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# 10<sup>th</sup> Workshop on Greenhouse Gas Emission Trading

EPRI-IEA-IETA

Session 3 – Carbon market development

Paris, September 20, 2010

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# Contents

**In a pre-COP15 world...**

**The reality we live in now...**

# Historic articulation of carbon markets

## Kyoto Protocol

- **Objective:** 5.2% decrease of greenhouse gas emissions from 1990 levels in 37 developed countries, over 2008-2012
- **Flexibility mechanisms:** CDM, JI, International Emission Trading (ETS)
- **Carbon currencies:** AAU, CER, ERU

### EU ETS Market

- **Objective:** 8% reduction in CO<sub>2</sub> emissions from 1990 levels in the EU at minimal cost
- **Players:** 5 industrial sectors
- **Carbon currencies:** EUA, CER, ERU



Emission reduction projects  
CDM / JI

Japan



Australia

New Zealand

Canada



## Voluntary Markets

USA

CCX



Other voluntary  
markets



- **Objective:** offset greenhouse gas emissions on a voluntary basis
- **Players:** companies, local communities
- **Carbon currency:** VER

## Other local markets

United-States  
RGGI, WCI



Australia  
NSW

Japan

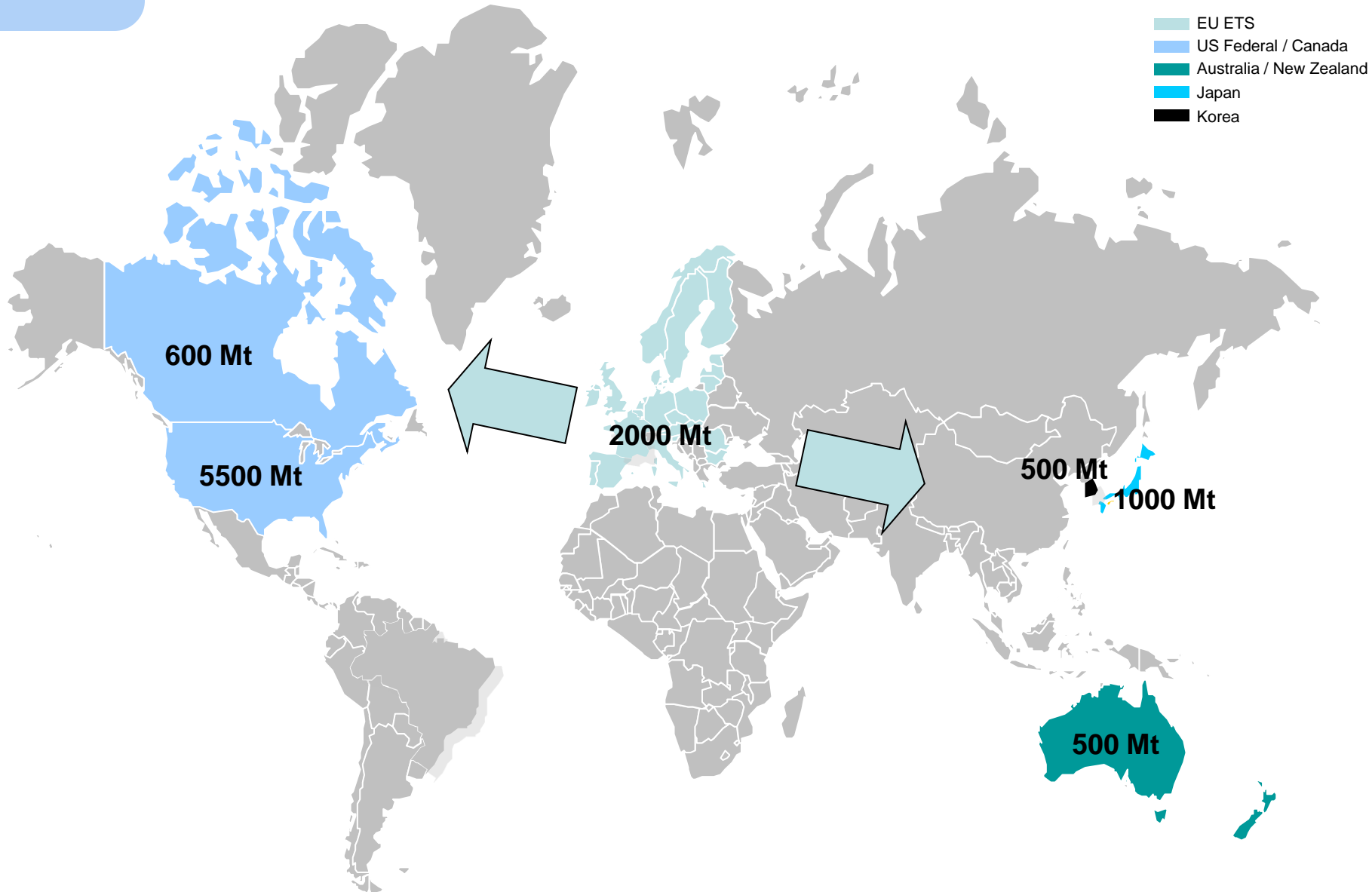
JVETS

# 6 “active” compliance markets to date

Non-Kyoto

	EU ETS	Swiss ETS	NZ ETS	RGGI	NSW GGAS	Alberta Emitters Regulation
Size (Mt CO <sub>2</sub> )	2100	2.8	8.3	162	7.3	115
Gas coverage	CO <sub>2</sub>	CO <sub>2</sub>	Six Kyoto Gases	CO <sub>2</sub>	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, PFC	CO <sub>2</sub>
Scope	46%	5%	11%	25%	5%	50%
Participants	Power and industry	Power and industry	Forestry	Power generators	Power suppliers generators and large customers	Power, heat, industry
Timeline	Phase 2: 2008-2012	Phase 1: 2008-2012	Phase 1: 2008-2012	Phase 1: 2009-2011	2003-2021	2007-2020
Allowance Distribution	10% auction	100% free	100% free	100% auction	100% free	N/A (no cap)
International Offsets	Yes	Yes	Yes	Yes, under certain conditions	No	No

# In the pre-COP15 view, regional cap and trade markets would sprawl...

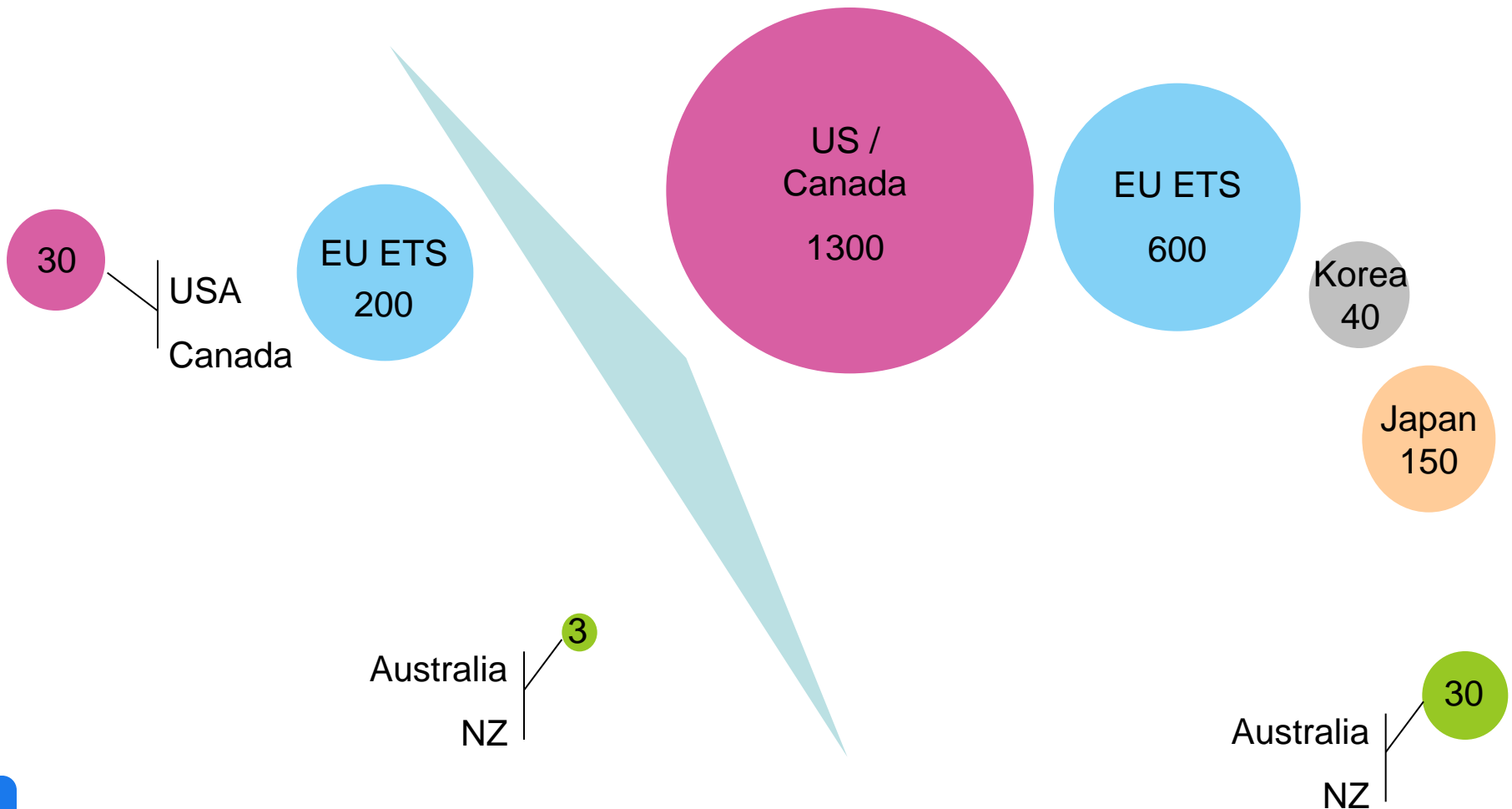


...gain in size...

## Magnitude of market Value in Bn\$

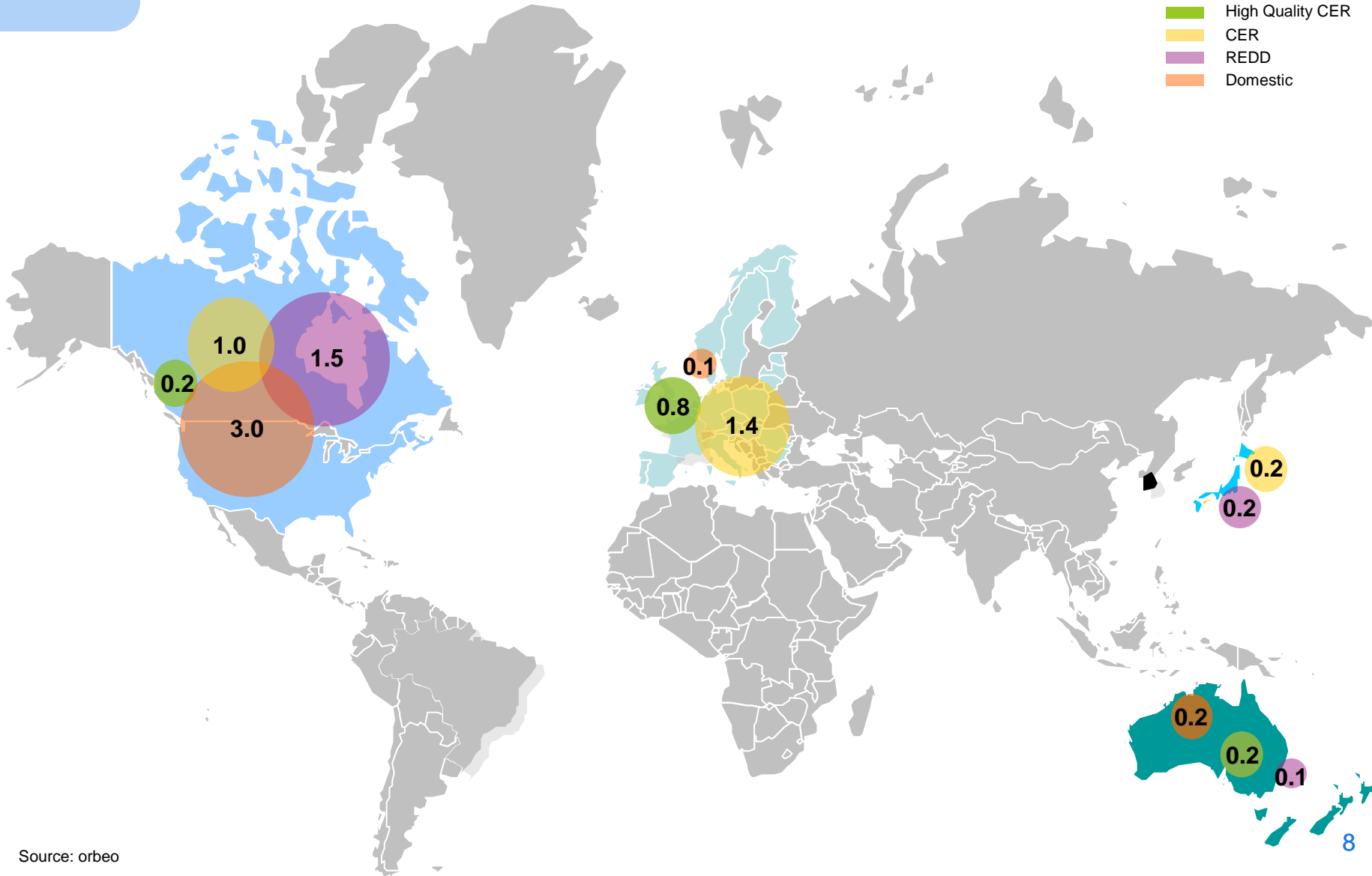
2012

2020



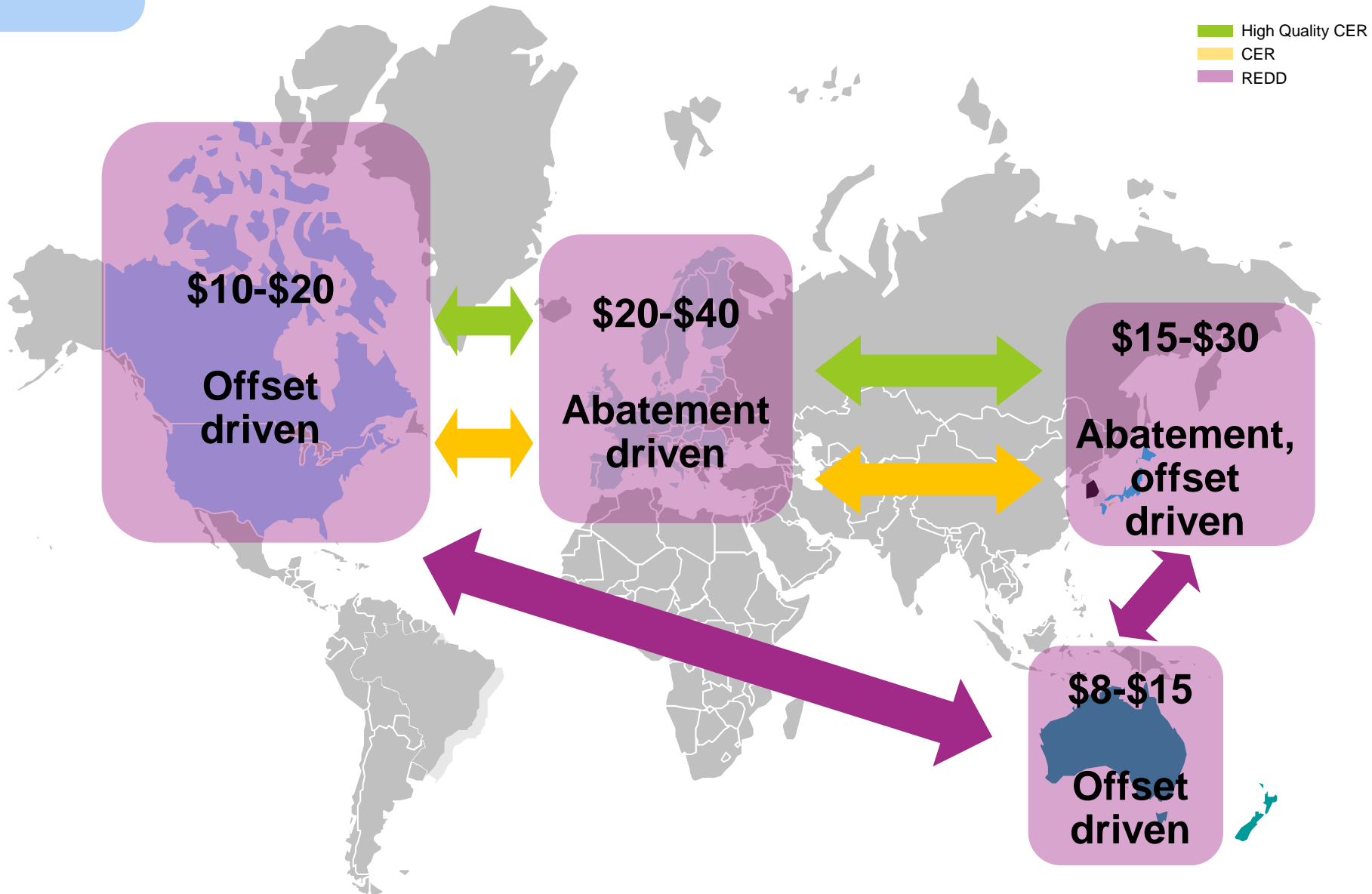
# ...featuring different offset regimes...

Maximum market potential, 2013-2020, in Gt





# ...forming the backbone of a global market



# Contents

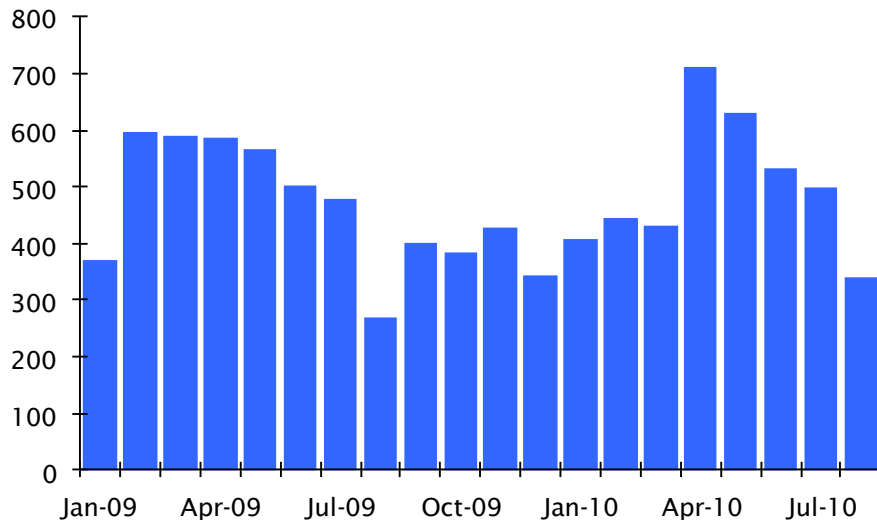
In a pre-COP15 world...

**The reality we live in now...**

# The EU ETS is moving along, but not booming

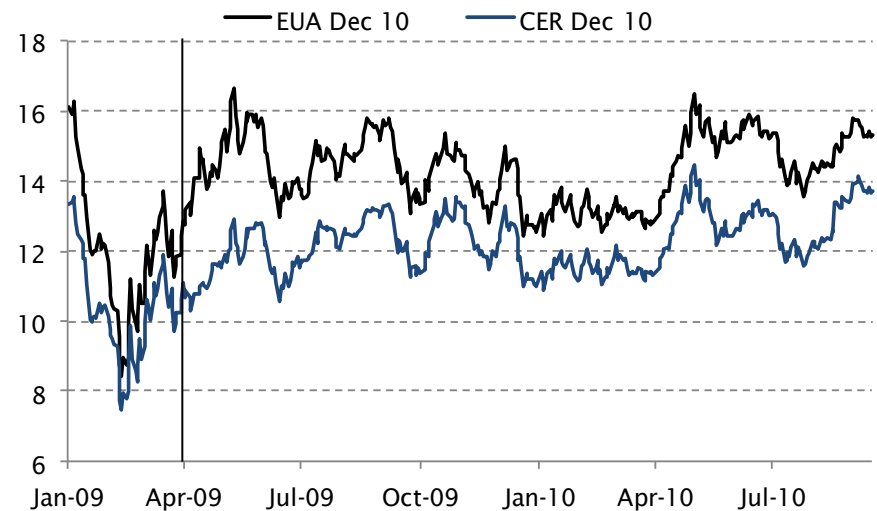
- Transactions are now increasing more slowly compared to 2008 and 2009: mature market?
- Effect of VAT fraud in 2009 to be accounted for, however
- Prices have traded between €12.4 /t and €16.5 /t since April 2009
- This is in stark contrast with previous years, and is the result of the recession-induced oversupply

EUA volumes on exchanges (in Mt) – includes cleared



Source: ECX

EUA and CER prices on ECX (€/t)



Source: ECX

# The good news: Phase III is taking shape

## 2013 cap released by the EU

- 2013 ETS emissions cap determined at 1.927bn allowances
- New sectors such as aviation or aluminum and new gases are excluded for now (final cap is expected to be published in September 2010)
- Cap is to be reduced annually by 1.74% of the average annual amount total amount of allowances (2033 Mt) which have been or will be allocated in 2008-2012: this is equivalent to -35 Mt per year

- Slightly inferior to the market expectations (1950-1975 Mt)
- Not the final figure yet

## Auctioning rules for Phase III agreed by Member States

- A hybrid system unanimously voted:
  - One central auctioning platform...
  - ...but EU states will be able to hold their own auctions (“opt-out”), under strict rules
    - Authorization by comitology
    - Unit size 10 Mt, on a regulated market
    - Cost sharing, translation, agreed dates
  - Spain, Germany, UK, Poland candidates for now
- Many points still undecided
  - Date and volume of first Phase III auction
  - Volume of Phase III EUA auctioned pre 2013

- No clear information on pre 2013 volumes
- Probably little and late

# Some decisions still needed for the market to shift gears

## Benchmarks

- 164 sectors out of 258 are considered sensitive to carbone leakage risk
- They will be able to receive 100% free EUA based upon benchmarks (average of 10% most efficient)
- Questions remain on:
  - The level of benchmarks (under discussion)
  - The date at which the benchmarks will apply: 2013 (EC) or 2020 (industrials)?

## -30%?

- 26 May EC communication states -30% “not for now”
- EC still pushes for it
- Some Member States officially support tightening the target (UK)
- However Member States strongly divided (Environment Council 11 June), most against it – divides also exist within countries
- Industrials strongly opposed (CBI, MEDEF, BDI)

## CER quality restrictions

- Climate Commissioner recently announced that quality restrictions will be put in place
- Not yet clear if all industrial gases affected or HFC « only » (both terms used in official communications)
- Proposal to come in November, to be used at Cancun

- Text due in autumn, for comitology vote
- EP adoption early 2011

- For us very little probability in the short-term
- Discussed again in October, prior ro Cancun
- Probably not in EUA prices yet

- Good that uncertainty starts to be lifted
- However if restriction to large, liquidity and CDM functioning will be at risk

# CDM: the HFC23 controversy is polluting the landscape – CDM at risk?

## Debate

- A NGO proposed changes in the HFC methodology arguing that HFC23 production is maintained at artificially high levels
- Uncertainty appears at 2 levels:
  - Revision or not?
  - Scope of the revision
- Status:
  - The EB launched an investigation end July
  - All HFC23 projects request for issuances on hold
  - EB now seeking DOEs responsibility

## Possible

Scope 1: only future projects (methodology revised)

Scope 2: future projects and renewal of crediting periods (methodology revised)

### *most likely now*

Scope 3: all existing and future projects (“retroactivity”): all issuances questioned from now on

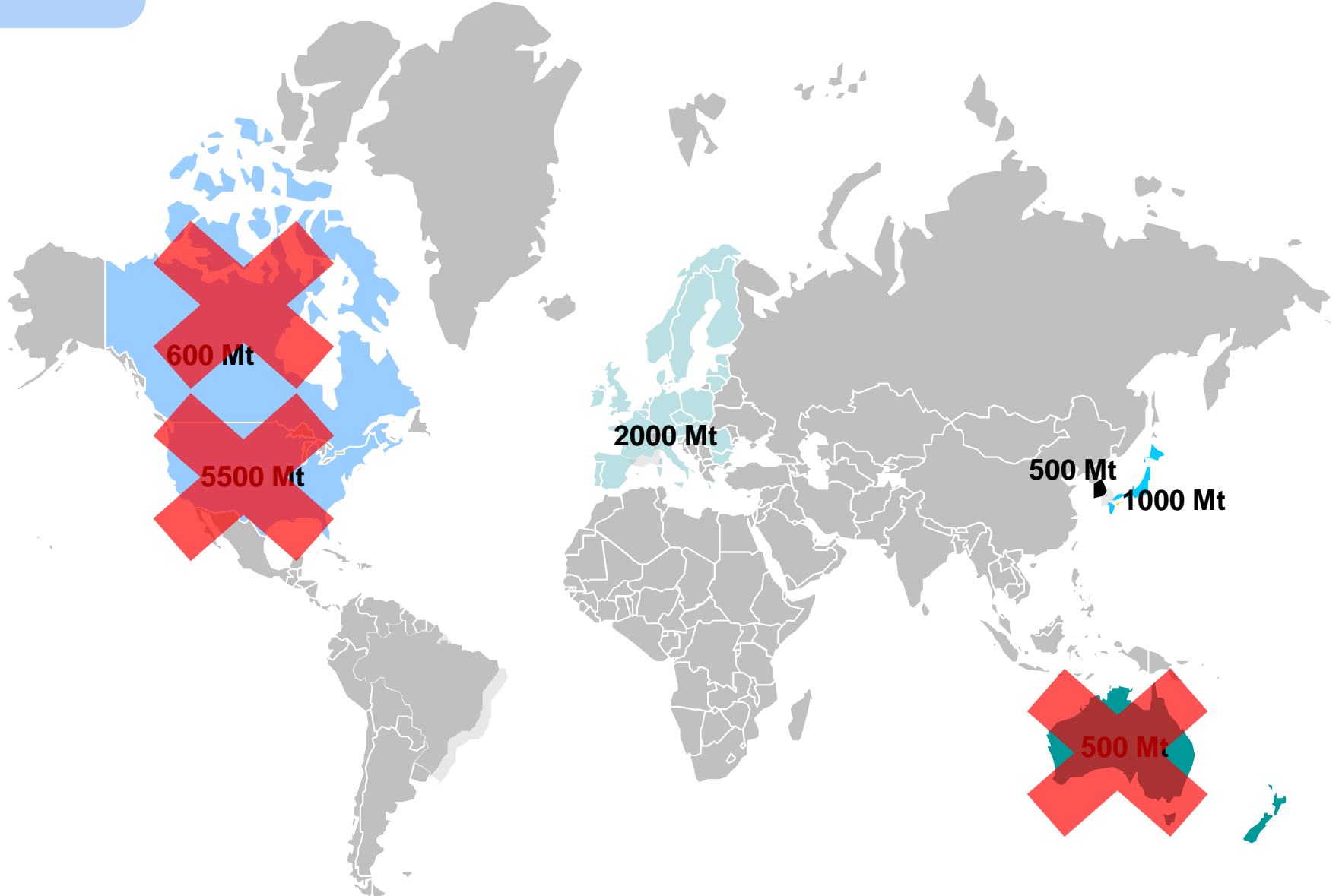
## Assessment

- Very limited impact, only from 2013 (few projects remaining)

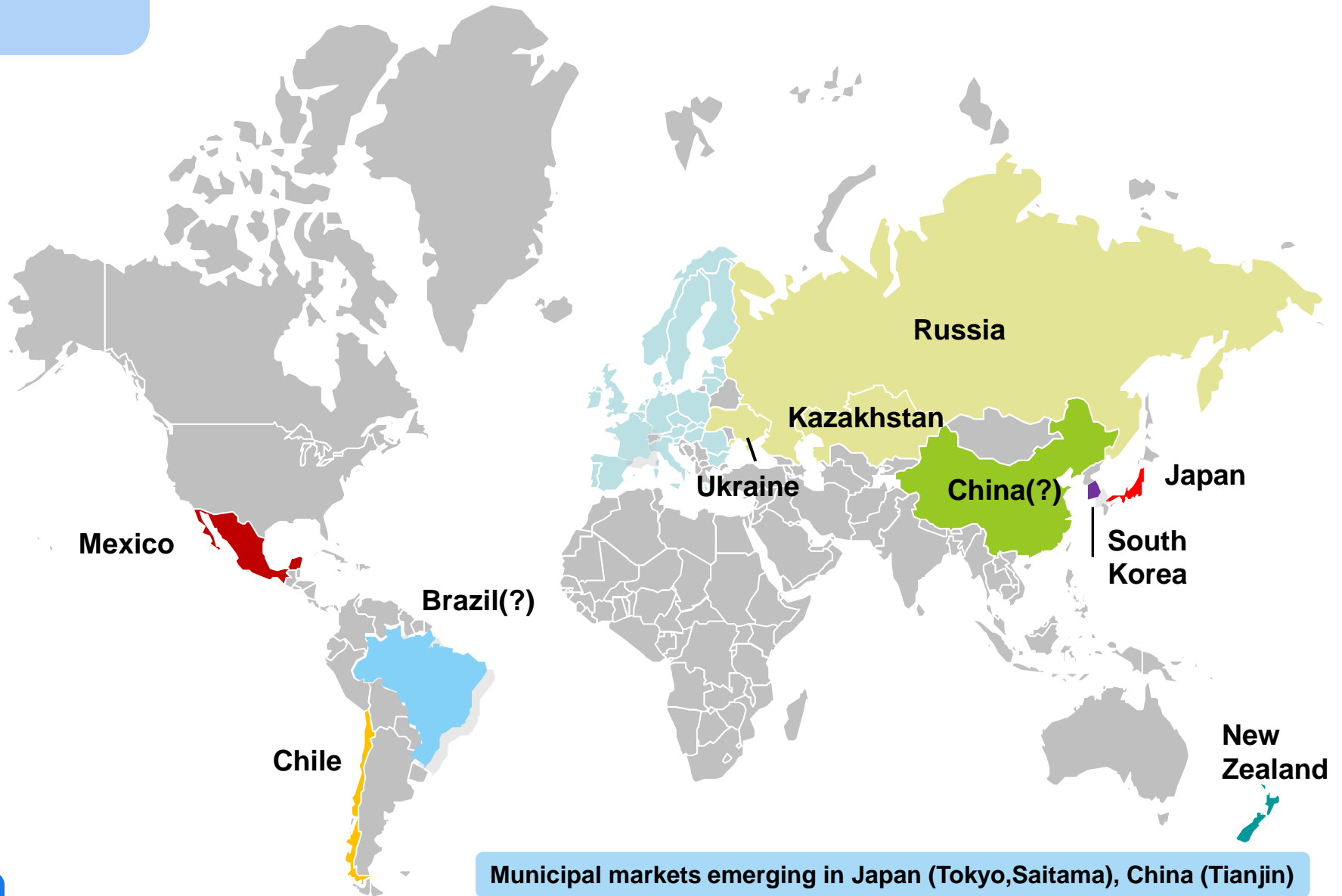
- Between -2 Mt and -3 Mt impact before 2013
- Between -300 Mt and -450 Mt from 2013

- Between -90 Mt and -130 Mt before 2013
- Between -400 Mt and -550 Mt from 2013
- If DOEs responsible, future of CDM compromised

# On the wider scene, perspectives are now different before 2015



# Country / or local initiatives are the rule





# There are pros and cons to the new dynamics

## Pros

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- Powerful, bottom-up drive
- Easier local acceptance and participation
- « Boon for traders » (arbitrage)

## Cons

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- Fragmented patchwork of isolated systems
- No sufficient liquidity if critical size not reached, and no simple links / compatibility between the markets
- Local presence necessary, and costly, for market-makers
- Long time to maturity: large investment and patience required



**Addresses the shortcomings of the centralized, administrative UN process**



**Less efficient, does not solve the urgency issue**

# Carbon markets will grow, but slowly, fragmented, and they will not be alone

## Fragmented markets

- “OECD market” not a realistic goal in the short term, US clearly backing away from the CO<sub>2</sub> instruments, and market mechanisms in particular
- Asia-Europe will be the axis going forward as most initiatives are in Asia (Korea, Japan, China?)
- New offset regimes will emerge as CDM fails to propose a credible model for scale-up
  - Japanese offsets
  - Green NAMA bonds
  - ...

## Multiplication of climate instruments

- Taxes on non-industrial sectors
- Energy efficiency markets (India)
- Renewable energy markets: REC, ROC, GOC... (US)
- R&D subsidies, feed-in tariffs, norms



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