# Annex A: Glossary of Terms and Acronyms

1. **Acronym**

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| **Acronym** | **Full Form** |
| **AML** | Anti-Money Laundering |
| **BCP** | Business Continuity Planning |
| **BRCC** | Board Risk and Compliance Committee |
| **CRS** | Climate Resilience Strategy |
| **DRP** | Disaster Recovery Planning |
| **ERM** | Enterprise Risk Management |
| **ESDD** | Environmental and Social Due Diligence |
| **ESG** | Environmental, Social, and Governance |
| **ESRM** | Environmental and Social Risk Management |
| **GHG** | Greenhouse Gas |
| **GRI** | Global Reporting Initiative |
| **ICAAP** | Internal Capital Adequacy Assessment Process |
| **ICMA SLBP** | International Capital Market Association Sustainability-Linked Bond Principles |
| **IFRS** | International Financial Reporting Standards |
| **IFRS S1** | General Requirements for Disclosure of Sustainability-related Financial Information |
| **IFRS S2** | Climate-related Disclosures |
| **KPI** | Key Performance Indicator |
| **ORMC** | Operational Risk Management Committee |
| **PLR** | Policy-Level Recommendation |
| **PSX** | Pakistan Stock Exchange |
| **SBP** | State Bank of Pakistan |
| **SDGs** | Sustainable Development Goals |
| **SECP** | Securities and Exchange Commission of Pakistan |
| **SMF** | Senior Management Function |
| **SOP** | Standard Operating Procedure |
| **TCFD** | Task Force on Climate-related Financial Disclosures |
| **UNEP FI PRB** | United Nations Environment Programme Finance Initiative – Principles for Responsible Banking |

1. **Glossary**

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| --- | --- |
| **Term** | **Definition** |
| **AML** | Anti-Money Laundering—regulatory practices that are increasingly integrated into ESG frameworks due to overlap in governance and ethical risk areas. |
| **Centralized ESG Data Platform** | A unified digital tool enabling departments across a bank to collect, monitor, and report ESG data for decision-making and compliance. |
| **Climate Resilience Strategy (CRS)** | A roadmap designed to ensure an organization’s strategic, operational, and risk management functions are adaptive to climate-related shocks and long-term changes. |
| **Disaster Recovery Planning (DRP)** | Strategic protocols to restore business operations after catastrophic events, including those triggered by climate-related disasters. ESG frameworks increasingly require climate-specific DRP integration. |
| **Enterprise Risk Management (ERM)** | A holistic approach to managing all risks (financial, operational, environmental, etc.) within an organization, integrating ESG and climate risks into traditional frameworks. |
| **Environmental and Social Due Diligence (ESDD)** | A mandatory credit screening process assessing environmental and social risks before approving financing, aligned with ESRM protocols. |
| **Environmental and Social Risk Management (ESRM)** | A formalized system within banks to assess, mitigate, and report environmental and social risks tied to financial activities. |
| **Green Banking** | Banking operations that consciously aim to reduce environmental impact and promote sustainability through financing, internal operations, and product design. |
| **Green Finance** | Investments and financial services that support environmentally sustainable projects, including renewable energy, sustainable agriculture, and climate-resilient infrastructure. |
| **Green IT** | Environmentally sustainable computing that reduces carbon footprint through energy-efficient systems, data centers, and sustainable procurement practices. |
| **GRI** | Global Reporting Initiative—a globally recognized standard for sustainability reporting, helping organizations disclose impacts on economy, environment, and people in a structured manner. |
| **ICAAP** | Internal Capital Adequacy Assessment Process used by banks to evaluate capital needs relative to risk exposure, including ESG and climate-related risks. |
| **ICMA SLBP** | The International Capital Market Association’s Sustainability-Linked Bond Principles, which guide issues on structuring bonds tied to sustainability performance targets, ensuring transparency, reporting, and verification. |
| **IFRS S1** | The General Requirements for Disclosure of Sustainability-related Financial Information, issued by the International Sustainability Standards Board (ISSB), setting foundational rules for reporting ESG risks and opportunities. |
| **IFRS S2** | Climate-related Disclosures standard by ISSB. It focuses on governance, strategy, risk management, and metrics/targets related to climate change and is aligned with TCFD recommendations. |
| **Integrated ESG Framework** | A structured approach to embed ESG principles across governance, risk, credit, data, and reporting within a financial institution, ensuring internal alignment and regulatory compliance. |
| **Materiality Assessment** | A method to identify and prioritize ESG topics that are significant to stakeholders and impactful to the business, guiding disclosures and strategy. |
| **Pakistan Green Taxonomy (Draft 2025)** | A draft classification system developed for identifying environmentally sustainable economic activities in Pakistan. It helps in aligning green finance, reducing greenwashing, and standardizing disclosures. |
| **Physical Risk** | Risks arising from the physical impacts of climate change, including extreme weather events, rising sea levels, and chronic changes in temperature or precipitation. |
| **PSX ESG Primer** | A publication by the Pakistan Stock Exchange outlining ESG reporting expectations for listed companies. It aligns with global standards and guides firms on disclosures, ESG risk assessment, and stakeholder communication. |
| **SBP ESRM Manual (2022)** | A mandatory framework that guides banks in implementing Environmental and Social Risk Management practices across credit and investment portfolios. It outlines due diligence requirements, sector screening, and reporting for sustainable finance decisions. |
| **SBP Green Banking Guidelines (2017)** | Issued by the State Bank of Pakistan to promote environmentally responsible banking. These guidelines encourage financial institutions to adopt green policies, integrate ESG risk assessments, and reduce environmental impact through internal operations and lending activities. |
| **SECP Green Bond Guidelines** | A regulatory framework issued by the Securities and Exchange Commission of Pakistan to enable the issuance of green bonds. It includes standards for use of proceeds, project eligibility, third-party assurance, and post-issuance reporting. |
| **Stakeholder Engagement** | Structured interaction with internal and external stakeholders (e.g., regulators, investors, customers, employees) to ensure alignment of ESG policies and reporting with expectations. |
| **Sustainability Reporting** | Regular, transparent disclosure of an entity’s ESG performance, risks, and governance in accordance with international standards like IFRS, GRI, and SECP guidelines. |
| **Taxonomy Tagging** | The classification of loans, investments, or products as ‘green’, ‘amber’, or ‘red’ according to regulatory taxonomies such as the Pakistan Green Taxonomy. |
| **Transition Risk** | Risks resulting from the policy, legal, technological, or market shifts required to move toward a low-carbon economy. Includes regulatory changes and shifting investor sentiment. |
| **UN SDGs** | The United Nations Sustainable Development Goals—17 global goals for social, environmental, and economic sustainability by 2030. They serve as a strategic lens for corporate ESG alignment. |
| **UNEP FI PRB** | United Nations Environment Programme Finance Initiative’s Principles for Responsible Banking—a global framework that aligns banking practices with the SDGs and Paris Agreement. |

# Annex C: Sample ESG Policies and Procedures

| **Sr. No.** | **ESG Category** | **Policy & Approach - Name** | **Display Name** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | Environment | Product stewardship policy | Stewardship Policy | Policies promoting sustainable product design, manufacturing, and disposal to minimize environmental impacts. |
| 2 | Environment | Carbon Footprint policy | Carbon Policy | Policies to track, measure, and reduce the company's carbon footprint through efficiency and sustainable practices. |
| 3 | Environment | Water management policy | Water Policy | Policies to manage water resources sustainably, reducing consumption and addressing water-related impacts. |
| 4 | Environment | Waste reduction policy | Waste Policy | Strategies to reduce waste generation and promote recycling or recovery in operations and supply chains. |
| 5 | Environment | Environmental policy | Environmental Policy | Policies addressing environmental management, ensuring sustainable practices and minimizing negative environmental impacts. |
| 6 | Environment | Energy and carbon management policy | Energy & Carbon Policy | Policies integrating energy management with carbon reduction strategies to ensure sustainability and compliance. |
| 7 | Environment | Energy efficiency policy | Energy Efficiency Policy | Efforts to improve energy efficiency, reducing energy consumption and associated environmental impacts. |
| 8 | Governance | Freedom of association policy | Freedom of Association Policy | Corporate commitment to employeesâ€™ right to organize and join labor unions freely. |
| 9 | Governance | Governance policy | Governance Approach | Governance Policy |
| 10 | Governance | Whistleblowing policy | Whistleblowing | Policies allowing employees to report unethical or unlawful behavior anonymously without retaliation. |
| 11 | Governance | Remuneration policy - members & senior executives | Executive Remuneration Policy | Policies defining remuneration for governing body members and senior executives, aligning compensation with organizational objectives. |
| 12 | Governance | Marketing & Advertisement Policy | Marketing Policy | Guidelines for responsible marketing and advertising practices, ensuring truthful and ethical communication. |
| 13 | Governance | Approach to stakeholder engagement | Stakeholder Engagement Approach | Efforts to engage stakeholders, ensuring their input and concerns are incorporated into decision-making and operations. |
| 14 | Governance | Approach to engagement with tax authorities | Tax Authority Engagement | Approaches to engaging with tax authorities, ensuring transparency and cooperative compliance. |
| 15 | Governance | Anti-corruption policy | Anti-Corruption Policy | Guidelines to prevent corruption, ensuring ethical practices and compliance within operations. |
| 16 | Governance | Procurement policy & practice | Procurement Policy & Practice | Procurement policies outlining ethical and sustainable sourcing practices, ensuring compliance with company values. |
| 17 | Social | Social Policy | Social Policy | Social Policy |
| 18 | Social | Sexual harassment policy | Harassment Policy | Policies preventing and addressing sexual harassment, ensuring a safe and respectful workplace. |
| 19 | Social | Animal welfare policy | Animal Welfare Policy | Guidelines ensuring animal welfare across operations, including ethical treatment and habitat protection. |
| 20 | Social | Health and safety policy | Health & Safety Policy | Measures ensuring the health and safety of employees and contractors in all operational environments. |
| 21 | Social | Equal pay policy | Equal Pay Policy | Policies ensuring gender pay equity, promoting fairness across all roles and levels. |
| 22 | Social | Diversity and inclusion policy | Diversity Policy | Policies promoting diversity and inclusion, ensuring equitable opportunities for underrepresented groups. |
| 23 | Social | Data privacy policy | Data Privacy Policy | Measures to protect customer and employee data, ensuring confidentiality and regulatory compliance. |
| 24 | Social | Community engagement policy | Community Engagement Policy | Engagement efforts aimed at fostering trust and collaboration within local communities. |
| 25 | Social | Child labor policy | Child Labor Policy | Corporate guidelines to prevent child labor and ensure ethical practices. |
| 26 | Social | Human rights policy | Human Rights Policy | Commitment to upholding human rights within operations and the supply chain, addressing issues like forced labor. |
| 27 | Social | Workplace policy | Workplace Policy | Guidelines promoting fair treatment, ethical practices, and compliance within the workplace. |
| 28 |  | Supplier code of conduct policy | Supplier Conduct Policy | Standards for suppliers, outlining expectations for ethical, environmental, and social compliance. |

# Annex D: Template for ESG Reporting and Disclosures

This unified ESG reporting and disclosure template consolidates key requirements from leading frameworks including SBP Green Banking Guidelines, SBP ESRM Manual, SECP Green Bond Guidelines, ICMA SLBP, IFRS S1 & S2, Pakistan Green Taxonomy, GRI, UN SDGs, UNEP FI PRB, and internal frameworks such as ICAAP, DRP, ERM, and AML. The aim is to streamline ESG reporting for alignment with regulatory, investor, and global sustainability expectations.

Section 1: Governance and Oversight

• Describe board-level oversight on ESG matters and frequency of review.

• Detail ESG roles and responsibilities across management.

Section 2: Strategy and Materiality

• Outline ESG strategy aligned with business goals and SDGs.

• Summarize the materiality assessment process and key topics identified.

Section 3: Climate and Environmental Risks

• Identify climate-related risks and opportunities (transition & physical).

• Present scenario analysis approach and outcomes.

• Detail alignment with Pakistan Green Taxonomy.

Section 4: ESG Metrics and KPIs

• Disclose GHG emissions (Scope 1, 2, 3) and energy use.

• Report water, waste, biodiversity, and circular economy indicators.

• Present ESG KPIs relevant to business model.

Section 5: Social Responsibility

• Provide data on labor rights, health & safety, and diversity metrics.

• Describe stakeholder engagement efforts and grievance mechanisms.

Section 6: Sustainable Finance and Instruments

• Disclose green/sustainability-linked bond issuances and proceeds use.

• Detail alignment with ICMA SLBP and SECP Green Bond Guidelines.

Section 7: Assurance and Reporting Standards

• Mention assurance provider and level of ESG data assurance.

• Indicate alignment with GRI, IFRS S1/S2, or other reporting standards.

Section 8: Risk Management Integration

• Describe integration of ESG risks in ICAAP, ERM, and DRP frameworks.

• Highlight ESG stress testing practices and contingency planning.

Section 9: Compliance and Ethics

• Report AML procedures related to ESG, such as greenwashing risk management.

• Provide updates on ESG-related compliance audits or investigations.

# Annex E: Pakistan Green Taxonomy Detailed Classification

| **Sr. No.** | **Sector / Department** | **Key Activity / Sub-sector** | **Codes (ISIC/PSIC)** | **Relevant Laws & Regulations** | **Key Policies / Frameworks / Standards** |
| --- | --- | --- | --- | --- | --- |
| 1 | **Manufacturing** | Manufacture of basic chemicals | C2011 | PEPA 1997, NEQS, Punjab Environmental Quality Standards | ISO 14067/14064, IFC EHS, Chain-of-Custody, National Energy Efficiency and Conservation Authority (NEECA) ratings |
| 2 | Manufacture of cement | C2394 | PEPA 1997, NEQS, Sindh Waste to Energy Act | ISO 14067, Paris Agreement, NEECA ratings |
| 3 | Manufacture of iron and steel | C2410 | PEPA 1997, NEQS | ISO 14067, Circular Economy Guidelines |
| 4 | Manufacture of aluminum | C2420 | PEPA 1997, NEQS | ISO 14067, Circular Economy Guidelines |
| 5 | Manufacture of plastics in primary form | C2013 | PEPA 1997, NEQS | ISO 14067, Circular Economy Guidelines |
| 6 | Manufacture of batteries | C2720 | PEPA 1997, Basel Convention | ISO 14001, Circular Economy Guidelines |
| 7 | Manufacture of renewable energy technologies | C2710, C2720, C3510 | PEPA 1997 | NEECA ratings, ISO 14001 |
| 8 | Manufacture of low-carbon transport technologies | C2811, C29, C30 | PEPA 1997, Motor Vehicle Rules | NEECA ratings, National EV Policy |
| 9 | Manufacture of energy-efficient equipment for buildings | C2740, C2750 | PEPA 1997 | NEECA ratings, ECBC 2023 |
| 10 | Manufacture of other low-carbon technologies | N.A. | PEPA 1997 | NEECA ratings |
| 11 | Manufacture of textiles with green certification | 1311, 1312, 1313, 1391, 1393, 1399, 1410, 1430, 1520 | PEPA 1997 | Better Cotton Initiative, Higg Index, Oeko Tex |
| 12 | Manufacture of bricks | C2392 | PEPA 1997, NEQS | Zig-zag Kiln Guidelines, NEECA ratings |
| 13 | Research & Development/Professional Services | N.A. | PEPA 1997 | IFC EHS, ISO 14001 |
| 14 | General manufacturing guidance | N.A. | PEPA 1997 | NEECA ratings, Circular Economy Guidelines |
| 15 | **Transportation** | Urban and rural public transport | H4911 | PEPA 1997, Motor Vehicle Rules | National Transport Policy, National EV Policy, Euro V/VI Standards |
| 16 | Micromobility | H4922 | PEPA 1997 | National Transport Policy |
| 17 | Interurban transport (cargo & passengers) | H4921 | PEPA 1997 | National Transport Policy |
| 18 | Low-carbon transport infrastructure | H52 | PEPA 1997 | National Transport Policy, Circular Economy Guidelines |
| 19 | Sea and coastal water transport | H501 | PEPA 1997, IMO Regulations | IMO GHG Strategy, Hong Kong Convention |
| 20 | Inland water transport | H502 | PEPA 1997, IMO Regulations | IMO GHG Strategy |
| 21 | Freight and passenger air transport | H5110, H5120, H51 | PEPA 1997, ICAO Rules | ICAO CORSIA, National Aviation Policy |
| 22 | Research & Development/Professional Services | N.A. | PEPA 1997 | National Transport Policy |
| 23 | **Energy** | Solar PV and CSP | D3510 | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001, Pakistan Renewable Energy Policy |
| 24 | Wind power | D3510 | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001 |
| 25 | Hydropower | D3510 | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001 |
| 26 | Geothermal energy | D3510 | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001 |
| 27 | Bioenergy | D3510 | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001 |
| 28 | Ocean energy | D3510 | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001 |
| 29 | Hydrogen or derivatives | D3510 | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001 |
| 30 | Transmission & Distribution | D3510 | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001 |
| 31 | Renewable/Low-carbon gas transmission & distribution | D3520 | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001 |
| 32 | Energy storage | N.A. | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001 |
| 33 | Low-carbon hydrogen production | N.A. | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001 |
| 34 | Waste heat for heating/cooling | D3530 | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001 |
| 35 | District heating/cooling systems | D3530 | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001 |
| 36 | Research & Development/Professional Services | N.A. | National Electricity Policy, NEQS, PEPA 1997 | ECBC 2023, IFC EHS, ISO 14001 |
| 37 | **Construction** | Construction of new buildings | F4100 | ECBC 2023, Green Building Code, PEPA 1997 | LEED, EDGE, HQE, National Sustainable Construction Standards |
| 38 | Renovation of existing buildings | F4100, F4330 | ECBC 2023, Green Building Code, PEPA 1997 | LEED, EDGE, HQE |
| 39 | Individual measures and professional services | F4321, F4322, F4329 | ECBC 2023, Green Building Code, PEPA 1997 | LEED, EDGE, HQE |
| 40 | Acquisition/ownership of buildings | L6810 | ECBC 2023, Green Building Code, PEPA 1997 | LEED, EDGE, HQE |
| 41 | **Water and Waste** | Collection & transportation of non-hazardous waste | E3811 | PEPA 1997, NEQS, Sindh Waste to Energy Act | WHO Drinking Water Guidelines, National Bio-Safety Guidelines |
| 42 | Composting of biowaste | E3821 | PEPA 1997, NEQS, Provincial Fertilizer Acts | Organic Fertilizer Standards, National Bio-Safety Guidelines |
| 43 | Anaerobic digestion of biowaste | E3821 | PEPA 1997, NEQS, Provincial Fertilizer Acts | Organic Fertilizer Standards, National Bio-Safety Guidelines |
| 44 | Landfill gas capture & use | E3821, E3822 | PEPA 1997, NEQS | International Best Practices Guide for Landfill Gas |
| 45 | Material recovery facilities | E3830 | PEPA 1997, NEQS | Circular Economy Guidelines |
| 46 | Research & Development/Professional Services | N.A. | PEPA 1997, NEQS | Circular Economy Guidelines |
| 47 | Water collection, distribution, treatment | E3600 | PEPA 1997, National Water Policy, Provincial Water Acts | WHO Drinking Water Guidelines, National Water Policy |
| 48 | Sanitary sewer systems | E3700 | PEPA 1997, National Water Policy | National Sanitation Policy |
| 49 | Wastewater treatment systems | E3700 | PEPA 1997, National Water Policy | National Sanitation Policy |
| 50 | Investments for efficient water use | E3600 | PEPA 1997, National Water Policy | National Water Policy, Water Accord |
| 51 | **ICT** | Data processing, storage, transmission, management | J6311 | PEPA 1997, E-waste Management SOPs, PTA Regulations | National Digital Policy, Cloud First Policy, ISO 14001, PUE Standards |
| 52 | GHG-related solutions and software | J6201, J6202 | PEPA 1997, PTA Regulations | National Digital Policy, ISO 14001 |
| 53 | **Tourism** | Ecotourism investments | N.A. | PEPA 1997, National Parks Regulations, GSTC | GSTC Industry Criteria, National Ecotourism Policy |
| 54 | **Agriculture, Forestry, Fishing** | Perennial and non-perennial crops | A011, A012 | National Forest Policy, National Water Policy, Provincial Fertilizer Acts | Sustainable Rice Platform, Better Cotton Initiative, Global GAP, FSC, PEFC, REDD+, National Biodiversity Strategy |
| 55 | Animal production | A014 | National Forest Policy, National Water Policy, Provincial Fertilizer Acts | Global GAP, SPN, National Biodiversity Strategy |
| 56 | Sustainable forest management | A0200, A0210 | National Forest Policy, National Climate Change Policy | FSC, PEFC, Rainforest Alliance, National Forest Monitoring System |
| 57 | Forestry plantation | A0200, A0210 | National Forest Policy, National Climate Change Policy | FSC, PEFC, Rainforest Alliance |
| 58 | Conservation, restoration, maintenance of natural forests | A0200, A0210 | National Forest Policy, National Climate Change Policy | FSC, PEFC, Rainforest Alliance, REDD+ |
| 59 | Sustainable aquaculture production | A031 | National Fisheries Policy, Provincial Fisheries Acts | Aquaculture Stewardship Council, Global GAP |
| 60 | Sustainable fishing production | A032 | National Fisheries Policy, Provincial Fisheries Acts | Marine Stewardship Council, Fairtrade Fisheries Standard |

| **Sr. No.** | **Sector / Department** | **Key Activity / Sub-sector** | **Codes (ISIC/PSIC)** | **Relevant Laws & Regulations** | **Key Policies / Frameworks / Standards** |
| --- | --- | --- | --- | --- | --- |
| 1 | **Water** | Climate-resilient water supply infrastructure | E3600 | PEPA 1997, National Water Policy, Provincial Water Acts | National Water Policy, National Adaptation Plan, WHO Drinking Water Guidelines |
| 2 | Flood management and drainage systems | E3700 | PEPA 1997, Provincial Irrigation Acts | National Flood Response Plan, National Disaster Risk Management Framework |
| 3 | Climate-resilient irrigation systems | A012 | PEPA 1997, Provincial Irrigation Acts | National Water Policy, Climate-Smart Agriculture Guidelines |
| 4 | Drought management and water conservation | E3600 | PEPA 1997, National Water Policy | National Drought Policy, National Adaptation Plan |
| 5 | Wetland and watershed restoration | E3600, A0210 | PEPA 1997, Ramsar Convention, Provincial Forest Acts | Ramsar Convention, National Wetlands Policy, National Biodiversity Strategy |
| 6 | **Transportation** | Climate-resilient Road and bridge infrastructure | F4210, F4220 | PEPA 1997, National Highway Authority Act | National Transport Policy, National Adaptation Plan |
| 7 | Flood-proofing of transport networks | F4210, F4220 | PEPA 1997, National Highway Authority Act | National Disaster Risk Management Framework |
| 8 | **ICT** | Climate risk early warning systems | J6201, J6202 | PEPA 1997, PTA Regulations | National Digital Policy, National Disaster Risk Management Framework |
| 9 | Remote sensing and climate data management | J6201, J6202 | PEPA 1997, PTA Regulations | National Adaptation Plan, National Digital Policy |
| 10 | **Construction** | Climate-resilient building design | F4100 | ECBC 2023, Green Building Code, PEPA 1997 | LEED, EDGE, National Sustainable Construction Standards, National Adaptation Plan |
| 11 | Flood- and earthquake-resistant infrastructure | F4100, F4290 | Building Codes of Pakistan, PEPA 1997 | National Disaster Risk Management Framework, National Building Code |
| 12 | Retrofitting for climate adaptation | F4330 | ECBC 2023, Green Building Code | National Adaptation Plan, National Building Code |
| 13 | **Disaster Risk Management** | Emergency response infrastructure | O8425 | National Disaster Management Act, PEPA 1997 | National Disaster Risk Management Framework, National Adaptation Plan |
| 14 | Early warning and evacuation systems | O8425 | National Disaster Management Act | National Disaster Risk Management Framework |
| 15 | Flood barriers and embankments | F4290 | National Disaster Management Act | National Flood Response Plan |
| 16 | Risk mapping and vulnerability assessment | O8412 | National Disaster Management Act | National Adaptation Plan, National Disaster Risk Management Framework |
| 17 | **Manufacturing** | Production of climate-resilient materials (e.g., flood-resistant cement, water-saving equipment) | C2394, C2740 | PEPA 1997, NEQS | NEECA ratings, ECBC 2023, National Adaptation Plan |
| 18 | **Energy** | Climate-resilient energy infrastructure | D3510 | National Electricity Policy, NEQS, PEPA 1997 | National Adaptation Plan, ECBC 2023 |
| 19 | **Waste** | Flood- and disaster-resilient waste management systems | E3811, E3821 | PEPA 1997, NEQS, Sindh Waste to Energy Act | National Adaptation Plan, National Sanitation Policy |
| 20 | **Agriculture, Forestry, Fishing** | Climate-smart agriculture (drought/flood-tolerant crops, water management) | A011, A012 | National Agriculture Policy, Provincial Fertilizer Acts | Climate-Smart Agriculture Guidelines, National Adaptation Plan, Sustainable Rice Platform |
| 21 | Sustainable forest management for adaptation | A0200, A0210 | National Forest Policy, Provincial Forest Acts | REDD+, National Biodiversity Strategy, National Adaptation Plan |
| 22 | Climate-resilient fisheries and aquaculture | A031, A032 | National Fisheries Policy, Provincial Fisheries Acts | Aquaculture Stewardship Council, National Adaptation Plan |

# Annex F: Summary of ICMA SLBP Requirements

| Sr. No. | SLBP Component | Description | Key Requirements | Examples / Notes |
| --- | --- | --- | --- | --- |
| 1 | Selection of KPIs | Identify relevant sustainability indicators linked to issuer’s strategy | - KPIs must be relevant, measurable, externally verifiable | Examples: GHG emissions, water usage, renewable energy %, employee diversity |
| 2 | - Material and quantifiable |
| 3 | - Reflect issuer’s sustainability strategy |
| 4 | Calibration of SPTs | Define ambitious, meaningful sustainability performance targets | - Targets must be time-bound and measurable | Science-Based Targets (SBTi), absolute or intensity-based targets |
| 5 | - Clear baseline and target dates |
| 6 | - Aligned with international/sectoral standards |
| 7 | Bond Characteristics | Financial/structural bond features linked to SPT achievement | - Coupon step-up or other financial incentives triggered by SPT achievement or failure | Creates financial motivation for issuer to meet targets |
| 8 | Reporting | Transparent, regular disclosure of KPI performance and progress | - At least annual reporting | Enhances transparency and investor confidence |
| 9 | - Publicly available |
| 10 | - Includes contextual info |
| 11 | - External assurance encouraged |
| 12 | Verification | Independent external verification of performance against SPTs | - Verification by qualified third party | Can be assurance, limited or reasonable assurance engagements |
| 13 | - Enhances credibility and market confidence |
| 14 | Additional Guidance & Updates | Recent clarifications and expanded guidance | - Inclusion of social KPIs | Updated in 2024-2025, consult ICMA official documents |
| 15 | - Guidance for sovereign issuers |
| 16 | - Illustrative KPIs Registry |
| 17 | Objectives & Benefits | Purpose and advantages of SLBs | - Promote continuous sustainability improvement | Mobilizes capital for sustainable development, ESG integration |
| 18 | - Flexibility for issuers |
| 19 | - Transparency for investors |
| 20 | Applicability | Scope of issuers and instruments | - Corporates, financial institutions, sovereigns | Broad applicability across sectors and instruments |
| 21 | - Bonds, loans, sukuk |

# Annex G: Climate Scenario Analysis Methodology Overview

**1. Introduction**

Climate scenario analysis is a strategic tool used by organizations to assess the resilience of their business models and strategies under a range of plausible future climate conditions. It supports understanding of both **transition risks** (policy, technology, market changes) and **physical risks** (acute and chronic climate impacts). The methodology aligns with recommendations from the **Paris Agreement** and is increasingly mandated or encouraged by regulators and investors globally.

The objective is not to predict the future but to explore potential impacts, identify vulnerabilities, and inform strategic decision-making under uncertainty.

**2. Core Principles**

* **Plausibility:** Scenarios must be scientifically credible and consistent with current climate science and policy trajectories.
* **Diversity:** Use multiple scenarios capturing a range of temperature pathways and risk types (e.g., 1.5°C net zero, 2°C, 3–4°C high emissions).
* **Quantification:** Translate scenario outcomes into financial and operational metrics (e.g., revenue impact, capital expenditure, asset impairment).
* **Transparency:** Clearly disclose assumptions, methodologies, and limitations.

**3. Major Scenario Frameworks**

Organizations typically select scenarios from established, peer-reviewed frameworks, including:

| **Framework** | **Use Case** | **Maintained By** |
| --- | --- | --- |
| **IEA Scenarios** (e.g., NZE, STEPS) | Energy transition pathways, sector-specific policy impacts | International Energy Agency |
| **NGFS Scenarios** | Macro-financial risk analysis integrating physical and transition risks | Network for Greening the Financial System |
| **IPCC SSP/RCP Frameworks** | Physical climate impacts and socioeconomic pathways | Intergovernmental Panel on Climate Change |
| **IAM Models (REMIND, GCAM, MESSAGE)** | Integrated assessment of climate-economy interactions | Various academic institutions |

**4. Climate Scenario Analysis Process**

The process typically involves the following steps:

1. **Governance Setup:** Embed scenario analysis within enterprise risk management and strategic planning. Assign board-level oversight and define stakeholder roles.
2. **Materiality Assessment:** Identify and prioritize climate-related risks and opportunities relevant to the organization.
3. **Scenario Selection and Definition:** Choose appropriate scenarios reflecting a range of climate futures and assumptions aligned with organizational exposures.
4. **Impact Evaluation:** Quantify potential effects on financials, operations, and strategy under each scenario. Assess sensitivities and vulnerabilities.
5. **Response Identification:** Develop strategic or operational adjustments to mitigate risks or capitalize on opportunities.
6. **Documentation and Disclosure:** Transparently report methodology, assumptions, results, and management actions to stakeholders.

**5. Analytical Tools and Techniques**

Organizations leverage a variety of digital tools and models to support scenario analysis, including:

* **Physical Risk Tools:** WRI Aqueduct, Climate Central, Four Twenty Seven – for asset-level exposure to floods, heatwaves, storms.
* **Transition Risk Tools:** Carbon Delta, Ortec Finance, PACTA – for policy, market, and technology transition impacts.
* **Integrated Platforms:** Cervest, ClimateIQ, S&P Climate Credit Analytics – combining physical and transition risks with financial metrics.

**6. Use Cases and Benefits**

* Enhances **strategic resilience** by preparing for a range of climate futures.
* Supports **regulatory compliance** with TCFD and emerging disclosure requirements.
* Improves **investor confidence** through transparent risk management.
* Facilitates **capital allocation** aligned with sustainability goals.

**References:**

* Task Force on Climate-related Financial Disclosures (TCFD) Guidance
* Network for Greening the Financial System (NGFS) Scenario Guide
* International Energy Agency (IEA) Climate Scenarios
* Intergovernmental Panel on Climate Change (IPCC) Assessment Reports
* Berkeley Group Climate Scenario Analysis Methodology (2024)
* ASuENE Blog on Climate Scenario Analysis (2025)

# Annex H: Sustainable Finance: Comprehensive Product Portfolio

**Green Loans**

* **Project Financing**: Dedicated funding for renewable energy, energy-efficient buildings, and sustainable infrastructure
* **Working Capital**: Support for businesses transitioning to sustainable operations and green technology adoption
* **Equipment Financing**: Funding for energy-efficient machinery, renewable energy systems, and clean technology equipment

**Green Bonds**

* **Issuance Standards**: Alignment with international green bond principles and certification requirements
* **Use of Proceeds**: Exclusive funding for projects meeting strict environmental criteria
* **Impact Reporting**: Regular disclosure of environmental outcomes and fund utilization

**Green Mortgages**

* **Energy-Efficient Housing**: Preferential rates for homes meeting energy efficiency standards
* **Green Building Incentives**: Additional benefits for LEED, BREEAM, or locally certified sustainable buildings
* **Renovation Support**: Financing for energy-efficient home improvements and renewable energy installations

**Sustainability-Linked Loans**

* **Performance Targets**: Interest rates tied to specific sustainability metrics (carbon reduction, energy efficiency, waste reduction)
* **Flexibility Options**: Adaptable terms based on achievement of predetermined ESG performance indicators
* **Monitoring Framework**: Regular assessment of sustainability performance against agreed benchmarks