

CAREC e-CERT Hub

Pilot Project on Electronic Exchange and Mutual Recognition
of Product Conformity Certificates / Test Reports
in the CAREC Region

Kickoff Workshop

1–2 June 2026 · Incheon, Republic of Korea · TA-10730 REG



ESCAP
Economic and Social Commission
for Asia and the Pacific



Session 1

Best Global Practices in Electronic Exchange and Mutual Recognition

S1-1. Session Structure — Joint Presentation by UNESCAP + KTNET

Review international norms together with Korean practical cases to align a reference base for the CAREC pilot — global cases are not copied directly but selectively adapted to the CAREC context.

09:20 ~ 09:40 (20 min)

UNESCAP

International Norms

09:40 ~ 10:00 (20 min)

KTNET

Korean Practical Cases

10:00 ~ 10:30 (30 min)

Joint Q&A

Country Perspectives

UNESCAP Part — International Norms

Asia-Pacific digital trade and mutual recognition norms

- Cross-border Paperless Trade Agreement (CPTA)
- Key lessons learned from the guides on proof of origin and phytosanitary certificates

KTNET Part — Korean Practical Cases

Three cases directly relevant to the CAREC Hub

- ① Trust Infrastructure
TradeSign / SCORE PDF / PKI·TST
- ② Cross-border Exchange
Korea ↔ Chinese Taipei / Korea ↔ China e-CO
- ③ Platform Operation
uTradeHub / Digital Document Distribution Platform

Output of this Session

- ✓ Reference principles
(Institutional · Technical · Operational)
- ✓ Practical lessons
(Five key lessons)
- ✓ Q&A inputs to
S2–S5

S1-2. CPTA-Centered International Norms

CPTA is the institutional reference base for the CAREC pilot — not a legal instrument that replaces the pilot operational arrangement, but an international norm reference supporting cross-border electronic document exchange and interoperability discussions.

CPTA (UN ESCAP)	CPTA Status of the Five CAREC Countries	Key principles
<p><i>Framework Agreement on Facilitation of Cross-border Paperless Trade</i></p> <p>Entry into force: 20 February 2021</p> <p>Status: UN treaty · Legally binding</p> <p>Open to: 53 ESCAP members</p> <p>Principles: Legal equivalence · Interoperability</p> <p>Core areas: Paperless trade documents · Data exchange</p>	<div data-bbox="810 568 1338 675"> <p>Uzbekistan Party · 2024.11.5</p> </div> <div data-bbox="810 694 1338 801"> <p>Kyrgyz Republic Party · 2023.12.20</p> </div> <div data-bbox="810 819 1338 926"> <p>Azerbaijan Party · 2018.03.02</p> </div> <div data-bbox="810 945 1338 1052"> <p>Tajikistan Party · 2022.12.08</p> </div> <div data-bbox="810 1071 1338 1178"> <p>Pakistan Accession in process</p> </div> <p><i>PK: UNTC listing to be verified</i></p>	<ul style="list-style-type: none"> ▪ Functional equivalence; ▪ Non-discrimination of the use of electronic communications; ▪ Technological neutrality; ▪ Promotion of interoperability; ▪ Improved trade facilitation and regulatory compliance; ▪ Cooperation between the public and private sectors; ▪ Improving transboundary trust environment.

S1-3. CPTA Implementation Guides + Technical / Operational References

These references are selected as functional references for the CAREC pilot — operational guidance, data standards, hub-based exchange, Single Window interoperability, and trade facilitation — not as direct models to be copied.

● **Five international norms / cases mapped into four functional groups**

① CPTA Implementation Guides	② UN/CEFACT Digital Product Conformity Certificate Exchange	③ IPPC ePhyto Hub / ASEAN ePhyto	④ UNECE Rec.36 + WTO TFA
<p>CoO·ePhyto paperless guides</p> <ul style="list-style-type: none"> Operating guide for paperless trade documents Prepared by the CPTA Standing Committee → Operational guidance reference 	<p>White Paper (2023) · BRS (2024)</p> <ul style="list-style-type: none"> Related e-CERT / data standards CAB and certificate metadata model → Attestation exchange, verification & metadata reference 	<p>Hub-based electronic phytosanitary certificate exchange</p> <ul style="list-style-type: none"> IPPC ePhyto Hub (since 2018) ASEAN Single Window integration → Hub & operational architecture reference 	<p>Policy & institutional principles</p> <ul style="list-style-type: none"> UNECE Rec.36 — Single Window interoperability WTO TFA — Trade document simplification → Policy framework reference

● **CAREC Pilot Approach**



Note: APEC TEL MRA is addressed separately in S1-4 as the phased trust-building reference case.

UN/CEFACT = United Nations Centre for Trade Facilitation and Electronic Business
 IPPC = International Plant Protection Convention
 ASEAN = Association of Southeast Asian Nations

UNECE = United Nations Economic Commission for Europe
 WTO TFA = World Trade Organization – Trade Facilitation Agreement

S1-4. APEC TEL MRA — Phased Approach

APEC TEL MRA illustrates a phased trust-building structure progressing from test report acceptance to certification acceptance. It is not a legal model for the CAREC pilot; it is used solely as an architectural reference for designing TR/CoC phasing.

● APEC TEL MRA Overview

1998 <i>Year established</i>
APEC 21 <i>Economies</i>
Telecom equipment <i>Scope</i>
Voluntary G-to-G <i>Nature</i>
Bilateral arrangements <i>Implementation</i>

● Phased Trust-Building — Phase I → Phase II

PHASE I Mutual acceptance of Test		➔	PHASE II Mutual acceptance of	
Subject	Test Reports		Subject	Certifications
Standard	ISO/IEC 17025		Standard	ISO/IEC 17065
Bodies	Testing Labs		Bodies	CBs
Commitment	Low entry barrier		Commitment	High (decision-making)
Trust	Testing capability recognition	Trust	Certification capability recognition	

● CAREC Application Points

1. Start low-burden Begin with TR acceptance
2. ISO base Common 17025 / 17065 base
3. Progressive trust Phased trust-building

Note: The Asia-Pacific Economic Cooperation Mutual Recognition Arrangement for Conformity Assessment of Telecommunications Equipment (APEC TEL MRA) is a telecommunications-equipment case, whereas the CAREC pilot covers TR/CoC product conformity. This case is used not as a legal model but solely as an architectural reference for phased trust-building.

S1-5. KTNET Part — Three Korean Cases Directly Relevant to the CAREC Hub

Korean cases offer experience in signature-based trust, cross-border electronic document exchange, and national paperless trade platform operation. They are not a direct replication model for the CAREC Hub but practical references for CoC/TR pilot design.

Trust Infrastructure	Cross-border Exchange	Platform Operation
<p>TradeSign / SCORE PDF</p> <p>What it is PDF signature + TST + X.509 PKI</p> <p>Key experience Integrity / timestamp / public-key trust Since 2002 — KTNET as a government-designated CA</p> <p>CAREC reference Signed PDF + public-key registry</p>	<p>Korea ↔ CT / Korea ↔ CN e-CO</p> <p>What it is Bilateral electronic certificate of origin</p> <p>Key experience KR ↔ CT 2010 (PAA framework) KR ↔ CN 2016 (EODES-based)</p> <p>CAREC reference Cross-border CoC/TR exchange workflow</p>	<p>uTradeHub / Digital Document Distribution Platform</p> <p>What it is DDDP — KTNET's national paperless trade platform</p> <p>Key experience Since 2008 — operated by KTNET Integrated issuance · distribution · archiving</p> <p>CAREC reference Hub portal / API · metadata · audit logs</p>

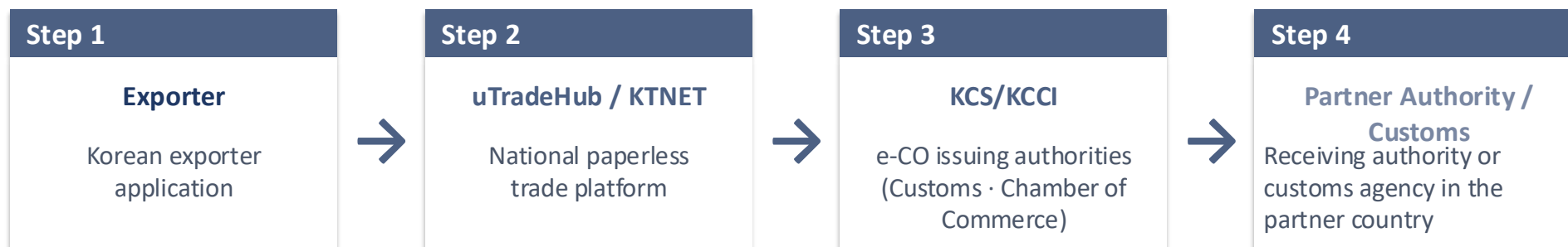
Note: PAA = Pan-Asian e-Commerce Alliance
EODES = Electronic Origin Data Exchange System (of South Korea)

API = Application Programming Interface

S1-6. Korea e-CO — KTNET / uTradeHub

Korea's e-CO exchange demonstrates the operational feasibility of bilateral electronic document exchange. As the document type differs from CoC/TR, only inter-agency exchange, platform operation, and trust information management are referenced.

• e-CO Exchange Flow (Cross-border e-CO Workflow)



KTNET / uTradeHub Platform Profile

- 1992 — designated national paperless trade operator (MOTIE)
- uTradeHub — national paperless trade platform operator
- PAA (Pan-Asian e-commerce Alliance) membership

CAREC e-CERT Hub Reference Points

- ✓ Multi-stakeholder coordination
- ✓ Cross-border data exchange
- ✓ Issuing / receiving authority workflow
- ✓ Trust information management

Note: e-CO is a certificate-of-origin case, while the CAREC pilot covers TR/CoC. As the document types differ, only operational patterns are referenced.

KCS = Korea Customs Service

KCCI = Korea Chamber of Commerce and Industry

S1-7. Lessons Learned and Practical Application Points

The common lessons from global norms and Korean cases are: start small, agree on operations first, manage trust information, and expand in phases. These lessons flow into later discussions on readiness, products, the Hub, and legal frameworks.

- **Five Key Lessons (5 Lessons from Global Norms + Korean Cases)**

L-1	L-2	L-3	L-4	L-5
<p>Start small</p> <p>Begin with a focused scope</p> <p>Selected agri-food / appliance candidates first</p>	<p>Operations before technology</p> <p>Agree on operations first</p> <p>SOPs · roles first</p>	<p>Manage public-key trust</p> <p>Run a public-key registry</p> <p>Public-key registry</p>	<p>Bilateral → Multilateral</p> <p>Start bilateral, expand later</p> <p>Provisional bilateral pilot, then expand</p>	<p>Design for readiness gaps</p> <p>Differentiate by capacity</p> <p>Phased participation</p>

- **Lessons connect to subsequent sessions (Connection to next sessions)**

Session 2	Session 3	Session 4	Session 5
<p>Overview of Digitalization Model</p> <p>5-stage model + country diagnostic</p>	<p>Preliminary Readiness Analysis</p> <p>Country-level readiness analysis</p>	<p>Selection Criteria for Pilot Products</p> <p>Pilot product selection criteria</p>	<p>Technical / Legal Regulatory Issues</p> <p>Technical · legal · regulatory issues</p>

S1-8. International Benchmarks — Comparison Matrix

The common patterns across international benchmarks are: trust-anchor management, authenticity-focused verification, and limited-scope gradual adoption. The CAREC e-CERT Hub does not replicate any legal effect; only principles are selectively referenced and adapted to the pilot scope.

• Nine International Benchmarks — Case Categories

Legal / Treaty-based

Treaty / legal frameworks

CPTA · WTO TFA · e-Apostille

Technical / Standards-based

Technical standards-based

UN/CEFACT e-CERT · UNECE Rec.36 · EU eIDAS

Operational / Platform-based

Operational · platform-based

IPPC ePhyto · APEC TEL MRA · KTNET / uTradeHub

• Three Common Patterns (Common Patterns)

1

Trusted authority / registry

Trust anchor · competent authority · certificate information

2

Authenticity-focused verification

Authenticity-focused verification — not re-testing or re-evaluation

3

Limited-scope, gradual adoption

Limited-scope start → phased expansion

Note: The CAREC pilot does not replicate the legal effect of any case; only verifiable principles are selectively referenced and adapted to the pilot scope.

S1-9. Joint Q&A · Discussion — Country Perspectives

This Q&A is not a country ranking or scoring exercise. It gathers each country's CPTA implementation status, electronic document law, electronic signature and public-key management, and API/portal preferences to inform differentiated pilot participation modes.

Q1 Legal readiness	Q2 Trust infrastructure	Q3 Participation mode
<p><i>Domestic legal frameworks</i></p> <p>What to share</p> <ul style="list-style-type: none"> • CPTA implementation status • National e-document law • E-signature law alignment 	<p><i>PKI & accreditation</i></p> <p>What to share</p> <ul style="list-style-type: none"> • PKI · certificate management • CAB designation · accreditation • CABs available for Hub participation 	<p><i>API vs portal preferences</i></p> <p>What to share</p> <ul style="list-style-type: none"> • Direct API integration vs portal • Technical · resource concerns • Support requirements

● **Format + Follow-up**

- 5 countries × 5–6 min each (10:00 ~ 10:30, 30 min)
- Country inputs → joint discussion → information for designing differentiated pilot participation modes
- Inputs to S2–S5: Digitalization Model · Readiness Analysis · Pilot Products · Technical / Legal / Regulatory Issues

S1 Key Messages

The CAREC Hub is not a stand-alone model. It selectively combines international norms and Korea's operational experience for the 24-month CoC/TR pilot and participating countries' readiness differences.

S1. Best Global Practices in Electronic Exchange and Mutual Recognition

1

International norms provide the reference base

- CPTA, UN/CEFACT, UNECE Rec.36, IPPC ePhyto, APEC TEL MRA, and WTO TFA form the institutional and technical reference base for the CAREC pilot.
- References for selective adaptation — not for direct replication.

2

Korean cases provide operational lessons

- TradeSign / SCORE PDF, Korea e-CO, and uTradeHub offer practical lessons on trust infrastructure, cross-border exchange, and platform operation.
- Operational reference points applicable to the design of the CAREC Hub.

3

The CAREC pilot selectively adapts, not copies

- The CAREC pilot does not adopt these references as-is.
- It selectively adapts them to the CoC/TR scope, the 24-month pilot, and readiness differences across participating countries.
- The result is a Metadata + Signed PDF Hub approach.

Note: The CAREC pilot selectively adapts proven references; it does not directly replicate their legal or operational models.

→ Next Session (S2): Overview of Digitalization Model

From global references to CAREC digitalization model — 5-stage model + country diagnostic

Thank You · 감사합니다 · Rahmat · Спасибо · شكراً

— With participation and cooperation of 5 countries, opening a new chapter in CAREC digital trade together —



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