

Climate Strategies



Linking Carbon Markets, 23.03.09 Paris
Results of the CS linking project

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Aims of the project

- ❑ Aim of the project was to carry out country case studies involving all major emerging schemes
- ❑ Evaluate the feasibility of different forms of linking
- ❑ Assess the barriers and the time frames for implementing different forms of linkages
- ❑ Assess the legal and institutional requirements for successful trading across jurisdictions, and
- ❑ Analyze the roles for linking in post-2012 climate architectures.



Climate Strategies aims to assist governments in solving the collective action problem of climate change. Sponsors include departments from European governments and other stakeholders.

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WORKING PAPER 1

Developing the International Carbon Market. Linking Options for the EU ETS
May 2008

WORKING PAPER 2

The role of land-based offsets in Emissions Trading Systems: Key design aspects and considerations for linking
August 2008

WORKING PAPER 3

Prospects of linking the EU Emission Trading Scheme with a Federal US Emissions Trading Scheme along the lines of the Lieberman-Warner Proposal
September 2008

WORKING PAPER 4

Linking Emissions Trading Schemes for International Aviation and Maritime Emissions
October 2008

WORKING PAPER 5

Emerging Japanese Emissions Trading Schemes and prospects for linking
October 2008



Linkages among Emissions Trading Schemes and with offset projects

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IGES Institute for Global Environmental Strategies
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Motu Economic and Public Policy Research



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University of New South Wales



UNSW

Australian National University



ANU THE AUSTRALIAN NATIONAL UNIVERSITY

Margaree Consultants



German Institute for International and Security Affairs



Ministry for the Environment New Zealand



Ministry for the
Environment
Manatū Mō Te Taiao

Several international Workshops



THE AUSTRALIAN NATIONAL UNIVERSITY



Environmental Economics Research Hub



Public Forum: International Linking of Emissions Trading

Australia is set to introduce emissions trading, New Zealand is about to implement its scheme, other markets are emerging including North America, and the EU scheme is maturing. A key issue for the operation of the schemes is whether and how to link the domestic permit market to international markets. Linking affects permit prices, compliance costs and the extent of domestic abatement, and can influence choices about scheme design.

The event was organized under the Environmental Economics Research Hub (EERH), an initiative for integrated policy-relevant economic research on environmental issues. The public forum was convened by Regina Betz and Frank Jotzo, and was associated with a project on linking of emissions trading schemes by Climate Strategies, a European research initiative.

Welcome and introduction
Jeff Bennett (Director EERH) - chair for the forum: Jack Pezzey (ANU)

Australian and NZ emissions trading schemes and perspective on linking
Anthea Harris (Department of Climate Change): *Australia policy parameters* [pdf]
John Scott (New Zealand Government): *The New Zealand scheme* [pdf]
Stephen Howes (ANU/Garnaut Review): *Garnaut Review perspectives on linking* [pdf]

Design of ETS and linking options
Erik Haites (Margaree Consultants, Canada): *Getting linked, breaking up* [pdf]
Ashley Stafford (Baker McKenzie): *Legal aspects of linking* [pdf]

Global carbon markets
Frank Jotzo (ANU/Garnaut Review): *Linking and permit prices* [pdf]
Tony Beck (Asia-Pacific Emissions Trading Forum): *The CDM market* [pdf]

EU and North American markets
Erik Haites (Margaree Consultants, Canada): *North American markets* [pdf]
Regina Betz (UNSW): *The EU market* [pdf]

Finalized Reports

- ❑ **WORKING PAPER 1** Developing the International Carbon Market. Linking Options for the EU ETS
May 2008, PIK
- ❑ **WORKING PAPER 2** The role of land-based offsets in Emissions Trading Systems: Key design aspects and considerations for linking
August 2008, Lead Joanneum Research
- ❑ **WORKING PAPER 3** Prospects of linking the EU Emission Trading Scheme with a Federal US Emissions Trading Scheme along the lines of the Lieberman-Warner Proposal
September 2008, Lead Wuppertal Institute

Finalized Reports

- **WORKING PAPER 4**

- Linking Emissions Trading Schemes for International Aviation and Maritime Emissions**

- October 2008, Lead Margaree Consultants

- **WORKING PAPER 5**

- Emerging Japanese Emissions Trading Schemes and prospects for linking**

- October 2008, Lead IGES

Finalized Reports

- **WORKING PAPER 6**
Linking North American Schemes (US, Can, regional and federal) Lead: Margaree Consultants

- **WORKING PAPER 7**
Linking the Australian ETS
Lead: ANU

Types of links

- Direkt: unilateral, bilateral
- Indirect: two systems have a unilateral link to a common third system

Why linking of trading schemes?

- ❑ When two emissions trading schemes are linked, market prices will rise for allowances in one scheme, and fall in the other scheme, until full or partial convergence is achieved.
- ❑ Linking promises a wider range of abatement costs in the market by expanding the range of available mitigation options.
- ❑ Impacts on Volatility
- ❑ Political reasons for linking

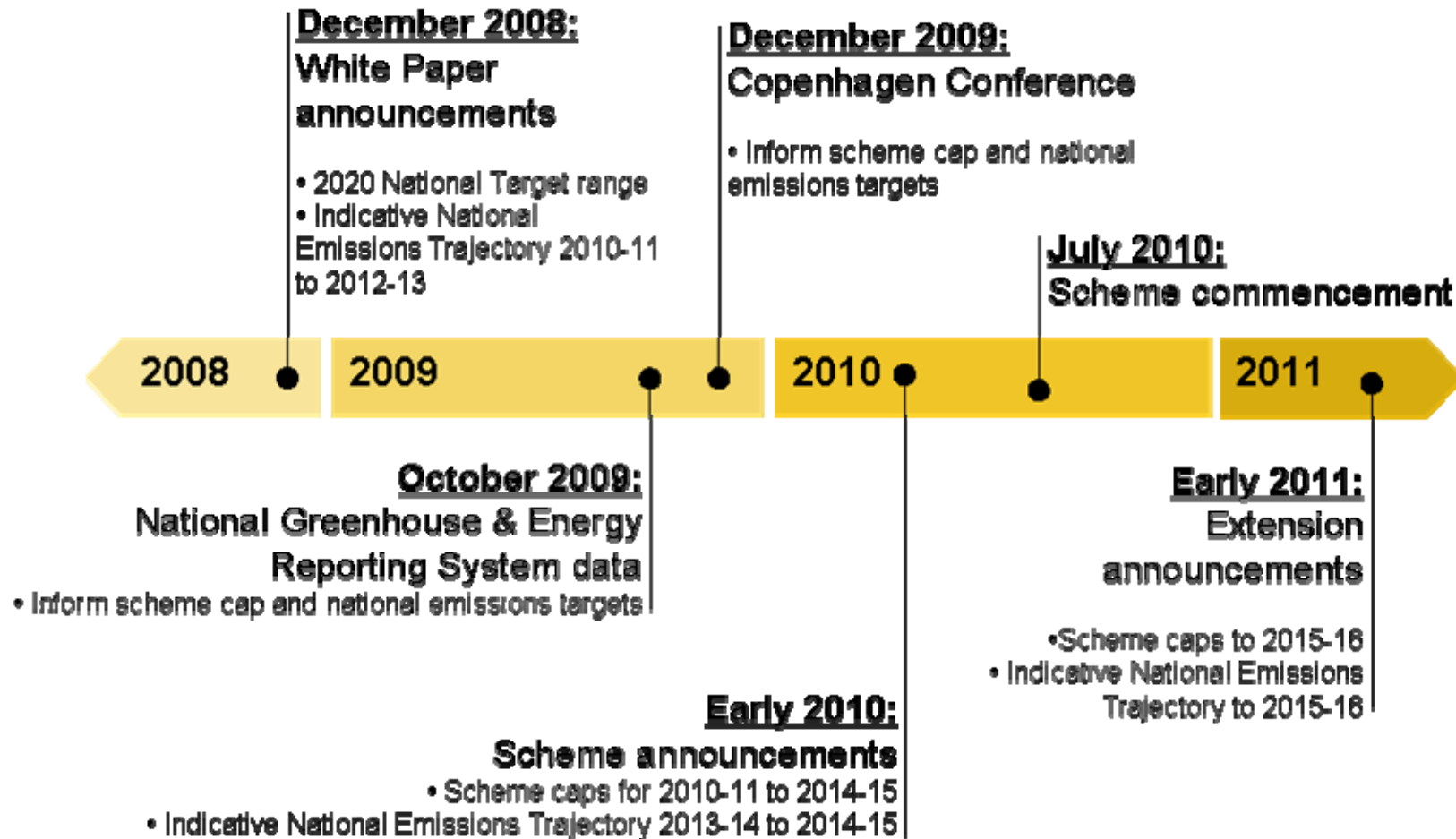
Scenarios for linking

- Kyoto II (Top-down)
- Bottom up linking of ETS
- Bottom-up and Top-down

Australia: 'Carbon Pollution Reductions Scheme'

- ❑ Economy-wide emissions trading scheme, with a detailed proposal tabled by the government in December 2008 and a scheme start planned for mid-2010.
- ❑ All greenhouse gas emissions outside land use change and agriculture, covering initially around 75 per cent of Australia's emissions, or around 450 MtCO₂-equivalent in 2006
- ❑ Smaller sources of combustion emissions, including transport and residential fuel use, are to be covered through 'upstream' permit liability on fuel suppliers.

Timeline of the CRPS



CPRS: Controlling the price

- ❑ Unlimited use of JI/CDM credits (except forestry credits)
- ❑ Ban on permit sales and a price cap provision
- ❑ Price cap: starting at A\$40/t of carbon dioxide equivalent (CO₂e) and rising by five percent per year plus adjustment for inflation
- ❑ The level of the price cap is to be independent of the national target and scheme caps chosen

CPRS: linking

- ❑ The White paper emphasises that the control over the domestic CO2 price has a much higher priority in the short term than a full bilateral link to other trading schemes
- ❑ Australia, being a relatively small emitter, is likely to be a price taker
- ❑ Excluding permit sales from the Australian system into other trading schemes Australia prevents unilateral links to its scheme established by others

CPRS: linking

- ❑ Short-term priority is to minimise implementation risk while the scheme is being established. This includes promoting price stability and predictability in the early years of the scheme.
- ❑ Linking rules are as important to market participants as decisions about the scheme cap as they are a key determinant of the domestic price
- ❑ Bilateral links on a 5 years notice

Linking AUS with NZ

- NZ candidate for early linking,
- Close economic ties already exist
- History of policy coordination between the two countries
- Both face the issue of how to bring large emissions from agriculture into a comprehensive system of mitigation policy

New Zealand

- ❑ The scheme brings in all sectors of the economy over a six-year period, starting with deforestation in 2008 and ending with agriculture in 2013
- ❑ A New Zealand Unit (NZU) will be the primary domestic unit of trade.
- ❑ The scheme allows also the unlimited use of international Kyoto credits, with the exception of ICERs and tCERs **but: AAUs**

New Zealand

- Currently New Zealand has no price cap in place as it expected a large supply of international credits and therefore a moderate price of these credits.
- A price cap may however be implemented post 2012

Japan

- Keidanren Voluntary Action Plan, based on the voluntary adoption of intensity targets
- Voluntary emission trading scheme (JVETS) based on absolute targets
Indirect links to the EU-ETS via the CDM

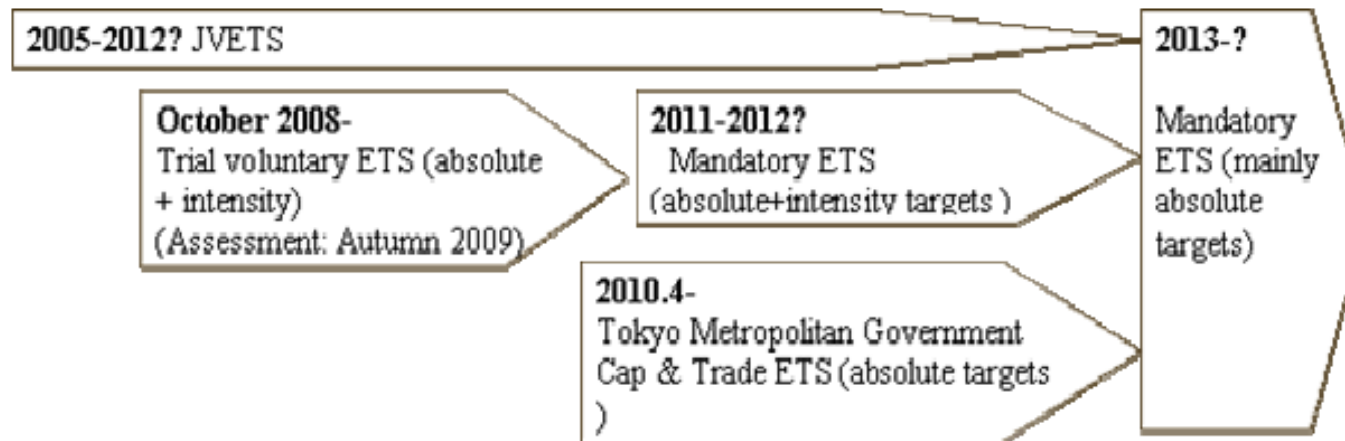
Japan

- ❑ Two proposals for a mandatory ETS in Japan were published in 2008, one by the MoE the other by METI
- ❑ A ETS following the METI report would pose significantly more barriers to direct bilateral linking than with the MoE proposal
- ❑ Both proposals mention intensity based caps and the control of Japan's domestic CO2 price, although with different accentuations.

Japan

- ❑ METI report for example foresees no strict penalties for non-compliance what in effect would act as a price cap
- ❑ All proposals for a Japanese ETS envision an increase in Japan's dependence on CERs, especially from Asia due to geographical reason

Timeline for a future Japanese ETS



Source: Kimura
2008

Linking the EU-ETS with US schemes

- A US-EU carbon market would constitute the major share of an OECD-wide system
- Would send a strong political signal to stakeholders regarding the further development of international climate policy along the lines of constructing a global carbon market

Linking the EU-ETS with US schemes

- ❑ Liberman-Warner bill: various cost-containment measures, land-use offsets
- ❑ WCI: few barriers to bilateral linking with the EU-ETS, such as land-use offsets
- ❑ But: is a short-term link realistic without institutional structures?

Barriers

- Most technical barriers can be resolved and: full harmonisation of design features is not necessary
- But a few barriers remain where harmonization is needed but politically difficult to resolve
 - Linking absolute and intensity based schemes**
 - Cost containment measures**
Quantitative Offset limits, Borrowing, Price caps

Relevance of barriers depends on scenario

- ❑ If linking occurs between countries in which the ETS that are backed by AAUs, the stringency of the offset creation under such a scheme is less problematic as if the ETS units are non-Kyoto units.
- ❑ In this case the host country takes the responsibility for the quality of the offsets.
- ❑ If the quality of offset units is considerably low the selling country of ETS units faces a loss of AAUs without corresponding GHG emissions reductions.

Results of the case studies

- ❑ In most of the assessed schemes, full bilateral linking is not a short term priority
- ❑ Its benefits will be weighed against the costs of giving up on other objectives, such as control over the domestic CO2 price level via price caps and other cost containment measures
- ❑ Small countries price taker

Results of the case studies

- ❑ Design of ETS varies greatly, reflecting different national and regional policy priorities and country circumstances
- ❑ The design of each ETS is tailored to achieve certain domestic or regional policy objectives and also reflects domestic circumstances
- ❑ The consequence of a CO₂ price change due to linking can affect achievement of these objectives, and may lead to unacceptable impacts for a region

Results of the case studies

- ❑ System coverage also impacts the acceptable CO2 price range
- ❑ In schemes which cover almost all economic sectors, the CO2 price is reflected in the costs faced by consumers, and the country may want to keep CO2 prices low at least initially in order to achieve political acceptance for the scheme

Results of the case studies

- ❑ Some ETS, such as the EU ETS and the WCI, are not only designed to meet an emissions target a least cost, but also to spur technological innovation in low carbon technologies (Runge-Metzger, 2008; Western Climate Initiative, 2008);
- ❑ Accordingly, they rely on a higher range of CO2 prices as a condition for their effectiveness.

Results of the case studies

- ❑ Each ETS and its design reflect the evolution of climate policy and other specific circumstances in different countries
- ❑ Some of the resultant differences in ETS design will make short term harmonization difficult
- ❑ Japan for example has been relying on voluntary intensity-based voluntary targets for more than a decade. Consequently, a shift to mandatory, absolute targets will be a long-term process.

Results of the case studies

- Economic and natural resource circumstances and consequent emissions structure is also a main determine for the design of a scheme.
- In New Zealand, for example, the forestry and agriculture sectors have a large mitigation potential; it would have been politically very difficult not to include these sectors into the ETS

Prospects for linking

- ❑ Few candidates for full direct bilateral linking between OECD countries in the next decade, although prospects for a transatlantic link between the EU ETS and a federal US scheme are difficult to predict
- ❑ Full bilateral links are a long-term goal, as they require a harmonization of cost-containment measures

Prospects for linking

- ❑ Schemes in countries that are already close trading partners and have undergone some degree of legal and political integration may see earlier bilateral links.
- ❑ Countries operating in regional organisations of economic integration will already have harmonised their regulatory frameworks to some extent as part of their efforts to reduce competitive distortions and other obstacles to free and open trade

Prospects for linking

- ❑ Example: link between the EU ETS and Norway, Iceland and Lichtenstein. The link was established through incorporation of the EU ETS Directive into the European Economic Area agreement
- ❑ In a similar way, other European countries may also link to the EU ETS in the future, such as Croatia prior to its EU accession, or Switzerland
- ❑ Linking within the same economic area gives a high degree of regulatory certainty

Prospects for linking

- Early full bilateral links may also be established between North American nations that which have close economic and political ties, and are part of the NAFTA agreement.
- Likewise, full bilateral links between Australia and New Zealand are realistic in upcoming years

Prospects for linking

- ❑ In case of a Kyoto successor treaty, most emissions trading systems will have unilateral links to international offset mechanisms, such as the CDM or potential new crediting mechanisms for non-OECD countries.
- ❑ Therefore, OECD country ETSs will be indirectly linked through the CDM or new trading mechanisms, and hence will be in competition with each other for credits.

Is the EU-ETS a desired linking partner ?

- ❑ The EU ETS has been characterized by high CO2 price volatility since its beginning in 2005.
- ❑ The absence of a clear position regarding the desired CO2 price range in the EU may however limit the desire of other schemes to fully link up to the EU ETS in the short term, given its large market size and the desire of emerging schemes for long-term regulatory price certainty

Thank you!

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