Concept Note

Green Performance Measures for CAREC Customs Administrations

A. Executive Summary

Customs administrations in CAREC countries are increasingly expected to balance trade facilitation with environmental protection. Positioned at the nexus of trade, revenue, and compliance, Customs plays a pivotal role in ensuring that hazardous waste, ozone-depleting substances, endangered species, and other environmentally sensitive goods are effectively monitored and regulated. The concept of “Green Customs” embeds sustainability directly into border operations, moving beyond compliance to actively supporting environmental and trade objectives.

This study proposes the development and piloting of Green Customs Key Performance Indicators (KPIs) to measure, monitor, and improve environmental compliance across all stages of the cargo clearance process. These stages are the acceptance of declaration, selectivity, assessment, payment, and release. These KPIs will enable Customs to strengthen environmental risk management, streamline clearance for compliant shipments, safeguard revenue collection of green-related duties and fees, and incentivize sustainable trade practices.

The Korea Customs Service (KCS) offers valuable technical expertise through its proven experience in designing evidence-based indicators, real-time monitoring systems, and dashboards that track environmental impacts such as greenhouse gas reductions. Combined with ADB’s convening role and regional cooperation mandate, and lessons from Pakistan Single Window (PSW), the initiative will help CAREC countries establish robust, transparent, and internationally aligned Green Customs performance frameworks. A phased approach is proposed:

- Framework Development (Aug–Nov 2025): Drafting and validation of the KPI framework with CAREC member input.
- Pilot Implementation (Dec 2025–Jun 2026): Testing KPIs at selected customs posts.
- Capacity Building & Knowledge Sharing (Jul–Sep 2026): Workshops, training, and dissemination of pilot results.
- Evaluation & Regional Rollout (Oct 2026–Jun 2027): Refinement of KPIs and adoption across CAREC countries.

Expected outcomes include harmonized KPI frameworks, improved detection of environmental violations, faster clearance for compliant shipments, and stronger alignment with Multilateral Environmental Agreements (MEAs). By jointly addressing digitalization and environmental sustainability, CAREC countries can transform border challenges into opportunities by advancing faster, greener, and more resilient trade corridors that meet global standards and regional development goals.

B. Background

Central Asia's trade landscape is evolving rapidly. E-commerce, digital logistics, and paperless border systems are transforming how goods and services move, while climate risks and green standards increasingly define competitiveness. Under the CAREC Integrated Trade Agenda (CITA) 2030, ADB's support focuses on two priorities: (i) building a dynamic digital trade system that lowers costs and expands market access; and (ii) embedding green practices so growth is climate-resilient, resource-efficient, and aligned with international norms.

CAREC economies continue to face high trade frictions from fragmented processes and uneven adoption of digital standards, while global buyers increasingly demand evidence of sustainability. Without coordinated reforms, the region risks higher compliance costs and lost opportunities in supply chain integration.

The Pakistan Single Window (PSW) offers practical evidence of digital–green synergies. By eliminating over 8.6 million paper documents across 12 agencies, PSW achieved significant savings in paper, toner, and travel, reducing CO_2 emissions equivalent to the annual absorption of nearly 30,000 trees. Mandatory e-documentation also shifted trader behavior toward climate-smart governance.

Policy recommendations from the PSW study include embedding a real-time Climate Dashboard in the trade platform, generating transaction-level CO_2 savings certificates, and adopting ISO energy management standards to reduce ICT emissions. Incentives such as reduced fees, expedited clearance, and recognition programs can encourage traders to maintain full digital compliance.

By framing digital trade and green initiatives as one integrated agenda, CAREC countries can cut costs, meet evolving international requirements, and strengthen their position as sustainable, competitive nodes in global supply chains—with ADB convening, co-designing, and financing this transition under CITA 2030.

C. Introduction

Customs authorities are uniquely positioned at the nexus of trade facilitation, revenue collection, and environmental protection. As global trade continues to grow, so does the movement of goods that may impact the environment, from hazardous waste and ozone-depleting substances to endangered species and environmentally sensitive products. In this context, "Green Customs" goes beyond compliance with conventional trade regulations; it embeds environmental sustainability into the core functions of border control.

To ensure that environmental objectives are effectively integrated into trade operations, performance must be measured, monitored, and continuously improved. Green Customs Key Performance Indicators (KPIs) provide a structured approach for Customs to evaluate how well environmental compliance is addressed throughout the clearance process. These KPIs are not just administrative metrics; they are strategic tools to:

- Strengthen environmental risk management through targeted inspections and intelligent selectivity systems.
- Improve operational efficiency by streamlining clearance for compliant, eco-friendly shipments while applying rigorous controls to high-risk goods.
- Ensure revenue integrity through accurate collection of green-related duties, taxes, and environmental fees.

- Promote sustainable trade practices by granting incentives to environmentally responsible traders.

By aligning these KPIs with the five key stages of cargo clearance — Acceptance of Declaration, Selectivity, Assessment, Payment, and Release — Customs administrations can achieve a balanced approach that safeguards the environment without compromising trade facilitation. This performance-driven framework enables data-driven decision-making, promotes transparency, and demonstrates a country's commitment to sustainable trade governance under international agreements such as the Basel, Rotterdam, Stockholm, and CITES conventions.

The Korea Customs Service (KCS**)** has established a track record in designing and implementing performance measurement systems that align trade facilitation with environmental sustainability. Its technical expertise includes:

- Experience in structuring quantifiable, evidence-based indicators for operational, compliance, and policy outcomes.
- Integration of real-time data capture from customs clearance systems, enabling accurate environmental impact tracking (e.g., carbon emissions linked to logistics flows).
- Provide support in the development of KPIs covering greenhouse gas reduction**,** waste minimization in packaging**, and** compliance with trade-related environmental standards.
- Learn from KCS deployment of customs intelligence systems capable of aggregating cross-border trade data for sustainability reporting.
- Implementation of dashboards that visualize progress towards green trade targets in near real-time.
- Alignment with global standards through the harmonization of KPI frameworks with WCO Green Customs initiatives[1]**,** UN Sustainable Development Goals, and relevant WTO and multilateral trade environment provisions.

By leveraging the proven expertise of ADB and the Pakistan Single Window (PSW), and with the support of the Korea Customs Service (KCS), stakeholders can work together to help CAREC countries establish robust, transparent, and internationally aligned Green Customs performance frameworks. These frameworks will drive measurable improvements in sustainable trade while ensuring that border operations actively contribute to environmental protection and facilitate the efficient movement of legitimate goods.

D. Objectives

The aim is embedding environmental compliance requirements across all clearance stages to protect ecosystems and public health, including improving risk profiling and inspection targeting for hazardous waste, endangered species, ozone-depleting substances, and other restricted products. This will streamline processes for shipments that meet environmental standards and assess / collect applicable duties, taxes, and environmental fees to support sustainability programs. Other measures that could be considered are:

- Improving completeness, accuracy, and timeliness of green-related trade data to enable informed decision-making;
- Fostering partnerships with traders, logistics providers, and other agencies to promote sustainable trade; and

[1] The **WCO Green Customs Initiative** is a comprehensive effort led by the World Customs Organization (WCO) to empower customs administrations worldwide in combating illegal trade in environmentally sensitive goods and promoting sustainable trade practices.

- Coming up with a performance-based framework to track contributions to Multilateral Environmental Agreements[2], (MEAs) and sustainability goals.

E. Methodology

The methodology for developing and implementing Green Customs KPIs follows a stage-based approach aligned with the standard cargo clearance process — Acceptance of Declaration, Selectivity, Assessment, Payment, and Release**.** This ensures environmental compliance is embedded into each operational step while maintaining trade facilitation.

<u>Acceptance of Customs Declaration</u>

- Integrate environmental data elements (e.g., HS codes for regulated goods, permits, eco-certificates) into electronic declaration systems.
- Automatically validate the completeness and accuracy of environmental documentation upon lodgment.
- Record and monitor lodgment-to-acceptance times for compliant vs. non-compliant shipments.

<u>Selectivity</u>

- Apply risk profiling to flag shipments with environmental risk indicators (e.g., high-risk HS codes, origin/destination patterns).
- Use automated selectivity criteria linked to environmental watchlists and MEA-controlled goods databases.
- Track targeting accuracy by comparing inspection hits vs. false positives.

<u>Assessment</u>

- Conduct documentary and physical checks to verify compliance with environmental regulations.
- Validate classification, valuation, and applicable environmental duties or fees.
- Record time taken to complete environmental compliance assessments and outcomes (pass/fail).

<u>Payment</u>

- Calculate and collect green-related duties, taxes, and fees in accordance with environmental regulations.
- Track payment completion time from assessment date.
- Monitor exemptions and incentives granted to eco-friendly goods.

<u>Release</u>

- Authorize release only after all environmental compliance checks are satisfied.
- Monitor clearance time for compliant shipments vs. those detained for non-compliance.
- Track the percentage and duration of detentions related to environmental violations.

F. Emerging Challenges and Strategic Imperatives

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[2] **Multilateral Environmental Agreements (MEAs)** are legally binding agreements between three or more countries that aim to address environmental issues that cross national boundaries. They provide a framework for international cooperation to protect the environment, conserve natural resources, and promote sustainable development.

Despite progress, CAREC economies face persistent trade frictions. Fragmented procedures, non-interoperable digital platforms, and incomplete adoption of international data standards increase costs, slow goods movement, and limit participation in global value chains. At the same time, global buyers, financiers, and regulators increasingly demand verifiable evidence of decarbonization, sustainable packaging, and responsible supply chains. Without coordinated digital and green reforms, the region risks higher compliance costs, lost investment opportunities, and reduced attractiveness in near-shoring initiatives and corridor development.

The strategic greening of trade under CITA 2030 offers measurable gains. Key activities include:

- Operational efficiency aligned with environmental outcomes: Digitization reduces paper use, lowers truck idling and border queue times, and encourages right-sized or reusable e-commerce packaging.
- Targeted controls for sensitive goods: HS-based alerts, licensing checks, and post-clearance audits ensure environmental compliance.
- Data-driven optimization: Information sharing enables load consolidation, smart routing, appointment systems at borders, and electronic payments to reduce physical trips.

Policy recommendations from the PSW experience highlight ways to reinforce these outcomes: real-time Climate Dashboards to visualize transaction-level and cumulative CO_2 savings, emission factors for credible measurement, voluntary disclosure frameworks (e.g., GRI, TCFD), and even the issuance of carbon certificates to monetize verified emissions reductions. Adoption of ISO 50001 energy management standards, coupled with economic and procedural incentives for traders, can institutionalize continuous efficiency improvements and strengthen compliance.

Framing digital trade and green initiatives as a single, integrated agenda enables CAREC countries to reduce costs, meet evolving global expectations, and position themselves as credible, sustainable nodes in supply chains. ADB's role as convenor, co-designer, and financier is critical to ensure that CITA 2030 delivers not only faster trade but smarter, cleaner, and more inclusive trade.

Customs authorities are uniquely positioned at the intersection of trade facilitation, revenue collection, and environmental protection. "Green Customs" embeds sustainability into the core of border operations, using KPIs to strengthen environmental risk management, improve operational efficiency, ensure revenue integrity, and promote sustainable trade practices. Aligning KPIs with the five stages of cargo clearance allows for data-driven decision-making, transparency, and measurable contributions to Multilateral Environmental Agreements.

The Korea Customs Service (KCS) experience demonstrates the feasibility of integrating real-time monitoring, evidence-based indicators, and dashboards for tracking greenhouse gas reductions and compliance with global standards. By leveraging ADB support and PSW lessons, CAREC countries can establish Green Customs frameworks that protect ecosystems, reduce environmental risks, and facilitate legitimate trade efficiently. The strategic imperatives include to embed environmental compliance across all clearance stages for hazardous, sensitive, and regulated goods and improve completeness, accuracy, and timeliness of green-related trade data.

By addressing both digital and environmental dimensions together, CAREC countries can transform trade challenges into opportunities, achieving faster, greener, and more resilient trade corridors that meet both regional and global expectations.

G. Suggested Green Customs KPIs by Clearance Stage

To embed sustainability into border operations, Green Customs KPIs track environmental compliance and efficiency across all stages of cargo clearance. At the Acceptance of Declaration stage, KPIs measure completeness and accuracy of environmental documentation, ensuring hazardous or sensitive goods are properly identified. During Selectivity, indicators monitor targeted inspections, risk-based audits, and enforcement of green-related controls.

The Assessment stage tracks timely calculation of environmental duties, taxes, and fees, while minimizing delays for compliant shipments. At Payment, KPIs capture adoption of electronic payments and e-receipts to reduce paper and travel emissions. Finally, Release metrics focus on the speed and reliability of clearance for environmentally compliant shipments, load consolidation, and reduced idling times.

Collectively, these KPIs provide a structured, data-driven framework that aligns trade facilitation with environmental stewardship, incentivizes compliance, and enables measurable contributions to climate and sustainability goals.

Green Customs KPI Matrix

Stage	Possible KPI	What It Measures	Actors	Data Sources	Measurement	Why It Matters
1. Acceptance	% of declarations screened for environmental compliance	Coverage of risk checks at lodgment	Importers/Exporters, Brokers, Customs IT, Environmental Agencies	Declarations, Permits, Data Warehouse	Daily monitoring, monthly reporting	Ensures early identification of regulated goods
	Avg. time from lodgment to acceptance (compliant)	Processing efficiency	Same as above	Same	Same	Prevents delays for compliant traders
	% of submissions with complete green compliance data	Data quality	Same as above	Same	Same	Improves targeting, reduces later inspections
2. Selectivity	% of shipments flagged for environmental risk	Share under green profiling	Risk Mgmt., Intelligence, Environmental Officers, Intl. Networks	RMS, Intelligence Reports, Inspection Logs	Monthly accuracy, quarterly review	Focuses checks on high-risk shipments
	Accuracy rate of targeting (hits vs. false positives)	Targeting efficiency	Same	Same	Same	Reduces unnecessary inspections
	% of high-risk shipments using NII	Tech use in selectivity	Same	Same	Same	Speeds clearance, lowers footprint
3. Assessment	% of high-risk shipments verified compliant	Compliance verification	Customs Officers, Inspectors, Labs, Permit Authorities	Assessment Records, Test Results,	Ongoing, quarterly review	Ensures only compliant goods clear

Stage	Possible KPI	What It Measures	Actors	Data Sources	Measurement	Why It Matters
				Agency Feedback		
	Avg. time to complete assessment	Timeliness	Same	Same	Same	Speeds clearance, maintains control
	% of green goods with correct HS code	Classification accuracy	Same	Same	Same	Prevents misdeclaration and evasion
4. Payment	% of duties/fees collected on regulated goods	Revenue compliance	Customs Revenue Unit, Importers, Banks, Fund Managers	Revenue System, Levy Databases	Monthly + annual trend	Supports green financing
	Avg. time from assessment to payment	Payment efficiency	Same	Same	Same	Speeds clearance, secures revenue
	% of exemptions/incentives granted to eco-goods	Green promotion	Same	Same	Same	Encourages sustainable trade
5. Release	% of compliant shipments released on time	Clearance timeliness	Release Unit, Border Agencies, Port Operators	Release System, Detention Records, PCA Reports	Daily tracking, monthly summary	Rewards compliance, reduces costs
	% of shipments detained for non-compliance	Enforcement rate	Same	Same	Same	Deters violations
	Avg. detention time for non-compliant shipments	Post-detection efficiency	Same	Same	Same	Minimizes harm from detained goods

H. Proposed Collaboration

As discussed with the ADB CAREC team, the formulas and recommendations from the technical study by Umair, Technical Expert of the Pakistan National Single Window, on greening activities can be adapted for CAREC Green Customs initiatives. This draft concept note will be converted into a pilot program for interested CAREC countries.

The program aims to develop, pilot, and promote Green Customs Key Performance Indicators (KPIs) that integrate environmental protection into customs clearance processes across CAREC member countries. It will leverage ADB's regional cooperation mandate, the CAREC trade facilitation network, and the Korea Customs Service's (KCS) technical expertise.

The ADB CAREC team will provide strategic coordination within the CAREC Program framework and mobilize technical assistance funding for KPI development, capacity building, and pilot projects. This will also facilitate policy dialogues with CAREC governments to integrate the KPIs into national customs modernization strategies. Further, CAREC member countries' customs administrations will be encouraged to participate in KPI design and testing to ensure alignment with the CAREC Customs Cooperation Committee[3] (CCC) work plans and regional environmental goals.

Moreover, KCS technical experts will share best practices and models for customs environmental compliance monitoring, including KPI development, risk profiling, and ICT system integration. Where feasible, they will also host study visits and training programs for CAREC customs officials.

I. Suggested Phases (Timeline) in Collaboration Activities

The CAREC Green Customs KPIs Pilot Program will be implemented through a phased, collaborative approach that maximizes the strengths of all partners such as the ADB, CAREC member countries, the Pakistan Single Window (PSW) team, and the Korea Customs Service (KCS). Each phase is designed to build upon the previous one, ensuring that the KPI framework is developed with broad stakeholder input, tested under real operational conditions, and refined for long-term adoption.

a. Phase 1 – Framework Development (Aug–Nov 2025)
    i. Dennis to draft the Green Customs KPI framework and methodology, drawing on international standards and regional requirements.
    ii. Gather inputs and comments from CAREC member countries during the CCC meeting.
    iii. Collaborate closely with KCS technical experts.
    iv. Deliver the pilot program draft to the ADB team by October 2025 for review.

[3] The **CAREC Customs Cooperation Committee (CCC)** is a specialized body established under the **Central Asia Regional Economic Cooperation (CAREC) Program** to strengthen cooperation among the customs administrations of CAREC member countries. Its primary purpose is to facilitate trade, improve customs efficiency, and ensure compliance with international standards.

v. ADB lead to present the proposal during the November 2025 TF Workshop in Korea for approval.

b. Phase 2 – Pilot Implementation (Dec 2025–Jun 2026)
    i. Introduce and integrate the KPIs into customs clearance processes in selected CAREC countries.
    ii. Coordinate with CAREC country missions, under the guidance of ADB and KCS.
c. Phase 3 – Capacity Building & Knowledge Sharing (Jul–Sep 2026)
    i. Conduct briefings on pilot testing results.
    ii. Organize workshops and, if feasible, develop e-learning modules on KPI application and monitoring.
d. Phase 4 – Evaluation & Regional Rollout (Oct 2026–June 2027)
    i. Evaluate pilot outcomes and refine KPIs.
    ii. Support full-scale rollout across CAREC member countries.

J. Expected Outcomes

The pilot program is designed to produce measurable, practical, and lasting benefits for both trade facilitation and environmental protection. By aligning regional customs processes with international standards and embedding sustainability into border operations, the program will strengthen CAREC countries' capacity to manage environmental risks without compromising trade efficiency. The following key outcomes are anticipated:

a. Harmonized Green Customs KPIs adopted across CAREC countries.
b. Improved detection and prevention of environmental trade violations.
c. Faster clearance for environmentally compliant shipments.
d. Stronger alignment with Multilateral Environmental Agreements (MEAs) and global best practices.

K. Next Steps

To ensure the pilot program moves from concept to sustainable practice, a structured set of follow-on actions will guide the transition from framework design to full regional adoption. These steps will consolidate technical work, secure institutional backing, and create the conditions for successful implementation across diverse operational environments.

The process will begin with finalizing and validating the KPI framework, followed by securing leadership and interagency commitment. Carefully selected pilot locations will provide the operational testing ground, with results shaping a broader regional rollout. Ultimately, the KPIs will be institutionalized within national customs strategies and linked to wider environmental policy commitments under Multilateral Environmental Agreements (MEAs). The following activities outline the pathway to scale-up and long-term sustainability:

a. Finalize the KPI Framework - Consolidate introduction, objectives, methodology, clearance stage mapping, and actor roles into one document and validate with relevant stakeholders (Customs, environmental agencies, trade bodies).
b. Secure Institutional Endorsement - Present the framework to Customs leadership for approval and obtain buy-in from interagency partners and policy-level commitment.

c. Select Pilot Countries and Sites - Choose 2–3 ports or border posts with significant environmentally regulated goods traffic and consider diversity in trade volume, modality (sea, air, land), and ICT readiness.
d. Scale Up Regionally - Roll out the refined KPI set to additional ports and countries. Share results and lessons learned through regional platforms (e.g., CAREC Customs Cooperation Committee).
e. Institutionalize and Sustain - Embed Green Customs KPIs in annual performance plans and customs modernization strategies. Link KPI results to environmental policy reporting under Multilateral Environmental Agreements (MEAs).