HKU Faculty of Law Taxation Law Research Programme

A Multilateral Agreement on Carbon Pricing and Implications for Developing Countries

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Roadmap

- Why Carbon is Special and How to Deal with It
- Carbon Pricing: the Status Quo and Developing Countries
- Options for a Global Minimum Carbon Price Framework
- The Role of Border Carbon Adjustments

Why Carbon is Special

The Ahr River in Insul, Germany, on 15 July 2021 after heavy rainfall - CNN

More …

Heavy rains in Zhengzhou, 21 July 2021 – The Washington Post

And more …

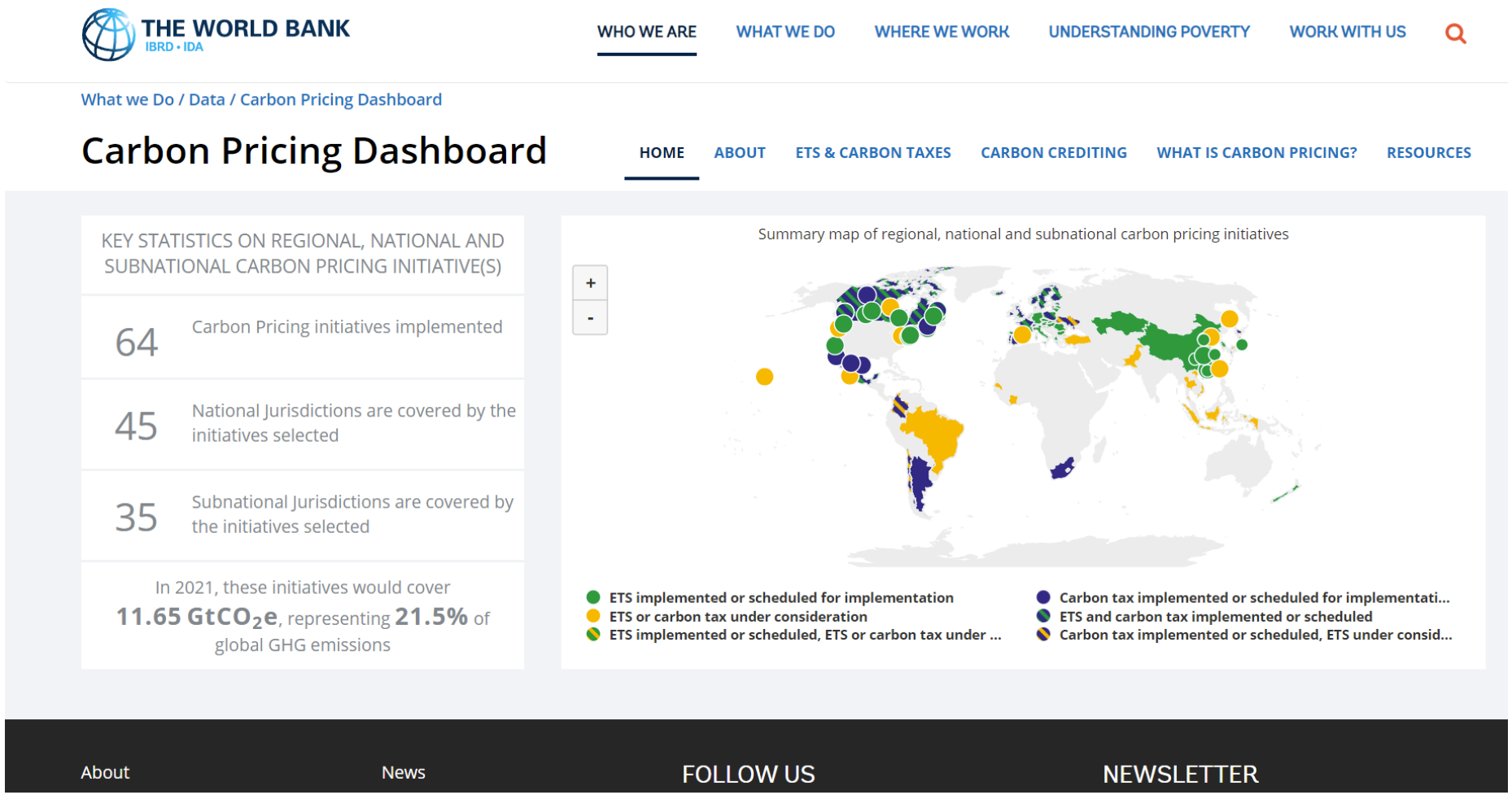
BC, Canada, 30 June 2021 – BBC;
A wildfire burning in Mugla, Turkey, 2 August 2021 – ANADOLU AGENCY

The IPCC Special Report

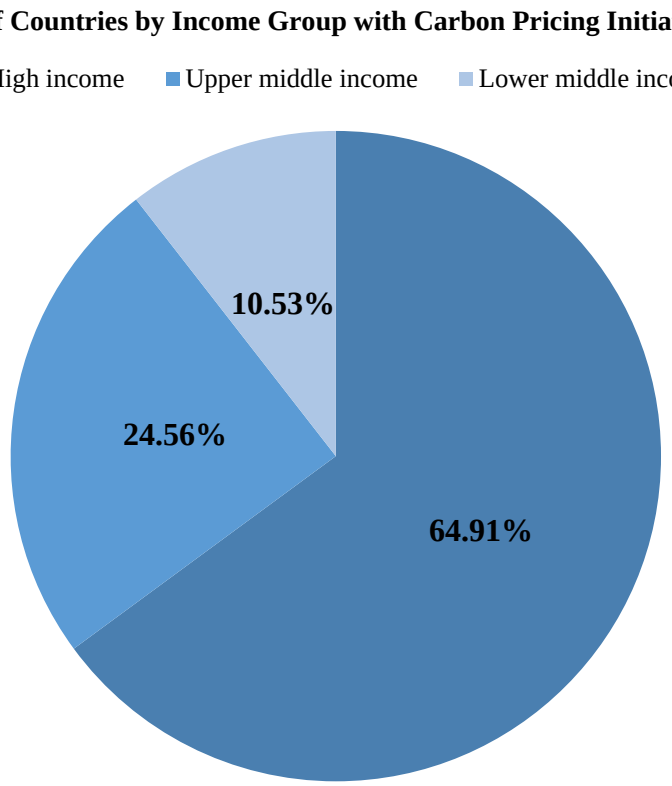
Urgency and Ways of Cutting Emissions

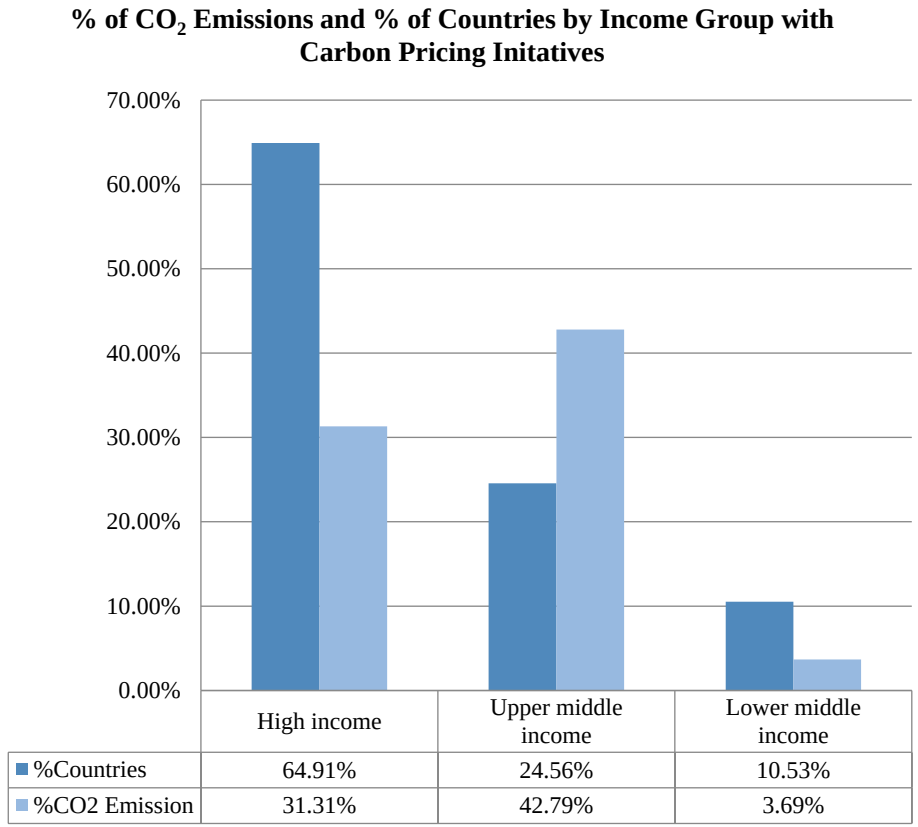
- The Urgency
  - Time to deal with global warming is significantly limited
  - Must achieve carbon neutrality by 2050
- How to cut carbon emissions effectively?
  - Carbon pricing
    - Most cost-effective
    - Can take different forms
    - Most commonly a carbon tax or an ETS

Carbon Pricing as of 2021



Economies with Carbon Pricing





	High income	Upper middle income	Lower middle income
%Countries	64.91%	24.56%	10.53%
%CO2 Emission	31.31%	42.79%	3.69%

Sources: various data from the World Bank

Carbon Prices - China

Economy	Region	Income group	Carbon tax/ETS	Status	CO_2 Emissions (kt) 2018	Price (US)	% of CO_2 in Global Total
China	East Asia & Pacific	Upper middle income	Beijing Pilot ETS	Implemented	10313460	**$4.32**	30.2971%
	East Asia & Pacific		National ETS	Implemented		**No price available**	
	East Asia & Pacific		Chongqing pilot ETS	Implemented		**$3.71**	
	East Asia & Pacific		Fujian pilot ETS	Implemented		**$1.25**	
	East Asia & Pacific		Guangdong pilot ETS	Implemented		**$5.72**	
	East Asia & Pacific		Hubei pilot ETS	Implemented		**$4.41**	
	East Asia & Pacific		Shenzhen pilot ETS	Implemented		**$1.12**	
	East Asia & Pacific		Shanghai pilot ETS	Implemented		**$6.32**	
	East Asia & Pacific		Shenyang pilot ETS	Under consideration			
	East Asia & Pacific		Tianjin pilot ETS	Implemented		**$3.80**	

Sources: World Bank, "Carbon Pricing Dashboard", "CO2 Emissions (kt)", "The World by Income and Region", and "Member Countries"

Carbon Prices - US

Economy	Region	Income group	Carbon tax/ETS	Status	CO_2 Emissions (kt) 2018	Price (US)	% of CO_2 in Global Total
United States	North America	High income	California ETS	Implemented	4981300	**$17.94**	14.6332%
	North America		Massachusetts ETS	Implemented		**$6.50**	
	North America		Oregon ETS	Under consideration			
	North America		Hawaii carbon tax	Under consideration			
	North America		Pennsylvania ETS	Under consideration			
	North America		RGGI ETS	Implemented		**$8.69**	

Sources: World Bank, "Carbon Pricing Dashboard", "CO2 Emissions (kt)", "The World by Income and Region", and "Member Countries"

Carbon Prices – EU & UK

Economy	Region	Income group	Carbon tax/ETS	Status	CO_2 Emissions (kt) 2018	Price (US)	% of CO_2 in Global Total
EU	Europe & Central Asia	High income	EU ETS (all EU members)	Implemented		**$49.78**	0.0000%
	Europe & Central Asia		Germany ETS	Implemented	709540	**$29.36**	2.0844%
	Europe & Central Asia		Denmark Carbon tax	Implemented	33380	**Fossil fuels ($28.14); F-gases ($23.65)**	0.0981%
	Europe & Central Asia		Spain Carbon tax	Implemented	258340	**$17.62**	0.7589%
	Europe & Central Asia		Estonia Carbon tax	Implemented	16000	**$2.35**	0.0470%
	Europe & Central Asia		Finland Carbon tax	Implemented	44360	**Transport fuels ($72.83); Other fossil fuels ($62.25)**	0.1303%
	Europe & Central Asia		France Carbon tax	Implemented	309960	**$52.39**	0.9105%
	Europe & Central Asia		Luxembourg Carbon tax	Implemented	9320	**Diesel fuel ($40.12); All fossil fuels ($23.49)**	0.0274%

Economy	Region	Income group	Carbon tax/ETS	Status	CO_2 Emissions (kt) 2018	Price (US)	% of CO_2 in Global Total
EU	Europe & Central Asia		Latvia Carbon tax	Implemented	7630	**$14.10**	0.0224%
	Europe & Central Asia		Netherlands Carbon tax	Implemented	151170	**$35.24**	0.4441%
	Europe & Central Asia		Slovenia Carbon tax	Implemented	14050	**$20.32**	0.0413%
	Europe & Central Asia		Sweden Carbon tax	Implemented	36000	**$137.24**	0.1058%
	Europe & Central Asia		Austria Carbon tax/ETS	Under consideration	63180		0.1856%
	Europe & Central Asia		Poland Carbon tax	Implemented	312740	**$0.08**	0.9187%
	Europe & Central Asia		Portugal Carbon tax	Implemented	49780	**$28.19**	0.1462%
	Europe & Central Asia		Ireland Carbon tax	Implemented	37110	**39.35 (transport fuels)**	0.1090%
United Kingdom	Europe & Central Asia	High income	ETS and Carbon tax	Implemented	358800	**Carbon price $24.80**	1.0540%

Carbon Prices – Canada

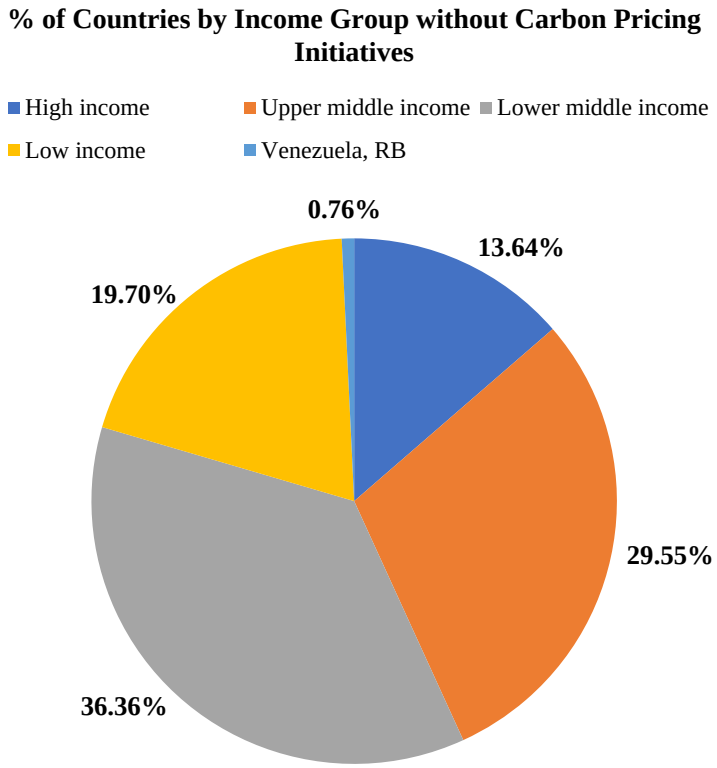
Economy	Region	Income group	Carbon tax/ETS	Status	CO_2 Emissions (kt) 2018	Price (US)	% of CO_2 in Global Total
Canada	North America	High income	Alberta ETS	Implemented	574400	**Alberta $31.83**	1.6874%
	North America		British Columbia ETS and carbon tax	Implemented		**ETS $19.90; carbon tax $35.81**	
	North America		Canada federal OBPS - ETS	Implemented		**$31.83**	
	North America		Canada federal fuel charge - ETS	Implemented		**$31.83**	
	North America		Manitoba ETS/Carbon tax	Under consideration		**ETS ($19.90); Carbon tax ($19.90)**	
	North America		New Brunswick ETS; Carbon tax	Under consideration; Implemented		**Carbon tax $31.83**	
	North America		Newfoundland & Labrador PSS (ETS) and carbon tax	Implemented		**PSS ($23.88); Carbon tax ($23.88)**	
	North America		Northwest Territories carbon tax	Implemented		**$23.88**	
	North America		Nova Scotia ETS	Implemented		**$19.66**	
	North America		Ontario ETS	Scheduled			
	North America		Quebec ETS	Implemented		**$17.94**	
	North America		Saskatchewan ETS	Implemented		**$31.83**	
	North America		Prince Edward Island carbon tax	Implemented		**$23.88**	

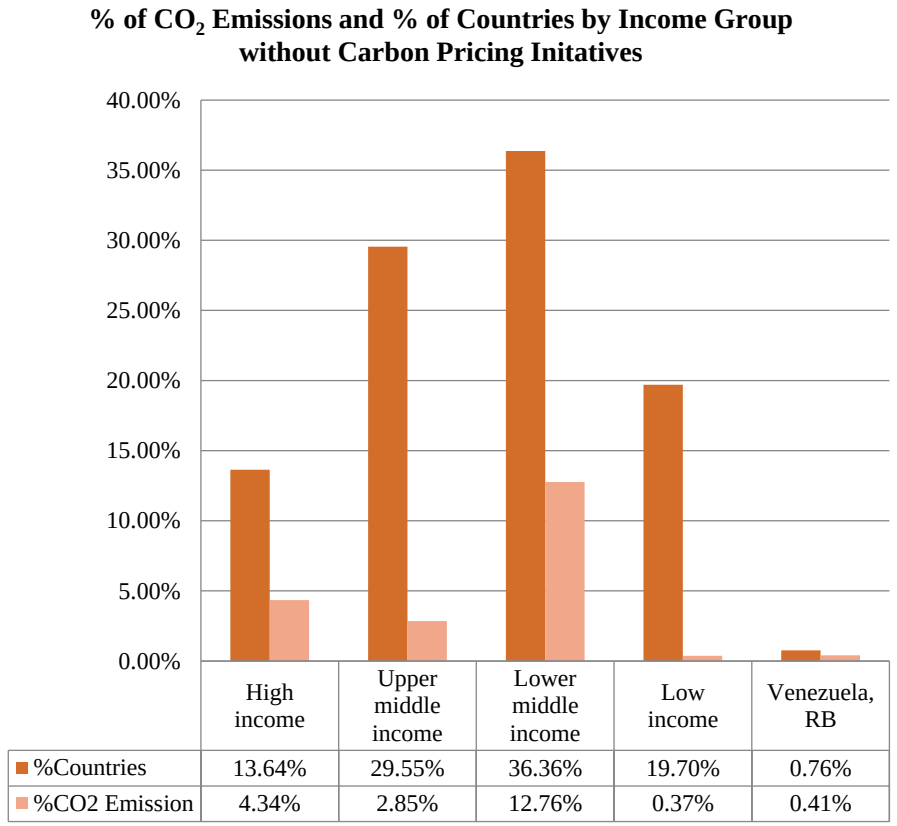
Economies without Carbon Pricing

Income Group	#Countries	%Countries without CP	%Countries Per WB Member	CO_2 (kt) 2018	% of CO_2 in Global Total
High income	18	13.64%	9.52%	1476800	4.34%
Upper middle income	39	29.55%	20.63%	971450	2.85%
Lower middle income	48	36.36%	25.40%	4343420	12.76%
Low income	26	19.70%	13.76%	127770	0.37%
Venezuela, RB	1	0.76%	0.53%	138160	0.41%
Grand Total	**132**	**100.00%**	**69.84%**	**7057600**	**20.73%**

Sources: World Bank, "Carbon Pricing Dashboard", "CO2 Emissions (kt)", "The World by Income and Region", and "Member Countries"

Economies without Carbon Pricing (cont'd)





	High income	Upper middle income	Lower middle income	Low income	Venezuela, RB
%Countries	13.64%	29.55%	36.36%	19.70%	0.76%
%CO2 Emission	4.34%	2.85%	12.76%	0.37%	0.41%

Sources: various data from the World Bank

A Multilateral Framework for Carbon Pricing

- Options
  - A universally applied environmental tax on carbon
  - Adoption of ETSs by all jurisdictions with annual, progressively tightening of emissions targets
  - A global minimum carbon price or price floor
- Major obstacles with the first two options

A Global Minimum Carbon Price

- Design features (the IMF proposal)
  - Not itself a carbon tax
  - Start with a small number of large carbon emitters
  - Apply different floors to different economies
    - e.g., $75 for advanced economy, $50 for upper-middle economy, $25 for low-income economy)
  - Allow flexible accommodation of reduction instruments

A Global Minimum Carbon Price (cont'd)

- The Political economy feasibility
  - Would the small fraction of large emitters accept the option?
  - The challenges for economies at the lower income ends
    - Balancing economical growth needs and climate change risks
    - The "common but differentiated responsibility" principle

The Role of Border Carbon Adjustments

- A complement to the global minimum carbon price approach?
  - The EU proposal
  - As a proxy sanction for complying with international obligations
- The rationale and the practice
  - Designed to equalise the costs borne by domestic industries with those by producers in jurisdictions with softer carbon policies
  - Meant to address two major concerns: carbon leakage and competitiveness
  - The EU as the first adopter, and others may follow

The Role of Border Carbon Adjustments (cont'd)

- WTO law constraints and the CBDR principle
  - What implications do WTO law and the principle of CBDR have for BCAs?
  - To what extent can BCAs be aligned with both systems?
- The WTO law
  - Article II:2(a) of the GATT: explicitly allows a border tax adjustment
  - Article III (national treatment) & Article 1 (most-favoured nation treatment): the principles of non-discrimination
  - GATT Article XX (general exceptions): Article XX(b) & (g), the Chapeau
- The CBDR principle
  - Explicit reference under UNFCCC, the Kyoto Protocol, and the Paris Agreement
  - Historical responsibility and current capacity

BCAs under a Multilateral Agreement

- If a multilateral agreement on minimum carbon prices is in place
  - Would the justification for unilateral BCAs remain?
- The design of BCAs if applied
- The value of the mechanism
  - Ideally just deterrence
  - In the long run, the most desirable solution is collective climate action

Conclusion

- Climate change is a common threat to all on the planet
- Must act now and act effectively
- A global carbon pricing framework appears promising, but challenges ahead and some unilateral actions may be needed to move forward the multilateral framework