

RSB Principles & Criteria

RSB-STD-01-001

Version 4.0

Publication date: 19 December 2023

Type of document: RSB Standard

Status: Approved

Published by the Roundtable on Sustainable Biomaterials. This publication or any part thereof may only be reproduced with the written permission of the RSB, the publisher. Any reproduction in full or in part of this publication must mention the title and reference code and credit the publisher as the copyright owner.

Contact details:

RSB – The Roundtable on Sustainable Biomaterials
International Environment House 2
Chemin de Balexert 7-9
1219 Châtelaine
Switzerland
web: www.rsb.org
email: info@rsb.org

CONTENTS

1. INTRODUCTION	3
2. UNDERSTANDING THIS DOCUMENT	4
3. MAIN CHANGES FROM THE PREVIOUS VERSION	6
4. THE 12 RSB PRINCIPLES & CRITERIA	8

1. INTRODUCTION

The Roundtable on Sustainable Biomaterials (RSB) is a global membership organisation that drives the just and sustainable transition to a bio-based and circular economy. Our sustainability framework, underpinned by 12 key principles and their underlying criteria, is the world's most trusted and peer-reviewed foundation for supporting innovative solutions to the climate crisis. Application of our sustainability framework demonstrates a commitment to realising of the United Nations Sustainable Development Goals.

RSB's 12 Principles & Criteria describe the best social, legal, environmental and management practices for sustainable production in a bio-based and circular economy. 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-recognised certification bodies. Together with our online tools and related guidance documents, the Principles & Criteria help Participating Operators (POs) to identify and manage sustainability issues in specific contexts, thereby reducing risks for POs, brand owners and investors.

The RSB Principles & Criteria are complemented by a set of standards, procedures and guidance documents, which constitute RSB's sustainability framework¹:

RSB's governance structure, based on consensus among our multi-stakeholder membership community, is designed to ensure a balanced decision-making process in the vital work of standard-setting. This ensures the most credible approach to addressing key social, environmental and management issues in a comprehensive way. As a result, RSB's sustainability framework has been recognised by NGOs, companies, regulators and others around the world as a uniquely robust and practical approach to advancing the just and sustainable transition to a bio-based and circular economy.

As an ISEAL Code Compliant Member, RSB follows the *ISEAL Standard-Setting Code*², which defines good practices for an equitable, open and transparent standard-setting process. It also follows *ISO/ IEC Guide 59:2019 (Code of Good Practice for Standardisation)*³ and the *WTO Agreement on Technical Barriers to Trade (TBT) (Article 4: Code of good practice for the preparation, adoption and application of standards)*⁴.

Revision of RSB's Principles & Criteria happens every five years to ensure that our sustainability framework remains fit-for-purpose and guided by best-practice.

This document is the latest version of RSB's Principles & Criteria (Version 4.0).

¹ https://rsb.org/library/?parent-lib-cat=21#block_49616230d7f1fd63642f3e952ae2594a

² <http://www.isealalliance.org/our-work/defining-credibility/codesof-good-practice/standard-setting-code>

³ <https://www.iso.org/standard/71917.html>

⁴ https://www.wto.org/English/docs_e/legal_e/17-tbt_e.htm

2. UNDERSTANDING THIS DOCUMENT

Scope of document

The RSB Principles & Criteria is an international standard and is valid worldwide.

It sets out the minimum and progress requirements for operations producing, converting and processing biomass, biofuels or biomaterials in the RSB certification system. It applies to all Participating Operators (POs) taking part in the RSB certification system as individual or groups of economic operators (e.g. a group of farmers).

The Criteria in this document are classified as 'minimum requirements' – unless stated otherwise, (i.e. 'progress requirements').

The Criteria in this document apply to all feedstocks – unless stated otherwise.

The Criteria in this document apply globally – unless stated otherwise.

The RSB Principles & Criteria identify two types of POs subject to different sustainability requirements within this document:

- *Biomass Producers* - Farmers and plantation or forest managers
- *Industrial Operators* - Feedstock processors, intermediary producers, biofuel or biomaterial producers

All requirements in this document apply to both of these POs – unless stated otherwise.

Traders⁵ applying for certification, whose scope of certification does not include any operation involved in the production, processing or transformation of biomass or any of its derivatives are not required to comply with RSB's 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 & Claims*.

Version of document

Version 4.0 of this document came into effect on 16th November 2023.

Modalities for the phase-in of existing POs 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.

⁵ Trading companies (including companies selling to end-consumers), biofuel blenders

Using the document

All parts of this document are considered to be normative. When applying RSB's Principles & Criteria, POs shall make sure that all of the requirements specified in this document, and any other measures necessary to achieve its aim are met.

Principles are identified by their associated colour on Page 7:

- **Gold** for Principles 1, 12
- **Green** for Principles 2, 11
- **Orange** for Principles 4, 5, 6
- **Teal** for Principles 3, 7, 8, 9, 10.

Criteria are identified by the **grey** boxes that follow the Principles.

Requirements are identified by the **white** boxes that follow the Criteria.

Where necessary, guidance boxes are provided to add context or extra information. These are identified by the **blue** boxes.

References

Please see the *RSB List of Documents and References (RSB-DOC-10-001)* for the full list of RSB standards and references.

Terms and definitions

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

Verbal forms for the expression of provisions include:

- "Shall" - Indicates requirements strictly to be followed in order to conform to this document.
- "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.

3. MAIN CHANGES FROM THE PREVIOUS VERSION

This version of RSB's Principles & Criteria (Version 4.0) contains several updates and changes. On a general level, the P&C Standard has several minor edits across the document, where spelling mistakes have been identified in the previous version, or to correct the numbering to the different criteria or minimum requirements. The document has also significant updates to criteria or minimum requirements, adding content or increasing specificity or to provide more clarity. A summary of these changes includes:

- Principle 1
 - Introduction of clarifying comments on the scope of legal compliance.
 - New Minimum Requirement (M.R.) 1.2 to clarify on the use of the RSB audit checklist tool
- Principle 2
 - Criteria 2b. added to improve clarity on how specific M.R. are related to monitoring and evaluation plans.
 - The use and name of the Impact Assessment Guidelines (RSB-GUI-01-002-02) updated to the current version, and MR 2b.4 and 2b.7 modified / added to improve clarity on continuous improvement planning.
 - A footnote definition for FPIC is added.
- Principle 3
 - Criteria 3a has been deleted.
 - GHG methodology has been updated, correlating to other internationally recognized frameworks (I.e. Corsia).
- Principle 4
 - New M.R.s added, including topics covering collective bargaining, labour rights, communication and inclusion of procedure to ensure labour rights compliance, harassment free working environments, maternity leave, improved housing conditions, clearer and more transparent conditions for wage payments, and monitoring of key health parameters in high-risk work situations.
- Principle 5
 - M.R. 5a.6 updated, with more explicit requirements regarding social benefits.
- Principle 6
 - M.R. 6a.1 updated to include clarifying comments on how to include a Climate Change approach to Food Security.
- Principle 7
 - M.R. 7a.5, 7a.6 and 7a.7 include (respectively) references to cultural or spiritual importance to indigenous communities, ancient and endangered forests of High Carbon Stocks, areas of significant conservation value not included in international reference frameworks.
 - M.R. 7d.1 includes reference to RSB-GUI-01-007-01 RSB Conservation Impact Assessment Guidelines.
 - Criteria 7.e updated with an improved overall approach to invasive species.
- Principle 8
 - Criteria 8.a updated with an improved overall approach to soil management and monitoring, linking P.O. performance with soil management to the ESMP, increasing reference specificity to negative soil impacts (I.e., such as wind vs water erosion), increasing the scope of soil topics covered in the standard, such as soil structure, or soil chemical fertility, pollution and contamination, mention of RSB-GUI-01-008-01-RSB Soil Impact Assessment Guidelines and covered topics (I.e. conservation agriculture), soil carbon sequestration, organic matter and other topics as well.
- Principle 9
 - M.R. 9b.2 updated to include key indicators to monitor water quality.
- Principle 10
 - M.R. 10a.2 updated with improved wording for better interpretation and increased scope specificity.
- Principle 11

- Criteria 11b. Wording improved to include circular economy approach.
 - M.R. 11d.1 updated with wording to include a broader approach to biological agents.
 - M.R. 11d.2 updated with wording that improves alignment to WHO Guidelines respective to toxicology of agrochemicals in formulations.
 - M.R. 11d.5 updated with added topics to increase scope of safe handling of agrochemicals.
 - Criteria 11f created to improve the approach to risk mitigation in cases where introduction of new technologies applies.
- Principle 12
 - No updates introduced to Principle 12.

4. THE 12 RSB PRINCIPLES & CRITERIA



Principle 1: Legality

Operations follow all applicable laws and regulations.

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, including social and environmental aspects (e.g. GHG emissions, labour laws, etc).

1. The Participating Operator (PO) shall implement and maintain a system for ensuring that all relevant laws and regulations are complied with, which includes:

- a) A legal register or equivalent system with all relevant applicable international, national, and regional laws and regulations.
- b) A training system ensuring that personnel are aware of the laws and regulations and have access to the legal register.
- c) 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.
- d) 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.
- e) If there is a difference between applicable law and the RSB requirements, RSB expects POs to conform to whichever is more stringent.

2. The PO shall verify the RSB audit checklist tool to identify country-specific indicators and guidance for country-specific implementation.

- a) POs operating in countries not included in the checklist tool are not exempt from complying with local laws and regulations.
- b) The use of the country-specific indicators and guidance indicated in the checklist does not exempt POs from checking additional laws and regulations and keeping up to date.
- c) The RSB checklist tool is available to POs upon request.

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.

2a. Operations shall undertake an impact assessment process to assess impacts and risks.

1. Where an impact assessment is required by national, regional, or local laws, the process may be integrated with the RSB impact assessment process to avoid duplication of efforts, but the higher and more comprehensive standard shall be applied.

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)*.

2b. Operations shall ensure sustainability of their operations through the development of effective and efficient implementation, mitigation, monitoring and continuous improvement and evaluation plans.

1. Participating operators (POs) 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.

2. The specialist environmental or social impact assessments, if required as determined through the screening exercise, shall be carried out using qualified professionals.

3. 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 utilized.

4. The Environmental and Social Management Plan (ESMP), in accordance with the *RSB Impact Assessment Guidelines (RSB-GUI-01-002-02)*, shall be developed by all operations and shall ensure compliance with all RSB Principles & Criteria. All progress requirements shall be detailed and documented in a continuous improvement action plan, with targets and indicators.

5. 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)*.

6. Multiple POs 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.

7. POs shall ensure the continuous improvement plan is implemented by providing evidence during the surveillance audits.

2c. 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.

FPIC is a specific right that pertains to Indigenous peoples and is recognised in the United Nations Declaration on the Rights of Indigenous Peoples. It allows them to give or withhold consent to a project that may affect them or their territories. Furthermore, FPIC enables them to negotiate the conditions under which the project will be designed, implemented, monitored, and evaluated. This is also embedded within the universal right to self-determination.⁶

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 conducted in accordance with the RSB consensus-building toolkit in the *Impact Assessment Guidelines (RSB-GUI-01-002-01)*. Disregarding FPIC based consultation on the grounds of not being relevant, must be demonstrated.

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.

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)*.

4. Relevant government authorities shall be included in the stakeholder process to ensure efficient streamlining of the process with legal requirements.

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)*.

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

⁶ Self-determination is a fundamental principle in international law, embodied in the Charter of the United Nations and the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights.

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.

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)*.

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.

9. POs 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)*.

2d. POs shall implement and maintain a transparent 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.

2e. POs shall make adequate resources available to ensure compliance with RSB's sustainability framework.

1. POs shall allocate adequate personnel and budget to implement and continuously monitor compliance with RSB's sustainability framework.

Principle 3: Greenhouse Gas Emissions

Alternative fuels and materials produced within the circular bioeconomy contribute to climate change mitigation by significantly reducing lifecycle GHG emissions as compared to fossil-based alternatives.

3a. Lifecycle GHG emissions of alternative fuels and materials shall be calculated by using system boundaries from well-to-wheel for fuels, and cradle-to-grave for materials, 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 alternative fuel or material are reduced.

1. Participating Operator (POs) shall report the lifecycle GHG emissions of the feedstock, intermediary or final product by using one of the following options: ⁷

- a) *RSB GHG Calculation Methodology (RSB-STD-01-003-01)*
- b) *EU Renewable Energy Directive Methodology*, by using the RSB Calculation Tool or by conducting an individual calculation.
- c) POs applying for *RSB Global* or *RSB EU RED* certification may use disaggregated default values set by the *EU Renewable Energy Directive, Annex V (2009/28/EC), Section D*, if the specifications as defined by the Directive are met (e.g. feedstock, process, process energy, country of origin).
- d) POs applying for *RSB ICAO CORSIA* certification may use default values set by ICAO CORSIA published in the ICAO document entitled *CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels*, which is available on the ICAO CORSIA website.
- e) Further methodologies following an approval by the RSB Board of Directors under the following conditions:
 - the decision is based on a sensitivity analysis carried out by an independent and competent organisation;
 - the RSB Secretariat 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.

⁷ This minimum requirement applies to biomass producers and industrial processors delivering into the alternative fuel supply chain.

2. POs shall use the current *RSB GHG Methodology* and comply with the RSB requirements in the *Standard for Woody Biomass (RSB-SA-01)* for supply chains using the following:⁸

- a) Forestry harvesting residues: treetops; branches; barks; damaged, dying, or dead trees; early/non-commercial thinning.
- b) Forestry processing by-products and residues: sawmill residues (slabs and chunks of wood, sawdust, shavings, bark); tall oil, brown and black liquor.
- c) End-of-life forestry materials: woody material from park and garden maintenance; orchards; construction and demolition waste wood; tree hedges.
- d) Alien invasive plants: generated as a waste by an operation cleaning an invaded area.
- e) Short rotation wood crops: perennial cropping systems planted to produce biomass or fibres with a system overall lifetime (i.e. from planting to final harvest) of less than 20 years and harvest taking place every 1-5 years.
- f) Roundwood (only eligible for the use in non-energy markets): stemwood, branches, roots, stumps and burls.
- g) Short rotation coppices (e.g. poplar, willow).

For some specific RSB scopes of certification, other GHG calculation methodologies are allowed. For example, under *RSB CORSIA*, the PO shall follow the methodology set out in the *RSB-STD-12-001*.

3b. Alternative fuels and materials shall mitigate climate change by creating an emission reduction compared with the fossil alternative.

1. Lifecycle greenhouse gas emissions of alternative fuels, calculated following the methodology in Criterion 3a, shall create at minimum the following emission saving compared with the fossil baseline: ⁹

- a) 50%, for biofuels, bioliquids and biogas consumed in the transport sector, produced in installations which started operation on or before 5 October 2015.
- b) 60%, for biofuels, bioliquids and biogas consumed in the transport sector, produced in installations which started operation from 6 October 2015 until 31 December 2020.

⁸ This minimum requirement applies to biomass producers and industrial processors delivering into the alternative fuel supply chain, and to forestry residue feedstocks.

⁹ This minimum requirement applies to alternative fuel producers.

- c) 65%, for biofuels, bioliquids and biogas consumed in the transport sector, produced in installations which started operation from 1 January 2021.
- d) 70%, for renewable liquid and gaseous transport fuels of non-biological origin produced in installations from 1 January 2021.
- e) 70%, for electricity, heating and cooling production from biomass fuels used in installations from 1 January 2021 until 31 December 2025.
- f) 80%, for electricity, heating and cooling production from biomass fuels used in installations starting operation from 1 January 2026.

For *RSB ICAO CORSIA* certification, in addition POs shall demonstrate that the sustainable aviation fuel achieves, on a life cycle basis including the default value for induced land use change set by ICAO CORSIA, net GHG emissions reductions of at least 10% compared to the baseline life cycle emissions values for aviation fuel.

2. Lifecycle greenhouse gas emissions of advanced materials (non-energy use) shall create an emission reduction compared with the fossil alternative in-line with requirements of the *RSB Standard for Advanced Products (RSB-STD-02-001)*.

Ensuring sustainability for the use of forestry residues

Deforestation and unsustainably managed forests are serious environmental risks. RSB addresses these risks by requiring POs to source forestry residues only from sustainably managed forests. POs are therefore required to provide evidence that forestry residues are compliant with the requirements set out in the *RSB Standard for Woody Biomass (RSB-SA-01)*.

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.¹⁰

4a. Workers shall enjoy freedom of association, the right to organise, and the right to bargain collectively.

1. In countries where the law prevents or has no clear legal framework on collective bargaining or unionisation, Participating Operators (POs) 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.

2. Workers shall be free to choose the organisation that will represent them in collective bargaining.

3. Worker's representatives shall not be discriminated against and will be able to engage with fellow employees.

4. Union activities are not impaired and collective negotiation is assured.

¹⁰ Operators may be eligible for fast-track demonstration of compliance to Principle 4. Refer to the RSB Screening Tool for guidance: <https://rsb.org/wp-content/uploads/2020/06/21-08-18-RSB-Screening-Tool-v3.0.xlsx>

5. Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.

6. Workers have access to a neutral, binding, and independent dispute resolution procedure.

7. Industry specific and applicable International Labour Organization (ILO) conventions are identified and applied, if relevant.

For more guidance, see:

- *ILO Conventions*¹¹
- *United Nations Universal Declaration of Human Rights*¹²
- *UNEP 2020 Social LCA Guidelines*¹³

4b. No slave labour or forced labour shall occur. POs 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.

2. Retaining parts of the workers' salary is not allowed.

¹¹ https://www.ilo.org/moscow/areas-of-work/gender-equality/WCMS_249143/lang--en/index.htm#:~:text=The%20ILO%20Conventions%20cover%20a,issues%20have%20a%20long%20history

¹² <https://www.un.org/en/about-us/universal-declaration-of-human-rights>

¹³ <https://wedocs.unep.org/handle/20.500.11822/34554;jsessionid=0A516E61B7668917225FDE41268F6218>

3. Spouses and children of workers shall not be obliged to work in the operations.

4. Workers shall be allowed to leave their employment after due notice according to their contractual agreements.

5. Workers shall be allowed to leave company premises freely at the end of their work shifts.

6. Workers know their labour rights and have the working conditions explained, including:

- a) working hours and schedule;
- b) type of job and description of activities and responsibilities;
- c) labour rights and existing internal mechanisms (policies, procedures, registries, etc.) to assure these.
- d) grievance, whistle blower and complaints mechanism explained, confidential and accessible.
- e) National / local legislation documentation and registration processes, labour union agreements.

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.

2. Hazardous child labour as defined by *ILO Convention 138* is not allowed.

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.

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.

2. Career development shall be encouraged for all workers

3. Mechanisms (e.g., policies, procedures, registries, etc.) shall be put in place to ensure equitable and safe working environments are in place, free from sexual harassment and other types of discrimination and abuse. Access to jobs, skill trainings, recruitment and career development is assured for women and all independently of race, gender, sexual orientation, age, ethnicity and other vulnerable or marginalised groups. Right to maternity leave is ensured as defined by *ILO 183* (i.e., conditions include, minimum 14 weeks, prohibition to terminate work during leave, return to the same working position and pay ensured, etc.).

4. POs have clear policies and procedures against discrimination and how to manage potential issues. Management includes training, sensitisation, dissemination, and other awareness raising practices. In the case of smallholders, approaches on these aspects could include making trainings at group level or by appointing a community member as focal point / lead on the issue.

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 with the worker's union and based on an economic salary analysis of the context of operation. 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 local market customs, and payments are ensured through a transparent and collectively agreed process.

2. Any housing provided by the PO for permanent or temporary workers for long or short-term living, shall be provided, built and maintained to ensure good sanitary, health, and safety conditions, including: sanitary facilities (e.g. separate facilities for women and men, incl. toilets, showers, lockers, etc.), adequate drinking water quality, shelter, heating, bedding, cooking facilities, etc. Facilities for storing, preparing and distribution of food provided to workers are designed, built, and regularly maintained to meet the basic needs of the personnel (and their families, if the conditions of employment require family resettlement), comply with legal requirements, and ensure safe and healthy conditions. Guidance can be followed using *RSB Social Impact Assessment Guidelines (RSB-GUI-01-005-01)*.

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. If no legal minimum wage is available, an analysis is required as per Minimum Requirement 4e.5.

4. The maximum number of regular hours worked per week must not exceed 48. Workers may work overtime under the conditions it is voluntary, but total working hours shall not exceed 80 per week. Additional recommendations for transparent and socially accepted overtime contracting conditions include:

- a) overtime work is for short periods of time (e.g. harvest)
- b) should be compensated adequately (including remuneration and rest periods)
- c) should be agreed on the basis of a collective bargaining process (e.g. between suppliers and contracting party or between employees and employer)
- d) should be ratified by a third party (e.g. governmental institution or an organisation agreed on by both parties). *RSB Social Impact Assessment Guidelines (RSB-GUI-01-005-01)* can be checked for further guidance.

5. POs assure workers a decent wage payment by including an assessment within the ESMP when a minimum wage is not available as a reference. *RSB Social Impact Assessment Guidelines (RSB-GUI-01-005-01)* can be used as reference for determining the level of decent wage).

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 good protection and training as defined in national law and international standards.^{14 15 16}

2. The PO 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)*.

3. The PO 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.

4. The PO 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

¹⁴ See here: <https://www.osha.gov/personal-protective-equipment/standards>

¹⁵ See here: https://www.bvl.bund.de/EN/Tasks/04_Plant_protection_products/04_Users/03_PersonalProtectiveEquipment/ppp_users_PPE_node.html;jsessionid=EE1307C6CB272D235F658A7006CAA0C8.2_cid298#doc11010640bodyText4

¹⁶ See here: https://single-market-economy.ec.europa.eu/sectors/mechanical-engineering/personal-protective-equipment-ppe_en

- trained and knowledgeable about all other aspects of the operation(s) of the PO that pose occupational health and safety risks or risks to the environment and/or to society.

5. The PO shall implement and maintain procedures and measures addressing emergencies and accidents that are continuously monitored and improved. The PO 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.

6. The PO 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.

7. The PO 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.

8. The PO 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).

9. The PO ensures that all workers have access to clean sanitary facilities and potable water.

10. The PO 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.

11. Where potential risks to health are identified to occupational health, workers should have key health indicators monitored during their employment to reduce job related health issues.

4g. POs 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. POs 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.¹⁷

4h. POs 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.

¹⁷ This is a progress requirement.

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.¹⁸

5a. In regions of poverty, the socioeconomic 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 *RSB 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.

2. The Participating Operator (PO) 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

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.

4. Measured improvements in the social and economic indicators as set against the baseline survey conducted under the social impact assessment process shall be targeted for review every three years.

¹⁸ This Principle applies to regions of poverty.

5. Skills training shall be provided by the PO 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 stakeholders shall be implemented based on a local needs assessment and defined and included in the ESMP, 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 bioenergy 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 through the investment and implementation in socially oriented projects (e.g. education, health, entrepreneurship, micro-finance, capacity building, etc.).

Further references can be checked using the guidance material *RSB Rural and Social Development Guidelines (RSB-GUI-01-005-02)*, to include parameters and aspects covering economic incentives beyond job creation.

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.

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.¹⁹

¹⁹ This is a progress requirement.

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 Security²⁰

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

6a. Operations shall assess risks to food security in the region and locality and shall mitigate any negative impacts that result from their operations. ²¹

1. Where the screening exercise of the RSB impact assessment process reveals a direct impact on food security in food-insecure regions, Participating Operators (POs) shall conduct a food security assessment in accordance with the *RSB Food Security Assessment Guidelines (RSB GUI-01-006-01)* and develop a Food Security Action Plan renewable over a 4 year period, that includes climate change mitigation and carbon stock increase, with action plan adjusted to *GUI-01-007-01*. The results of the Food Security Action Plan show an effective decrease or total mitigation of food insecurity. The Action Plan addresses both immediate and long-term actions and effects on livelihoods, restoration, and compensation as per *RSB Food Security Guidelines GUI-01-006-01*. The Food Security Action Plan addresses point “5.2 Targeting and implementing mitigation and enhancement measures” in *Food Security Guidelines GUI-01-006-01*, by including a climate change approach to enhancing food security.

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 climate change, carbon stocks, land, water, labour, and infrastructure.

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.

²⁰ This Principle does not apply to Industrial Operators.

²¹ This criterion applies to crop feedstocks, as per *RSB Glossary of Terms (RSB-STD-01-002)*, and food-insecure regions.

4. Measures developed under Principle 5 that mitigate food insecurity shall be integrated with the measures developed under Criterion 6a.

6b. In food insecure regions, operations shall enhance the local food security of the directly affected stakeholders.²²

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.

2. Measures to enhance regional food security shall be integrated with measures that contribute to rural and social development developed under Principle 5.

²² This criterion exempts small-scale operators. This criterion applies to crop feedstocks, as per *RSB Glossary of Terms (RSB-STD-01-002)*, and food-insecure regions.

Principle 7: Conservation

Operations avoid negative impacts on biodiversity, ecosystems, and conservation values, and contribute to protecting and/or increasing carbon stock accumulation. Applicable to feedstock producers and their supply chains.

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 (POs) 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).²³

2. Conversion or use of new areas for operations shall not occur prior to the screening exercise.

3. Where conservation values of local, regional, or global importance have been identified, POs shall carry out a specialised impact assessment in accordance with the *Conservation Impact Assessment Guidelines (RSB-GUI-01-007-01)*.

4. Operations shall prioritise areas with the lowest possible risk of impacts to the identified conservation values.

²³ Follow the updated IPCC 2020 climate zone map categorisation to define the climate zone categories: <https://essd.copernicus.org/articles/12/2959/2020/essd-12-2959-2020.html>

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 areas²⁴
- Wetlands of International Importance designated under the Ramsar Convention²⁵
- World Heritage Sites designated under the UNESCO World Heritage Convention²⁶
- Biosphere Reserves designated under the UNESCO Man and the Biosphere Programme²⁷
- 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)
- Natural or non-natural highly biodiverse grassland
- Areas of cultural or spiritual importance for indigenous peoples, including their rights to subsistence, land management and tradition

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 Tool²⁸, 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 Directives²⁹
- Land with high carbon stock, e.g. wetland, peatland
- Areas listed on the IUCN Red List of Ecosystems
- 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)

²⁴ <http://www.protectedplanet.net/>

²⁵ <http://ramsar.wetlands.org/>

²⁶ <http://whc.unesco.org/en/list>

²⁷ <http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/biosphere-reserves/>

²⁸ www.ibatforbusiness.org

²⁹ <http://natura2000.eea.europa.eu>

- Ancient and Endangered forests and High Carbon Stock forests as mapped in Canopy's Forest Mapper³⁰ to the prohibited and no conversion list

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). If areas are identified which do not fall into the categories identified in Minimum Requirement 7.a.6, yet contain conservation values of global, regional or local importance or serve to maintain or enhance such conservation values, these shall only be used if robust management practices maintain or enhance the identified conservation values (e.g. sustainable biomass harvesting, carbon stocks, biodiversity, etc.), where RSB *Conservation Impact Assessment Guidelines (RSB-GUI-01-007-01)* can be used for guidance.

8. Hunting, fishing, ensnaring, poisoning and exploitation of rare, threatened, endangered and legally protected species shall not occur on the operation site.

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 are 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 metres³¹.

Peatlands are areas with or without vegetation with a naturally accumulated peat layer at the surface of at least 30 cm in depth³².

³⁰ <https://canopyplanet.org/tools/forestmapper/app/>

³¹ Source: RAMSAR Convention

³² Source: EN 16214-1:2012

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, POs shall implement practices through the Environmental and Social Management Plan (ESMP) that maintain and enhance ecosystem functions and services, such as biodiversity and / or carbon stocks both inside and outside the operational site, on land which is directly affected by the operations.

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.

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.

3. The timetable for the restoration or creation of buffer zones, including riparian vegetation sections shall be part of the ESMP.

7d. 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. *RSB Conservation Impact Assessment Guidelines (RSB-GUI-01-007-01)* should be checked for guidance.

2. Whenever the operational site impairs the connectivity between surrounding ecosystems, ecological corridors shall be created by the PO.

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.³³

4. Any ecological corridor destroyed after 1st of January 2004 on or near the operation site and for which the PO is directly accountable shall be restored.³⁴

7e. Operations shall prevent invasive species from invading or spreading into areas inside and / or outside the operation site³⁵.

1. Operators shall not use any species officially prohibited in the country of operation, including species recognized as invasive under national, subnational or local authorities, and shall put in place a system to monitor, control and minimize the spread of introduced invasive species and new pests. Operators shall follow official requirements and recommendations in place to identify and monitor introduced invasive species and new pests, or monitor severe outbreaks of existing pests, contributing to minimize their spread.

2. If the species of interest is not prohibited in the country by the national, subnational or local government agency, of operation or no official system for the species identification and monitoring is in place, operators shall seek adequate information about the invasiveness of the species to

³³ This is a progress requirement and exempts small-scale operators.

³⁴ This is a progress requirement and exempts small-scale operators.

³⁵ 7e applies only to biomass producers.

be used for feedstock production or for any other operational purposes (e.g. in the Global Invasive Species Database - GISD)¹³, or Environmental Impact Classification for Alien Taxa - EICAT or similar). Should no reference to the species be found in either, the operator will inquire with national, subnational and local authorities as to the existence of biological or socioeconomic impact or risk assessments completed by their agency on the species of interest. In cases where the operator has identified a new pest or invasive species, or has detected severe outbreaks of existing pests, the operator shall report these findings to the relevant authorities and organisations and follow-up with any recommended procedures as necessary.

3. If the species is recorded as highly invasive (e.g., EICAT assessed as Massive, Major or Moderate) under similar conditions (similar climate, and similar local ecosystems, and similar soil types), this species shall not be used.

4. In cases where the PO intends to introduce a new species for feedstock production purposes, and the species has not yet been recorded as representing a high risk of invasiveness under similar conditions (climate, local ecosystems, soil type), POs shall follow the specific steps:

- a) During the feedstock selection and development, POs 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.
- b) During feedstock production, POs 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.
- c) During harvesting, processing, transport and trade, POs shall contain propagules in an appropriate manner on site and during transport.

Principle 8: Soil³⁶

Operations shall implement practices to maintain or enhance soil's physical, chemical and biological conditions.

8a. Participating Operators (POs) shall implement practices to maintain or enhance soil's physical, chemical, and biological conditions.

1. Soil wind and water 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 or to the scope determined in the ESMP.³⁷

2. POs shall implement practices (in accordance with *RSB-GUI-01-008-01*) to protect soil structure, including the prevention and mitigation of compaction, erosion, and degradation, and that maintain or enhance soil organic matter, carbon sequestration and overall soil fertility and biological activity on the feedstock production site.³⁸

3. The use of agrarian and forestry residual products for feedstock production, including lignocellulosic material, shall not be at the expense of long-term soil fertility (including, but not limited to, structural stability and organic matter, nutrient cycling, water retention capacity content, soil temperature etc.). Follow *Standard Amendment for Woody Biomass (RSB-SA-01)* and *RSB Soil Impact Assessment Guidelines (RSB-GUI-01-008-01)* for further guidance.³⁹

³⁶ Principle 8 does not apply to industrial operators.

³⁷ This minimum requirement applies to crop feedstocks.

³⁸ This minimum requirement applies to crop feedstocks.

³⁹ This minimum requirement applies to agrarian and forestry residue feedstock.

4. POs shall implement practices to maintain and improve the soil nutrient use efficiency and reduce nitrate, phosphate, and other chemical pollution, such as trace metals, agrochemicals and microplastics.⁴⁰

5. POs shall implement measures to improve soil health, following an agronomical analysis to be included as part of the ESMP and which includes soil types, climates, topographies, and crops. Follow *RSB Soil Impact Assessment Guidelines (RSB-GUI-01-008-01)* for guidance on topics such as:⁴¹

- 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.
- Implementation of crop-livestock and/or silvopastoral integrated systems.

6. Where the screening exercise has triggered the need for a *Soil Impact Assessment (RSB-GUI-01-008-01)*, POs shall:⁴²

- a) Develop and implement a soil management plan as part of the Environmental and Social Management Plan (ESMP), which demonstrates continuous improvement of soil parameters overtime.
- b) Perform periodic sampling of soil on the feedstock production site to evaluate the effect of the soil management plan on the content of organic matter and other soil quality parameters (e.g. C/N, N%, P%, etc.). If the practices included in the soil management plan do not show evidences or positive effects to maintain soil organic matter and other key soil quality indicators (i.e. as defined in the Soil Management Plan) at the optimal level during the monitoring process, alternative practices shall be investigated and implemented to assure improved results overtime.
- c) Efforts that produce increased Organic Matter content, should be accompanied by appropriate nutrient management, to avoid unintended negative consequences such as increased GHG emissions.

What is Conservation Agriculture?

Conservation Agriculture (CA) is an approach to managing agro-ecosystems for improved and sustained productivity, increased profits and food

⁴⁰ This minimum requirement applies to crop feedstocks.

⁴¹ This minimum requirement applies to crop feedstocks.

⁴² This minimum requirement applies to crop feedstocks.

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.⁴³

⁴³ 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.

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.

2. The Participating Operator (PO) 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.

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.

4. Where the screening exercise has triggered the need for a *Water Assessment* (RSB-GUI-01-009-01), POs 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.

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. POs shall develop and implement a water management plan based on Circular Economy principles and integrate it into the Environmental and Social Management Plan (ESMP). Water management resources and guidelines for water footprint calculation are encouraged to be used and integrated to the ESMP.

2. The water management plan shall contain good water management practices to optimise water use, including:

- a) For rain-fed crops: practices that ensure that rainwater is captured and used (e.g. use of cover crops, retaining crop stubble, etc.).
- b) For irrigated crops: practices that ensure good management of storage and delivery systems (e.g. application of water saving irrigation techniques).
- c) The PO shall implement water-saving practices to increase the efficiency of the water use and reduce the amount of water used and/or wasted.
- d) The water management plan shall include key performance monitoring indicators that assess different water parameters and variables associated to the operation's water usage, including aspects of usage related to water quantity and quality.

3. The water management plan shall be made available to the public, unless limited by national law or international agreements on intellectual property.

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.

5. The PO shall undertake annual monitoring of the effectiveness of the water management plan.

6. The water management plan shall include steps for reusing or recycling wastewater, appropriate to the scale and intensity of operation. ⁴⁴

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.

2. Irrigated crops and freshwater intensive operations systems shall not be established in long-term freshwater stressed areas, unless the implementation of:

- a) good practices is assured, or;
- b) an adequate mitigation process that does not contradict other requirements in this standard ensures that the water level remains stable.

3. POs 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.

4. Where the screening exercise has triggered the need for a *Water Assessment* (RSB-GUI-01-009-01), POs shall:

- a) 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.
- b) 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.

⁴⁴ This is a progress requirement.

9d. Operations shall contribute to the enhancement or maintaining of the quality of the surface and groundwater resources.

1. Operations shall not occur on a critical aquifer recharge area without a specific authorisation from legal authorities.

2. POs 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.

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.

4. Buffer zones shall be set between the operation site and surface or groundwater resources.

5. Where the screening exercise has triggered the need for a *Water Assessment (RSB-GUI-01-009-01)*, POs shall determine the optimal water quality level required to sustain the system, taking into account local economic, climatic, hydrologic and ecological conditions.

6. For existing operations, degradation of water resources that occurred prior to certification and for which the PO is directly accountable shall be reversed. Wherever applicable, POs (except small-scale POs) shall participate in projects that aim to improve water quality at a watershed scale.⁴⁵

⁴⁵ This is a progress requirement.

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).⁴⁶

⁴⁶ This is a progress requirement.

Principle 10: Air Quality

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

10a. Air pollution emission sources from the operations shall be identified, and air pollutant emissions minimised through an air management plan⁴⁷.

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.

2. The Participating Operator (PO) 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 if no regulatory requirements are stated by the regulator.⁴⁸

10b. Operations shall avoid and, where possible, eliminate open-air burning of residues, wastes or by-products, or open air burning to clear the land⁴⁹.

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

⁴⁷ 10a applies only to industrial operators.

⁴⁸ This is a progress requirement.

⁴⁹ 10b applies only to biomass producers.

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.

2. Open air burning of agricultural residues and by-products shall not occur following the phase-out plan (10b.1).⁵⁰

⁵⁰ This is a progress requirement.

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

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

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
2. The Participating Operator (PO) shall disclose technologies with hazardous or potentially hazardous effects when such technology is used and make this information available to the public upon request.

11b. The technologies used in operations including genetically modified plants, micro-organisms, algae, and other biological or non-biological tools (e.g., agrochemicals), shall minimise the risk of damages to the environment and people, promoting and implementing circular economy strategies and shall improve the operation's 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.

2. The PO 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.⁵¹

3. For new operations, POs shall provide evidence that the hazardous technologies they use do not contradict any of the RSB Principles & Criteria before the beginning of operations.

4. POs 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.⁵²

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.⁵³

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.⁵⁴

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.

⁵¹ This minimum requirement applies only to biomass producers.

⁵² This minimum requirement applies only to biomass producers.

⁵³ This minimum requirement applies only to biomass producers.

⁵⁴ This minimum requirement applies only to biomass producers.

1. In no case shall genetically modified microorganisms 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.

2. POs 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.

11d. Good practices shall be implemented for the storage, handling, use, and disposal of biofuels, fertilisers, and chemicals.

1. The PO 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. In the case of use of biological control agents, these are documented, monitored, and controlled in accordance with national laws and internationally accepted scientific protocols and a history of all use of biological control agents is maintained. ⁵⁵

2. No pesticide formulations classified as 1a or 1b under the WHO pesticide hazard guidelines 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. ⁵⁶

3. Manufacturer's safety instructions for the storage, handling, use, and disposal of chemicals shall be followed.

⁵⁵ This minimum requirement applies only to biomass producers.

⁵⁶ This minimum requirement applies only to biomass producers.

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.⁵⁷

5. The handling, application, storage, transportation and disposal of pesticides and their containers shall comply with the FAO's *Guidelines on Good Practices for Ground and Aerial Applications of Pesticides*⁵⁸, including different aspects such as:⁵⁹

- a) assure use of safety equipment and protective gear (e.g. gloves, mouthpiece, protective eyewear, etc.)
- b) observe recommended safety distances for application near urban or peri-urban areas, or near critical facilities (e.g. rural schools or other sensitive infrastructure)
- c) observe recommended safety distances for application near water bodies or other sensitive ecological or conservation areas
- d) observe required environmental and weather conditions for an effective and safe application (i.e. including temperature, wind velocity, relative air humidity, etc.)
- e) check adequate working conditions of application equipment (e.g. nozzles, hoses, containers, etc.)
- f) use signage and / or different communication mechanisms to alert the community of application activities and identify applied field-plots
- g) agrochemical containers are safely disposed of, reused or recycled.

6. Fertilisers shall be transported and stored in a safe and secure way for humans and the environment.⁶⁰

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.⁶¹

⁵⁷ This minimum requirement applies to only to biomass producers.

⁵⁸ <http://www.fao.org/agriculture/crops/thematic-sitemap/theme/pests/code/list-guide-new/en/>

⁵⁹ This minimum requirement applies only to biomass producers.

⁶⁰ This minimum requirement applies only to biomass producers.

⁶¹ This minimum requirement applies only to biomass producers and is a progress requirement.

8. The PO should use waste and co-products for a material purpose or for energy generation. POs shall use waste and/or co-products for energy generation only if: ⁶²

- a) the use for material purposes is not possible (e.g., no market is accessible)
- b) the use is in line with RSB Principle 10 (Air Quality) and the use provides a greenhouse gas benefit in comparison to the alternative.

11e. Residues, wastes and by-products from feedstock 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 by-products are handled and/or disposed of in appropriate containers and to prevent any environmental contamination and damage to human health⁶³.

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) guidelines. In all other cases, handling and disposal must follow the manufacturer's recommendation and the country or regional (e.g., EU, ASEAN, ALENA) guidelines⁶⁴.

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.

⁶² This is a recommendation.

⁶³ This applies only to industrial operators.

⁶⁴ This applies only to industrial operators.

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. ⁶⁵

6. For medium and large-scale POs, by-products or wastes shall also be reused by the processing/production unit or transferred to other sectors following Circular Economy criteria (e.g. recycling, reuse of products / materials). This should be implemented 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. ⁶⁶

11.f. Introduction of new technology which enables continuous improvement in social and environmental performance shall be encouraged, when and if appropriate security measures are taken prior and during their use.

11.f.1 New technologies introduced to optimise and enable continuous environmental and social performance, will have a prior risk assessment and mitigation analysis to assure security measures before and during the adoption have been taken. Prior to the implementation of the technology, stakeholder consultation will be implemented as part of the ESMP stakeholder engagement process.

11.f.2 New technology adoption will have an adequate management system, including monitoring and performance evaluation as part of the ESMP and ESMP monitoring process.

⁶⁵ This is a progress requirement.

⁶⁶ This is a progress requirement.

Principle 12: Land Rights

Operations respect land rights and land-use rights.⁶⁷

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.⁶⁸

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 Participating Operator (PO) 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.

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.

⁶⁷ Operators may be eligible for fast-track demonstration of compliance to Principle 12. Refer to the RSB Screening Tool for guidance: <https://rsb.org/wp-content/uploads/2020/06/21-08-18-RSB-Screening-Tool-v3.0.xlsx>

⁶⁸ This applies only to biomass producers.

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.

5. Independent, qualified land valuation specialists shall be used for valuing all land and asset values.

6. Where land is to be sold it shall be done on a willing seller/ willing-buyer basis.

7. Coercion to alter existing land rights or land use rights shall not be allowed in operations

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.

