

ETS Analysis in the CAREC Region

Marina Wang

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The Urgent Global Context

- ▶ The Paris Agreement: Nations united for climate action
- ▶ 2024: Hottest Year on Record: Global temps exceeded 1.5°C above pre-industrial levels.
- ▶ The EU's CBAM: A game-changer for global trade
 - ▶ Implementation starts in 2026
 - ▶ Phasing out free allowance (2026-2034)
- ▶ Why it matters for CAREC: Export cost will rise unless emission are reduced. Studying ETS is critical.

Global ETS Landscape: Growing Coverage

- ▶ 38 ETSs are operational worldwide(as of Jan 2025)
- ▶ 20+ are under consideration or development
- ▶ ≈19% of global emissions are now covered by carbon pricing
- ▶ Only 10 are National System, including China and Kazakhstan from CAREC Region

Two Main Types of ETS

	Cap-and-Trade	Rate-Based (Intensity Based)
How it works	Sets an absolute cap on the total emissions	Sets a limit on emission per unit of output
Pros	Environmental certainty	More flexible for growing economies
Cons	Can be politically challenging	Total emission can rise with production
Examples	EU ETS	China's National ETS

Carbon Price & Revenue Trend (2022-2024)

A Tale of Three Markets:

- ▶ EU ETS: High prices, significant volatility, dominant revenue generator(≈\$66B in 2024)
- ▶ China ETS: Moderate price increase, low absolute price, minimal revenue due to free allocation
- ▶ Kazakhstan ETS: Low and stable price, very small market size.

China's National ETS: The world's Largest by coverage

- ▶ Launched: July 2021
- ▶ Sector: Power Generation (2,225 entities)→Expanding to Steel, Cement, Aluminum in 2025
- ▶ Coverage: 4.5 Gt CO_{2e} (45% of national emissions)
- ▶ Key Feature: Rate-Based System with 100% free allocation
- ▶ Price(2024):≈¥70-106/t(≈\$10-15/t)
- ▶ Challenge: Low price signal, no significant revenue yet

Kazakhstan's National ETS: A Pioneer's Journey

- ▶ Launched: 2013(Pioneer in the developing world)
- ▶ Sector: Energy, Oil & Gas, Mining, Metallurgy (≈41% of national emissions)
- ▶ Journey:
 - ▶ 2016-2017: Suspended due to price volatility & verification issues
 - ▶ 2018: Revived with legal reform and a move towards benchmarking
- ▶ Price(2024): ≈\$5/t CO_{2e}
- ▶ Future Plans: Introduce auctions ,align with international markets

Persistent Challenges in the CAREC Region

► Structural Issues

- Narrow sectoral coverage (e.g. only power in China)
- Low carbon prices → weak decarbonization incentive
- Over-reliance on free allocation
- Data quality and MRV (Monitoring, Reporting, Verification) Challenges

► Regional Barriers:

- Political resistance in fossil-fuel-rich economies
- Limited institutional capacity (e.g. Tajikistan)
- Lack of data transparency and harmonized standards

► Risks: Carbon leakage, social equity concerns, price volatility

Policy Recommendation: A Path Forward

- ▶ Strategic Investment: Redirect carbon revenue to renewables & just transition programs
- ▶ Sector-Specific Frameworks: Develop ETS for CBAM-exposed industries(cement, metal)
- ▶ Regional Harmonization: Align rules between China, Kazakhstan, Uzbekistan for future integrated market
- ▶ Phased Transition: Tailor approach to each economy's readiness

CAREC Carbon Pricing outlook

Diverse Levels of Progress:

- ▶ Leaders(Expanding): China, Kazakhstan
- ▶ Pilots/Preparation: Uzbekistan(2025), Azerbaijan (2026), Pakistan (2025-26)
- ▶ Feasibility/Study: Georgia, Mongolia (Carbon Tax)
- ▶ Early Stage: Tajikistan

Conclusion & Outlook

- ▶ China and Kazakhstan provide crucial lessons for the region
- ▶ Technical improvement (MRV, coverage, pricing) and political will are both essential
- ▶ Regional cooperation is key to building effective and resilient carbon markets
- ▶ A well-designed ETS can be a powerful tool for emission reduction and sustainable economic growth

Thank you!