall implement and maintain a system for ensuring that all relevant laws and regulations are complied with, which includes - A legal register or equivalent system with all relevant applicable international, national and regional laws and regulations. - A training system ensuring that personnel are aware of the laws and regulations and have access to the legal register. - A register containing all evidence of legal compliance (e.g. permits, licenses, evidence of lease, concessions, etc.) and a system ensuring that auxiliary conditions are met. - A system that ensures that all forms of bribery, conflicts of business interest and fraudulent practices are prohibited, including a written policy by the management and appropriate staff training.	X	X	All	Global	X	

PRINCIPLE 2: PLANNING, MONITORING AND CONTINUOUS IMPROVEMENT

Sustainable operations are planned, implemented, and continuously improved through an open, transparent, and consultative impact assessment and management process and an economic viability analysis.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
2a. Operations shall undertake an impact assessment process to assess impacts and risks and ensure sustainability through the development of effective and efficient implementation, mitigation, monitoring and evaluation plans.	1. Where an impact assessment is required by national, regional, or local laws, the proces shall be integrated with the RSB impact assessment process to avoid duplication of efforts, but the higher and more comprehensive standard shall be applied.	X	X	All	Global	X	
	2. A screening exercise shall be required for all new and existing operations and extensions to operations of all sizes to determine if specialist social or environmental impact assessments are required (e.g. Food Security Assessment, Conservation Impact Assessment, Soil Impact Assessment, etc.). The screening exercise shall be done in accordance with the Screening Guidelines (RSB-GUI-01-002-02).	X	X	All	Global	X	
	3. Participating operators shall conduct the specialist environmental or social impact assessments, if required, in accordance with the RSB Impact Assessment Guidelines (RSB- GUI-01-002-01), respectively, as determined by the scale and intensity of the operations.	X	X	All	Global	X	
	4. The specialist environmental or social impact assessments, if required as determined through the screening exercise, shall be carried out using qualified professionals.						

PRINCIPLE 2: PLANNING, MONITORING AND CONTINUOUS IMPROVEMENT

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CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
2a. Operations shall undertake an impact assessment process to assess impacts and risks and ensure sustainability through the development of effective and efficient implementation, mitigation, monitoring and evaluation plans.	5. Where operations will have significant social impacts, as measured during the screening exercise, a social impact assessment process shall be carried out using local experts to ensure that local customs, languages, practices and indigenous knowledge are respected and utilised.	X	X	All	Global	X	
	6. The Environmental and Social Management Plan (ESMP), in accordance with the RSB ESMP Guidelines (RSB-GUI-01-002-05), shall be developed by all operations and shall ensure compliance with all RSB Principles & Criteria. Where there are progress requirements, they shall be detailed.	X	X	All	Global	X	
	7. Where specifically stated in a criterion the impact assessment process shall extend beyond the scope of the immediate operational area, for instance for food security, water management and use, ecosystem impacts, biodiversity and conservation in accordance with the RSB Impact Assessment Guidelines (RSB-GUI-01-002-01).	X	X	All	Global	X	
	8. Multiple operators applying for certification, as defined in the Standard for Participating Operators (RSB-STD-30-001), shall conduct the RSB impact assessment and management processes jointly.	X	X	All	Global	X	

PRINCIPLE 2: PLANNING, MONITORING AND CONTINUOUS IMPROVEMENT

Sustainable operations are planned, implemented, and continuously improved through an open, transparent, and consultative impact assessment and management process and an economic viability analysis.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
2b. Free, Prior & Informed Consent (FPIC) shall form the basis for the process to be followed during all stakeholder consultation, which shall be gender sensitive and result in consensus-driven negotiated agreements.	1. While FPIC provides the process conditions for stakeholder engagement and negotiated agreements, consensus shall be the decision-making tool applied in all cases and carried out in accordance with the RSB consensus-building toolkit in the Impact Assessment Guidelines (RSB-GUI-01-002-01).	X	X	All	Global	X	
	2. The impact assessment facilitator shall invite all locally-affected stakeholders, local leaders, representatives of community and indigenous people groups and all relevant stakeholders to participate in the consultative process.	X	X	All	Global	X	
	3. The scope of engagement shall be determined by the scale of the operations as set out in the RSB Impact Assessment Guidelines (RSB-GUI-01-002-01).	X	X	All	Global	X	
	4. Relevant government authorities shall be included in the stakeholder process to ensure efficient streamlining of the process with legal requirements.	X	X	All	Global	X	
	5. Those responsible for undertaking the impact assessment shall undertake and document a stakeholder analysis in accordance with the RSB Impact Assessment Guidelines (RSB-GUI-01-002-01).	X	X	All	Global	X	

PRINCIPLE 2: PLANNING, MONITORING AND CONTINUOUS IMPROVEMENT

Sustainable operations are planned, implemented, and continuously improved through an open, transparent, and consultative impact assessment and management process and an economic viability analysis.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
2b. Free, Prior & Informed Consent (FPIC) shall form the basis for the process to be followed during all stakeholder consultation, which shall be gender sensitive and result in consensus-driven negotiated agreements.	6. Participatory methodologies described in the RSB Impact Assessment Guidelines (RSB-GUI-01-002-01) shall be used to ensure meaningful stakeholder engagement. Special attention shall be made to ensure that women, youth, elders,indigenous and vulnerable people can participate meaningfully in meetings and negotiations. Where the need is identified by the impact assessment facilitator, there shall be informal workshops to build local understanding in the community of the processes that may impact them directly to aid meaningful engagement.	X	X	All	Global	X	
	7. Documentation necessary to inform stakeholder positions shall be made freely available to stakeholders in a timely, open, transparent and accessible manner through distribution channels appropriate to the local conditions in accordance with the RSB Impact Assessment Guidelines (RSB-GUI-01-002-01).	X	X	All	Global	X	
	8. Management documents shall be publicly available, except where this is prevented by commercial confidentiality, of a proprietary nature or where disclosure of information would result in negative environmental or social outcomes.	X	X	All	Global	X	
	9. Participating Operators shall seek consensus, in accordance with the RSB Impact Assessment Guidelines (RSB-GUI-01-002-01), such that individuals or single-issue groups cannot block consensus. Deadlocks shall be broken in accordance with the RSB Impact Assessment Guidelines (RSB-GUI-01-002-01). .	X	X	All	Global	X	

PRINCIPLE 2: PLANNING, MONITORING AND CONTINUOUS IMPROVEMENT

Sustainable operations are planned, implemented, and continuously improved through an open, transparent, and consultative impact assessment and management process and an economic viability analysis.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
2c. Operators shall implement and maintain a trans-parent and easily accessible grievance mechanism for directly affected local communities.	1. The grievance mechanism shall be a documented system for dealing with complaints and grievances, and which has the following characteristics: - The mechanism is communicated and made easily accessible to directly affected local communities. - Any grievances shall be acknowledged and dealt with in a timely manner. - The dispute-resolution mechanism shall be based on negotiation between affected parties and decisions shall be made on consensus. - Records of all grievances are kept, including how they were dealt with and the outcome of the process.	X	X	All	Global	X	
2d. Biofuel operators shall make adequate resources available to ensure compliance with the RSB Standard.	1. Operators shall allocate adequate personnel and budget to implement and continuously monitor compliance with the RSB Standard.	X	X	All	Global	X	

PRINCIPLE 3: GREENHOUSE GAS EMISSIONS

Biofuels contribute to climate change mitigation by significantly reducing lifecycle GHG emissions as compared to those of fossil fuels.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
3a. Biofuels shall meet all applicable GHG reduction requirements set by national and/or regional and/or local regulations.	1. The Participating Operator shall report the lifecycle GHG emissions of the biomass, intermediary or final product by using the methodology as required by the applicable regulation(s).	X	X	All	Global	X	
	2. The Participating Operator shall ensure that GHG emission reduction thresholds as set by the applicable regulation(s) are met.	X	X	All	Global	X	
3b. Lifecycle GHG emissions of biofuel shall be calculated by using system boundaries from Well to Wheel, including GHG emissions from land-use change, including, but not limited to above and below-ground carbon stock changes and incentivising the use of co-products, residues and waste in such a way that the lifecycle GHG emissions of the biofuel are reduced.	1. The Participating Operator shall report the lifecycle GHG emissions of the bio-mass, intermediary or final product by using one of the following options: - RSB GHG Calculation Methodology (RSB-STD-01-003-01) or EU Renewable Energy Directive Methodology by using the RSB Calculation Tool or by carrying out an individual calculation - Biograce GHG calculation tool - Greenhouse gases, Regulated Emissions, and Energy use in Transportation (GREET) Model, developed and maintained by the Argonne National Laboratory - GHGenius Model for sugarcane ethanol and UCO biodiesel traded into Canada	X Biomass producers delivering into the bio-fuels supply chain	X Processors delivering into the biofuel supply chain	All	Global	X	

PRINCIPLE 3: GREENHOUSE GAS EMISSIONS

Biofuels contribute to climate change mitigation by significantly reducing lifecycle GHG emissions as compared to fossil fuels.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
3b. Lifecycle GHG emissions of biofuel shall be calculated by using system boundaries from Well to Wheel, including GHG emissions from land-use change, including, but not limited to above and below-ground carbon stock changes and incentivising the use of co-products, residues and waste in such a way that the lifecycle GHG emissions of the biofuel are reduced.	1. - Default Values set by the EU Renewable Energy Directive, Annex V (2009/28/EC) if the specifications as defined by the Directive are met (e.g. feedstock, process, process energy, country of origin) - Further methodologies following an approval by the RSB Board of Directors under the following conditions: o the decision is based on a sensitivity analysis carried out by an independent and competent organisation o the RSB membership has been consulted and comments have been considered In the case that the Secretariat believes a sensitivity analysis is not necessary (e.g. if a calculator is similar to another calculator that is already approved), the Board of Directors may approve the calculator without conducting a sensitivity analysis if the membership does not raise any objections to this approach.	X Biomass producers delivering into the bio-fuels supply chain	X Processors delivering into the biofuel supply chain	All	Global	X	

PRINCIPLE 3: GREENHOUSE GAS EMISSIONS

Biofuels contribute to climate change mitigation by significantly reducing lifecycle GHG emissions as compared to fossil fuels.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
3b. Lifecycle GHG emissions of biofuel shall be calculated by using system boundaries from Well to Wheel, including GHG emissions from land-use change, including, but not limited to above and below-ground carbon stock changes and incentivising the use of co-products, residues and waste in such a way that the lifecycle GHG emissions of the biofuel are reduced.	2. Operators shall use the current RSB GHG Methodology or the UK's Ofgem Solid and Gaseous Biomass Calculator Tool7 for supply chains using the following: - Forestry harvesting residues: tops, limbs (branches) and saplings (trees with a diameter at a breast height below 5 inches/12.7 cm[8]). - Forestry processing by-products and residues: sawdust, shavings, bark, tall oil / tall oil pitch and brown liquor. - Short rotation coppices (e.g. poplar, willow). 3. In the case of energy products derived from other forestry products, the operator shall use a GHG accounting methodology that - takes into account counterfactual scenarios, i.e. compares emissions from bioenergy production to scenarios absent bioenergy demand, (including forest baseline scenario and traditional wood products baseline) and - uses a timeframe not longer than 20 years for modelling carbon sequestration, and - has been approved by the RSB Board of Directors for this purpose. Prior to the decision the RSB membership shall be consulted and comments shall be considered. The RSB Board of Directors may also approve regional feedstock specific default values	X Biomass producers delivering into the bio-fuels supply chain	X Processors delivering into the biofuel supply chain	Forestry residues	Global	X	
		X Biomass producers delivering into the bio-fuels supply chain	X Processors delivering into the biofuel supply chain	Other forestry products	Global	X	

[7]https://www.ofgem.gov.uk/publications-and-updates/uk-solid-and-gaseous-biomass-carbon-calculator
[8]Based on US Dept of Agriculture and Energy.

PRINCIPLE 3: GREENHOUSE GAS EMISSIONS

Biofuels contribute to climate change mitigation by significantly reducing lifecycle GHG emissions as compared to fossil fuels.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
3c. Biofuels shall have on average 50% lower lifecycle greenhouse gas emissions relative to the fossil-fuel baseline (60% for new installations).	1. Lifecycle greenhouse gas emissions of a biofuel, calculated following the methodology in Criterion 3b, shall be on average 50% lower than the applicable fossil-fuel baseline. 2. Lifecycle greenhouse gas emissions of a biofuel produced in a new installation (i.e. an installation that started operation after 5 October 2015) shall be 60% lower than the applicable fossil-fuel baseline.		X Only applicable for Biofuel producers	All	Global	X	

Ensuring sustainability for the use of forestry residues

Deforestation and unsustainably managed forests are serious environmental risks. The RSB addresses these risks by requiring operators to source forestry residues only from sustainably managed forests. Operators are therefore required to provide evidence that forestry residues are sourced from forests with a valid Forest Stewardship Council (FSC) certification or any certification scheme with equivalent sustainability requirements as approved by the RSB (for more information, see *RSB Standard for certification of biofuels and bio-products based on end-of-life-products, by-products and residues*, RSB-STD-01-010).

A note on Greenhouse Gas emissions

•Fossil-fuel baseline: Biofuels certified against the RSB Standard are required to significantly reduce greenhouse gas (GHG) emissions compared to fossil fuels (Principle 3). Operators have different methodological options outlined in Principle 3 to calculate the lifecycle emissions of their product. If operators opt to calculate the GHG emissions by using the RSB GHG Calculation Methodology, the GHG emission of the biofuel is compared to the fossil-fuel baseline set in accordance to the RSB fossil-fuel baseline methodology. The fossil-fuel baseline is a global average calculated in 2011 by the RSB Secretariat, in conjunction with experts from the fields of Life Cycle Assessment and fossil fuels for different fossil fuel types (gasoline, diesel, and jet fuel). The fossil-fuel baseline will be recalculated every 5 years to reflect changes in the carbon intensity of fossil fuels used in the world.

•GHG Trading System: In 2010, the RSB decided to move towards developing a GHG Trading System to comply with the GHG emission reduction requirements in Criterion 3c. As international policies on biofuels sustainability do not foresee a GHG trading system at the moment, the RSB GHG Trading System has not been developed further. If stakeholders ask for a GHG Trading System in order to support the sustainable production of biofuels and biomaterials, the RSB Secretariat will return this topic to the agenda.

PRINCIPLE 4: HUMAN AND LABOUR RIGHTS

Operations do not violate human rights or labour rights, and promote decent work and the well-being of workers.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
4a. Workers shall enjoy freedom of association, the right to organise, and the right to bargain collectively.	1. In countries where the law prevents collective bargaining or unionisation, operators shall not interfere with workers' own efforts to set up representational mechanisms in such cases, and shall provide a mechanism for workers to engage with employers without breaking the law.	X	X	All	Global	X	
4b. No slave labour or forced labour shall occur. The participating operator shall not be engaged in or support the use of forced, compulsory, bonded, trafficked or otherwise involuntary labour as defined in ILO Convention 29.	1. Workers shall not be required to lodge their identity documents with the employer or a third party.	X	X	All	Global	X	
	2. Retaining parts of the workers´ salary is not allowed.	X	X	All	Global	X	
	3. Spouses and children of workers shall not be obliged to work in the operations.	X	X	All	Global	X	
	4. Workers shall be allowed to leave their employment after due notice according to their contractual agreements.	X	X	All	Global	X	
	5. Workers shall be allowed to leave company premises freely at the end of their work shifts.	X	X	All	Global	X	
4c. No child labour shall occur, except on family farms and then only when work does not interfere with the child's schooling and does not put his or her health at risk.	1. Schooling age limit is that defined in the national legislation or 14, whichever is higher.	X	X	All	Global	X	
	2. Hazardous child labour as defined by ILO Convention 138 is not allowed.	X	X	All	Global	X	
	3. Work by children on family smallholdings is only acceptable under adult supervision and when work does not interfere with the child's schooling nor puts at risk his or her health.	X	X	All	Global	X	

PRINCIPLE 4: HUMAN AND LABOUR RIGHTS

Operations do not violate human rights or labour rights, and promote decent work and the well-being of workers.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
4d. Workers shall be free of discrimination of any kind, whether in employment or opportunity, with respect to gender, age, wages, working conditions, and social benefits.	1. Employees, contracted labour, small outgrowers, and employees of outgrowers shall all be free of discrimination as per ILO Convention 111.	X	X	All	Global	X	
	2. Career development shall be encouraged for all workers	X	X	All	Global	X	
	3. Work sites shall be safe for women; free from sexual harassment and other discrimination and abuse; and promote access to jobs, skills training, recruitment and career development for women to ensure more gender balance in work and career development.	X	X	All	Global	X	

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Operations do not violate human rights or labour rights, and promote decent work and the well-being of workers.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
4e. Workers' wages and working conditions shall respect all applicable laws and international conventions, as well as all relevant collective agreements. Where a government-regulated minimum wage is in place in a given country and applies to the specific industry sector, this shall be observed. Where a minimum wage is absent, the wage paid for a particular activity shall be negotiated and agreed on an annual basis with the worker. Men and women shall receive equal remuneration for work of equal value.	1. Wages shall be provided in cash or in another form acceptable to workers.	X	X	All	Global	X	
	2. Any housing provided by the operator for permanent or temporary workers shall be built and maintained to ensure good sanitary, health, and safety conditions.	X	X	All	Global	X	
	3. For piecework (pay based on production rather than hours), the pay rate must allow workers to earn at least the legal minimum wage or comparable regional wage, whichever is higher, based on an eight-hour workday under average conditions.	X	X	All	Global	X	
	4. The maximum number of regular hours worked per week must not exceed 48. Workers may work overtime which shall be voluntary, but total working hours shall not exceed 80 per week.	X	X	All	Global	X	

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CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
4f Conditions of occupational safety and health for workers shall follow internationally-recognised standards	1. Workers shall not be exposed to any occupational health or safety hazards without adequate protection and training as defined in national law and international standards.	X	X	All	Global	X	
	2. The operator shall have a health and safety policy in place, which applies to all workers, including contractors. For agricultural operations, this policy shall follow ILO Convention 184 (Safety and Health in Agriculture).	X	X	All	Global	X	
	3. The operator shall ensure that workers are skilled in the implementation of their prescribed activities and jobs to minimise health and safety risks and the risk of work-related accidents.	X	X	All	Global	X	
	4. The operator shall ensure that workers are - trained and knowledgeable about work-related health and safety risks and preventative measures for minimising the risk to health and safety, - trained and knowledgeable about work-related risks to the environment and/or society, - trained and knowledgeable about correct application, transport, storage and handling of hazardous substances and waste, and - trained and knowledgeable about all other aspects of the operation(s) of the participating operator that pose occupational health and safety risks or risks to the environment and/or to society.	X	X	All	Global	X	

PRINCIPLE 4: HUMAN AND LABOUR RIGHTS

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CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
4f Conditions of occupational safety and health for workers shall follow internationally recognised standards	5. The operator shall implement and maintain procedures and measures addressing emergencies and accidents that are continuously monitored and improved. The participating operator ensures that all workers understand accident and emergency procedures and measures, including the interpretation of labels, markings, signs, and other safety relevant audio and/or visual signals.	X	X	All	Global	X	
	6. The operator shall maintain and review periodically records of all work-related accidents, and adjust its accident and emergency procedures to minimise the risk of work-related accidents.	X	X	All	Global	X	
	7. The operator shall ensure that first aid kits, fire extinguishers, and spill-response material are available in sufficient quantity (i.e. readily available and accessible to workers) and quality (i.e. current and periodically serviced, and appropriate to address the associated hazards and risks) at all sites including mobile facilities and in the vicinity of agricultural sites, and that workers are knowledgeable of such equipment and its use.	X	X	All	Global	X	
	8. The operator shall ensure that workers are provided with and regularly use personal protective equipment to protect them from all occupational health and safety hazards associated with their respective jobs (e.g. for the handling of plant-protection products or working with electric equipment).	X	X	All	Global	X	

PRINCIPLE 4: HUMAN AND LABOUR RIGHTS

Operations do not violate human rights or labour rights, and promote decent work and the well-being of workers.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
4f Conditions of occupational safety and health for workers shall follow internationally recognised standards	9. The operator ensures that all workers have access to clean sanitary facilities and potable water. 10. The operator ensures that any living quarters and infrastructure for sleeping, sanitary facilities (e.g. toilet/ latrines, showers, etc.) and facilities for storing, preparing and distributing of food provided to workers are designed, built and regularly maintained to meet the basic needs of the personnel and their families, comply with legal requirements, and ensure safe and healthy conditions.	X X	X X	All All	Global Global	X X	
4g. Operators shall implement a mechanism to ensure the human rights and labour rights outlined in this principle apply equally when labour is contracted through third parties.	1. Operators shall identify instances where those working within the scope of their operational function (feedstock producer, feedstock processor, or industrial producer) are contracted outside of the direct influence of the operation by external parties and shall implement a mechanism to ensure that such contracted workers are afforded the same rights as described in this principle as employed staff within the process.	X	X	All	Global		X
4h. Operators shall implement and maintain a transparent and easily accessible grievance mechanism, open for all workers and contracted workers	1. The grievance mechanism shall be a documented system for dealing with complaints and grievances which has the following characteristics: - The mechanism is communicated and made easily accessible to workers and contracted workers. - Any grievances shall be acknowledged and dealt with in a timely manner. - Records of all grievances are kept, including how they were dealt with and the outcome of the process.	X	X	All	Global	X	

PRINCIPLE 5: RURAL AND SOCIAL DEVELOPMENT

In regions of poverty, operations contribute to the social and economic development of local, rural and indigenous people and communities.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
5a. In regions of poverty, the socio-economic status of local stakeholders impacted by the operations shall be improved.	1. Where the socioeconomic baseline survey undertaken during the social impact assessment process in accordance with the Social Impact Assessment Guidelines (RSB-GUI-01-005-01) identifies an excess of unemployed or underemployed labour in the locality of the operations, operations shall optimise the job-creation potential.	X	X	All	Regions of Poverty	X	
	2. The Participating Operator shall assess ways in which the use of permanent and local labour can be promoted and introduced over the use of migrant, seasonal and casual labour	X	X	All	Regions of Poverty	X	
	3. If it is determined through the RSB impact assessment or monitoring process that mechanisation is the optimal choice from an environmental, economic, and social perspective, the transition from labour intensity to mechanisation shall be done in a fair and equitable way for existing workers where as many of the existing workers as possible are retrained and employed in the mechanised process.	X	X	All	Regions of Poverty	X	
	4. Measured improvements in the social and economic indicators as set against the baseline survey carried out under the social impact assessment process shall be targeted for review every three years.	X	X	All	Regions of Poverty	X	

PRINCIPLE 5: RURAL AND SOCIAL DEVELOPMENT

In regions of poverty, operations contribute to the social and economic development of local, rural and indigenous people and communities.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
5a. In regions of poverty, the socio-economic status of local stakeholders impacted by the operations shall be improved.	5. Skills training shall be provided by the operator if necessary to ensure the implementation of this criterion. Cultural sensitivity and respect for existing social structures shall be applied in the development of options for compliance with this criterion. 6. At least one measure to significantly optimise the benefits to local stake-holders shall be implemented within a three-year period of the start of the operations, for instance: a) Creation of year-round and/or long-term jobs b) The establishment of governance structures that support empowerment of small-scale farmers and rural communities such as co-operatives and micro-credit schemes c) Use of the locally produced bio-energy to provide modern energy services to local poor communities d) Shareholding options, local ownership, joint ventures and partnerships with the local communities e) Social benefits for the local community such as the building or servicing of clinics, homes, hospitals and schools	X X	X X	All All	Regions of Poverty Regions of Poverty	X X	

PRINCIPLE 5: RURAL AND SOCIAL DEVELOPMENT

In regions of poverty, operations contribute to the social and economic development of local, rural and indigenous people and communities.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
5b. In regions of poverty, special measures that benefit and encourage the participation of women, youth, indigenous communities and the vulnerable in the operations shall be designed and implemented.	1. Data for rural poor women in regions of poverty shall be disaggregated in the baseline social surveys to assist with the design of special programmes for the targeted people.	X	X	All	Regions of Poverty	X	
	2. Training and capacity building shall be required to give effect to this principle. Such training is required for both the workers and also for management that oversees employment protocols and supervision.	X	X	All	Regions of Poverty		X

What is a region of poverty?
The RSB has set national-level thresholds for Regions of Poverty based on the United Nations Human Development Indicators. If the country is listed at the inequality-adjusted human development index (IHDI), the threshold is 0.59. If no data is available, the Human Development Index (HDI) may be used with the threshold 0.74. Both indices can be accessed via the UNDP Human Development Indicators World Map.

PRINCIPLE 6: LOCAL FOOD SECURITY

Operations ensure the human right to adequate food and improve food security in food-insecure regions.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
6a. Operations shall assess risks to food security in the region and locality and shall mitigate any negative impacts that result from their operations.	1. Where the screening exercise of the RSB impact assessment process reveals a direct impact on food security in food-insecure regions, Participating Operators shall conduct a food security assessment in accordance with the RSB Food Security Assessment Guidelines (RSB GUI-01-006-01).	X	X	Crops[9]	Foodin-secure regions	X	
	2. The scope of the food security assessment shall include additional impacts that the operations may have on cross-cutting requirements for food security including land, water, labour, and infrastructure.	X	X	Crops	Food insecure regions	X	
	3. If the food security assessment indicates a food security risk as a result of the operations, a mitigation plan shall be developed and implemented through the ESMP.	X	X	Crops	Food insecure regions	X	
	4. Measures developed under Principle 5 that mitigate food insecurity shall be integrated with the measures developed under Criterion 6a.	X	X	Crops	Food insecure regions	X	
6b. In food insecure regions, operations shall enhance the local food security of the directly affected stakeholders.	1. In regions where food security is an ongoing risk and concern, operations shall enhance food security of the locally affected community by, for instance, setting aside land for food growing, increasing yields, providing opportunities for workers to carry out household-level food production, sponsoring agricultural support programmes and activities, and/or making value-added food by-products available to the local market.	X (small-scale operators exempt)	X (small-scale operators exempt)	Crops	Food insecure regions	X	
	2. Measures to enhance regional food security shall be integrated with measures that contribute to rural and social development developed under Principle 5.	X (small-scale operators exempt)	X (small-scale operators exempt)	Crops	Food insecure regions	X	

[9]Crop: Vegetable biological organism used for biomass production and the biomass produced based on this plant (RSB Glossary of Terms RSB-STD-01-002)

PRINCIPLE 7: CONSERVATION

Operations avoid negative impacts on biodiversity, ecosystems, and conservation values

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
7a. Conservation values of local, regional or global importance within the potential or existing area of operation shall be maintained or enhanced.	1. Participating Operators shall identify the conservation value(s) within the area of a potential or existing operation during the screening exercise of the RSB impact assessment process (Principle 2).	X	X	All	Global	X	
	2. Conversion or use of new areas for operations shall not occur prior to the screening exercise.	X	X	All	Global	X	
	3. Where conservation values of local, regional or global importance have been identified, Participating Operators shall carry out a specialised impact assessment in accordance with the Conservation Impact Assessment Guidelines (RSB-GUI-01-007-01).	X	X	All	Global	X	
	4. Operations shall prioritise areas with the lowest possible risk of impacts to the identified conservation values.	X	X	All	Global	X	

PRINCIPLE 7: CONSERVATION

Operations avoid negative impacts on biodiversity, ecosystems, and conservation values

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
7a. Conservation values of local, regional or global importance within the potential or existing area of operation shall be maintained or enhanced.	5. Areas identified as “no-go areas” shall not be used for operations after the 1st of January 2008, unless feedstock production or processing operations are legally authorised as part of the conservation management for the area concerned. No-go-areas are nationally, regionally, or internationally legally protected areas including but not limited to those designated by any of the of the following: - The World Conservation Union “IUCN” Category I-IV protected areas http://www.protectedplanet.net/ - Wetlands of International Importance designated under the Ramsar Convention http://ramsar.wetlands.org/ - World Heritage Sites designated under the UNESCO World Heritage Convention http://whc.unesco.org/en/list - Biosphere Reserves designated under the UNESCO Man and the Biosphere Programme http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/biosphere-reserves/ - Other legally protected areas - Primary Forest, i.e. naturally regenerated forest, where there are no clearly visible indication of human activities and the ecological processes are not significantly disturbed.[10] - Natural or non-natural highly biodiverse grassland	X	X	All	Global	X	

What is natural or non-natural highly biodiverse grassland?

Natural highly biodiverse grassland: Area that would remain grassland in the absence of human intervention and which maintains the natural species composition and ecological characteristics and processes.

Non-natural highly biodiverse grassland: Area that would cease to be grassland in the absence of human intervention and which is species-rich and not degraded, unless evidence is provided that the harvesting of the raw material is necessary to preserve its grassland status Please find more information and definitions for “Grassland”, “Human intervention” and “species-rich” in RSB Glossary

What are wetlands and peatlands?

Wetlands: Areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres (Source: RAMSAR Convention)

Peatlands: Areas with or without vegetation with a naturally accumulated peat layer at the surface of at least 30 cm in depth (Source: EN 16214-1:2012)

[10]Please see for further information and clarification FAO (2015): Forest Resources Assessment Working Paper 2015, Terms and Definitions

PRINCIPLE 7: CONSERVATION

Operations avoid negative impacts on biodiversity, ecosystems, and conservation values

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
7a. Conservation values of local, regional or global importance within the potential or existing area of operation shall be maintained or enhanced.	6. Areas that contain identified conservation values of global, regional or local importance or that serve to maintain or enhance such conservation values shall not be converted after the 1st of January 2008, or earlier as prescribed by other relevant international standards. “No conversion” areas include: - Key Biodiversity Areas (KBA) as indicated in the IBAT for Business Tool (www.ibatforbusiness.org), including Alliance for Zero Extinction Areas (AZEs), Important Bird Areas (IBAs), and IUCN Key Freshwater Biodiversity Areas. - Natura 2000 sites (as determined under the European Birds and Habitats Directives http://natura2000.eea.europa.eu) - Land with high carbon stock, e.g. Wetland, Peatland - Areas listed on the IUCN Red List of Ecosystems[11] - Forests, i.e. land spanning more than 0.5 hectares with trees higher than 5 metres and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ)[12]	X	X	All	Global	X	

[11]IUCN-CEM 2016. The IUCN Red List of Ecosystems. http://iucnrle.org

[12]Please see for further information and clarification FAO (2015): Forest Resources Assessment Working Paper 2015, Terms and Definitions. RSB applies this definition as no other approach is currently operational that ensures protection of forests and deforestation-free supply chains. As soon as other approaches are operational and achieve consensus among RSB stakeholders, RSB may allow further approaches to define protected forests, e.g. The High Carbon Stock Approach (http://highcarbonstock.org/)

PRINCIPLE 7: CONSERVATION

Operations avoid negative impacts on biodiversity, ecosystems, and conservation values

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
7a. Conservation values of local, regional or global importance within the potential or existing area of operation shall be maintained or enhanced.	7. Areas that contain conservation values of global, regional or local importance or serve to maintain or enhance such conservation values shall only be used if adequate management practices maintain or enhance the identified conservation values (e.g. sustainable biomass harvesting).	X	X	All	Global	X	
	8. Hunting, fishing, ensnaring, poisoning and exploitation of rare, threatened, endangered and legally protected species shall not occur on the operation site.	X	X	All	Global	X	
7b. Ecosystem functions and services that are directly affected by the operation shall be maintained or enhanced	1. In accordance with the results of the impact assessment process, Participating Operators shall implement practices through the Environmental and Social Management Plan (ESMP) that maintain ecosystem functions and services, such as biodiversity both inside and outside the operational site, on land which is directly affected by the operations.	X	X	All	Global	X	
7c. Operations shall protect, restore or create buffer zones.	1. In accordance with the results of the impact assessment process, buffer zones, including riparian vegetation sections, shall be defined according to the region, type of terrain, wildlife and agricultural practices, protected, restored or created to avoid negative impacts from the operations on areas that are contiguous to the operation site.	X	X	All	Global	X	

PRINCIPLE 7: CONSERVATION

Operations avoid negative impacts on biodiversity, ecosystems, and conservation values

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
7c. Operations shall protect, restore or create buffer zones.	2. In accordance with the results of the impact assessment process, within the operational site, buffer zones, including riparian vegetation sections, shall be protected, restored or created to avoid negative impacts from the operations on areas that contain conservation value(s) of local, regional or global importance.	X	X	All	Global	X	
	3. The timetable for the restoration or creation of buffer zones, including riparian vegetation sections shall be part of the ESMP.	X	X	All	Global	X	
7.d Ecological corridors shall be protected, restored or created to minimise fragmentation of habitats.	1. Existing ecological corridors within the operational site shall be set-aside and protected with appropriate surrounding buffer zones.	X	X	All	Global	X	
	2. Whenever the operational site impairs the connectivity between surrounding ecosystems, ecological corridors shall be created by the operator.	X	X	All	Global	X	
	3. New ecological corridors shall be created within the operation site if it is surrounded by areas containing wildlife and there is evidence that such corridors would improve connectivity.	X (small-scale operators exempt)	X (small-scale operators exempt)	All	Global		X
	4. Any ecological corridor destroyed after 1st of January 2004 on or near the operation site and for which the Participating Operator is directly accountable shall be restored.	X (small-scale operators exempt)	X (small-scale operators exempt)	All	Global		X

PRINCIPLE 7: CONSERVATION

Operations avoid negative impacts on biodiversity, ecosystems, and conservation values

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
7e. Operations shall prevent invasive species from invading areas outside the operation site.	1. Operators shall not use any species officially prohibited in the country of operation.	X		All	Global	X	
	2. If the species of interest is not prohibited in the country of operation, operators shall seek adequate information about the invasiveness of the species to be used for feedstock production, e.g. in the Global Invasive Species Database (GISD)[13].	X		All	Global	X	
	3. If the species is recorded as highly invasive under similar conditions (similar climate, and similar local ecosystems, and similar soil types), this species shall not be used.	X		All	Global	X	
	4. If the species has not been recorded as representing a high risk of invasiveness under similar conditions (climate, local ecosystems, soil type), operators shall follow the specific steps: 1) During the feedstock selection and development, operators shall conduct a Weed Risk Assessment (WRA) to identify the potential threat of invasion. If the species is deemed highly invasive after the Weed Risk Assessment, this species shall not be used. 2) During feedstock production, operators shall set up a management plan, which includes cultivation practices that minimise the risks of invasion, immediate mitigation actions (eradication, containment or management) in case of escape of a plant species outside the operation site (possibly through the provision of a specific fund), as well as a monitoring system that checks for escapes and the presence of pests and pathogens outside the operation site. 3) During harvesting, processing, transport and trade, operators shall contain propagules in an appropriate manner on site and during transport.	X		All	Global	X	

[13] http://www.issg.org/database/welcome/

PRINCIPLE 8: SOIL

Operations implement practices that seek to reverse soil degradation and/or maintain soil health.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
8a. Operators shall implement practices to maintain or enhance soil's physical, chemical, and biological conditions.	1. Soil erosion shall be minimised through the design of the feedstock production site and use of sustainable practices in order to enhance soil physical health on a watershed scale.	X		Crops	Global	X	
	2. Operators shall implement practices to protect soil structure, including the prevention of compaction, and maintain or enhance soil organic matter on the feedstock production site.	X		Crops	Global	X	
	3. The use of agrarian and forestry residual products for feedstock production, including lignocellulosic material, shall not be at the expense of longterm soil stability and organic matter content.	X		Agrarian and forestry residues	Global	X	
	4. Operators shall implement practices to maintain and improve the soil nutrient balance and reduce nitrate pollution.	X		Crops	Global	X	
	5. Operators shall implement measures to improve soil health, such as the following Conservation Agriculture practices[14]: - Direct seeding or planting: Involves growing crops without mechanical seedbed preparation and with minimal soil disturbance; - Maintenance of a permanent soil cover, by mulch or growing cover crops to protect the soil surface; - Diversifying and fitting crop rotations and associations in the case of annual crops and plant associations in the case of perennial crops.	X		Crops	Global	X	

[14] http://www.fao.org/ag/ca/index.html

PRINCIPLE 8: SOIL

Operations implement practices that seek to reverse soil degradation and/or maintain soil health.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
8a. Operators shall implement practices to maintain or enhance soil's physical, chemical, and biological conditions.	6. Where the screening exercise has triggered the need for a Soil Impact Assessment (RSB-GUI-01-008-01), operators shall: - Develop a soil management plan as part of the Environmental and Social Management Plan (ESMP). - Perform periodic sampling of soil on the feedstock production site to evaluate the effect of the soil management plan on the organic matter content. Where the practices included in the soil management plan are not seen during monitoring to maintain soil organic matter at the optimal level, alternative practices shall be investigated.	X		Crops	Global	X	

What is Conservation Agriculture?

Conservation Agriculture (CA) is an approach to managing agro-ecosystems for improved and sustained productivity, increased profits and food security while preserving and enhancing the resources base and the environment. CA principles are universally applicable to all agricultural landscapes and land uses with locally adapted practices.
Read more here: http://www.fao.org/ag/ca/1a.html

PRINCIPLE 9: WATER

Operations maintain or enhance the quality and quantity of surface and groundwater resources, and respect prior formal or customary water rights.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
9a. Operations shall respect the existing water rights of local and indigenous communities.	1. The use of water for the operations shall not be at the expense of the water needed by the communities that rely on the same water source(s) for subsistence.	X	X	All	Global	X	
	2. The operator shall assess the potential impacts of the operations on water availability within the local community and ecosystems during the screening exercise of the impact assessment process, and mitigate any negative impacts.	X	X	All	Global	X	
	3. Water resources under legitimate dispute shall not be used for the operations until any legitimate disputes have been settled through negotiated agreements with affected stakeholders - following a free, prior and informed consent (as described in 2a and its guidance) enabling process.	X	X	All	Global	X	
	4. Where the screening exercise has triggered the need for a Water Assessment (RSB-GUI-01-009-01), operators shall: - Identify downstream or groundwater users and determine the formal or customary water rights that exist. - Evaluate and document the potential impacts of the operations on formal or customary water rights that exist. - Respect and protect all formal or customary water rights that exist through the Environmental and Social Management Plan (ESMP) to prevent infringement of such rights. No modification of the existing rights can happen without the Free Prior and Informed Consent (as described in 2a and its guidance) of the parties affected.	X	X	All	Global	X	

PRINCIPLE 9: WATER

Operations maintain or enhance the quality and quantity of surface and groundwater resources, and respect prior formal or customary water rights.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
9b. Operations shall include a water management plan which aims to use water efficiently and to maintain or enhance the quality of the water resources that are used for the operations.	1. Operators shall develop and implement a water management plan and integrate it into the Environmental and Social Management Plan (ESMP).	X	X	All	Global	X	
	2. The water management plan shall contain good water management practices to optimise water use, including: - For rain-fed crops: practices that ensure that rain water is captured and used (e.g. use of cover crops, retaining crop stubble, etc.) - For irrigated crops: practices that ensure good management of storage and delivery systems (e.g.application of water saving irrigation techniques) - The operator shall implement water-saving practices to increase the efficiency of the water use and reduce the amount of water used and/or wasted.	X	X	All	Global	X	
	3. The water management plan shall be made available to the public, unless limited by national law or international agreements on intellectual property.	X	X	All	Global	X	
	4. The water management plan shall be consistent with local rainfall conditions, not contradict any local or regional water management plans, and include the neighbouring areas, which receive direct runoff from the operational site. Any negative impact on these neighbouring areas shall be mitigated.	X	X	All	Global	X	

PRINCIPLE 9: WATER

Operations maintain or enhance the quality and quantity of surface and groundwater resources, and respect prior formal or customary water rights.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
9b. Operations shall include a water management plan which aims to use water efficiently and to maintain or enhance the quality of the water resources that are used for the operations.	5. The operator shall undertake annual monitoring of the effectiveness of the water management plan.	X	X	All	Global	X	
	6. The water management plan shall include steps for reusing or recycling wastewater, appropriate to the scale and intensity of operation.	X	X	All	Global		X
9c. Operations shall not contribute to the depletion of surface or groundwater resources beyond replenishment capacities.	1. Water used for the operations shall not be withdrawn beyond replenishment capacity of the water table, watercourse, or reservoir from which the water comes.	X	X	All	Global	X	
	2. Irrigated crops and freshwater intensive operations systems shall not be established in longterm freshwater-stressed areas, unless the implementation of: - good practices or - an adequate mitigation process that does not contradict other requirements in this standard ensures that the water level remains stable.	X	X	All	Global	X	
	3. Operators shall not withdraw water from natural watercourses to the extent that it modifies its natural course or the physical, chemical and biological equilibrium it had before the beginning of operations.	X	X	All	Global	X	

PRINCIPLE 9: WATER

Operations maintain or enhance the quality and quantity of surface and groundwater resources, and respect prior formal or customary water rights.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
9c. Operations shall not contribute to the depletion of surface or ground-water resources beyond replenishment capacities.	4. Where the screening exercise has triggered the need for a Water Assessment (RSB-GUI-01-009-01), operators shall: - Identify critical aquifer recharge areas, replenishment capacities of local water tables, watercourses, and ecosystem needs. The potential impacts of operations on any of these aspects shall be evaluated, and any negative impacts mitigated. - Define the use and share of water resources for operations in agreement with local experts and the community; any water-user committees shall be consulted.	X	X	All	Global	X	
9d. Operations shall contribute to the enhancement or maintaining of the quality of the surface and ground-water resources.	1. Operations shall not occur on a critical aquifer recharge area without a specific authorisation from legal authorities.	X	X	All	Global	X	
	2. Operators shall implement the best available practices which aim to maintain or enhance the quality of surface and groundwater resources that are used for the operations to the level deemed optimal for the local system for sustained water supply, ecosystem functioning and ecological services.	X	X	All	Global	X	
	3. Adequate precautions shall be taken to contain effluents and avoid runoffs and leaching and contamination of surface and groundwater resources, in particular from chemicals and biological agents.	X	X	All	Global	X	

PRINCIPLE 9: WATER

Operations maintain or enhance the quality and quantity of surface and groundwater resources, and respect prior formal or customary water rights.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
9d. Operations shall contribute to the enhancement or maintaining of the quality of the surface and ground-water resources.	4. Buffer zones shall be set between the operation site and surface or groundwater resources.	X	X	All	Global	X	
	5. Where the screening exercise has triggered the need for a Water Assessment (RSB-GUI-01-009-01), Participating Operators shall determine the optimal water quality level required to sustain the system, taking into account local economic, climatic, hydrologic and ecological conditions.	X	X	All	Global	X	
	6. For existing operations, degradation of water resources that occurred prior to certification and for which the Participating Operator is directly accountable shall be reversed. Wherever applicable, operators (except small-scale operators) shall participate in projects that aim to improve water quality at a watershed scale.	X	X	All	Global		X
	7. Wastewater or runoff that contains potential organic and mineral contaminants shall be treated or recycled to prevent any negative impact on humans, wildlife, and natural compartments (water, soil).	X	X	All	Global		X

PRINCIPLE 10: AIR QUALITY

Air pollution from the operations is minimised along the supply chain.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
10a. Air pollution emission sources from the operations shall be identified, and air pollutant emissions minimised through an air management plan.	1. An emission-control plan appropriate to the scale and intensity of operations shall be included as part of the Environmental and Social Management Plan (EMP) that identifies major air pollutants including carbon monoxide, nitrogen oxides, volatile organic compounds, particulate matter, sulphur compounds, dioxins and other substances recognised as potentially harmful for the environment or human health. The plan shall identify all potential air pollution sources and describe their nature. The plan shall describe any air pollution mitigation strategies that are employed, or else the rationale for not utilising such strategies.		X	All	Global	X	
	2. The operator shall investigate and, whenever possible in the local context, implement Best Available Technology (BAT) to reduce air pollution, appropriate to the scale and intensity of operation.		X	All	Global		X
10b. Operations shall avoid and, where possible, eliminate open-air burning of residues, wastes or by-products, or open air burning to clear the land.	1. A plan shall be put in place to phase out any open-air burning of leaves, straw and other agricultural residues within three years following certification. If workers' health and safety is at stake or when no viable alternative is available or affordable in the local context, if burning may prevent natural fires, or if the cultivation of the crop periodically requires burning for viability in the long-term without any equivalent alternatives, limited open-air burning practices may occur.	X		All	Global	X	
	2. Open air burning of agricultural residues and by-products shall not occur following the phase-out plan (10b.1).	X		All	Global		X

PRINCIPLE 11: USE OF TECHNOLOGY, INPUTS, AND MANAGEMENT OF WASTE

The use of technologies in operations seeks to maximise production efficiency and social and environmental performance, and minimise the risk of damages to the environment and people.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
11a. Information on the use of technologies in operations shall be fully available, unless limited by national law or international agreements on intellectual property.	1. When complying with and auditing against this criterion, proprietary technology shall be protected from competitors and intellectual property rights shall be respected	X	X	All	Global	X	
	2. The operator shall disclose technologies with hazardous or potentially hazardous effects when such technology is used, and make this information available to the public upon request.	X	X	All	Global	X	
11b. The technologies used in operations including genetically modified plants, micro-organisms, and algae, shall minimise the risk of damages to environment and people, and improve environmental and/or social performance over the long term.	1. The use of genetically modified organisms shall follow relevant national or international guidelines, laws and agreements, crop-specific stewardship systems, and local and community coexistence agreements or understandings.	X	X	All	Global	X	
	2. The operator shall demonstrate that the use of genetically modified plants has clear environmental or social benefits compared to non-GMO alternatives, e.g. grow on non-fertile soil or reduced inputs (water, fertiliser, pesticides). The use of genetically modified plant shall not result in an increased use of pesticides.	X		Crops	Global	X	
	3. For new operations, operators shall provide evidence that the hazardous technologies they use do not contradict any of the RSB principles and criteria before the beginning of operations.	X	X	All	Global	X	

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CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
11b. The technologies used in operations including genetically modified plants, micro-organisms, and algae, shall minimise the risk of damages to environment and people, and improve environmental and/or social performance over the long term.	4. Operators using GMOs shall take measures to prevent migration of genetically modified material and shall cooperate with neighbours, regulatory and conservation authorities, and local stakeholders to implement monitoring and preventative measures. Crop-specific and technology-specific mitigation strategies shall be utilised.	X		Crops	Global	X	
	5. The Biosafety Clearing-House established under the Cartagena Protocol on Biosafety, or any other such clearinghouse established by law, shall be consulted before providing information about specific GMOs, including related risk and countries' decisions regarding that technology.	X		Crops	Global	X	
	6. For new operations, feedstock producers shall use indigenous crops whenever alternative crops reduce yield and/or environmental and/or social performance compared to indigenous crops.	X		Crops	Global	X	
11c. Micro-organisms used in operations which may represent a risk to the environment or people shall be adequately contained to prevent release into the environment.	1. In no case shall genetically modified micro-organisms or any micro-organisms that pose a risk (pathogenic, mutagenic, contaminant, etc.) to human health or the environment be released outside the processing/ production unit. Any such organism used for processing shall be destroyed or adequately neutralised (i.e. loss of any potentially hazardous character) before being disposed of.	X	X	All	Global	X	
	2. Operators using such technologies shall include as part of their ESMP a plan that includes adequate monitoring and an emergency procedure in case of accidental dissemination of any such micro-organisms into the environment.	X	X	All	Global	X	

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The use of technologies in operations seeks to maximise production efficiency and social and environmental performance, and minimise the risk of damages to the environment and people.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
11d. Good practices shall be implemented for the storage, handling, use, and disposal of biofuels, fertilisers and chemicals.	1. The operator shall implement and monitor Integrated Pest Management techniques (IPM) that are adequate for the target crop to reduce the development of pest populations and minimise risks to human health and the environment.	X		Crops	Global	X	
	2. None of the chemicals recorded in the WHO's 1a and 1b lists shall be used. The use of chemicals recorded in Annex III of the Rotterdam Convention, in the Stockholm Convention on Persistent Organic Pollutants (POPs) and the Montreal Protocol on Substances that Deplete the Ozone Layer shall be listed (type and annual volume used) and a plan to phase out any such chemical over the three years following certification shall be described in the ESMP.	X		Crops	Global	X	
	3. Manufacturer's safety instructions for the storage, handling, use, and disposal of chemicals shall be followed.	X	X	All	Global	X	
	4. Records of the pesticides use shall be kept, including at least the justification why the application is needed, the name of the pest treated, the product specification of the pesticide, the content of active ingredients, the amount applied per ha, location, date, target crop and number of applications).	X		Crops	Global	X	

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CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
11d. Good practices shall be implemented for the storage, handling, use, and disposal of biofuels, fertilisers and chemicals.	5. The handling, storage and disposal of pesticides shall comply with the FAO's Guidelines on Good Practices for Ground and Aerial Applications of Pesticides[15]	X		Crops	Global	X	
	6. Fertilisers shall be stored in a safe and secure way for humans and the environment.	X		Crops	Global	X	
	7. None of the chemicals recorded in Annex III of the Rotterdam Convention, in the Stockholm Convention on Persistent Organic Pollutants or the Montreal Protocol on Substances that Deplete the Ozone Layer shall be used within three years after certification.	X	Crops	All	Global		X
	8. The operator should use waste and co-products for a material purpose or for energy generation. Operators shall use waste and/or co-products for energy generation only if: - the use for material purposes is not possible (e.g. no market is accessible), - the use is in line with RSB Principle 10 (Air Quality) and the use provides a greenhouse gas benefit in comparison to the alternative.	X	X	All	Global	Recom-mendation	Recom-mendation

What is Integrated Pest Management (IPM)?

"IPM is the careful consideration of all available pest control techniques and subsequent integration of appropriate measures to discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment. IPM emphasises the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms" (FAO, 2015)

FAO's Guidelines on Good Practices for Ground and Aerial Applications of Pesticides

These FAO Guidelines have been prepared to offer practical help and guidance to those involved in using pesticides in order to distribute the correct dose to a defined target with a minimum of wastage due to drift using the most appropriate spraying equipment. The FAO documents guide the user through the decision-making process, explain safety aspects and show best practices for pre-application, field application and post application (i.e. cleaning, disposal, storage).

[15] http://www.fao.org/agriculture/crops/thematic-sitemap/theme/pests/code/list-guide-new/en/

PRINCIPLE 11: USE OF TECHNOLOGY, INPUTS, AND MANAGEMENT OF WASTE

The use of technologies in operations seeks to maximise production efficiency and social and environmental performance, and minimise the risk of damages to the environment and people.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
11e. Residues, wastes and byproducts from feed-stock processing and biofuel or biomaterial production units shall be managed such that soil, water and air's physical, chemical, and biological conditions are not damaged.	1. A waste and by-product management plan shall be included in the ESMP to ensure that wastes and byproducts are handled and/or disposed of in appropriate containers and to prevent any environmental contamination and damage to human health. 2. These products shall not be in direct contact with soils, water sources and air outside the processing and production units unless their innocuousness to the environment and people is officially stated by manufacturers or the country or regional (e.g. EU, ASEAN, ALENA) guide-lines. In all other cases, handling and disposal must follow the manufacturer's recommendation and the country or regional (e.g. EU, ASEAN, ALENA) guidelines. 3. For new and expanding operations, the design of operations shall integrate the necessary infrastructure for safe burning of processing waste and by-products in line with criterion 10b. 4. For existing operations, a strategy shall be set to develop the necessary infrastructures for safe burning of waste and by-products in line with criterion 10b.		X	All	Global	X	
			X	All	Global	X	
		X	X	All	Global	X	
		X	X	All	Global	X	

PRINCIPLE 11: USE OF TECHNOLOGY, INPUTS, AND MANAGEMENT OF WASTE

The use of technologies in operations seeks to maximise production efficiency and social and environmental performance, and minimise the risk of damages to the environment and people.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
11e. Residues, wastes and byproducts from feed-stock processing and biofuel or biomaterial production units shall be managed such that soil, water and air's physical, chemical, and biological conditions are not damaged.	5. Measures shall be taken to implement clean and efficient processes for conversion of residues, wastes or by-products into energy appropriate to the scale and intensity of the operation. Such processes shall always occur in an appropriate facility to minimise air pollution from substances recognised as potentially harmful for the environment or human health. Solid residues from fermentation or burning shall be disposed of such that soil and water conditions are not damaged or according to national regulations. 6. For medium and large-scale operators, by-products or wastes shall also be reused by the processing/production unit or transferred to other sectors whenever their use may improve the overall system's energy balance, greenhouse gas emissions, and/or economic viability without impairing the other principles and criteria in this standard.	X X	X X	All All	Global Global	X 	X X

PRINCIPLE 12: LAND RIGHTS

Operations respect land rights and land-use rights.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
12a. Existing land rights and land-use rights, both formal and informal, shall be assessed, documented, and established. The right to use land for the operations shall be established only when these rights are determined.	1. Where the screening exercise of the RSB impact assessment process reveals a negative impact to existing land rights and land-use rights by the operations, the operator shall conduct a Land Rights Assessment (RSB-GUI-01-012-01). 2. Land under legitimate dispute shall not be used for operations until any legitimate disputes have been settled through Free, Prior and Informed Consent and negotiated agreements with affected land users.	X		Crops	Global	X	
12b. Free, Prior, and Informed Consent shall form the basis for all negotiated agreements for any compensation, acquisition, or voluntary relinquishment of rights by land users or owners for operations.	1. No involuntary resettlement shall be allowed for biofuel, biomaterial or biomass operations. 2. The Impact Assessment Guidelines (RSB-GUI-01-002-01) shall be referred to for guidance on Free Prior and Informed Consent. 3. Where land rights and land use rights are voluntarily relinquished and/or acquired on a willing seller-willing buyer basis, local people shall be fairly, equitably and timely compensated. 4. Compensation for voluntary relinquishment and/or acquisition shall include appropriate balancing measures needed to preserve the ability of the persons concerned to sustain their livelihoods in an autonomous and dignified manner.	X		Crops	Global	X	
		X	X	All	Global	X	
		X	X	All	Global	X	
		X	X	All	Global	X	
		X	X	All	Global	X	

PRINCIPLE 12: LAND RIGHTS

Operations respect land rights and land use rights.

CRITERIA	MINIMUM REQUIREMENTS	BIOMASS PRODUCERS	INDUSTRIAL FACILITIES	FEEDSTOCK	REGION	MINIMUM	PROGRESS
12b. Free, Prior, and Informed Consent shall form the basis for all negotiated agreements for any compensation, acquisition, or voluntary relinquishment of rights by land users or owners for operations.	5. Independent, qualified land valuation specialists shall be used for valuing all land and asset values.	X	X	All	Global	X	
	6. Where land is to be sold it shall be done on a willing-seller/willing-buyer basis.	X	X	All	Global	X	
	7. Coercion to alter existing land rights or land use rights shall not be allowed in operations	X	X	All	Global	X	
	8. Where the rule of law is not adequately applied, international and regional legal bodies shall be consulted for rulings and information on disputes.						
	9. If there are disputes about the tenure agreements of the land among stake-holders, operations shall not be certified.	X	X	All	Global	X	

Optional Module: Low iLUC Risk Biomass

In order to minimise the occurrence of indirect Land Use Change, the RSB developed a set of criteria and compliance indicators for economic operators willing to demonstrate that their operations have a low iLUC risk, i.e. are unlikely to cause any displacement of an equivalent biomass production to another location.

The RSB recognises three approaches for low ILUC risk biomass, biofuels and biomaterial production:

i. Yield increase: Operators demonstrate that additional biomass was produced through an increase in yield compared to a reference date, without any additional land conversion. The biomass that is produced above the baseline scenario is eligible.

ii. Unused / Degraded land: Operators demonstrate that biomass was produced from land that was not previously cultivated or was not considered arable land

iii. Use of waste / residues: Operators demonstrate that the raw material used is derived from existing supply chains and does not require dedicated production out of arable land

The requirements for the optional module low iLUC Risk Biomass are described in detail in the RSB Standard RSB Low iLUC Risk Biomass Criteria and Compliance Indicators (RSB-STD-04-001). Operators that are certified against the optional module are entitled to use the “low iLUC risk” on-product claim.

The Roundtable on Sustainable Biomaterials (RSB) is an independent and global multi-stakeholder coalition which works to promote the sustainability of biomaterials. RSB's user-friendly certification scheme is the strongest and most trusted of its kind. It verifies that biomaterials are ethical, sustainable and credibly-sourced. The certification is approved by RSB's members, including leading NGOs and UN agencies. RSB members work across sectors to set global best practice for sustainable biomaterial production. Choosing RSB-certified biomaterials helps build trust and credibility in the bio-based sector and supports a healthy biobased community.

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