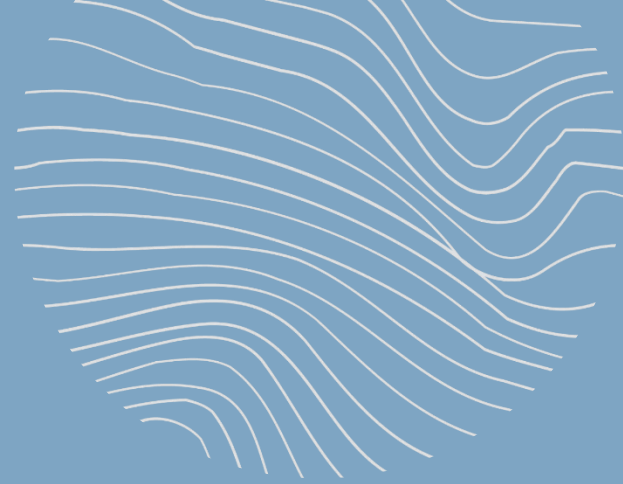


21.10.2022



Carbon Pricing Potential in Asia: Opportunities and Challenges

Please wait, we will begin shortly



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Asia POLICY
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ASEAN Centre for Energy
One Community for Sustainable Energy

21.10.2022



CARBON PRICING POTENTIAL IN ASIA

OPPORTUNITIES & CHALLENGES

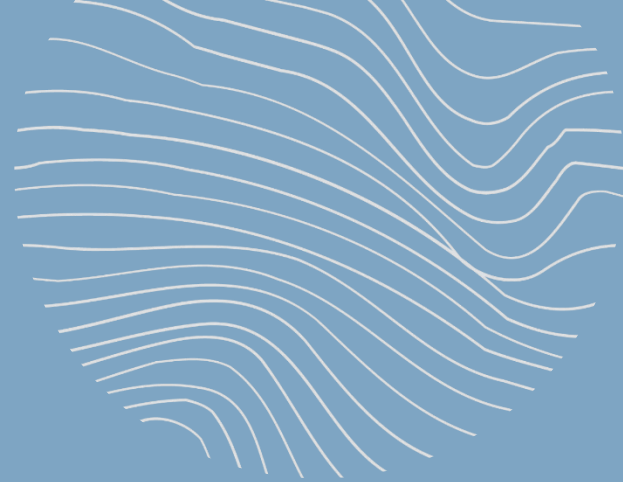
Webinar

AGENDA

- **Introduction & opening remarks**
Dr. Constanze Haug (adelphi), moderator
Prof. Dr. Daniel Klingefeld (UBA)
- **Insights from “Carbon Pricing Potential in Asia: Opportunities & Challenges”**
Dr. Baran Doda (adelphi)
Prof. Dr. Anatole Boute (CUHK)
Maia Hall (adelphi)
- **Interventions**
Alistair Ritchie (ASPI)
Beni Suryadi (ACE)
- **Q&A and discussion**
- **Closing remarks**



21.10.2022



GERMAN EMISSIONS TRADING AUTHORITY

Opening remarks

Prof. Dr. Daniel Klingefeld

CARBON PRICING POTENTIAL IN ASIA

OPPORTUNITIES & CHALLENGES

Project insights



PROJECT OVERVIEW

Developing theoretical framework

Literature survey to identify drivers and obstacles to carbon pricing along political, legal, economic, technical, and regional dimensions

Identify qualitative and quantitative indicators to assess them

Applying theoretical framework in Asia

Applied to 15 jurisdictions, using a subset of indicators for which quantitative and qualitative data broadly available

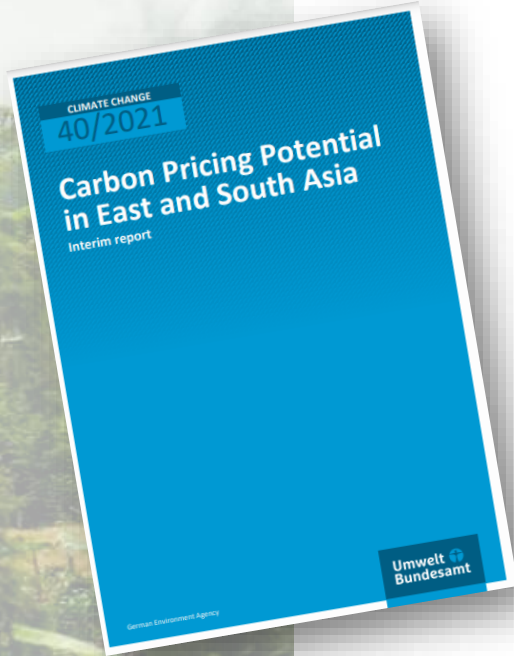
Detailed factsheets developed and jurisdictions clustered

Case studies & synthesis

Developed case studies for carbon pricing potential in Indonesia, Vietnam, Pakistan based on stakeholder mapping and interviews plus desk research

Synthesis of project findings

PROJECT OVERVIEW



May 2021

February 2022



Final report on the three case studies and synthesis expected by the end of 2022

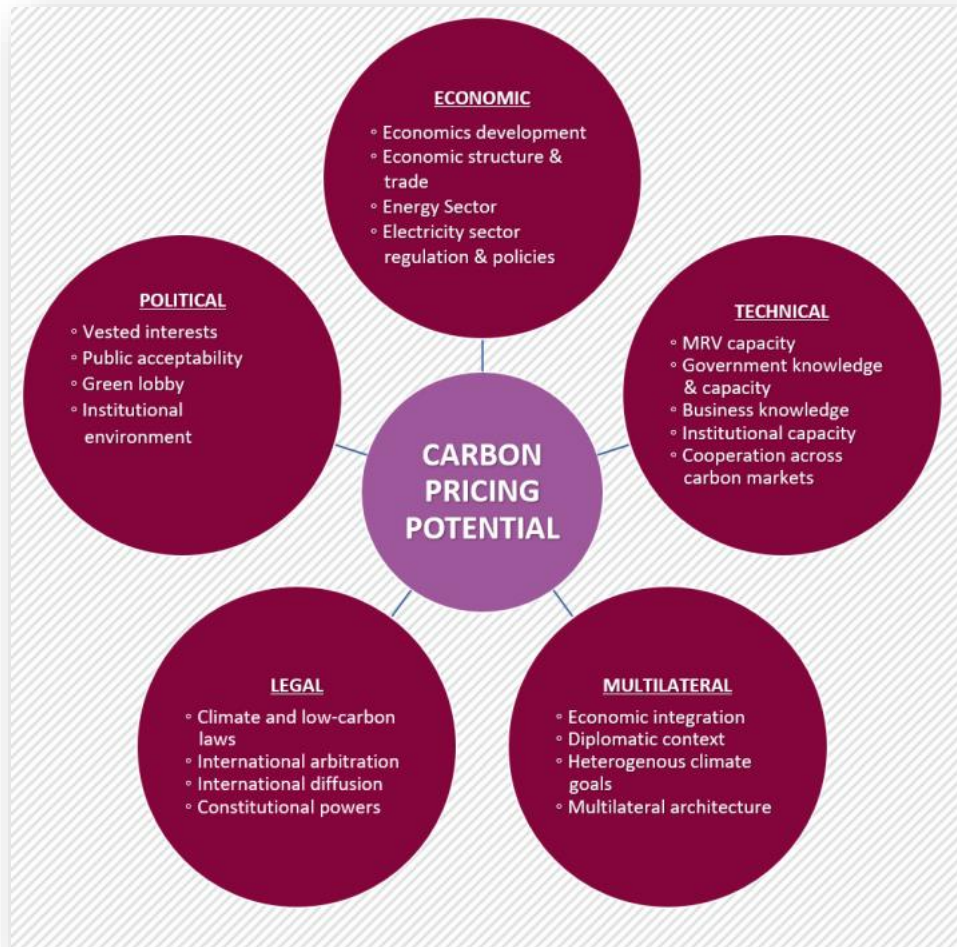


DEVELOPING A THEORETICAL FRAMEWORK

DEVELOPING A THEORETICAL FRAMEWORK

- In-depth and structured literature review of 500+ publications → **analytical framework to survey carbon pricing potential**
- Identification of **key drivers and obstacles** along political, legal, economic, technical and regional dimensions
- Identification of **indicators and variables** along each dimension to understand relevant conditions for carbon pricing readiness in a broader context





CLIMATE CHANGE
40/2021

Carbon Pricing Potential in East and South Asia

Interim report

German Environment Agency

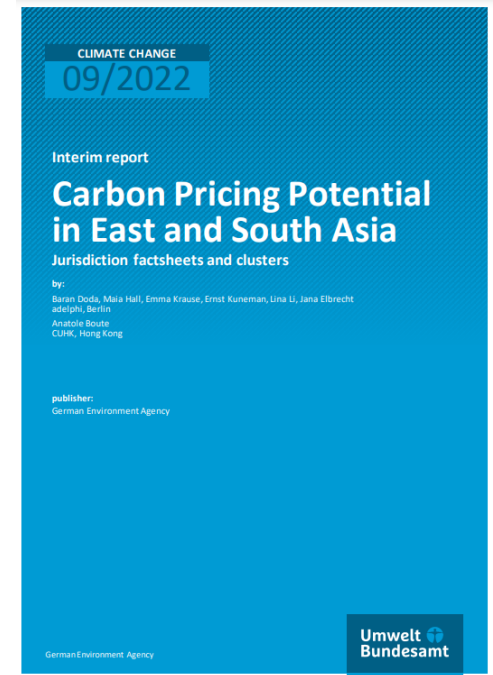
Umwelt Bundesamt



APPLYING THE THEORETICAL FRAMEWORK

APPLYING THE THEORETICAL FRAMEWORK

- 15 East and South Asian jurisdictions in a series of **detailed factsheets**
- Revealed **pathways for carbon pricing** and **emerging opportunities** in jurisdictions where the **challenges** to it seem greatest
- Jurisdiction **clustering**



Bangladesh



Brunei



Hong Kong SAR



India



Indonesia



Malaysia



Mongolia



Pakistan



Philippines



Republic of China
(Taiwan)



Russia



Sri Lanka



Thailand



Uzbekistan



Vietnam



A FACTSHEET EXAMPLE

CLIMATE CHANGE Carbon Pricing Potential in East and South Asia – Jurisdiction factsheets and clusters

A.13 Thailand Factsheet

Overall		Thailand	
Capital	Bangkok	Political	Electricity from fossil fuels 82.8% of total generation (2019)
Govt structure	Constitutional monarchy (Legislative branch modelled on Westminster)	Brown lobby	EGAT
GDP	USD 1,342.2 billion (2019)	Green lobby	Thai Climate Justice Network; tourism industry
GDP per capita	USD 19,276.9 (2019)	Perceived corruption	Score=36 (2019) Min=9; Mean=43; Max=87 Germany=80
Population	69.6 million (2019)	Economic	Income group Upper-middle income
Legal	Key government departments National Committee on Climate Change Policy; Min. of Nat. Resources and Environment; Office of Nat. Resources and Env. Policy and Planning; TGO	Gini index	36.4 (2018) Perfect equality/inequality=0/100; Germany=31.9 (2016)
Key legal instruments	Nat. Econ. & Social Development Plans, Energy Conservation Promotion Act; Energy Industry Act; Strategic Plan on Climate Change	Importance of industry	Value added: 33.4% of GDP (2019) Employment: 23% of total (2020) CO2 emissions: 61.8% of total (2018)
Related policies	Nat. Reform Plan; Nat. Climate Change Master Plan (2015-2050); Plans for power development, EE & alternative energy (2015-2036); Climate Change Act (under development); Long-term Low GHG Emission Development Strategy (under dev.)	Fossil subsidies	9.5% of GDP (2017)
FDI	1.1% of GDP (2019)	Electricity market	Partial unbundling with regulated tariff structures and a single buyer model

CLIMATE CHANGE Carbon Pricing Potential in East and South Asia – Jurisdiction factsheets and clusters

Thailand

Technical	Thailand		
MRV status	Under development since 2013 for voluntary ETS	Multilateral	
UNFCCC reporting	3 BURs (2020)	Openness	110% of GDP (2019)
Experience with carbon markets	Thailand Voluntary ETS; T-VER; JCM; CDM; NAMAs	International agreements	WTO (1995); RCEP (2020); ASEAN (2005)
Participation in WB initiatives	Not a CPLC partner; PMR implementing country	NDC	(Un)Conditional: (20%) 25% reduction in GHG emissions by 2030 compared to projected BAU level
		NDC assessment	Ambition not assessed by CAT; Reference to bilateral, regional, multilateral market-based cooperation and Article 6

Carbon pricing readiness and options

- Through the establishment of the Greenhouse Gas Management Organisation (TGO), pilot ETS, and experience with international market mechanisms, Thailand has accumulated substantial institutional, regulatory, and technical experience and expertise, which provide a solid foundation for the successful introduction of an ETS.
- Vested interests of carbon-intensive industries, reliance on fossil fuels, and highly regulated power development of an ETS. Also challenging is the coordination of 30+ climate and energy policies designed and implemented by some 25 public agencies.
- Thailand's struggle with corruption, flaws in democracy, and political turbulence (including military intervention in governance) pose challenges for a sustained political environment for any carbon pricing instrument.
- Climate Change Act currently under development could provide a solid legal basis for carbon pricing growing a awareness and acknowledgment of climate changes risks in the country and its effect on the renewable energy development is conducive to carbon pricing.
- Considering the strides Thailand has already made, an ETS is likelier than a carbon tax, at least for provisions in existing long-term contracts to be phased out as much-needed electricity sector reforms progress and start bearing fruit.

1. Political dimension

The vested interests of carbon-intensive industries can pose significant challenges for the introduction of a carbon price as powerful actors resist the transition to a low-carbon economy. In 2018, 80% of Thailand's total primary energy supply and over 82% of its electricity generation stemmed from coal, natural gas, and oil sources, illustrating the country's continued heavy reliance on fossil fuels (IEA 2018). There is marked resistance to phasing out coal. 19 plants are currently in operation with another announced recently (Global Energy Monitor 2021), which increases the likelihood of stranded assets and therefore opposition to a carbon price. Key actors such as the Electricity Generating Authority of Thailand (EGAT) hold sway over energy development. Publicly owned enterprises like EGAT are encouraged to promote energy conservation but generally do not, due to the likely negative impact on electricity sales and profits from existing plants. This can pose a significant barrier to the continued development of carbon pricing in Thailand (Boydland 2018).

KEY HIGH-LEVEL FINDINGS



Political

- Reliance on oil, gas, and coal + dominance of fossil fuel earnings in gov & export revenues / GDP provide economic rationale and political interests that seek to avoid high carbon prices
- Targeted / transparent communication about policy instrument & counterweight of green groups and civil society can help mitigate



Legal

- Many jurisdictions have flagship climate law
- Robust regulatory and policy framework also necessary

KEY HIGH-LEVEL FINDINGS (II)



Economic

- Structure of regulation and state of liberalisation of power markets key for decarbonization (planning/dispatch) & effective carbon cost pass-through
- Interplay between market regulation and carbon pricing in power sector + energy subsidies create aversion to higher electricity prices



Technical

- Most jurisdictions have some experience with MBMs (e.g., CDM, JI, JCM projects) + established MRV
- But many still lack detailed technical and administrative capacity necessary to implement /operate carbon pricing

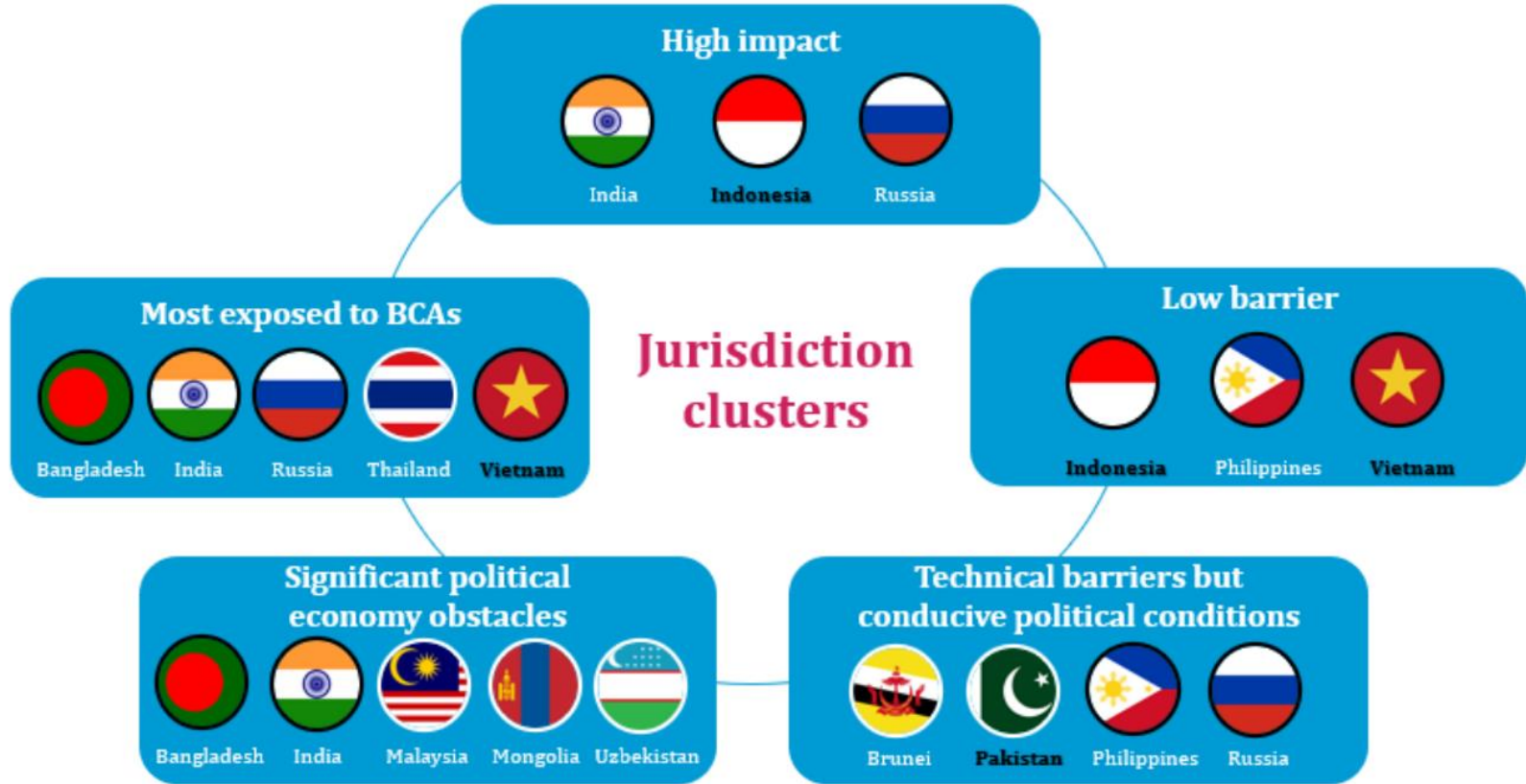
KEY HIGH-LEVEL FINDINGS (III)

Multilateral

- Climate cooperation under the UN framework can facilitate carbon pricing
- Economic cooperation under ASEAN framework relevant for many jurisdictions in the region
- Multilateral carbon pricing support initiatives (e.g. World Bank PMR, CIACA, and ICAP) can be important
 - transfer lessons in the design and implementation phases of the instrument, especially important in a world of with border carbon adjustment mechanisms facilitators
 - transfer knowledge and help build capacity



JURISDICTION CLUSTERING



Note: Flags with a black ring appear in multiple clusters. Jurisdiction names in black are case study jurisdictions.

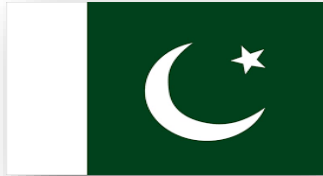


DEEP DIVE: CASE STUDIES

3

CARBON PRICING POTENTIAL

- Vietnam, Pakistan, Indonesia chosen to broadly represent the jurisdictional clusters
- Incorporates findings from interviews with local and international stakeholders based on stakeholder mapping in each jurisdiction
- A detailed review of power sector regulation and its interaction with carbon pricing



OBSERVATIONS FROM CASE STUDIES (I)

- **Political**
 - Influence of and opposition from vested fossil fuel interests (both private and public sector), especially with substantial fossil fuel reserves
- **Legal**
 - All three countries have flagship climate laws; RE and energy efficiency policy framework
 - Fragmented institutional environment (esp. Indonesia and Pakistan) → challenges of distribution of power between central/subnational governments; coordination across public bodies
 - Potential challenges from international investors in brown sectors who may seek arbitration arguing that rights are violated by CPI (esp. Vietnam and Pakistan)

OBSERVATIONS FROM CASE STUDIES (II)

- **Economic**

- Major power sector emissions and surging demand, so often first sector to be regulated by CPIs
- Dominance of state-owned enterprises, long term PPAs; fossil fuel subsidies; ongoing reform processes; new investments in coal fired generation; and heavily regulated wholesale and retail prices

- **Technical**

- Though three countries are at different stages of progress towards CPI, main technical challenge is capacity and knowledge for developing and operating MRV system

OBSERVATIONS FROM CASE STUDIES (III)

- **Multilateral**
 - Significant motivator for CPIs in all three case study countries:
 - Use of CPI in all three countries' major trade partners, e.g., EU, South Korea, Japan, New Zealand & several US States and Canada
 - Move by EU to establish a CBAM and launch of the China National ETS

KEY RECOMMENDATIONS (I)

- **Important to align CPIs with power market regulation/liberalisation**
 - Important benefits from **joined up thinking** on CPI and power market regulation, **strong legal framework** for both and **early needs assessment**
 - **Remove fossil fuel subsidies** and provide targeted support
- **Dependence on fossil fuels and opposition from vested interests can be a significant challenge to carbon pricing**
 - Engage with public/private sector, civil society and int'l stakeholders
 - **Early engagement** to explain carbon pricing rationale, raise awareness about the instrument and understand stakeholder concerns
 - Consider the pros/cons of instruments and design options

KEY RECOMMENDATIONS (II)

- **Multilateral cooperation / dialogue key with jurisdictions already with CPI or closer to implementation**
 - **Reflect best-practices**, avoid common pitfalls, enhance design harmonization to reduce leakage concerns & help with linking
 - Bi/multilateral dialogues in technical working groups to **assess needs**, identify solutions to common problems → further cooperation
 - Open and early **conversation with trade partners** to anticipate potential points of resistance and work on cooperative approach
 - Draw support/inspiration from others with relevant experience to support **technical capacity building**, particularly for robust MRV

21.10.2022



Asia POLICY
Society INSTITUTE

ASIA SOCIETY POLICY INSTITUTE

Intervention

Alistair Ritchie

adelphi 

21.10.2022



ASEAN Centre for Energy
One Community for Sustainable Energy

ASEAN CENTRE FOR ENERGY

Intervention

Beni Suryadi

adelphi 

21.10.2022



Q&A



21.10.2022



Thank you

CARBON PRICING IN ASIA

Opportunities and Challenges



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