

Solar Stewardship Initiative

ESG Standard

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Foreword

The Solar Stewardship Initiative (SSI), its members and stakeholders are unwavering in their commitment to responsible practices in the solar value chain.

Our core values are built upon the protection of the environment and respect for human rights. We recognise that these principles are fundamental to the sound governance of the solar sector. We are dedicated to accelerating the clean energy transition and delivering solutions to the immediate climate and energy crises. These values must be reflected at all steps of our industry's value chain; they are fundamental to the long-term success of any solar business operating today.

Solar is a reliable, sustainable, and renewable source of energy, critical to addressing climate change and improving energy security. The industry is growing rapidly; it is expected to be the main electricity source in Europe by 2050.

With its growth, the opportunity to foster green economic development also increases. Developing a responsible, transparent, and sustainable solar value chain is central to delivering this clean energy transition.

The SSI has been designed to clearly set out expectations for environmental, social and governance (ESG) practices, and supply chain transparency.

Its purpose is to strengthen confidence in how the materials and products in the solar value chain are manufactured and used. It aims to establish and communicate verifiable

information on ESG practices and transparency of businesses along the length of the solar supply chain.

The SSI does not certify sites involved in forced labour. By refusing to conduct assessments or certifications in sites or regions that are not freely accessible, the SSI contributes to the marginalisation of businesses who fail to uphold strong ESG and traceability standards.

The publication of the SSI ESG Standard in October 2023 was a significant step in achieving these objectives. With the combination of the SSI ESG and SSI Supply Chain Traceability Standard, stakeholders along the solar value chain will be reassured that the silicon used in the solar modules was produced responsibly.

More information can be found at www.solarstewardshipinitiative.org/

Version history

Version	Date	Description
1.0	December 2023	First version issued as approved by the SolarPower Europe and SEUK Board.
1.1	April 2024	Second version issued reflecting improvements, updates and clarifications, as approved by the SSI Board.
1.2	July 2025	SSI Principles transferred to an additional core document and redundancies removed, as approved by the SSI Board.

The Solar Stewardship Initiative

The Solar Stewardship Initiative (SSI) works with industry participants including manufacturers and buyers of solar photovoltaic modules, as well as other stakeholders including civil society, NGOs, intergovernmental institutions, international financial institutions, academics and independent experts with human rights and environmental expertise to collaboratively foster responsible production, sourcing, and stewardship of materials in the solar value chain. The SSI's mission is to enhance sustainability, and environmental, social, governance (ESG) performance across the solar supply chain.

Businesses actively involved in the solar value chain can apply to join the SSI and have their certified against the SSI Standards.

The SSI's core objectives are to:

- Ensure the energy transition is just, inclusive, and respects people's human rights.
- Establish mechanisms to create supply-chain transparency in the global solar industry.
- Enable continuous improvement of ESG performance and level of transparency.
- Prepare the industry for relevant upcoming laws and regulations on ESG, transparency and responsible supply chains.

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Introduction

About the standard

The SSI ESG Standard outlines environmental, social, and governance (ESG) requirements to address sustainability issues throughout the solar value chain. Currently, facilities must comply with national and international human rights laws, including the [UN Guiding Principles on Business and Human Rights](#), and implement policies to respect and protect human rights. This includes conducting due diligence to identify, prevent, and mitigate adverse human rights impacts, with a focus on prohibiting forced or child labour, upholding freedom of association, and ensuring non-discrimination in hiring, promotion, and compensation practices.

Environmental requirements include the disclosure and reduction of greenhouse gas (GHG) emissions, with specific targets for Scope 1 and 2 emissions, and addressing Scope 3 emissions. Facilities are also required to assess water-related risks, set conservation and quality targets, and manage waste effectively, focusing on minimisation and recovery. Pollution management protocols must align with international conventions, with action plans to reduce environmental impacts on health and ecosystems. Additionally, facilities must commit to no net loss of biodiversity, zero deforestation, and respect for protected areas while enhancing circularity through material reuse and recycling.

On governance, facilities must ensure legal compliance with the ESG standard, maintain effective management systems, and prohibit corruption. Senior management must endorse and review ESG policies, conduct regular risk assessments, and engage stakeholders transparently. Responsible sourcing policies and due diligence on suppliers, particularly in high-risk areas, are also required. Public reporting on ESG performance, including due diligence efforts, is mandatory.

These requirements are designed to promote sustainability, ethical practices, and responsible resource management across the solar value chain, ensuring that production sites adhere to the highest ESG standards.

Purpose

The purpose of the ESG Standard is to encourage and facilitate the adoption of environmental, social, and governance (ESG) requirements, which are used to assess production sites.

By achieving certification, sites demonstrate their commitment to sustainable, ethical, and responsible practices, helping to enhance transparency and trust within the solar industry.

Scope

The SSI ESG Standard covers requirements to address environmental, social and governance sustainability for facilities engaged in manufacturing of polysilicon, ingots, wafers, cells and modules, and other component manufacturing.

The following topics are covered by the Standard:

Governance and Business Ethics

- Business Integrity
- Policy and Management
- Stakeholders and Communities
- Transparency
- Responsible Sourcing

Environment

- Greenhouse Gas Emission Management
- Water Management
- Waste Management
- Pollution Management
- Biodiversity Management
- Circularity

Human and Labour Rights

- Human Rights
- Labour Rights
- Occupational Health and Safety

Applicability

SSI Manufacturing Members are required to achieve SSI ESG Standard Certification against all applicable requirements for at least two facilities within 12 months of joining the SSI,

Certification

The SSI ESG Standard is designed for the SSI Manufacturing Member sites who are certified against the SSI ESG Standard to be able to make claims in line with [SSI claims guide](#).

More detailed information and guidance on the Assessment Process, roles and responsibilities is provided in the [SSI Assurance Manual](#).

The SSI ESG Standard is designed for use by SSI approved assessors to verify facilities' for the purposes of granting SSI ESG Certification.

Further details and comprehensive guidance on the entire the Assessment Process, including roles and responsibilities are outlined in the [SSI Assurance Manual](#).

Supporting Documentation

The following documents provide supporting information to assist with implementation of the SSI Standard:

- SSI Standard Guidance (to be developed in 2025)
- [SSI Assurance Manual](#)
- [SSI Claims Guide](#)

Standard Development

The development of this Standard has been guided by formal and transparent stakeholder consultation processes. SSI extends its gratitude to the many individuals and organisations who contributed their time, expertise, and valuable input throughout the development of this Standard and its assurance system elements.

Version 1 of the Standard was developed by the SSI Sponsors Group, supported by a public comment period in Q2 – Q3 2023, and was published in December 2023. Version 2 of the Standard was released in April 2024, reflecting ongoing improvements and updates. This document represents Version 3 of the SSI Standard.

Where applicable, SSI follows the ISEAL Code of Good Practice for Setting Social and Environmental Standards in the development of its standards.

Review

SSI will undertake a formal review of its Standard at the latest by 2026, no more than two years after this publication in line with our Standard Development and Review Procedure.

SSI will continue to work with stakeholders to ensure that its Standard is relevant and achievable, and that it addresses key ESG challenges in line with the objectives of SSI. Proposals for revisions or clarifications can be submitted by stakeholders at any time, and SSI will document these for consideration in the next review process.

Standard Requirements

Governance and Business Ethics

1. Business Integrity

Legal Compliance

1.1 The Facility shall develop and implement systems to maintain awareness of, and ensure compliance with applicable international standards, national laws and regulations in the areas of environment, social and governance practices.

1.2 The Facility shall hold valid relevant permits and licenses for conducting its operations.

Anti-Corruption and Bribery

1.3 The Facility shall develop and implement systems to prohibit and prevent all forms of corruption, including bribery, bribe solicitation, facilitation payments, extortion and embezzlement, as well as money laundering by its workers, subcontractors, and suppliers.

2. Policy and Management Systems

Management Systems

2.1 The Facility shall develop and implement integrated and/or stand-alone ESG management systems. The systems will support continuous improvement and include, at a minimum, policies and procedures with clearly defined roles and responsibilities, financial and human resources, controls, monitoring protocols, training programmes, internal and external communication and reporting requirements.

2.2 The Facility's senior management shall publicly endorse the ESG policies and support through provision of resources.

2.3 The Facility shall ensure that policies are reviewed and revised regularly, communicated to employees and other stakeholders, and made publicly available.

Risk and Impact Assessments

2.4 The Facility shall identify and assess the risk of any actual and potential environmental, social or human rights impacts of its operational activities by likelihood and severity of outcome.

2.5 The Facility shall take into consideration the risks and impacts associated with its supplier operations and the liability arising from such business relationships when conducting their environmental, social and human rights risk and impact assessments.

2.6 The Facility shall establish action plans to avoid, minimise, remedy, or compensate for any actual and potential adverse environmental, social and human rights impacts of its operational activities in accordance with the mitigation hierarchy.

2.7 The Facility shall measure, record, and regularly review plans to mitigate environmental, social and human rights impacts of its operational activities.

3. Stakeholders and Communities

Stakeholder Engagement

3.1 The Facility shall identify groups and individuals including community members, Indigenous and Tribal Peoples, rights' holders and other stakeholders who may be affected by or interested in its activities.

3.2 The Facility shall develop and implement a stakeholder engagement plan that is scaled to the operation's risks, impacts and development stage, and tailored to the characteristics and interests of its various stakeholders including host governments, civil society, the private sector and the affected communities.

3.3 The Facility shall develop engagement processes in consultation with affected stakeholders that are accessible, inclusive, equitable, culturally appropriate, gender-sensitive and rights-compatible, and will demonstrate that efforts have been or are being taken to identify and remove barriers to engagement for affected stakeholders, especially the most vulnerable persons, groups and organisations.

Community Development

3.4 The Facility shall assess the potential and actual adverse impacts of its projects on local communities.

3.5 The Facility shall develop an action plan that details actions to minimise, mitigate, and/or compensate for adverse social, environmental, and economic impacts, while identifying opportunities and actions to foster positive impacts of the project on the local communities.

3.6 The Facility shall assess the positive socio-economic impacts of its activities on the local area, and to adopt measures fostering such impacts that can include:

- Creating local employment opportunities through training, employment, and staff retention.
- Supporting local procurement by investing in local supply chains.
- Promoting educational opportunities by liaising with local and regional educational centres.

Grievance Mechanism

3.7 The Facility shall develop and implement an effective grievance mechanism available to all stakeholders in line with the requirements of the UN Guiding Principles on Business and Human Rights to respect the rights of adversely affected stakeholders' access to remedy.

4. Transparency

Sustainability reporting

4.1 Members will publicly report annually on their ESG performance for all material topics in alignment with internationally recognised reporting standards.

5. Responsible Sourcing

5.1 The Facility shall implement a Responsible Sourcing Policy, aligned to the social, environmental and governance requirements identified by this Standard and communicate, and raise awareness of these principles amongst its supply chain partners.

5.2 The Facility shall conduct Know Your Counterparty (KYC) checks on all of its suppliers.

5.3 The Facility shall communicate to its suppliers its ESG commitments, including the requirements included in the SSI Standard.

Sourcing from high-risk areas

5.4 With respect to sourcing from conflict-affected and high-risk areas, the Facility shall develop and implement the Responsible Sourcing Policy consistent at a minimum with Annex II of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD Guidance) and implemented through a due diligence system aligned with Annex I of the OECD Guidance.

5.5 The Facility shall develop and implement its due diligence system to include at a minimum:

- Strong management systems, including a supply chain Policy, responsibilities and resources, information gathering and supplier engagement.
- Identification and assessment of risks in the supply chain.
- Design and implementation of a strategy to respond to identified risks.
- An independent third-party audit of its due diligence system.
- Public reporting annually on due diligence undertaken.

Environment

6. Greenhouse Gas (GHG) Emissions Management

6.1 The Facility shall identify, quantify and disclose information on its Scope 1 and Scope 2 greenhouse gas emissions according to a recognised standard, such as WRI/WBCSD Greenhouse Gas Protocol Corporate Accounting and Reporting Standard.

6.2 The Facility shall identify relevant material sources of greenhouse gas Scope 3 emissions.

6.3 The Facility shall establish time-bound greenhouse gas emissions reduction targets and implement a plan to achieve these targets. The targets shall cover the material sources of Scope 1 and 2 gas emissions.

7. Water Management

7.1 The Facility shall identify and quantify the risks of potential and actual adverse impacts of its business activities on water balance, flow, quality, and access, including consideration for the needs of other water users and wildlife.

7.2 The Facility shall establish action plans to avoid, minimise, restore, and compensate for any actual and potential adverse impacts on water use and quality in accordance with the mitigation hierarchy.

7.3 The Facility shall establish time-bound targets for water consumption reduction, water quality improvements, water efficiency, and off-site water conservation programmes, where applicable.

7.4 The Facility shall establish and implement water monitoring procedures and protocols to measure progress against water management targets.

8. Waste Management

8.1 The Facility shall identify and quantify waste streams generated by its business activities and related risks of actual and potential adverse impacts and assess and compare these risks by likelihood and severity of outcome.

8.2 The Facility shall establish action plans to avoid, minimise and recover waste and to avoid and minimise any actual or potential adverse impacts from waste in accordance with the mitigation hierarchy.

9. Pollution Management

9.1 The Facility shall identify and align its policies and management practices with relevant international environmental conventions, including but not limited to:

- The Minamata Convention on Mercury.
- The Stockholm Convention on Persistent Organic Pollutants.
- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.
- The Rotterdam Convention.

9.2 The Facility shall identify and quantify the risks of actual and potential adverse impacts of its business activities from pollution and assess and compare these risks by likelihood and severity of outcome.

9.3 The Facility shall establish action plans to avoid, minimise and compensate for any actual and potential adverse impacts on nature and human health from pollution in accordance with the mitigation hierarchy.

10. Biodiversity Management

10.1 The Facility shall commit to: No net-loss of biodiversity. Zero deforestation. Not operating in natural World Heritage sites or their buffer zones. Respecting the management objectives of protected areas and other areas designated for their biodiversity importance.

10.2 The Facility shall identify and quantify risks of actual and potential adverse impacts of its business activities on biodiversity and assess and compare these risks by likelihood and severity of outcome.

10.3 The Facility shall establish action plans to avoid, minimise, restore, or replace, and compensate for any actual and potential adverse impacts on biodiversity in accordance with the mitigation hierarchy.

10.4 The Facility shall establish time bound targets for preventing any net-loss of biodiversity, including the use of credible quality biodiversity offsets where avoiding, minimising, and restoring biodiversity is not possible.

10.5 The Facility shall establish and implement biodiversity monitoring procedures and protocols to measure progress against biodiversity management targets.

11. Circularity

11.1 The Facility shall identify and quantify the actual and potential adverse impacts and opportunities for input materials and product circularity in its business operations, including the opportunities for recycling materials and the impact of not using recycled and producing non-recyclable materials.

11.2 The Facility shall generate and gather data on its input materials and products circularity to inform decisions on their composition through methods such as cradle-to-gate analysis, recycled content approach, and End-of-Life recycling approach.

11.3 The Facility shall establish time bound targets for continually improving the circularity of their input materials and products.

11.4 The Facility shall establish and implement circularity monitoring procedures and protocols to measure progress against circularity improvement targets.

Human and Labour Rights

12.Human Rights

Human Rights Due Diligence

The Facility shall comply with national and international Human Rights Law and observe the UN Guiding Principles on Business and Human Rights, including as a minimum:

12.1 Developing a policy commitment to respect Human Rights which is communicated to all appropriate parties, including its own suppliers. The Facility shall have senior management endorse, support through provision of resources and regularly review the Human Rights policy.

12.2 Undertaking a Human Rights Due Diligence process that seeks to identify, prevent, mitigate, and account for how it addresses its actual and potential impacts on Human Rights and those of its business relationship, including its Supply chain aligned to the scope of this Initiative.

12.3 Where the Facility identifies that its business operations have caused or contributed to adverse Human Rights impacts, it shall provide for or cooperate in the remediation of these impacts through legitimate processes.

Security Forces

12.4 A Facility that hires or uses private or public security forces for protection shall provide sufficient instruction, training and oversight to ensure workers are protected from torture, cruel, inhumane, or degrading treatment, damages to life or limb of individuals, and the impairment of workers' freedom of association.

Indigenous Peoples

12.5 Where there are known to be Indigenous Peoples communities or groups in the sphere of influence of the Facility:

- The Facility shall ensure that it commits to work to obtain the consent of Indigenous communities for new projects (and significant changes to existing projects).
- The Facility shall implement Free, Prior and Informed Consent (FPIC) as a principle to be respected to the greatest degree possible on lands that are traditionally owned by or under customary use of Indigenous Peoples and

are likely to have significant adverse impacts as a result of the facility operations.

Land Rights

12.6 The Facility shall identify and document any legal and/or customary rights in relation to land and water use of its operations.

12.7 The Facility shall develop and implement systems to ensure that if there is a risk of land or water disputes, all relevant land and water rights have been complied with.

13. Labour Rights

Freely Chosen Employment

13.1 The Facility shall develop and implement systems to ensure it does not employ or in any way support or benefit from the use of any form of forced labour or modern slavery. This includes prison, indentured, bonded, slave or other forms of forced labour. The systems will ensure the Facility does not participate in acts of human trafficking and/or sexual exploitation in adherence to the ILO Forced Labour Convention, 1930 (No. 29) and the ILO Abolition of Forced Labour Convention, 1957 (No. 105).

Child Labour and Young Workers

13.2 The Facility shall develop and implement systems to comply with minimum age standards and not employ or allow children to work who are under the age of 15, the age for completing compulsory education, or the legal minimum age for employment in the country, whichever age is greatest in adherence to the ILO Minimum Age Convention, 1973 (No. 138).

13.3 The Facility shall develop and implement systems to ensure that the Worst Forms of Child Labour do not occur in its business operations and that young workers are not exposed to hazardous work that is likely to compromise their health, safety and/or morals in adherence to the ILO Worst Forms of Child Labour Convention, 1999 (No. 182).

13.4 The Facility shall in case of discovery of a child under the minimum working age:

→ Remove the child immediately from his or her job; and

- Develop and implement remediation procedures that provide the child with support in his or her transition to legal work or schooling.

Freedom of Association and Collective Bargaining

13.5 The Facility shall respect the rights of workers to associate freely in Labour Unions, seek representation and join Workers' councils without interference, in line with the ILO Conventions C87 and C98.

13.6 The Facility shall respect the rights of workers to collective bargaining, participate in any collective bargaining process in good faith, and adhere to collective bargaining agreements where such agreements exist.

13.7 A Facility that operates in countries where national law restricts the right to freedom of association and collective bargaining, shall support alternative means of association for workers that are permitted under national law and shall not hinder the development of parallel means for independent and free association and bargaining.

Non-discrimination

13.8 The Facility shall develop and implement systems to ensure there is no discrimination in hiring, compensation, access to training, promotion, termination or retirement based on race, caste, national origin, religion, age, disability, gender, sexual orientation, marital status, political affiliation, union membership, or regional or tribal origin, in line with the ILO Equal Remuneration Convention, 1951 (No. 100) and ILO Discrimination (Employment and Occupation) Convention, 1958 (No. 111).

Disciplinary Practices & Harassment

13.9 The Facility shall develop, and implement systems to prevent and address harassment, intimidation, and/or exploitation in the workplace.

13.10 The Facility shall develop and implement systems to ensure workers are not subjected to any form or threat of corporal punishment, harsh or degrading treatment, sexual or physical harassment, mental, physical, or verbal abuse, coercion or intimidation, or monetary fines as disciplinary measures.

Employment Terms

13. 11 The Facility shall provide workers with clear information, including in writing and in a language the workers understand, regarding the workers' employment rights under national and local labour and employment law, and any applicable

collective agreements, including information on the workers' rights relating to working hours, wages, overtime, compensation, and benefits.

13. 12 The facility shall provide workers with such information upon the beginning of the working relationship, when any material changes occur, and at any time on request.

13. 13 The Facility shall not avoid obligations to workers under labour or social security laws and regulations through the use of labour-only contracting, sub-contracting, or home-working arrangements, or through apprenticeship schemes where there is no real intent to impart skills or provide regular employment, nor shall any such obligations be avoided through the excessive use of fixed-term contracts of employment instead of regular employment relationships.

13. 14 The Facility shall ensure that workers have the freedom to terminate employment (provided they give reasonable notice) at any time without administrative or financial penalties (such as withholding or non- payment of wages).

13. 15 The Facility shall only employ workers who have a legal right to work in the country.

Ethical Recruitment

13.16 The Facility shall develop and implement systems to ensure no recruitment fees or related costs shall be borne by workers at any stage of the selection, recruitment, and employment or termination process.

13.17 The Facility shall use only labour agencies that are registered with it and have a written, legally binding service level agreement. The Facility shall conduct appropriate due diligence against labour agencies providing workers to them to ensure compliance with national law, international standards, and Facility's own Code of Conduct.

13.18 The Facility shall not require from any worker any deposit or charge for specific material or equipment provided for the worker's job duty (such as protective equipment, uniforms, etc.). It is forbidden to request any worker to repay training fees directly related to internal training conducted on the Facility's premises, or on departure from the Facility's site.

13.19 For migrant workers, there shall be no substitution or change(s) in the employment agreement between departure and arrival in the receiving country

unless these changes are made to meet local law and provide equal or better terms.

13.20 The Facility shall ensure that all the relevant information on workers' terms and conditions of employment and living arrangements are adequately communicated to workers by recruitment agencies or brokers for workers not directly hired by the Facility.

Working Hours

13.21 The Facility shall apply normal working hours that comply with national laws. Where specific laws and regulations do not exist, working hours will not exceed, on a regular basis, a maximum of 48 hours per working week, in accordance with the ILO Hours of Work (Industry) Convention, 1919 (No.1).

13.22 The Facility shall ensure that overtime is voluntary and that the sum of regular and overtime hours will not exceed 60 hours per week, or the maximum allowed by national law, whichever is less.

13.23 The Facility shall provide all workers with at least one rest day in seven consecutive working days in accordance with the ILO Weekly Rest (Industry) Convention, 1921 (No. 14).

13.24 Exceptions to the number of regular and overtime hours and provision of rest days are allowed in special circumstances where all the following are met:

- This is allowed by national law.
- This is allowed by a collective agreement freely negotiated with a workers' organisation representing a significant portion of the workforce.
- Appropriate safeguards are taken to protect the workers' health and safety.
- The employer can demonstrate that exceptional circumstances apply.

Wages and Benefits

13.25 The Facility shall pay workers' wages that meet or exceed legal minimum wages, wages agreed through collective wage agreements or the prevailing industry standard whichever is higher.

13.26 The Facility shall pay employees a premium rate for work performed beyond the normal working hours in accordance with national laws, collective agreements or the prevailing industry standard, whichever is higher.

13.27 The Facility shall make wage payments that are timely, in legal tender and fully documented. All workers must receive an itemised pay slip for every pay period, showing the basis on which they are paid.

13.28 The Facility shall determine the living wage in its country of operation in cooperation with stakeholders, and will develop, and where possible, implement a plan on payment of the living wage to all workers over time.

13.29 The Facility shall provide workers with all legally mandated leave, including maternity and paternity leave, compassionate leave, and paid annual leave. Where no applicable law exists, paid annual leave will be provided in accordance with the ILO Holidays with Pay Convention, 1970 (No. 132).

14. Occupational Health and Safety (Worker's Protection)

General OHS

14.1 The Facility shall regularly conduct health and safety risk assessments and inspections of the Facility's operational activities and processes that have a potential negative impact on physical and mental health and wellbeing. The risk assessment shall consider hazards including, but not limited to, the use of machinery and equipment; storage and handling of hazardous chemicals/materials; exposure to fumes, airborne particles, and volatile organic compounds; excessive noise and/or temperature levels; inadequate lighting and ventilation; repetitive strain activities; infrastructure and building integrity; and general hygiene and housekeeping.

14.2 The Facility shall establish, implement, and maintain actions and processes to eliminate or minimise health and safety hazards and risks using the hierarchy of controls.

14.3 The Facility shall provide workers and Visitors with functioning personal protective equipment (PPE) free of charge and shall ensure that it is properly used and maintained.

14.4 The Facility shall provide workers with regular and documented health and safety training in a form and language they can understand and shall repeat such training for new or reassigned workers. Training shall include, at minimum, information on specific role-related health and safety hazards and controls; proper use of PPE; hazardous chemicals/materials handling; accident reporting protocols; fire safety and emergency evacuation procedures; first-aid training for designated

worker representatives; and a workers' right and responsibility to stop work or refuse to work in dangerous situations.

14.5 The Facility shall investigate and document health and safety incidents, accidents and injuries; identify and implement corrective and preventive actions; and incorporate investigation results into reviews of relevant hazard controls to identify opportunities for improvement.

Chemical Management

14.6 The Facility shall control, store, transport, use and dispose of hazardous chemicals/materials according to relevant laws and regulations, and shall minimise any hazards and risks to workers.

14.7 The Facility shall maintain an inventory of hazardous chemicals/materials; shall ensure workers understand their associated risks; and shall provide workers access to the relevant safety data sheets in a language they understand wherever hazardous substances are used.

14.8 The Facility shall not manufacture, trade, or use chemicals and hazardous substances subject to international bans.

14.9 The Facility reduce the use of hazardous chemicals/materials and shall use alternatives to hazardous substances in its operational activities and processes, wherever technically feasible and economically viable.

Safety and Hygiene

14.10 The Facility shall provide a safe and hygienic working environment, taking into consideration industry standards and any specific hazards identified in the risk assessment. Adequate steps shall be taken to prevent accidents and injury to health arising out of, associated with, or occurring in the course of work, by eliminating or minimising, so far as is reasonably practicable, the causes of hazards inherent in the working environment.

14.11 The Facility shall provide access to clean and hygienic toilet facilities commensurate with the number and gender of Workers employed; potable water; and, if appropriate, sanitary facilities for food storage.

14.12 The Facility shall ensure that accommodation, where provided, is clean, safe, and meet the basic needs of the workers and shall include, at minimum, access to potable water; sanitary facilities for food storage; clean and hygienic washing and toilet facilities commensurate with the number and gender of workers employed;

properly maintained and clearly marked fire safety equipment and alarms; clearly marked, unlocked and unblocked emergency exits and escape routes; and access to adequate power supply and emergency lighting.

Fire safety, Emergency preparedness and Response

14.13 The Facility shall identify and assess emergency situations in the workplace and any company-provided accommodation, and work to prevent emergency situations by implementing appropriate plans and response procedures.

14.14 The Facility shall develop, communicate, and regularly test emergency response procedures and evacuation plans developed in collaboration with potentially affected stakeholder groups such as communities, workers and their representatives, and relevant agencies.

14.15 The Facility shall provide properly maintained and clearly marked fire safety equipment and alarms; clearly marked, unlocked and unblocked emergency exits and escape routes; and emergency lighting.

14.16 The Facility shall provide access to first-aid provisions and trained first aid personnel and establish procedures for transportation to local medical facilities in the case of a medical emergency.

Annexes

Annex A Acronyms

B	
BREEAM	Building Research Establishment Environmental Assessment Method: A sustainability assessment method for buildings.
C	
CO ₂	Carbon Dioxide: A greenhouse gas primarily emitted by burning fossil fuels.
E	
ESG	Environmental, Social, and Governance: A framework for evaluating a company's commitment to sustainability, ethical practices, and corporate governance.
G	
GHG	Greenhouse Gas: Gases like CO ₂ , methane (CH ₄), and nitrous oxide (N ₂ O) that contribute to global warming.
GHG Protocol	Greenhouse Gas Protocol: A global framework for measuring and managing greenhouse gas emissions.
I	
ILO	International Labour Organization: A UN agency that sets labour standards and promotes fair working conditions.
ISEAL	International Social and Environmental Accreditation and Labelling: An organization

	setting best practices for sustainability standards.
O	
OECD	Organisation for Economic Co-operation and Development: An international body setting economic and environmental policies.
OHS	Occupational Health and Safety: Standards and regulations for workplace health and safety.
S	
SDGs	Sustainable Development Goals: A set of 17 global goals established by the UN to promote sustainability and social well-being.
SSI	Solar Stewardship Initiative: An initiative focused on ensuring responsible ESG practices in the solar value chain.
U	
UNGP	UN Guiding Principles on Business and Human Rights: A framework for corporate responsibility regarding human rights.
W	
WRI	World Resources Institute: An organization focused on environmental sustainability and climate policy.
WBCSD	World Business Council for Sustainable Development: A global coalition of businesses promoting sustainability.

Annex B References

International Standards and Guidelines

- International Labour Organization (ILO) Conventions
 - ILO Forced Labour Convention, 1930 (No. 29)
 - ILO Abolition of Forced Labour Convention, 1957 (No. 105)
 - ILO Minimum Age Convention, 1973 (No. 138)
 - ILO Worst Forms of Child Labour Convention, 1999 (No. 182)
 - ILO Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87)
 - ILO Right to Organise and Collective Bargaining Convention, 1949 (No. 98)
 - ILO Equal Remuneration Convention, 1951 (No. 100)
 - ILO Discrimination (Employment and Occupation) Convention, 1958 (No. 111)
 - ILO Hours of Work (Industry) Convention, 1919 (No.1)
 - ILO Weekly Rest (Industry) Convention, 1921 (No. 14)
 - ILO Holidays with Pay Convention, 1970 (No. 132)
- ISEAL Code of Good Practice for Setting Social and Environmental Standards
- ISO 14001:2015 Environmental Management Systems and ISO 14044:2006 Life Cycle Assessment
- OECD Due Diligence Guidance for Responsible Business Conduct
- OECD Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas
- UNGPs
- UNGC
- WRI/WBCSD Greenhouse Gas Protocol Corporate Accounting and Reporting Standard

Environmental Conventions and Treaties

- Minamata Convention on Mercury
- Stockholm Convention on Persistent Organic Pollutants (POPs)
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal
- Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

Sustainability and Reporting Frameworks

- Sustainable Development Goals (SDGs) – United Nations
- Science-Based Targets Initiative (SBTi)
- Eco-Management and Audit Scheme (EMAS)
- Building Research Establishment Environmental Assessment Method (BREEAM)

Responsible Sourcing and Supply Chain Management

- Know Your Counterparty (KYC) Checks
- Roundtable on Sustainable Palm Oil (RSPO) Certification
- Responsible Business Alliance (RBA) Code of Conduct

Carbon and Energy Regulations

- European Union Emissions Trading System (EU ETS)
- Carbon Border Adjustment Mechanism (CBAM)

Biodiversity and Conservation Standards

- No Net Loss of Biodiversity Principle
- Free, Prior, and Informed Consent (FPIC)

Annex C Glossary

A	
Anti-Corruption and Bribery	Policies and practices that prohibit unethical practices such as bribery, fraud, extortion, and embezzlement to ensure transparency and integrity in business operations.
Applicability	The scope of an ESG standard's enforcement, specifying which organizations, facilities, or industries must comply.
B	
Biodiversity Management	The strategic approach to protecting and sustaining ecosystems by preventing biodiversity loss, avoiding deforestation, and ensuring that industrial activities do not negatively impact natural habitats.

Business Ethics	The moral principles guiding an organization's policies, operations, and decision-making to ensure responsible and fair business practices.
Business Integrity	The adherence to ethical, legal, and transparent business practices, including compliance with international regulations and avoiding corruption.
C	
Carbon Emissions (GHG Emissions)	The release of greenhouse gases, including carbon dioxide (CO ₂), methane (CH ₄), and nitrous oxide (N ₂ O), which contribute to global warming and climate change.
Certification	The process through which a facility or organization is formally recognized for meeting specific environmental, social, and governance (ESG) criteria.
Child Labour	The employment of individuals under the legally defined minimum working age, as specified by international conventions such as the ILO Minimum Age Convention, 1973 (No. 138).
Circular Economy	A system aimed at eliminating waste by keeping resources in use for as long as possible through recycling, reusing, and refurbishing products and materials.
Circularity	The design and implementation of sustainable product life cycles that prioritize resource efficiency, waste reduction, and material recovery.
Community Development	Programs and initiatives aimed at improving the economic, social, and environmental well-being of local communities affected by industrial operations.

Corporate Governance	The system by which companies are directed and controlled, ensuring accountability, fairness, and transparency in decision-making processes.
D	
Due Diligence	A risk management process used to identify, prevent, mitigate, and account for adverse impacts on human rights, the environment, and ethical business practices.
Disciplinary Practices & Harassment	Policies that ensure employees are treated with dignity and respect, free from harassment, intimidation, and abusive disciplinary actions.
E	
Employment Terms	The conditions under which employees work, including wages, benefits, working hours, contracts, and job security.
Energy Transition	The global shift from fossil fuel-based energy systems to renewable and low-carbon energy sources such as solar and wind power.
Environmental, Social, and Governance (ESG)	A framework for evaluating a company's commitment to sustainability, ethical practices, and corporate governance.
Ethical Recruitment	The hiring process that ensures workers are employed voluntarily, without coercion, deception, or excessive recruitment fees.
F	
Freedom of Association	The right of workers to form and join trade unions or other worker organizations to negotiate working conditions collectively.
G	

Greenhouse Gas (GHG) Protocol	A standardized framework for measuring and reporting greenhouse gas emissions at the corporate, facility, and supply chain levels.
Greenhouse Gas Emissions Management	Strategies to reduce and mitigate the environmental impact of industrial activities by limiting carbon dioxide and other greenhouse gas emissions.
Grievance Mechanism	A system established by companies to allow employees, suppliers, and affected communities to raise concerns and seek redress for violations of rights or ESG commitments.
H	
Human Rights Due Diligence (HRDD)	A structured approach for businesses to identify, assess, and address risks related to human rights violations, including forced labour, child labour, and discrimination.
Human Rights Policy	A company's commitment to respecting and upholding internationally recognized human rights principles, as guided by frameworks like the UN Guiding Principles on Business and Human Rights.
Hazardous Waste	Waste materials that pose a risk to human health or the environment, including toxic, flammable, corrosive, and reactive substances.
I	
ILO Conventions	International labour standards set by the International Labour Organization (ILO) to ensure fair wages, safe working conditions, and protection of workers' rights.

Indigenous Peoples' Rights	Legal and ethical principles ensuring that Indigenous communities have control over their land, resources, and cultural heritage, including the principle of Free, Prior, and Informed Consent (FPIC).
L	
Labour Rights	The fundamental rights of workers, including fair wages, freedom from discrimination, safe working conditions, and the ability to collectively bargain.
Living Wage	The minimum income required for a worker to meet their basic needs, including food, housing, healthcare, and education.
M	
Management Systems	Structured processes and policies that organizations implement to ensure compliance with ESG requirements and continuous improvement in sustainability practices.
Material Sourcing	The process of procuring raw materials in a way that is ethical, environmentally sustainable, and socially responsible.
N	
Non-Discrimination Policy	A workplace policy that ensures equal treatment of all employees, regardless of race, gender, religion, age, or other protected characteristics.
No Net-Loss of Biodiversity	A conservation principle requiring that any biodiversity loss caused by industrial activities is offset through restoration efforts.
O	

Occupational Health and Safety (OHS)	Regulations and practices aimed at protecting workers from hazards and ensuring a safe working environment.
P	
Pollution Management	The process of identifying, controlling, and reducing emissions and pollutants that negatively impact human health and the environment.
Policy Commitment	A company's formal statement outlining its ESG principles and the measures it takes to uphold them.
R	
Responsible Sourcing	The practice of procuring materials and goods in a manner that prioritizes ethical labour conditions, environmental sustainability, and transparency.
Risk and Impact Assessments	Evaluations conducted to identify potential risks to workers, communities, and the environment, and to develop strategies for mitigating negative impacts.
S	
Scope 1, 2, and 3 Emissions	<p>Categories of greenhouse gas emissions:</p> <ul style="list-style-type: none"> • Scope 1: Direct emissions from owned or controlled sources. • Scope 2: Indirect emissions from purchased electricity, steam, heating, and cooling. • Scope 3: Indirect emissions from the entire value chain, including suppliers and customers.
Stakeholder Engagement	The process of consulting and collaborating with individuals, communities, and

	organizations affected by or interested in a company's operations.
Supply Chain Traceability	The ability to track materials and products through each stage of production, ensuring ethical sourcing and compliance with ESG standards.
Sustainability Reporting	The practice of publicly disclosing a company's ESG performance, risks, and impacts in accordance with international reporting frameworks.
T	
Traceability	The ability to verify the origins, production, and movement of materials through the supply chain to ensure ethical sourcing and transparency.
Transparency	The principle of open and honest communication about corporate policies, decisions, and impacts on society and the environment.
W	
Waste Management	The strategies and systems used to minimize, recycle, and safely dispose of waste materials generated by industrial activities.
Water Management	The conservation and responsible use of water resources to ensure sustainability and prevent depletion or pollution.
Working Hours Compliance	Adherence to international and national laws regarding standard work hours, overtime limits, and mandatory rest periods.