

Setting a Framework for the Energy Transition: *Envisioning a Global Carbon Market*

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9 July 2015

Envisioning a Global Carbon Market

Petersberg Dialogue Call for Climate Action

Joint Statement from Angela Merkel and François Hollande, 19 May 2015:

“Germany and France call for action in the following areas: (...) Introducing carbon markets and pricing on national and regional level.”



Envisioning a Global Carbon Market

BG Group, BP, Eni, Shell, Statoil and Total
Letter to UNFCCC Executive Secretary Christiana Figueres and COP21 President and French Foreign Min. Laurent Fabius, 29 May 2015:

“[W]e call on governments to (...) introduce carbon pricing systems [and] create an international framework that could eventually connect national systems.”



Envisioning a Global Carbon Market

Group of 7

G-7 Leaders' Declaration, 8 June 2015:

“[W]e commit to the long-term objective of applying effective policies and actions throughout the global economy, including carbon market-based (...) instruments”

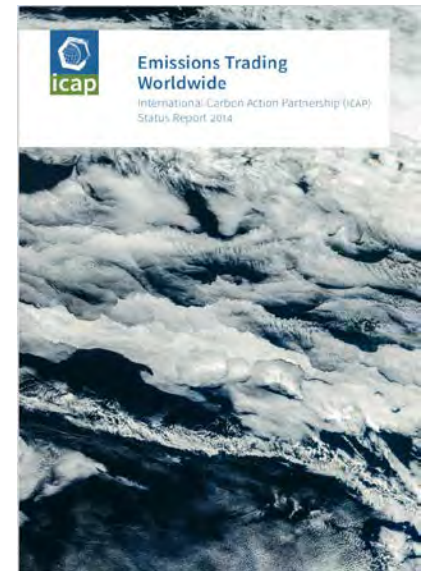


Envisioning a Global Carbon Market

- **International Carbon Action Partnership (ICAP)**

Co-Chairs Leif Ervik (Norway) and Jared Snyder (New York State), 6 February 2014:

“[A] global carbon market is unlikely to come about in a harmonized, top-down fashion. Rather, it will emerge from the bottom up, building on a multitude of systems that do not follow one blueprint.”



Not a New Vision ...

- **International Emissions Trading Association**
Principles for a Post-2012 International Climate Change Agreement, June 2009

“It is clear (...) that the achievement of a global market will come from links and economic attraction between the emission trading systems now developing at national and regional levels, rather than from the imposition of a top-down structure.”



Not a New Vision ...

California Governor Arnold Schwarzenegger

Executive Order S-20-06, 16 October 2006:

“[S]hall develop (...) a comprehensive market-based compliance program with the goal of creating a program that permits trading with the European Union (...) and other jurisdictions.”

German Foreign Minister Frank-Walter Steinmeier

Strategy Paper, 5 July 2007:

“[For] the next phase of international climate negotiations (...) the goal has to be a powerful new trans-Atlantic market”

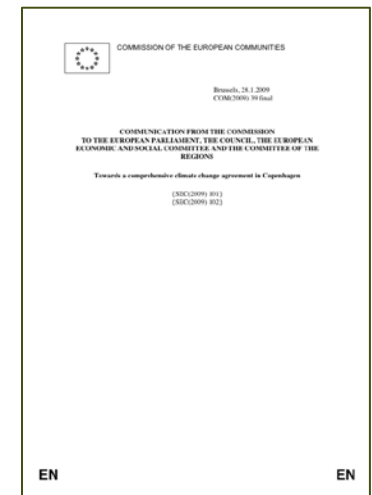


Not a New Vision ...

European Commission

Towards a Comprehensive Climate Change Agreement in Copenhagen, 28 January 2009:

“Domestic carbon markets can and should be linked to build an effective global market (...) a robust OECD-wide carbon market by 2015, to be further extended to economically more advanced developing countries by 2020.”

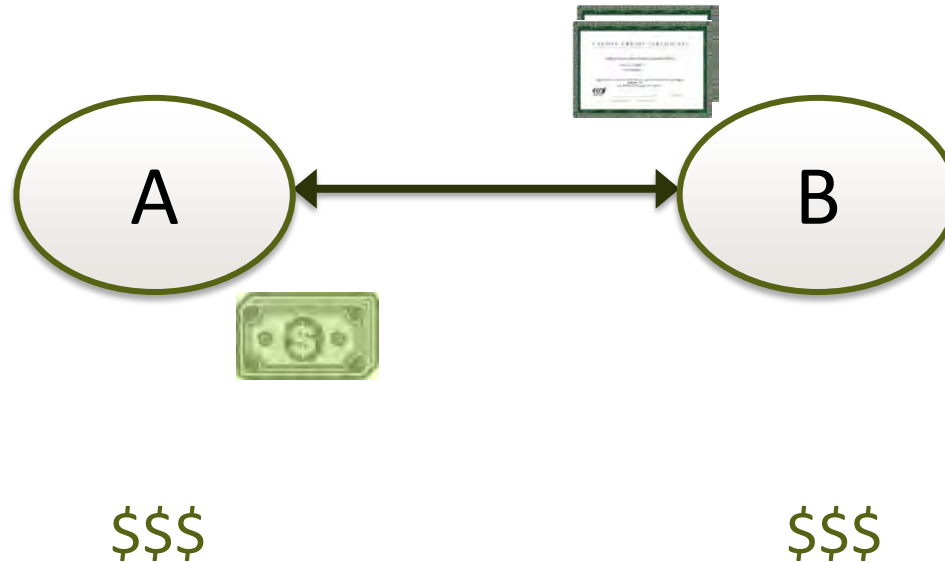


Carbon Market Integration through Linking

- Multilateral agreement on a common market design with **central allocation of units** (as under the Kyoto Protocol) is very unlikely
- Domestic markets with varying design choices and ambition levels are **already underway**
- How can current and future domestic carbon markets be **integrated** in a way that fully leverages the benefits of a broader, more liquid market and results in convergence of marginal abatement cost across systems?

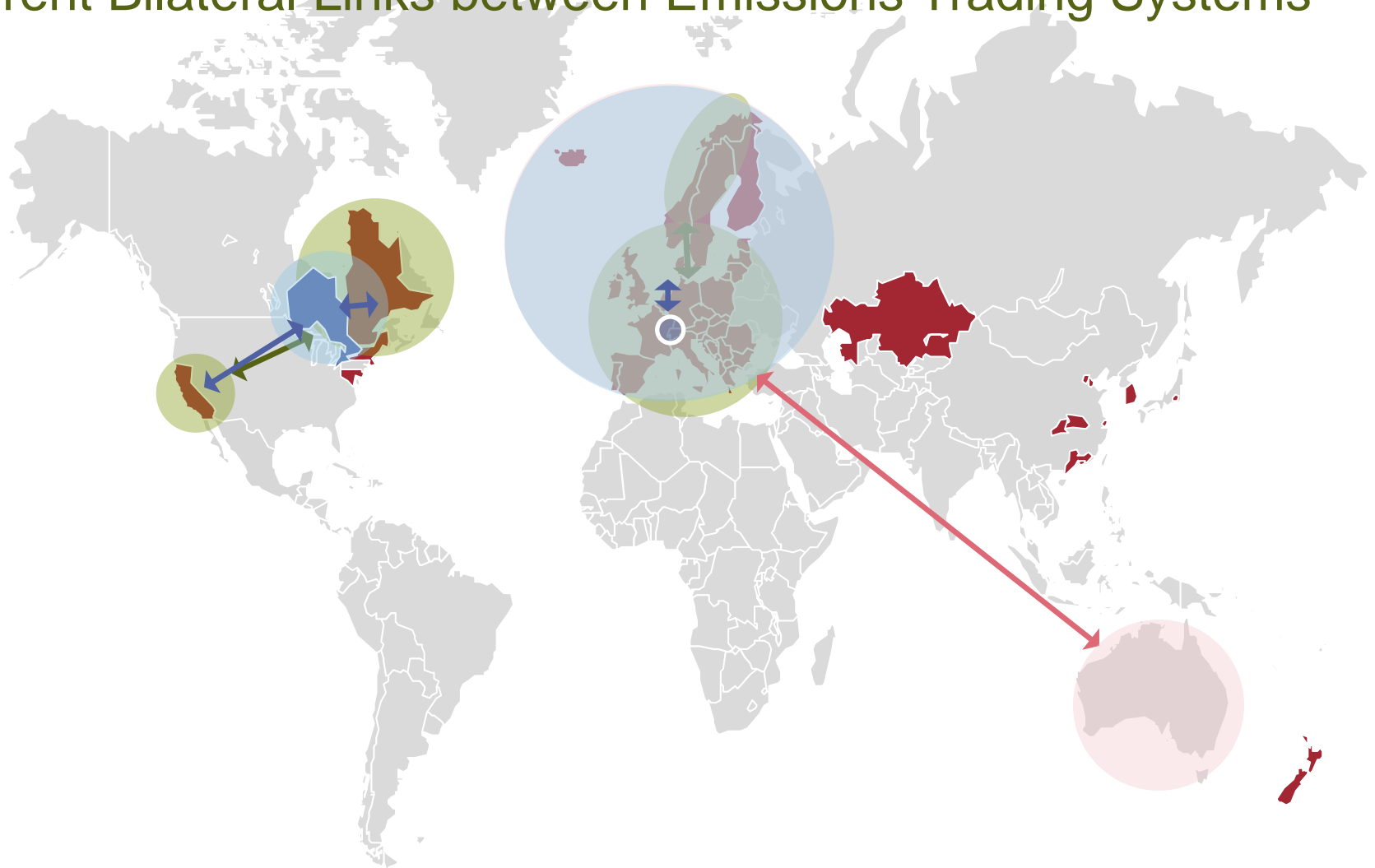
Carbon Market Integration through Linking

Starting Point: Bilateral Linking



Alternative Pathways to a Global Market

Current Bilateral Links between Emissions Trading Systems



Carbon Market Integration through Linking

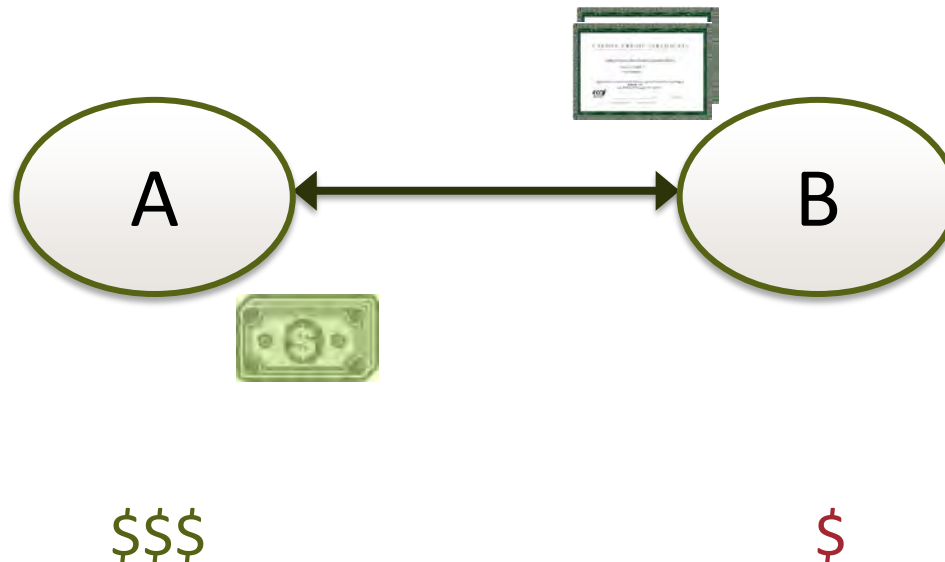
Compatibility of Systems

System design does not have to be identical, as long as overall system “compatibility” is ensured

- Compatibility is largely a question of degree, and determined by the differences (and resulting effects) that are politically tolerable
- Very few design features are an exception to this general principle: so-called “contagious” features
 - Nature of the cap (absolute vs. Intensity)
 - Price ceilings/floors
 - Compliance flexibility options (e.g. offsets, borrowing)

Carbon Market Integration through Linking

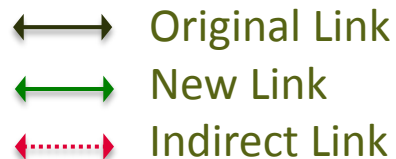
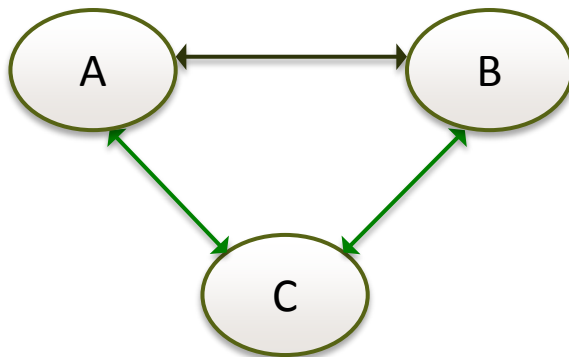
Linking with a “Contagious” Design Feature Price Ceiling in System B



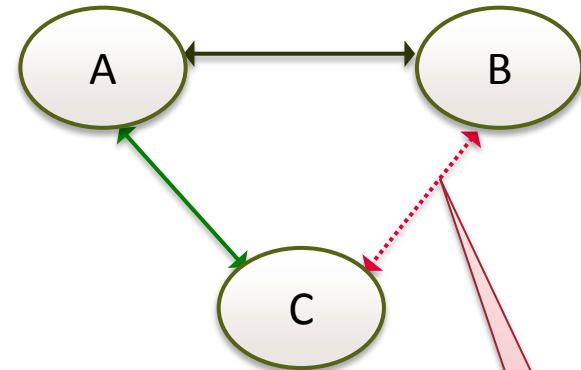
Alternative Pathways to a Global Market

Beyond Bilateral Linking

Full Multilateral Link
(All Systems Directly Linked)



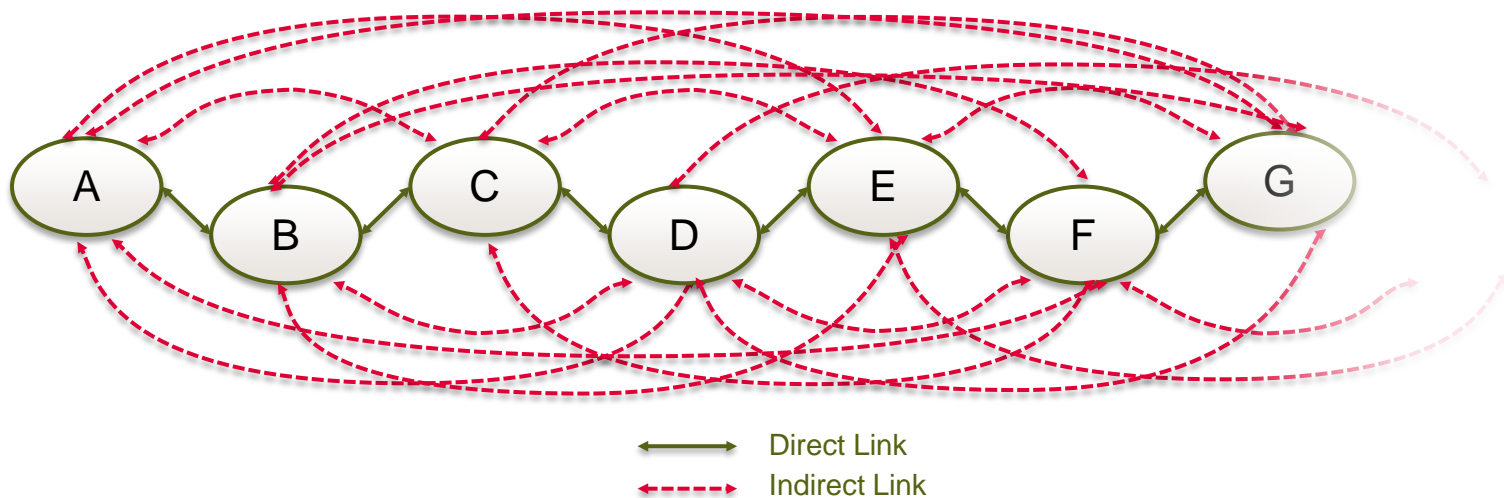
Chained Bilateral Links
(Systems Directly and Indirectly Linked)



Indirect links matter!

Alternative Pathways to a Global Market

Uncoordinated Bilateral Links

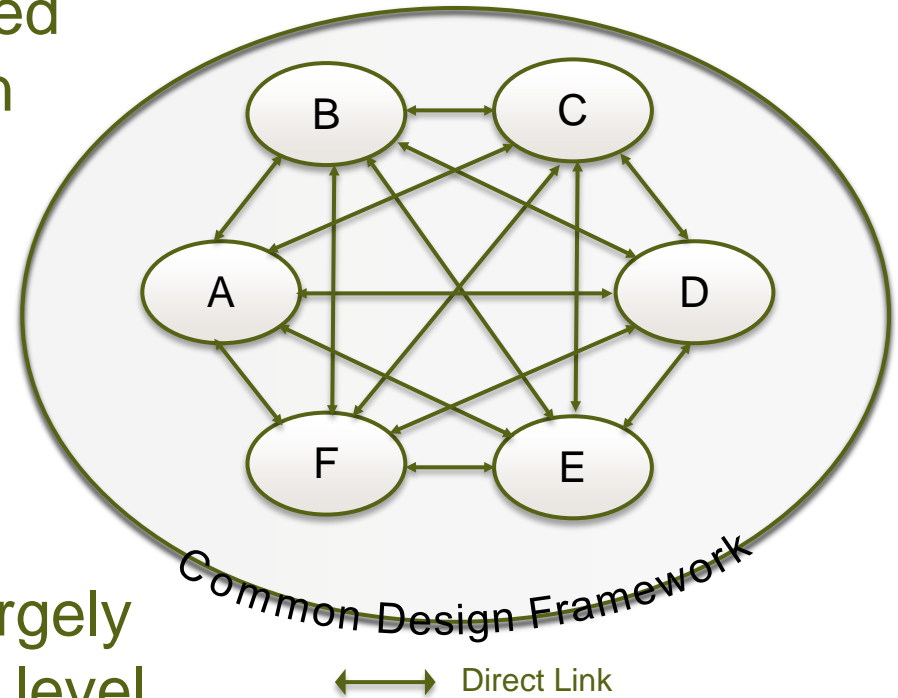


- Number of indirect links will rapidly grow: $\Sigma = \frac{n-2(n-1)}{2}$

Alternative Pathways to a Global Market

Harmonized Design

- All systems are based on a **common design template**, with limited discretion in implementation
- Some processes and institutions may be **centralized** to facilitate further market integration and oversight
- Decision-making on design and operational issues is largely conferred to the multilateral level



Alternative Pathways to a Global Market

Example: Western Climate Initiative

- Based on a “Western Regional Climate Action Initiative Agreement” signed on 26 February 2007
- WCI members adopted a common “**Design for the WCI Regional Program**” in 2010, setting out a template for a regional emissions trading system
- California and Québec have each adopted mandatory mitigation targets, emission reporting rules, and **emission trading systems** based on the common design
- Joint administrative organization (**WCI, Inc.**) created in 2011 maintains a registry, manages joint auctions, oversees offset crediting and monitors the market

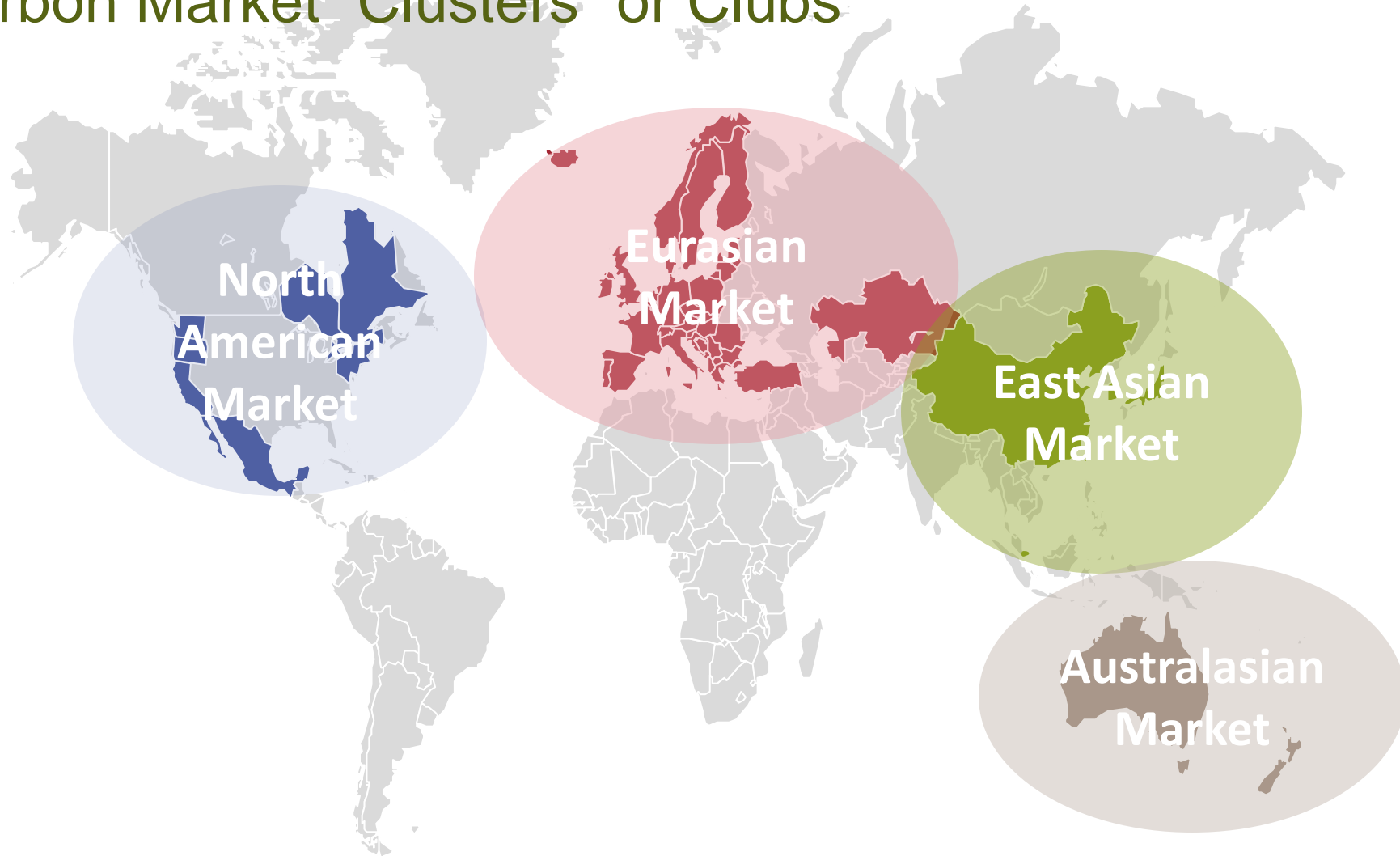
Alternative Pathways to a Global Market

Carbon Market Clusters or “Clubs”

- As markets grow in **size and liquidity** (and aggregate political influence), they will likely exert a “gravitational pull” vis-à-vis smaller or emerging systems willing to align their system design with the harmonized framework
- Evidence suggests that **geographic proximity** and existing **economic ties** favor the emergence of links
- As such clusters continue to grow, there is a likelihood of increased **path dependence** regarding specific design and governance choices: *integration **within** clusters a barrier to integration **across** clusters?*

Alternative Pathways to a Global Market

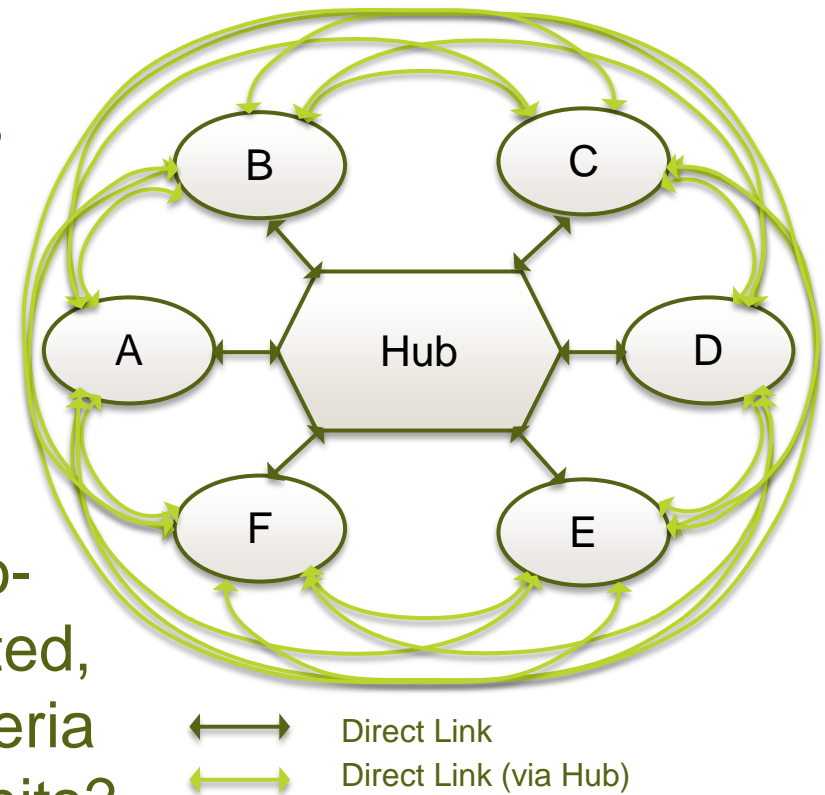
Carbon Market “Clusters” or Clubs



Alternative Pathways to a Global Market

Hub-Based Approach

- All systems are linked to a **common hub**, with joint institutions and shared governance provisions
- Opting-in would be **voluntary** and offer the benefits of an expanded market, but would also be linked to conditions
- Some degree of design heterogeneity might be accommodated, but what are the minimum criteria for **full fungibility** of traded units?

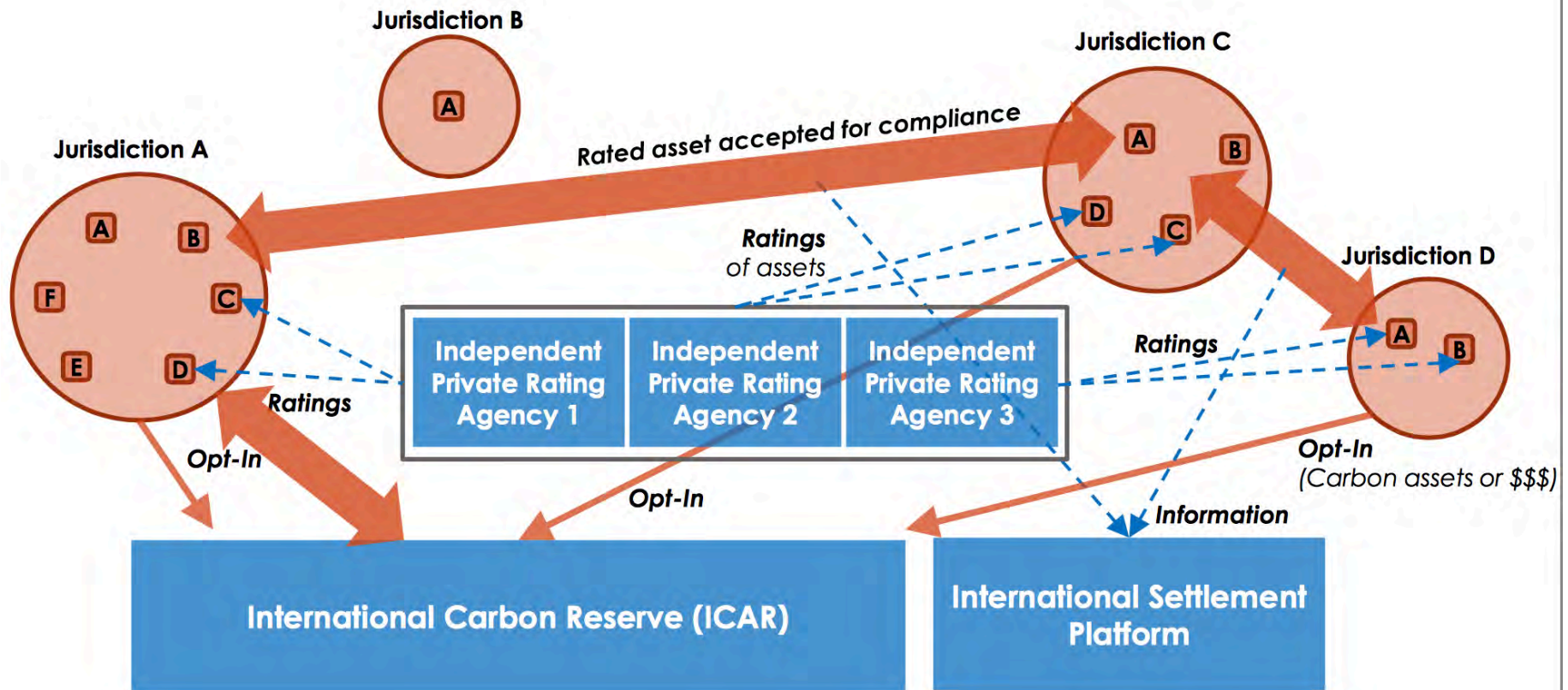


Alternative Pathways to a Global Market

Example: “Networked Carbon Markets” Initiative

- World Bank task force has spearheaded a consultation process for “**Globally Networked Carbon Markets**”
- The proposal would introduce a risk-based **carbon asset rating process** to ensure fungibility of mitigation efforts and create a frame of reference for carbon value
- The resulting market would be facilitated by a set of designated **institutions** serving as the common hub:
 - An International Carbon Reserve (ICAR) that converts ratings into exchange rates and can help address market shocks
 - An International Settlement Platform to track cross-border trading
 - One or more independent private rating agencies

Alternative Pathways to a Global Market



Rating = f {program rating, credibility rating, ambition adjustment}

Source: World Bank, 2014

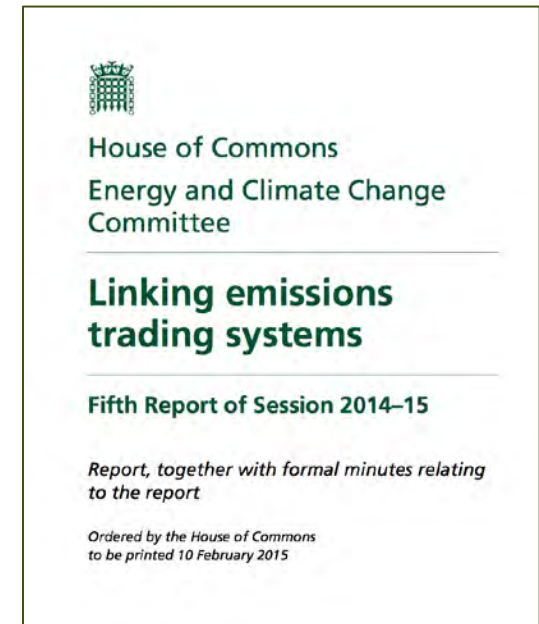


A
 Carbon Asset Class

Envisioning a Global Carbon Market

- **U.K. House of Commons,
Energy and Climate Change Committee**
Fifth Report of Session 2014-15, 10 February 2015:

“Any agreement reached (...) in Paris at the end of 2015 should promote the use of carbon markets and facilitate the future linking of emissions trading systems.”



What Role for COP21?

Facilitate Use of Markets and Allow Linking



- Paris outcome would have to allow **use of carbon markets** and set up an **international transfer system** that enables Parties to transfer portions of their national contributions to one or more other Parties for compliance
- The current negotiating text outlines **six options**, ranging from explicit definitions of market mechanisms, including the definition of an emissions trading system, to descriptions of accounting rules alone, to no provisions at all for market mechanisms
- Almost all options in the negotiating text specify that the market mechanism must ensure “environmental integrity” and “avoidance of double counting”. One option is to require international transfers to be made using the International Transaction Log

What Role for COP21?

F. Yamin, E. Haites and N. Höhne (29th June 2015): **From 90 Pages to 9: A Possible Paris Agreement from the Geneva Negotiating Text?**

Market Mechanism

- Participation is voluntary
- A “**Market Mechanism Body**” replaces CDM EB/JISC
- “Surplus allowances from a domestic market mechanism implemented by a Party with a mitigation commitment” can generate “**approved units**”
- “[T]ransfers of approved units must be made using procedures specified by the Market Mechanism Body. Transferred units shall be added to the mitigation commitment of the seller Party and be counted toward meeting the mitigation commitment of the purchasing Party.”

What Role for COP21?

International Emissions Trading Association (IETA) (July 2015) **IETA Policy Brief: Streamlined Market Provisions for the Paris 2015 Climate Agreement**

- Proposes a consolidated draft text for “Article 39: Cooperation between Parties in realizing their Contributions”
- Central provision:
“**Transfers of mitigation units** between Parties, either directly or through public/and or private entities, can be used to meet and enhance their contributions under the new agreement. (...) An **Economic Transfer System** is hereby established.”
- Such transfers should preserve environmental integrity and avoid double counting of effort
- Further modalities to be adopted by COP 22

Thank you for your attention!

Questions?

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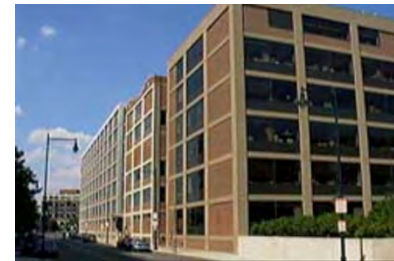
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