





Linkages and Carbon Clubs

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The Networked Carbon Markets initiative is collaboratively developing post-2020 tools & services for linking carbon markets



13% of global emissions are now covered by carbon pricing initiatives



Cooperation saves costs of NDC implementation

International cooperation through carbon markets plays a critical role in:

- Cost savings
- Achieving more ambitious target (below two degree)
- Facilitating finance flows to build stable coalition

GLOBAL COST OF COOPERATIVE NDC IMPLEMENTATION





Source: State and Trends of Carbon Pricing 2016

The gains could be more significant, depending on the linking partner

Bilateral linking – China and South Korea in 2030

	China		South Korea	
	No linking	Linking	No linking	Linking
Carbon price (\$/tCO2)	42	46	310	46

Net Emissions Transfer in 2030





Source: Enerdata 2016

With such significant cost savings, it becomes politically infeasible not to link



China and South Korea are not the only examples of countries where carbon prices will differ



this graph as price information is not available for those initiatives. The carbon tax rate applied in Mexico, Finland, and Norway varies with the fossil fuel type and use. The graph shows the average carbon tax rate weighted by the amount of emissions covered at the different tax rates in those jurisdictions.

ETS Carbon tax

13% of global emissions are now covered / allowed by carbon pricing initiatives



Why is measuring mitigation impact of an ETS important for international linking?

If we treat every <u>right to emit</u> as if it is a 1 tonne <u>emission reduction</u> – trading will increase emissions.



Methodologies to measure mitigation impact might be one organizing principle of carbon clubs





Confirming differences between schemes shouldn't mean you can't trade with those partners

ALIGNED

HETEROGENEOUS

DIRECT LINKING

For direct linkages to work, "Jurisdictions need to find compromises to align design elements—in particular to guarantee comparable levels of environmental integrity... this may require adjustment of certain ETS design features," PMR/ICAP ETS Handbook.

NETWORKING

- Based on principle that many different actions have mitigation impact, but they don't have the same mitigation impact.
- No alignment of actions.
- Transparent and efficient approach to determine the relative climate change mitigation value of carbon assets to be traded internationally.





Heterogeneity is important for ensuring that domestic needs and circumstances are met





CHALLENGE: linking is limited by diversity, design and different capacities





Challenges measuring the mitigation impact of an ETS – <u>A Hypothetical Scenario</u>

At START of commitment period		
Projected emissions under		
a BAU scenario	1200	tonnes
Allowances issued	1000	allowances

At END of commitment period				
Reported emissions	850	tonnes		
Surrendered / expired allowances	850	allowances		
Real Mitigation Outcomes	75	allowances		
Over-allocated allowances	75	allowances		

Net Tansfer		
Number of allowances		
purchased by Country B NET	150	allowances
Transfer allows Country B to emit	150	tonnes



Reasons for over-allocation

- Prior to commencement of an ETS, Governments will project future emissions and this projection will inform decisions on the type and ambition of the cap, as well as its cost implications.
- There are an infinite number of factors that affect whether actual outcomes will equal expected outcomes.
- It is not be the role of ETS administrators to predict the future by forecasting exactly future emissions, but rather their role is to:
 - Be transparent about how actual mitigation outcomes are tracking relative to expected outcomes, in order to track whether specific assumptions underlying estimates of future emissions are playing out in reality or not.
 - Adjust for differences between actual and expected mitigation outcomes, so as to limit the extent of over-allocation in an ETS.

