ALTERNATE DEVELOPMENT SERVICES

TRAINING MANUAL

FOR TRAINERS

Pakistan's Textile and Sports Apparel Sector

Sustainability Compliance | ESG Reporting | Industrial Decarbonization

2026

www.alternate.org.pk

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List of Acronyms

Acronym	Full Form
ADS	Alternate Development Services
BSCI	Business Social Compliance Initiative
CDP	Carbon Disclosure Project
CEMS	Continuous Emission Monitoring Systems
CO2e	Carbon Dioxide Equivalent
CSR	Corporate Social Responsibility
CSRD	Corporate Sustainability Reporting Directive (EU)
CSDDD	Corporate Sustainability Due Diligence Directive
CTAP	Climate Transition Action Plan
EPM	Environmentally Preferred Material
ESRS	European Sustainability Reporting Standards
ESG	Environmental, Social, and Governance
ETP	Effluent Treatment Plant
GCF	Green Climate Fund
GHG	Greenhouse Gas
GRI	Global Reporting Initiative
GSP+	Generalized Scheme of Preferences Plus (EU-Pakistan trade)
IFRS	International Financial Reporting Standards
IFC	International Finance Corporation
ILO	International Labor Organization
IROs	Impacts, Risks, and Opportunities
ISSB	International Sustainability Standards Board
LCOE	Levelized Cost of Energy
MRV	Monitoring, Reporting, and Verification
NPV	Net Present Value
OHS	Occupational Health and Safety
POSH	Prevention of Sexual Harassment
rPET	Recycled Polyethylene Terephthalate (recycled polyester)
SBTi	Science Based Targets initiative
SECP	Securities and Exchange Commission of Pakistan
SMETA	Sedex Members Ethical Trade Audit
tCO2e	Tonnes of Carbon Dioxide Equivalent

UNIDO	United Nations Industrial Development Organization
ZDHC	Zero Discharge of Hazardous Chemicals

1. Introduction

This document from ADS encompasses a comprehensive, practitioner-oriented Training Manual for Trainers, designed to equip facilitators with the knowledge, tools, and structured content required to deliver high-impact capacity-building programmes for Pakistan's textile and sports apparel sector. Drawing on over a decade of ADS experience in curating articulated trainings and capacity-building initiatives, this manual synthesizes the core curriculum, activities, and assessments developed under the Industrial Decarbonization programme and the broader ADS sustainability competency series.

ADS (Alternate Development Services) is a research, advocacy, campaigning, and capacity-building organization based in Islamabad with deep experience in climate change, energy transition, environmental sustainability, and renewable energy uptake pathways. Over the past decade, ADS has supported evidence-based policy dialogue on renewable energy, industrial decarbonization, and equitable development in Pakistan, working with government bodies, industry associations, and private sector manufacturers to translate global sustainability frameworks into sector-specific, actionable programmes.

Why This Matters

Pakistan's textile sector contributes approximately 60% of total export earnings and employs over 40 million people directly and indirectly.

Global buyers including Nike, Adidas, and PUMA now mandate supplier-level ESG reporting, Scope 1-3 carbon inventories, and compliance with EU-driven frameworks including CSRD, CSDDD, and the EU Taxonomy.

Pakistan's CSR Act 2026 makes ESG reporting mandatory for qualifying companies, and SECP ESG Voluntary Disclosure Guidelines bridge toward mandatory audit and assurance by 2027-2029.

This manual is positioned as a cornerstone resource for sustainability preparedness and competitiveness in Pakistan's textile and sports apparel sector, enabling trainers to deliver structured, replicable programmes aligned with the highest international expectations.

The manual covers the full spectrum of sustainability knowledge required by compliance, sustainability, and marketing departments operating in Pakistan's export-oriented apparel sector: from the EU Green Deal and the Omnibus Package, through CSRD and GRI Standards, to carbon foot printing, decarbonization scenario planning, and industrial pollution management.

2. How to Use This Manual

This manual is designed as a modular, adaptable resource for trainers delivering corporate sustainability and ESG capacity-building programmes across Pakistan's textile and sports apparel sector. Each section is self-contained and can be adapted to the organizational context, time availability, and learner profile of a given cohort.

2.1 Intended Audiences

Department	Recommended Modules
Compliance and Legal Teams	EU Green Deal, CSRD, CSDDD, EU Taxonomy, Due Diligence
Sustainability and ESG Teams	GRI Masterclass, Double Materiality, Stakeholder Engagement, MRV
Marketing and Export Teams	Buyer Requirements Mapping, Green Premium, Competitive Positioning
Finance and Investment Teams	Climate Finance Fundamentals, Project Bankability, Financial Metrics
Operations and Production Teams	Decarbonization, Emission Identification, Pollution Management, Kaizen
Senior Management	Strategic Decision-Making, ESG Governance, Reporting Strategy

2.2 Replicability and Adaptability

All activities within this manual have been field-tested and are designed for replication across different organizational sizes and industry sub-sectors (garments, sports goods, footwear, knitwear, denim). Trainers are encouraged to adapt scenarios, factory profiles, and data examples to reflect the specific context of each training cohort.

- Activities can be delivered in 2-day intensive formats, single-day workshops, or modular half-day sessions.
- All templates and workbooks referenced are available on the ADS website for download and customization.
- Group sizes of 15-30 participants are optimal; however, activities can be scaled for cohorts of 8-30.

2.3 Competitive Alignment

This manual equips participating firms with the competitive skills aligned with global buyer expectations. Firms that successfully integrate the learning from this manual will be positioned to: negotiate Green Premium pricing of 3-8% per unit with international buyers; qualify for co-financing of renewable energy and effluent treatment infrastructure; transition from reactive compliance to proactive strategic partnership status with global brands; and meet the documentation requirements of GRI, CSRD/ESRS, IFRS S1/S2, CDP, and SBTi frameworks.

A guiding toolkit, including ESG reporting templates, materiality assessment workbooks, and buyer requirement mapping matrices, will be available on the ADS website at www.alternate.org.pk for ongoing trainer and participant support.

3. Trainer Competency Requirements

Trainers delivering programmes based on this manual should possess a combination of conceptual knowledge, practical expertise, and facilitation skills. The following competency areas represent the baseline required to deliver sessions with credibility and practical relevance to Pakistan's textile and sports apparel sector.

3.1 Core Knowledge Areas

Baseline Knowledge Requirements
ESG Frameworks: Thorough understanding of Environmental, Social, and Governance (ESG) principles, their commercial significance, and application within global apparel supply chains.
Sustainability Reporting Frameworks: Working knowledge of GRI Standards (especially GRI 1, 2, 3 and key Topic Standards), CSRD/ESRS, IFRS S1/S2 (ISSB), CDP disclosure requirements, and SBTi target-setting methodology.
EU Regulatory Architecture: Familiarity with the EU Green Deal, the Omnibus Package, CSRD, CSDDD, and EU Taxonomy as they pertain to non-EU suppliers in Pakistan's textile and apparel value chains.
Industrial Pollution Management: Understanding of industrial air quality challenges, pollutant mapping in apparel manufacturing, CEMS vs. low-cost sensor approaches, and Kaizen-based emission reduction methodologies.
Climate Finance Fundamentals: Familiarity with climate finance instruments (grants, loans, bonds, equity), project bankability criteria, key financial metrics (NPV, IRR, LCOE), and major climate finance providers including GCF, IFC, ADB, and UNIDO.
Carbon Footprinting: Competency in GHG Protocol-aligned Scope 1, 2, and 3 emission identification, emission factor selection and hierarchy (DEFRA, IPCC, Ecoinvent, national databases), and carbon footprint calculation methodology.
Pakistan Sector Context: Knowledge of the Sialkot sports goods cluster, Lahore and Faisalabad textile manufacturing ecosystems, GSP+ trade arrangement and its conditionality, Pakistan CSR Act 2026, and SECP ESG guidelines.

3.2 Facilitation Skills

- Ability to conduct participatory activities including role plays, group simulations, and data modeling exercises.
- Competency in debrief facilitation: drawing out participant insights, connecting practical exercises to conceptual frameworks, and managing group dynamics.
- Capacity to adapt content depth to mixed-expertise cohorts, ranging from technical sustainability managers to production floor supervisors.

- Fluency in relevant sector terminology and ability to communicate across compliance, finance, operations, and marketing functions.

3.3 Ongoing Support

A guiding toolkit will be available on the ADS website at www.alternate.org.pk. This toolkit includes session facilitation guides, updated emission factor databases, revised buyer requirement checklists, new regulatory summaries, and revised activity templates. Trainers are encouraged to review the toolkit prior to each programme delivery to ensure content reflects the latest regulatory developments.

4. Code of Conduct

All trainers delivering programmes under the ADS Training Manual are required to uphold the highest standards of professionalism, inclusivity, and ethical conduct. The following Code of Conduct applies to all training contexts, venues, and participant interactions.

4.1 Non-Discrimination Policy

In accordance with the articles 3, 8, 19(a), 25-27 and 37(e) of Constitution of Islamic Republic of Pakistan, this programme maintains a zero-tolerance policy for discrimination of any kind. Trainers and participants are required to engage with respect for all individuals regardless of:

- Race or ethnic background
- Gender identity or expression
- Province, district, or regional origin
- Religion, sect, or belief system
- Age, disability status, or socioeconomic background

Any act of discrimination, whether verbal, written, or behavioral, will result in immediate removal from the programme and referral to the organizing institution.

4.2 Prevention of Harassment

Harassment Policy

This programme operates under strict intolerance for all forms of harassment, including but not limited to sexual harassment, workplace bullying, and intimidation.

Pakistan's Prevention of Sexual Harassment at Workplace Act 2010 (POSH) applies to all training environments organized under ADS programmes.

A designated grievance mechanism is available: participants may report concerns confidentially to the programme coordinator at any time during or after the training.

Trainers are required to model professional conduct and create an environment in which all participants feel safe, respected, and empowered to participate fully.

Safe learning environments are non-negotiable: trainers must actively intervene if they observe any harassing or discriminatory behavior.

4.3 Inclusivity and Professional Standards

- Trainers must use inclusive language and actively encourage participation from all cohort members, including women, younger professionals, and those from smaller firms.
- The gender gap in Pakistan's apparel sector (women constitute 70% of stitchers yet under 5% of supervisory positions) should be acknowledged and addressed within training content as an ESG risk, not a social commentary.
- All training materials should be free of language that stereotypes, demeans, or marginalizes any group.
- Professionalism in all written and verbal communications is mandatory throughout programme delivery.

5. Content and Activities

The curriculum is structured across two thematic programme tracks, each containing multiple modules. The sequence below reflects the recommended delivery order, designed to build conceptual understanding before moving to practical application. Time allocations are indicative and may be adjusted based on cohort profile and session format.

5.1 Programme Track A: EU Regulatory Frameworks and Climate Finance

Day 1, Session 1: EU Green Deal and Omnibus Package Decoded

Module 1A 90 min	**EU Green Deal and Climate Neutrality Agenda** Key Topics: Introduction to the EU's 2050 climate neutrality objective; sustainability agenda's influence on global supply chains; ESG expectations flowing to non-EU suppliers via Tier 1 buyers. *Outputs: Participants understand the macro-regulatory driver behind all subsequent EU frameworks and can articulate why Pakistan's textile sector cannot operate in isolation from EU policy.*
Module 1B 60 min	**EU Omnibus Package: Simplification in Context** Key Topics: Omnibus Package objectives; modifications to CSRD, CSDDD, and EU Taxonomy timelines; scope reductions and their implications for supply chain information flows. *Outputs: Participants map which buyer requirements remain active despite Omnibus amendments and identify unchanged supply chain data obligations.*
Module 1C 75 min	**CSRD: Corporate Sustainability Reporting Directive** Key Topics: ESG disclosures under CSRD; double materiality concept; value-chain reporting; sustainability assurance requirements; ESRS technical standards; Omnibus timeline changes. *Outputs: Participants understand which CSRD disclosures cascade into supplier data requests and can articulate the difference between single and double materiality.*
Module 1D 60 min	**CSDDD: Corporate Sustainability Due Diligence Directive** Key Topics: Risk-based due diligence methodology; identifying, preventing, and mitigating human rights and environmental risks; Omnibus implementation amendments; supplier risk assessment protocols. *Outputs: Participants can conduct a basic supply chain risk identification exercise aligned with CSDDD requirements.*

Module 1E 45 min	**EU Taxonomy: Defining Sustainable Economic Activities** Key Topics: Six environmental objectives of the EU Taxonomy; Do No Significant Harm (DNSH) criteria; Technical Screening Criteria; influence on investment and financing decisions for Pakistan textile exports. *Outputs: Participants understand how EU Taxonomy-aligned investment decisions create opportunities and requirements for Pakistani suppliers.*

Module 1F 60 min	**Implications for Pakistan's Textile Sector** Key Topics: Synthesis of CSRD, CSDDD, and EU Taxonomy for textile suppliers; cross-functional sustainability management; GSP+ conditionality and trade risk; practical actions for sustainability preparedness. *Outputs: Participants develop a draft list of immediate actions their organization should take to respond to combined EU framework requirements.*

Session 1 Activities

Activity 1: EU Buyer Sustainability Audit Meeting (Role Play) | Time: 30 min

Objective: Apply Omnibus compliance knowledge in a realistic buyer-supplier scenario, practicing data negotiation and corrective action planning.

Setup & Instructions

Groups of 4: 2 participants play EU buyer sustainability team; 2 play Pakistani textile supplier management.

Scenario: EU buyer requests CSRD-related data as part of annual reporting. Supplier has partial data and must negotiate timelines, explain gaps, and propose a corrective action plan.

Materials: Role cards, Buyer Data Request Form template, Supplier Response Template.

Time allocation: 15 minutes role play, 15 minutes debrief.

Debrief Questions

Which data was hardest to provide and why?

What internal systems would your organization need to respond fully?

What was the buyer's reaction to partial compliance? What is a realistic response strategy?

Activity 2: Supply Chain Due Diligence under CSDDD (Risk Assessment) | Time: 30 min

Objective: Apply risk-based due diligence methodology to identify human rights and environmental risks within textile supply chains, and prioritize corrective actions.

Setup & Instructions

Groups of 4-5 acting as sustainability and compliance team of a European buyer.

Scenario A: Pakistani garment exporter with unauthorized subcontractor where excessive overtime, poor ventilation, inadequate wage records, unsafe chemical storage, and weak grievance mechanisms are identified.

Scenario B: Three suppliers with different risk profiles: prioritize where to focus limited due diligence resources.
Time allocation: 15 minutes group discussion, 15 minutes debrief.

Debrief Questions

Which supplier should be prioritized for investigation and why?
What indicators make a supplier high-risk?
What corrective actions should be implemented immediately?
How could stronger supplier management systems prevent such issues?

Activity 3: Compliance Cost or Competitive Advantage? (Strategic Decision-Making) | Time: 30 min

Objective: Assess how CSRD, CSDDD, and EU Taxonomy requirements collectively influence business strategy and whether sustainability compliance is a cost burden or strategic investment.

Setup & Instructions

Groups assume roles of senior management team: Finance Director, Export Manager, Sustainability Manager, Operations Head.

Scenario: Vertically integrated Pakistani textile company receives multiple sustainability-related requests from a European buyer across ESG performance data, due diligence, subcontractor disclosures, workforce records, environmental improvement plans, and circular economy evidence.

Time allocation: 15 minutes group discussion, 15 minutes plenary discussion.

Debrief Questions

What is the financial risk of non-compliance versus the cost of compliance?
Which department should own each sustainability requirement?
How would you present the business case for sustainability investment to your board?

Day 1, Session 2: Unlocking Climate Finance

Module 2A 45 min	**Climate Finance Fundamentals** Key Topics: Definition and scope of climate finance; connection to industrial sustainability and competitiveness; rising energy costs and water scarcity context; common barriers to accessing capital. *Outputs: Participants understand climate finance as a tool for sectoral transformation, not merely grant funding.*

Module 2B 60 min	**Types and Instruments of Climate Finance** Key Topics: Mitigation, adaptation, and transition finance categories; grants, loans, bonds, and equity financing instruments; advantages, limitations, and suitability of each instrument for textile projects. *Outputs: Participants can match a textile project type with the most appropriate financing instrument.*

Module 2C 45 min	**Project Bankability and Investment Readiness** Key Topics: Components of bankable projects: clear project scope, reliable baseline data, demonstrable financial returns, risk mitigation; NPV, IRR, Simple and Discounted Payback, LCOE; environmental and social co-benefits. *Outputs: Participants can evaluate a project's investment readiness against GCF and commercial lender criteria.*

Module 2D 45 min	**Sources of Climate Finance for Pakistan Textile Sector** Key Topics: Apparel Impact Institute (AII), EU SWITCH-Asia, UNIDO, IFC, GCF, SBP Green Banking; grant, technical assistance, blended finance, and commercial financing options. *Outputs: Participants identify at least 3 relevant financing sources for their organization's sustainability pipeline.*

Session 2 Activity

Activity 4: Climate Finance Project Assessment (Group Exercise) | Time: 30 min

Objective: Apply climate finance evaluation criteria to a realistic textile infrastructure project and recommend a financing structure.

Setup & Instructions

Scenario: A mid-sized denim manufacturer in Faisalabad is considering a PKR 200 million investment in a Zero Liquid Discharge (ZLD) wastewater treatment system combined with 3 MW rooftop solar PV.

Task: As a climate finance advisory team, assess the project against GCF evaluation criteria, identify the most appropriate financing instrument(s), and outline the key data required for a proposal.

Deliverable: 5-minute plenary presentation of financing recommendation.

Time allocation: 20 minutes group work, 10 minutes presentation.

Debrief Questions

What baseline data does this project need to be bankable?

Which financing instrument is most appropriate and why?

What environmental and social co-benefits strengthen the proposal?

5.2 Programme Track B: ESG Reporting, Decarbonization, and Pollution Management

Day 2, Session 1: GRI Standards Masterclass

Module 3A 60 min	**Introduction to GRI Standards and Reporting Principles**

	Key Topics: GRI framework structure: Universal Standards (GRI 1, 2, 3) and Topic Standards; reporting principles of accuracy, completeness, comparability, and transparency; GRI vs. CSRD/ESRS vs. IFRS S1/S2 positioning. *Outputs: Participants understand when to use GRI vs. other frameworks and why GRI remains the global baseline for impact-oriented reporting.*

Module 3B 90 min	**Double Materiality: GRI 3 and Material Topics** Key Topics: Double materiality concept: impacts on people/environment (impact materiality) and sustainability risks affecting financial value (financial materiality); identifying material topics; value chain scope including upstream suppliers and downstream stakeholders; alignment with ESRS. *Outputs: Participants complete a first-pass materiality identification for their own organization.*

Module 3C 60 min	**Stakeholder Engagement Methodology** Key Topics: Role of stakeholder engagement in materiality assessment; stakeholder identification and mapping; power/interest grid; engagement methods: surveys, interviews, focus groups, workshops, worker feedback; documentation and reporting requirements. *Outputs: Participants produce a stakeholder map for their organization with prioritized engagement approaches.*

Module 3D 75 min	**Materiality Assessment Process (GRI 3 Methodology)** Key Topics: Step-by-step GRI 3 materiality process: organizational context, impact identification, significance assessment, topic prioritization, validation; documenting the process; integrating stakeholder input; materiality matrix construction. *Outputs: Participants complete a scored materiality matrix identifying their organization's top 10 material topics.*

Module 3E 60 min	**Strategy Alignment: Embedding Sustainability in Business Operations** Key Topics: Translating material topics into objectives, targets, KPIs, and management actions; embedding sustainability in governance structures; communicating material topics to internal and external stakeholders; alignment with SDGs. *Outputs: Participants complete a Strategy Alignment Matrix linking each material topic to business functions, governance owners, and GRI disclosures.*

GRI Masterclass Activities

Activity 5: Double Materiality Assessment: Environmental and Social Impacts | Time: 75 min

Objective: Apply GRI 3 methodology to identify and characterize Impacts, Risks, and Opportunities (IROs) for a textile manufacturer, covering both environmental and social dimensions.

Setup & Instructions

Part A: Using the DMA Template workbook, list key environmental impacts (scope: own operations, then value chain). Rate each impact: Severity (1-5), Likelihood (1-5), Scale (local/national/global), Remediability.

Part B: Identify financial materiality: which impacts also create financial risk or opportunity for the business?

Part C: Extend the analysis to social topics: labour rights, community impacts, supply chain labour standards.

Materials: DMA Template Workbook, GRI Topic Standards reference list, sector guidance sheet.

Debrief Questions

Which environmental impact scores highest on severity and why?

Where does your organization have the greatest influence over impacts?

Which social topics are most material to your buyers and investors?

Activity 6: Stakeholder Mapping and Materiality Matrix Development | Time: 60 min

Objective: Build a stakeholder map and translate engagement insights into a scored materiality matrix, identifying top material topics for GRI reporting.

Setup & Instructions

Part A: Using the power/interest grid template, map key stakeholders. Assign priority score to each. Design an engagement approach for top-priority groups.

Part B: Using IRO list from Activity 5, plot topics on materiality matrix (X-axis: financial materiality; Y-axis: impact materiality). Prioritize topics in the high-high quadrant.

Part C: Apply weighting factors (severity of impact, stakeholder concern level, business risk level). Select top 10 material topics.

Materials: Stakeholder Mapping Template, Materiality Matrix Grid.

Debrief Questions

Which stakeholder groups had the most influence on your materiality results?

Were any topics in the high-high quadrant surprising? Why?

How would you validate this materiality assessment with your board?

Activity 7: Full DMA Completion and GRI Report Structure | Time: 60 min

Objective: Complete the full double materiality assessment and begin structuring a GRI-aligned sustainability report.

Setup & Instructions

Apply scoring matrix to all identified topics. Plot final materiality matrix. Confirm top 10 material topics.

Map each confirmed topic to: GRI Topic Standard, Key Disclosures, and Data requirements.

For each confirmed material topic identify: (a) current data available, (b) data gaps, (c) organizational data owner, (d) system or process to generate it.

Draft GRI Report Table of Contents: GRI 2 General Disclosures, material topic chapters, GRI Content Index.

Deliverable: Completed DMA Tool and GRI Report outline (first draft).

Debrief Questions

What is the biggest data gap in your organization's GRI readiness?

Which department currently owns the most critical sustainability data?

How would you build internal accountability for regular data collection?

Activity 8: GRI Strategy Embedding Assignment (Board Presentation) | Time: 45 min

Objective: Integrate GRI material topics into business strategy and performance frameworks and present a credible 3-year sustainability strategy to a simulated board.

Setup & Instructions

Group scenario: You are the sustainability committee of a mid-sized Pakistani knitwear exporter.

Present to your Board a 3-year GRI-aligned sustainability strategy covering: top 5 material topics, strategic objectives, KPIs, resource requirements, and governance arrangements.

Strategy Alignment Matrix: For each material topic, complete: business strategy pillar it supports, existing management system to embed it in, board-level KPI, and GRI disclosure to be made.

Materials: Strategy Alignment Template, GRI Disclosure Mapping Sheet.

Debrief Questions

How did different board members react to the sustainability strategy?

Which KPIs were most compelling to a finance-oriented board audience?

What governance structure is most realistic for your organization?

Day 2, Session 2: ESG in Global Apparel Supply Chains

Module 4A 75 min	**ESG Foundations: From CSR to Commercial Imperative** Key Topics: Evolution from voluntary CSR to mandatory ESG; three pillars in sports apparel context (Environmental: ZDHC, carbon, water; Social: OHS, minimum wage, gender equity; Governance: board oversight, anti-bribery, no unauthorized subcontracting); Pakistan CSR Act 2026; GSP+ conditionality and 27 international conventions. *Outputs: Participants can articulate ESG as a commercial prerequisite and identify the highest-risk ESG gaps in their own factories.*
Module 4B 90 min	**Buyer Requirements Mapping and Reporting Ecosystem** Key Topics: Global sustainability pressure chain; Nike, Adidas, and PUMA detailed requirements; GRI, CSRD/ESRS, IFRS S1/S2, CDP, SBTi framework roles; Framework Crosswalk methodology; 3-phase vendor roadmap (0-6 months, 6-18 months, 18 months+).

Outputs: Participants complete a buyer-aligned ESG KPI readiness assessment and develop a 12-month ESG improvement roadmap.

Session 2 Activities

Activity 9: Risk Scavenger Hunt (Group Exercise) | Time: 30 min

Objective: Identify ESG risks across Environmental, Social, and Governance dimensions in realistic factory profiles and propose practical, actionable mitigation strategies.

Setup & Instructions

Groups assigned a factory profile (sports goods, knitwear, denim, or footwear manufacturer).

Each group identifies 2-3 specific ESG risks per profile and proposes practical, actionable mitigation strategies.

Sample factory profiles include: unit using village women for stitching without contracts; fabric dyeing unit using local wood for boilers; factory floor with 400 workers and only 1 fire exit; chemical waste dumped in municipal drain.

Groups present findings to plenary, inviting cross-group critique and refinement.

Debrief Questions

Which ESG risk category (E, S, or G) appears most frequently across all factory profiles?

Which risks create the highest likelihood of immediate buyer audit failure?

What low-cost, high-impact mitigation steps can be implemented within 30 days?

Activity 10: The Buyer's Hot Seat (Role Play) | Time: 30 min

Objective: Simulate a high-stakes commercial negotiation between a Pakistani factory and a global sports brand buyer, with ESG credentials central to the contract discussion.

Setup & Instructions

Team A (Factory Owners): Win a USD 2 million jersey contract while defending ESG credentials despite 20% home-workers. Strategy: defend ESG performance by showing zero needle-injury records and traceability systems.

Team B (Global Brand Buyers): Conduct rigorous interrogation asking probing questions such as 'How do you track village stitching centers?', 'What is your current female-to-male supervisory ratio?', 'How do you handle chemical waste?'

Both teams negotiate a final deal that includes a Green Premium price increase.

Topics in play: health insurance, female-to-male ratios, recyclability, stitcher traceability, living wage, effluent management, sub-tier suppliers, grievance mechanisms, coal use.

Debrief Questions

What ESG arguments were most persuasive to the buyer?

Which gaps were hardest to defend? What systems would eliminate them?

What is the realistic Green Premium achievable for a well-prepared factory?

Activity 11: Buyer-Aligned ESG Reporting Assessment and Framework Crosswalk | Time: 75 min

Objective: Evaluate ESG KPI readiness against buyer requirements and develop a comprehensive 12-month ESG improvement roadmap mapped to GRI, CSRD/ESRS, and IFRS.

Setup & Instructions

Scenario: A Sialkot sports company exporting to Nike, Adidas, and PUMA receives ESG data requests across climate, energy, water, waste, chemicals, social standards, and supply chain traceability.

Step 1: Identify which ESG areas are critical and which gaps create the highest compliance risk.

Step 2: Evaluate KPI readiness across all ESG pillars, identifying missing data, weak areas, and high-risk gaps.

Step 3: Develop a 12-month ESG roadmap spanning GHG inventory, energy and water tracking, waste segregation, ZDHC compliance, OHS assessment, supplier documentation, carbon hotspot analysis, solar feasibility, and GRI-aligned reporting.

Framework Crosswalk: map each supplier data area against GRI, CSRD/ESRS, IFRS S1/S2 references, and audit evidence requirements.

Debrief Questions

Which ESG pillar has the largest gap between current performance and buyer expectations?

Which framework alignment (GRI vs. ESRS) is most critical for your primary buyer?

What quick wins in the roadmap can be achieved in the first 3 months?

Day 3, Session 1: Decarbonization and Emission Identification

Module 5A
75 min

Carbon Footprint Fundamentals and Emission Scopes

Key Topics: Scope 1 (direct: boilers, generators, vehicles); Scope 2 (indirect: purchased electricity, market-based vs. location-based); Scope 3 (15 GHG Protocol categories: Category 1 purchased goods, Category 4 upstream transport, Category 5 waste, Category 9 downstream transport most material for apparel); emission calculation formula: Activity Data x Emission Factor; Pakistan-specific emission factors.

Outputs: Participants classify their factory's main emission sources across Scopes 1, 2, and 3 using the Pakistan grid factor (0.45 kgCO2e/kWh).

Key Pakistan-Specific Emission Factors

Pakistan grid electricity: 0.45 kgCO2e/kWh (updated annually)

Natural gas: 2.00 kgCO2e/m3 | Diesel: 2.68 kgCO2e/liter

Virgin polyester: 5.50 kgCO2e/kg | rPET: 2.50 kgCO2e/kg

Cotton/fabric: 3.00 kgCO2e/kg | Chemicals: 4.00 kgCO2e/kg

Packaging: 1.50 kgCO2e/kg | Logistics: 0.10 kgCO2e/tonne-km

Emission Factor Hierarchy: Tier 1 (supplier primary data) > Tier 2 (national databases) > Tier 3 (DEFRA/IPCC/Ecoinvent) > Tier 4 (industry average proxies)

Module 5B 75 min	**Decarbonization Scenario Planning** Key Topics: Brand decarbonization case studies (Adidas CTAP, Puma RE:FIBRE); Solar PV scenario modeling; rPET substitution analysis; emission intensity metrics (kgCO2e/piece); Buyer-Ready Decarbonization Summary documentation. *Outputs: Participants model at least 2 decarbonization scenarios for their factory and calculate combined emission reductions.*

Decarbonization Activities

Activity 12: Emission Factor Justification Role Play (Supplier vs. Buyer Audit) | Time: 60 min

Objective: Train factory sustainability teams to defend corporate carbon footprint reports, validate data traceability, and correctly apply the GHG Protocol Corporate Value Chain (Scope 3) Standard under rigorous third-party scrutiny.

Setup & Instructions

Team A (Supplier Sustainability Team): Defend a recently submitted corporate carbon footprint report for a vertical textile manufacturing facility. Justify operational boundaries, defend Scope 3 category exclusions, and validate emission factor selections.

Team B (Global Buyer Audit Team): Probe structural weaknesses, challenge data gaps, question geographic anomalies in conversion factors, and verify GHG Protocol alignment.

Key challenges to prepare for: exclusion of Category 2 (Capital Goods); use of UK DEFRA emission factors for a Pakistan facility; immateriality thresholds for Scope 3 categories.

Debrief: Complete a standardized data quality scorecard rating Category justification, EF source quality, Data traceability, GHG Protocol alignment, and Buyer challenge handling.

Debrief Questions

How did the supplier justify Category 2 exclusion? Was the argument persuasive?

What localized emission factor alternatives should Pakistan manufacturers develop?

What corrective actions are needed to elevate the report to international procurement readiness?

Activity 13: Decarbonize Your Chain: Carbon Footprint Calculator Exercise | Time: 90 min

Objective: Use a purpose-built Carbon Footprint Calculator to establish a factory baseline and model decarbonization scenarios, producing a Buyer-Ready Decarbonization Summary.

Setup & Instructions

Step 1: Input Sheet Setup: Enter facility profiles, annual production volumes (reference: 1 million pieces/year), and monthly utility/fuel logs.

Step 2: Baseline Inventory: Review automated Scope 1 and 2 outputs and emission intensities. Reference baseline: 4,491.5 tCO2e/year (natural gas boilers 2,400; grid electricity 1,125; virgin polyester 550; cotton/fabric 150; diesel 134; chemicals 80; logistics 30; packaging 22.5).

Step 3: Scenario Modeling: Model 1 MW Solar PV (675 tCO2e reduction, 15.0%, PKR 82.5M/year saving, PKR 180M CAPEX) and 50% rPET Substitution (150 tCO2e reduction, 3.3%, PKR 4M/year premium).

Step 4: Emission Factor Verification: Audit database version controls using recommended data hierarchy.

Step 5: Dashboard and Buyer Report: Review auto-generated KPI dashboards. Combined result: 825 tCO_2e reduction (18.4%); new emissions 3,666.5 tCO_2e/year; emission intensity from 4.492 to 3.667 $kgCO_2e$/piece.

Debrief Questions

Which emission source in your factory's baseline is largest? What is the decarbonization potential?

What is the payback period for 1 MW solar at your current electricity tariff?

How would you present this Decarbonization Summary to a Nike or Adidas sustainability team?

Day 3, Session 2: Measuring and Reducing Industrial Pollution

Module 6A 45 min	**Industrial Air Quality and the Health-Wealth Link** Key Topics: Poor air quality as productivity, health-cost, and reputational risk; industrial pollution as a worker welfare obligation, regulatory requirement, and buyer-facing ESG indicator; pollutant mapping: azo dyes, formaldehyde, chromium VI, microfibre generation, VOCs. *Outputs: Participants map the pollution streams present in their own facility type against buyer ESG reporting requirements.*
Module 6B 45 min	**Emission Monitoring: Manual to CEMS** Key Topics: Periodic manual stack testing vs. Continuous Emission Monitoring Systems (CEMS); low-cost ambient and indoor sensors as practical entry points; case studies demonstrating continuous monitoring for regulatory compliance and operational optimization; ZDHC MRSL vs. RSL distinction. *Outputs: Participants develop a monitoring upgrade roadmap appropriate to their facility size and buyer requirements.*
Module 6C 60 min	**Kaizen-Based Pollution Reduction** Key Topics: Kaizen philosophy applied to emission reduction: boiler recalibration, ventilation improvement, fugitive emission prevention, flow meter and air quality sensor installation, waste stream segregation; triple benefit: worker health, input cost reduction, buyer-reportable ESG data. *Outputs: Participants identify 5 Kaizen fixes applicable to their own factory floor within a 90-day implementation window.*

Pollution Management Activity

Activity 14: Factory Floor Pollution Audit Simulation | Time: 30 min

Objective: Apply pollution monitoring concepts to a simulated factory floor scenario, identifying pollutant sources, proposing monitoring solutions, and designing Kaizen-based reduction initiatives.

Setup & Instructions

Participants receive a factory floor map with labeled processes (dyeing units, boiler room, cutting section, wet processing, chemical storage).

Task: Identify likely pollutant sources for each process area; propose monitoring approach (manual, low-cost sensor, or CEMS); identify 3 Kaizen fixes with estimated implementation cost.

Groups present their pollution management plan to the plenary.

Debrief Questions

Which process area in the factory has the highest pollutant risk?

What is the minimum monitoring investment needed to satisfy a Nike OHS audit?

Which Kaizen fix offers the best ratio of health benefit to implementation cost?

6. Tasks and Assignments

The following workbook-style assignments are designed for participants to complete at their workplaces following each training session. They are structured to be actionable, reusable, and directly linked to buyer reporting requirements. Trainers should brief participants on assignments at the close of each session and establish a follow-up review mechanism within 30 days.

Assignment 1: ESG Reporting Self-Assessment Template

Using the ESG KPI Readiness Template from Session 4B, complete a full self-assessment of your organization's current ESG data availability across Climate, Energy, Water, Waste, Chemicals, Social, and Governance pillars. Rate each KPI as: Available (A), Partial (P), or Not Available (N). Identify the 5 highest-risk gaps and assign a data owner and a 60-day collection plan for each.

Deliverable: *Completed ESG KPI Readiness Matrix with gap analysis and data owner assignments.*

Assignment 2: Supply Chain Due Diligence Risk Prioritization

Map your organization's supply chain Tier 1 and Tier 2 suppliers. For each key supplier, identify the top human rights and environmental risks using the CSDDD risk categories. Score each supplier on likelihood and severity. Prioritize the top 3 suppliers for immediate due diligence action and draft a corrective action request letter for the highest-risk supplier.

Deliverable: *Supplier risk register with priority ranking and at least 1 corrective action request draft.*

Assignment 3: Climate Finance Project Evaluation

Identify one energy efficiency or renewable energy project your factory could implement in the next 12 months (solar PV, biogas, LED retrofit, variable frequency drives, heat exchanger installation). Collect baseline energy data for the relevant process. Calculate estimated NPV, IRR, and simple payback period. Identify the most appropriate financing instrument and at least one applicable funding source.

Deliverable: *1-page project brief with financial metrics and financing recommendation.*

Assignment 4: Stakeholder Mapping Grid

Using the power/interest grid framework, map all key stakeholders of your organization's sustainability programme. Include: buyers, investors, employees (including stitchers and home workers), regulators, local community, industry associations, and civil society organizations. For each stakeholder group: assign an influence and interest score; determine engagement priority; and identify one engagement method you will use within the next quarter.

Deliverable: *Completed stakeholder mapping grid with engagement plan.*

Assignment 5: Double Materiality Matrix

Using the DMA Comprehensive Tool from Session 3, complete a full double materiality assessment for your organization. Score at least 15 sustainability topics across both impact materiality and financial materiality dimensions. Plot the final materiality matrix. Identify your top 10 material topics. Map each material topic to its relevant GRI Topic Standard and confirm the data currently available in your organization to support that disclosure.

Deliverable: *Completed materiality matrix (visual) and GRI material topic mapping table.*

Assignment 6: Carbon Footprint Baseline Report

Using the ADS Carbon Footprint Calculator (available at www.alternate.org.pk), complete a Scope 1 and Scope 2 baseline for your facility using the most recent 12 months of utility and fuel data. Apply Pakistan-specific emission factors. Identify your top 3 emission hotspots. Model at least 1 decarbonization scenario (solar PV or rPET substitution). Produce a Buyer-Ready Decarbonization Summary using the provided template.

Deliverable: *Completed carbon baseline (tCO2e/year by source) and 1 scenario Buyer-Ready Decarbonization Summary.*

Assignment 7: 12-Month ESG Improvement Roadmap

Using the Framework Crosswalk and Buyer-Aligned ESG Roadmap template from Session 4B, develop a 12-month ESG improvement plan for your organization. The roadmap should cover at minimum: Month 1-2 (GHG inventory setup), Month 3-4 (water and energy tracking systems), Month 5-6 (ZDHC compliance and chemical inventory), Month 7-8 (OHS assessment and worker welfare documentation), Month 9-10 (supplier documentation and sub-tier controls), Month 11-12 (GRI-aligned report drafting and buyer submission preparation).

Deliverable: *Completed 12-month ESG roadmap with responsible departments, deliverables, and buyer alignment mapped per month.*

7. Feedback MRV System

The Monitoring, Reporting, and Verification (MRV) system for this training programme is designed to measure the effectiveness of capacity building at both the immediate (knowledge acquisition) and medium-term (implementation) levels. The system follows a structured three-stage cycle: pre-training baseline, immediate post-training assessment, and follow-up verification at 30, 90, and 180 days.

7.1 Key Performance Metrics

Metric	Target Benchmark	Verification Method
% of participants confident in ESG reporting (post-training)	80% at 4+ on 5-point scale	Post-training survey
% able to conduct a materiality assessment	75% at 4+ on 5-point scale	Post-training survey + assignment review
% who completed a carbon footprint baseline within 60 days	60% of participants	Follow-up survey at 60 days
% who submitted a buyer ESG data request within 90 days	40% of participants	Follow-up survey at 90 days
% who developed a 12-month ESG roadmap within 90 days	50% of participants	Assignment submission
% who identified at least 1 climate finance project	40% of participants	Follow-up survey at 90 days
Average improvement in pre/post confidence score	Minimum 1.5 points on 5-point scale	Pre/post survey comparison
% of assignments completed and submitted within 30 days	70% submission rate	Trainer review and tracking

7.2 Training Feedback Form

The following form is administered in two stages: Part A (Pre-Training Baseline) at the start of the first session, and Part B (Post-Training Assessment) at the close of the final session. Both parts are self-administered by participants.

Question / Statement	Rating	Notes
PRE-TRAINING BASELINE		
How familiar are you with GRI Standards?	1 2 3 4 5	*(1=None, 5=Expert)*
How confident are you in conducting a materiality assessment?	1 2 3 4 5	

How well do you understand CSRD requirements?	1 2 3 4 5	
Can you calculate Scope 1, 2, and 3 emissions?	1 2 3 4 5	
POST-TRAINING ASSESSMENT		
I can explain ESG and its commercial importance to my team.	1 2 3 4 5	
I can map buyer sustainability requirements to reporting frameworks.	1 2 3 4 5	
I can conduct a double materiality assessment.	1 2 3 4 5	
I can calculate my factory's carbon footprint.	1 2 3 4 5	
I can identify Scope 3 emission priorities for our sector.	1 2 3 4 5	
I can design a Kaizen-based pollution reduction initiative.	1 2 3 4 5	
I can develop a 12-month ESG improvement roadmap.	1 2 3 4 5	
QUALITATIVE FEEDBACK		
Most valuable session / topic covered:		
Topic that needs more depth:		
Practical tool most useful to your work:		
One action you will implement in 30 days:		

7.3 Using Feedback Data to Refine Future Trainings

Feedback data collected through the MRV system will be used to improve future programme design in the following ways:

- Pre/post confidence score gaps below 1.5 points for any module will trigger a review of that module's content depth and activity design.
- Topics identified by more than 30% of participants as 'needing more depth' will be expanded in the next programme iteration.
- Topics where fewer than 60% of participants submit the corresponding workbook assignment within 30 days will be flagged for redesign or additional trainer guidance.
- Follow-up survey data at 90 and 180 days will be compiled into a Programme Impact Report shared with ADS, partner organizations, and relevant industry associations.
- Aggregate anonymized results from each training cohort will be uploaded to the ADS website for programme transparency and continuous improvement documentation.

8. About the Developers

Khadija Zahra

Green and Clean Energy Officer (GCEO), Alternate Development Services (ADS)

Khadija Zahra is a sustainability and clean-energy professional currently serving as Green and Clean Energy Officer at ADS. She formerly held the position of Performance and Sustainability Lead at Nishat Chunian Limited (2023-2025), one of Pakistan's leading vertically integrated textile manufacturers.

Her areas of expertise span GRI and IFRS sustainability reporting, renewable energy planning, Scope 1, 2, and 3 GHG emissions management, and ESG compliance frameworks. She brings applied sector experience to her curriculum design work, ensuring training content reflects the operational realities of Pakistan's export-oriented textile and apparel manufacturers.

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Mashhood Urfi

Energy Transition Officer, Alternate Development Services (ADS)

Mashhood Urfi brings over 7 years of experience in capacity building and curriculum design, with a specialist focus on the role of Bretton Woods institutions and multilateral finance mechanisms in supporting sustainable industrial transitions in the Global South.

His technical expertise spans CBAM Policy Development, MRV systems design, industrial energy efficiency, and evidence-based policy discourse. He designs transparent, internationally benchmarked training frameworks that align global sustainability standards with Pakistan's industrial transformation agenda, ensuring that capacity-building outputs are practically actionable, measurable, and institutionally durable.

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