



Kyoto Protocol Post 2012 Project Specific Opportunities

CDM Workshop

October 29th, 2009

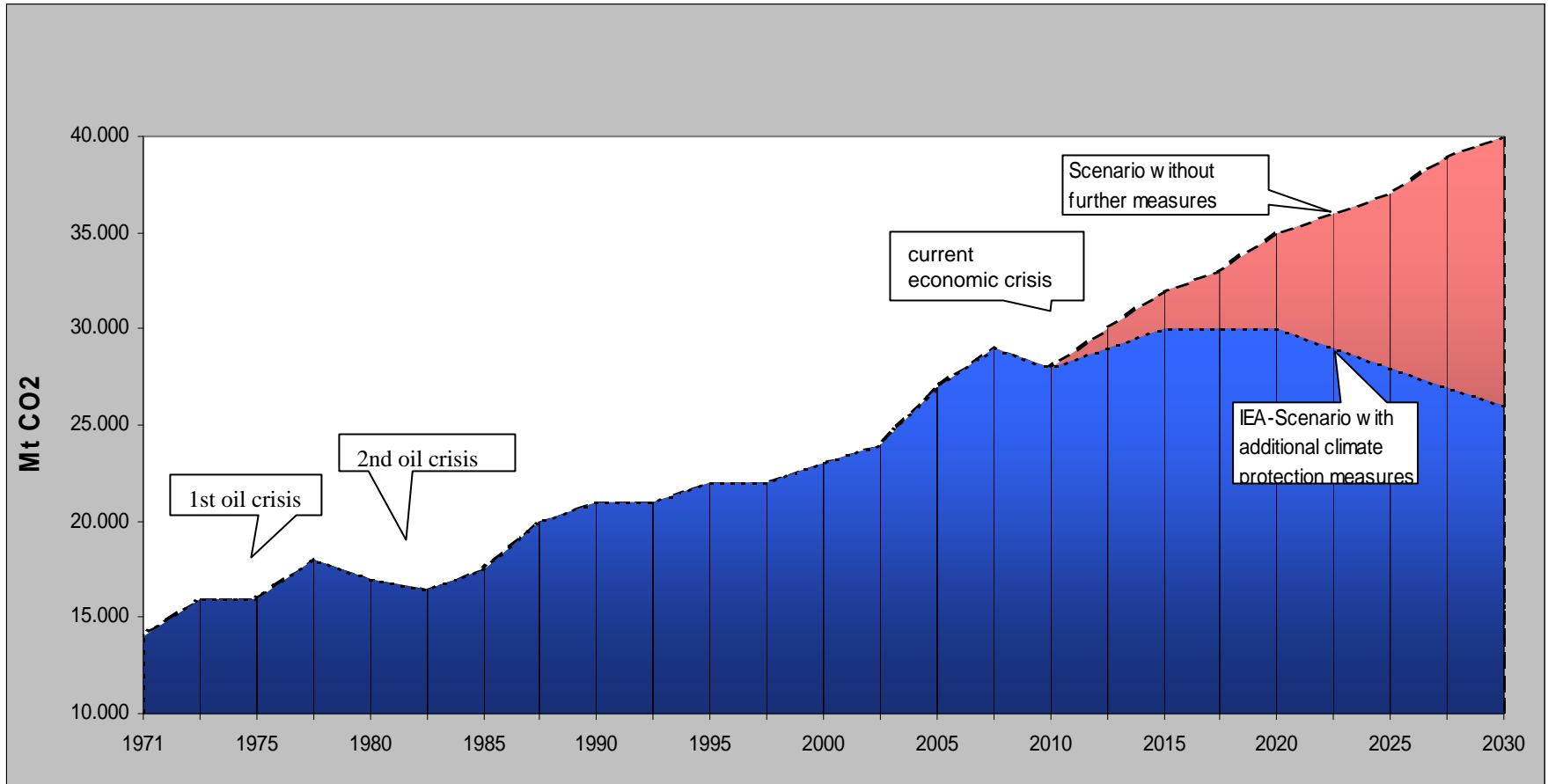
Mag. Ferdinand Heilig

Tripoli (Libya)

Table of Content

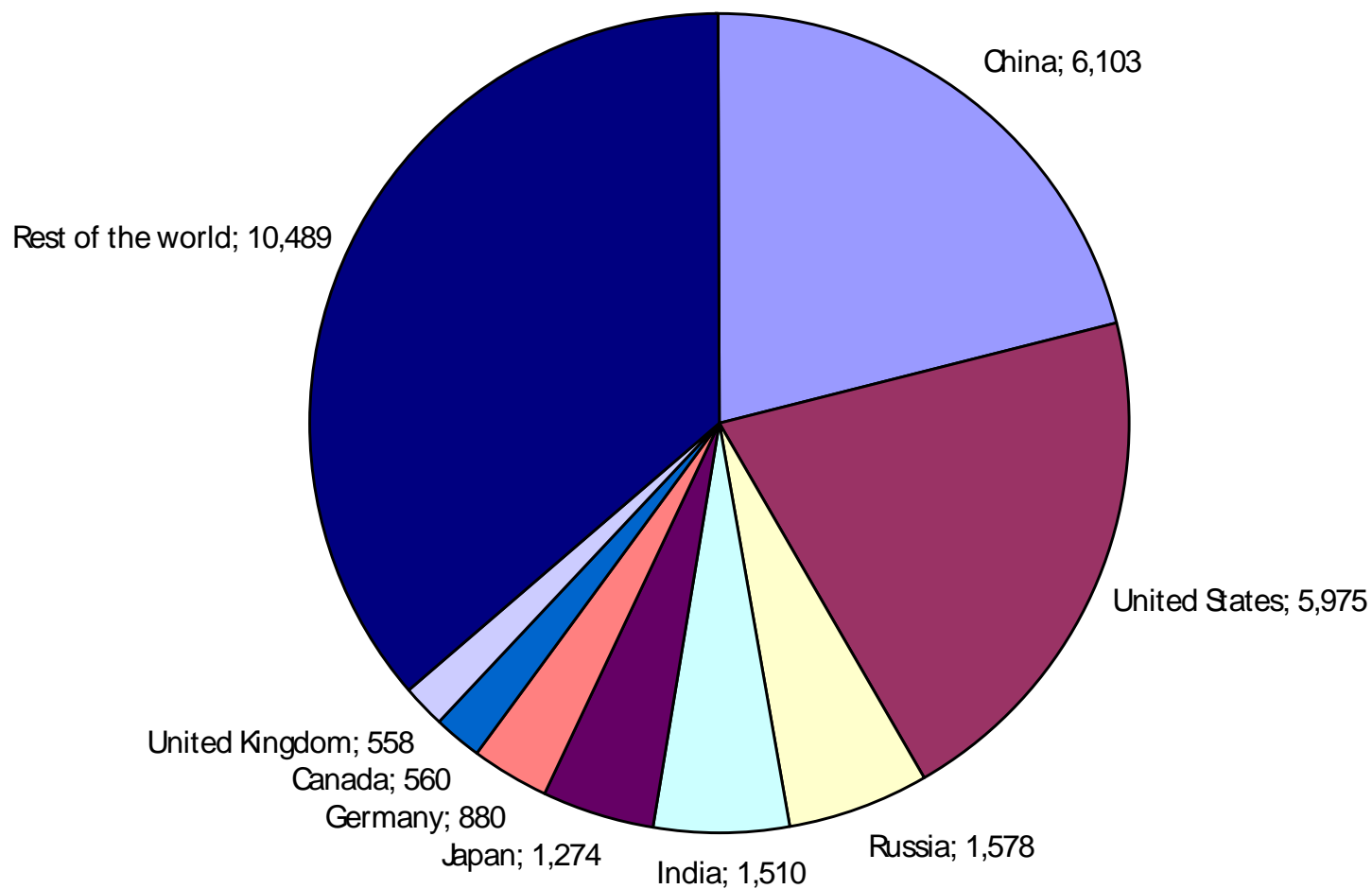
- Global Warming in absolute figures
- CARBON's position in JI/CDM-Market
- CDM and its interaction with other GHG reduction instruments
- CDM/project specific offset instruments Post 2012

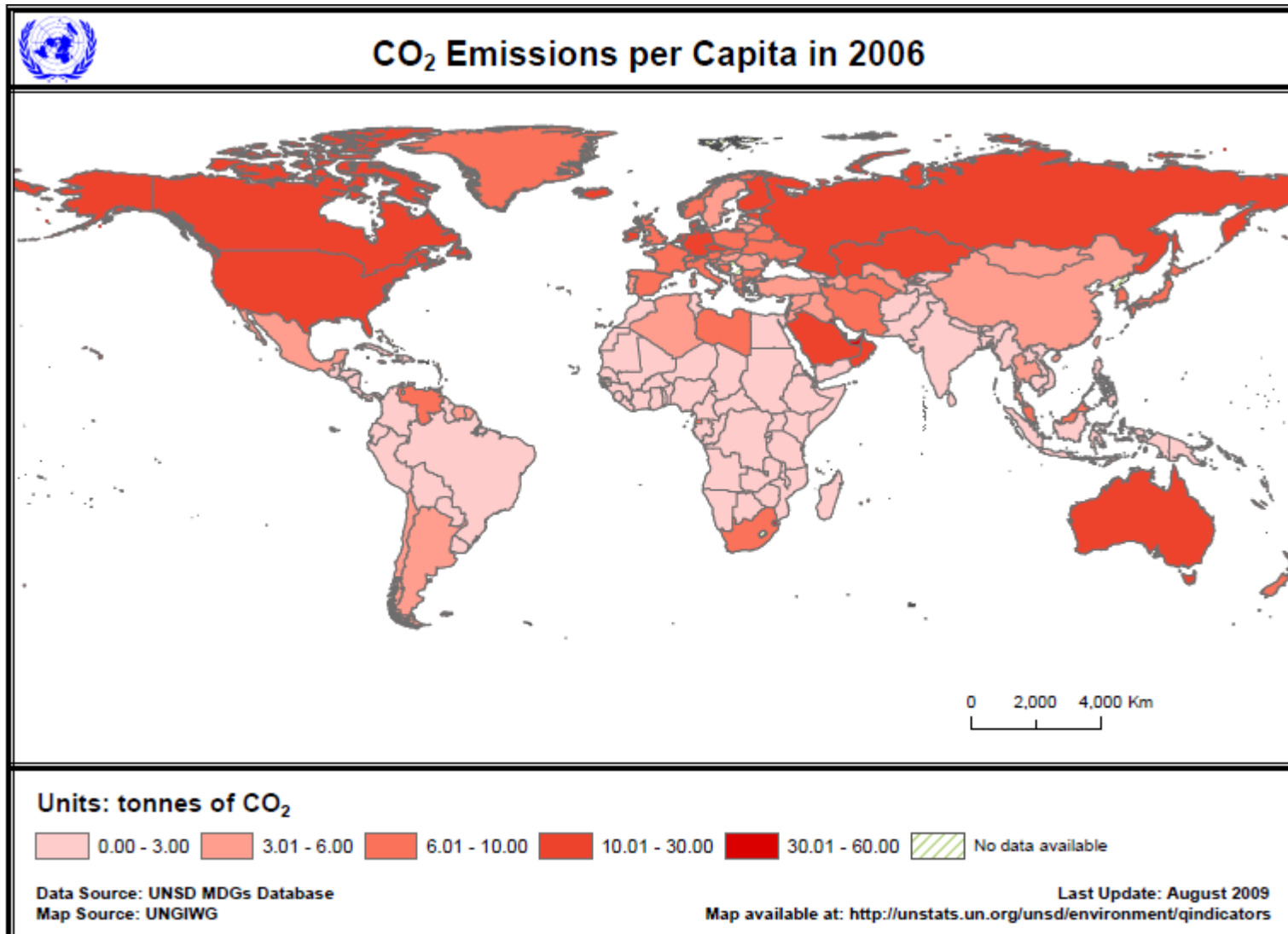
Development of global CO₂ Emissions since 1971



Global CO₂ Emissions share per country in 2006

World Carbon Dioxide Emissions, 2006 [MtCO₂e]





CARBON's position in JI/CDM-Market

- CARBON is among leading project developers in international JI/CDM-Market;
- Africa's biggest CDM-Project has been developed, financed and is operated by CARBON (N₂O-Reduction Project at Abu Qir Fertilizer Project in Alexandria, Egypt);
- CARBON invests its own funds in identified JI/CDM-Projects and will reduce more than 4,5 Mio. CERs in 2009 (in 2012 reduction volume is expected 6 Mio. CERs);
- Total amount of CERs issued is sold at fix prices produced until 31st of December 2012 mainly to the Government of Austria and Europe's biggest compliance buyer in EU ETS - RWE of Germany;
- In 2007 a minor stake in CARBON has been sold to RWE Power AG of Germany with the aim that furthermore both companies develop JI/CDM-Projects together;

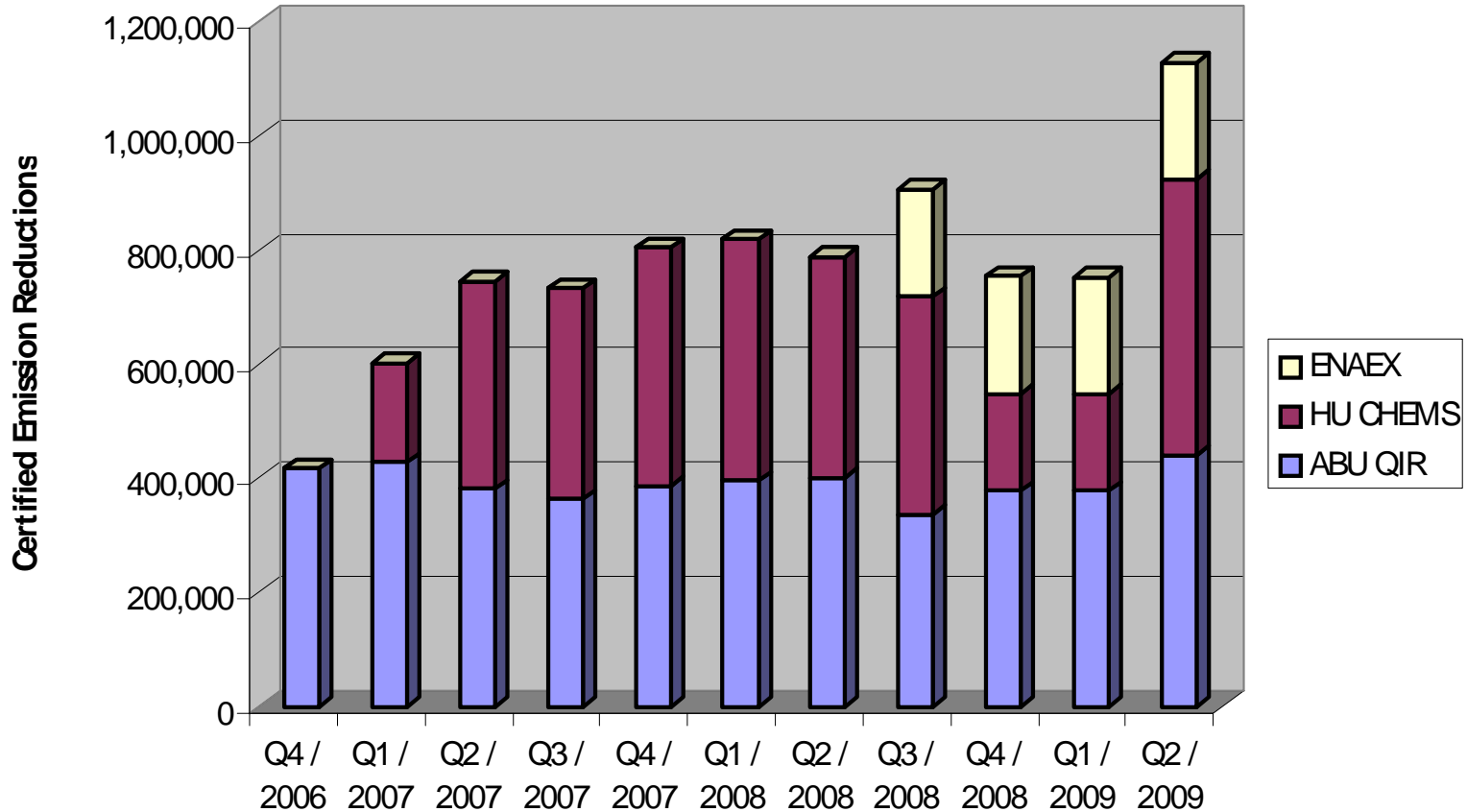
CARBON's N₂O CDM-Project Abu Qir Fertilizer Co., Egypt



- **Company:** Abu Qir Fertilizers Co.
- **Location:** Alexandria, Egypt
- **Process:** Dual Pressure
- **Capacity:** 1,830 t/d HNO₃
- **Tail gas:** 230,000 Nm³/h
- **Tail gas Temp.:** 418°C

**Start-up on
1st of October 2006**

CARBON's CER production from N₂O abatement projects



The Flexible Instruments of the Kyoto Protocol



| | JI Joint Implementation | CDM Clean Development Mechanism | ET Emissions Trading | ETS Emissions Trading System (e.g. EU ETS) |
|--------------------------------|--|--|--------------------------------|---|
| Partner | Annex I – Annex I | Annex I – Non Annex I | Annex I – Annex I | Energy Utilities and Industry |
| Emission Reduction Units | ERU – Emission Reduction Units | CER – Certified Emission Reduction | AAU – Assigned Amount Units | EUA - EU Allowances |
| Framework | von 2008 bis 2012 | ab 2000 | from 2008 till 2012 | Periods |
| Institutions | Supervisory Committee (SC) Independent Entities (IEs) | Executive Board (EB) Designated Operational Entities (DOE) | UNFCCC | EU Commission DG Environment |

UNFCCC CDM Statistics



| | Annual Average CERs *) | Expected CERs until end of 2012 **) |
|---|------------------------|-------------------------------------|
| CDM project pipeline: > 4,200 of which: | N/A | > 2,900 m |
| 1,839 are registered | ~ 319 m | > 1,660 m |
| 75 are requesting registration | ~ 8 m | > 20 m |

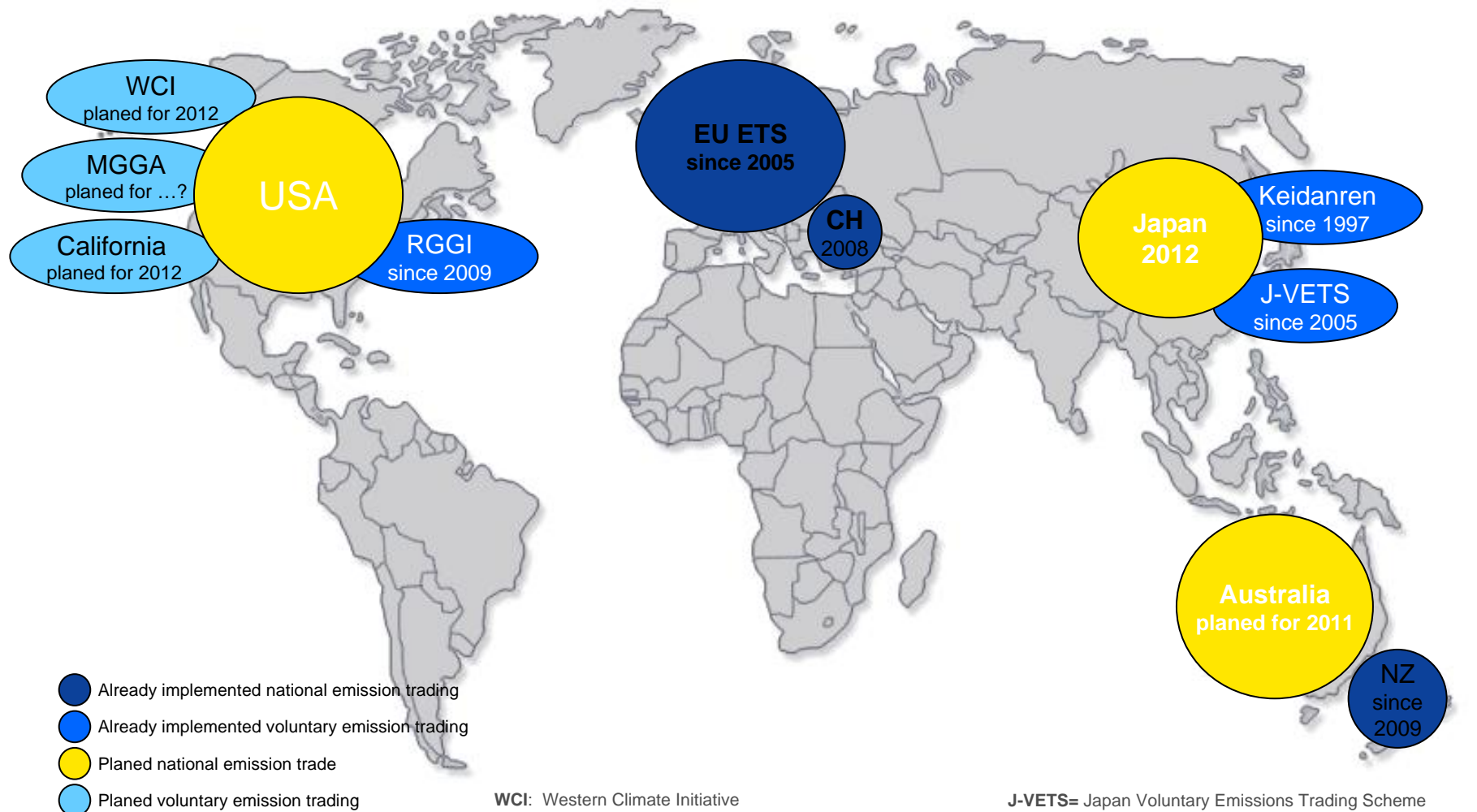
*) Assumption: All activities deliver simultaneously their expected annual average emission reductions

***) Assumption: No renewal of crediting periods

- Until 6th of October 2009 approx. ~ 333 m CERs have been issued;
- CARBON's share is >2%.

Source: UNFCCC

Emissions Trading Systems



- Already implemented national emission trading
- Already implemented voluntary emission trading
- Planned national emission trade
- Planned voluntary emission trading

WCI: Western Climate Initiative

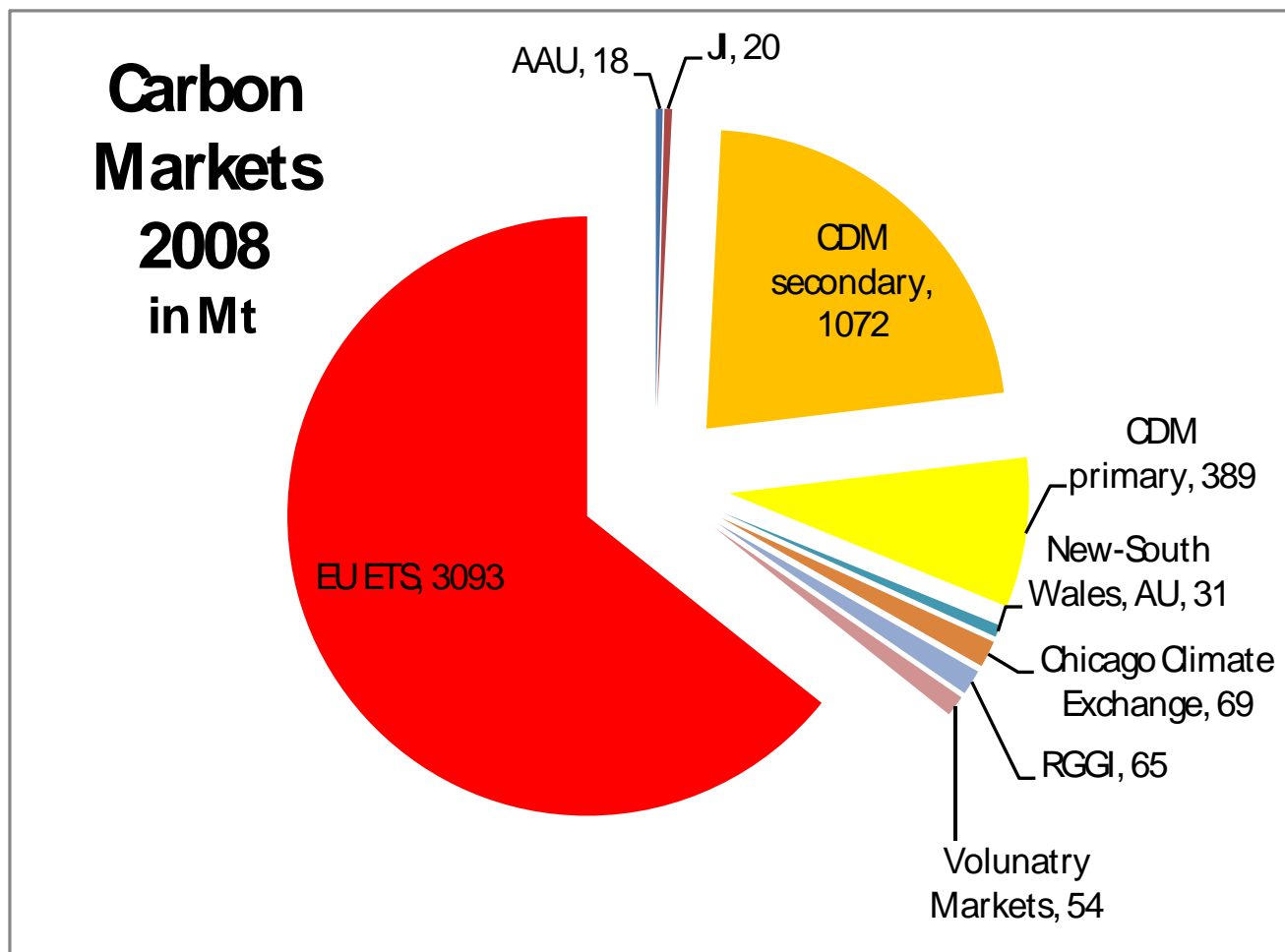
MGGA: Midwestern Greenhouse Gas Reduction Accord

RGGI: Regional Greenhouse Gas Initiative

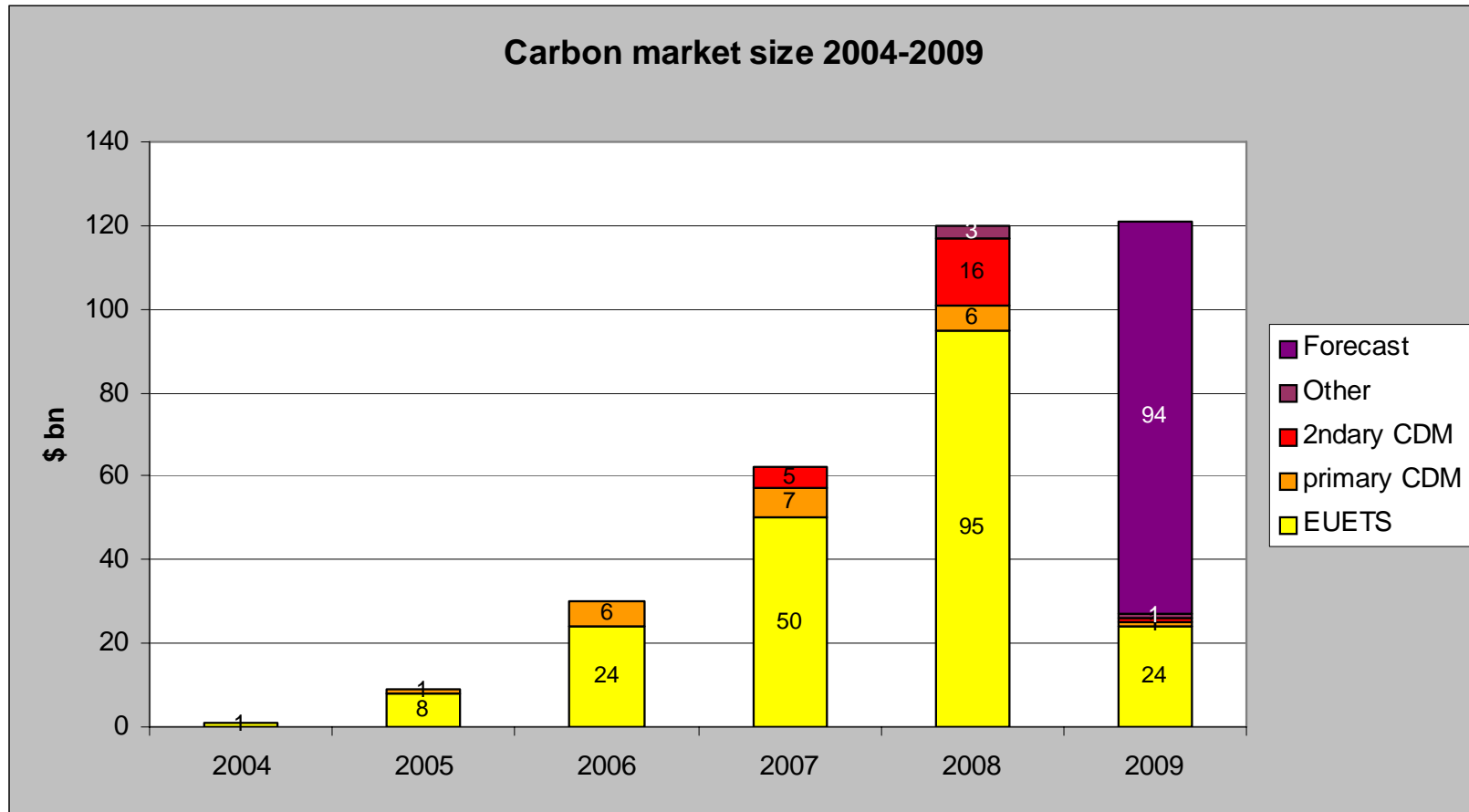
J-VETS= Japan Voluntary Emissions Trading Scheme

Keidanren= Voluntary Action Plan of the Japanese Business Federation

Trading Volumes in Mt in various ER markets in 2008



Volume of Carbon Market



Scenarios Post 2012



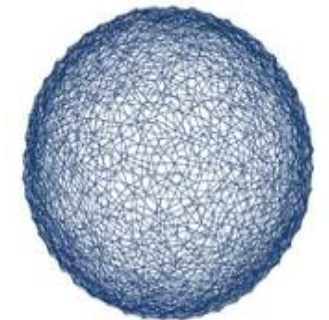
1. Kyoto Protocol expires without new agreement

This scenario is unrealistic due to

- Findings of IPCC regarding climate change;
- Global political acceptance that climate change is a threat to mankind (nowadays also in US);
- Increasing economic interests in “green technologies and economy”;

2. Kyoto Protocol is prolonged

This scenario is unrealistic, as US stated several times not to ratify KP any more and wish a new form of agreement.



COP15
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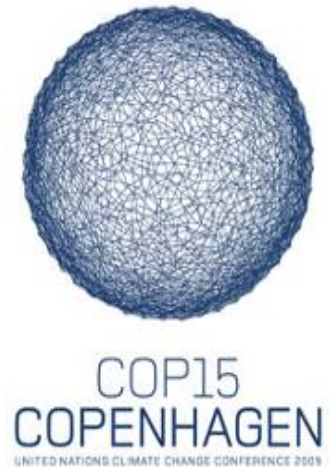
Scenarios Post 2012 – New Agreement



3. New Agreement

Most realistic scenario due to

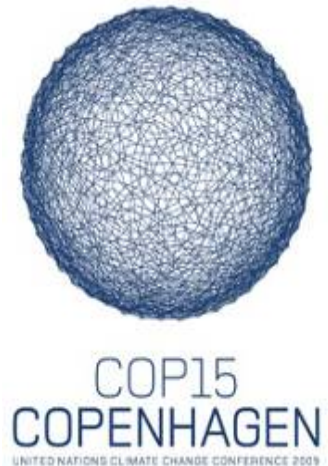
- General acceptance in the EU and Japan to enter into new agreement;
 - General positioning of developing countries to assist in climate mitigation activities;
 - Positioning of US (see previous slide);
-
- Main critical points to new agreement:
 - Interests between OECD countries and developing countries are diverse;
 - Many big developing countries (China, Mexico, South Africa, Brazil and India) are not ready to accept binding measures (and in no case caps);
 - Industrial Nations are not ready to provide financial means requested by developing countries;



Scenarios Post 2012 – New Agreement



- › Details to be discussed:
 - › Compliance Periods (2x5 or 8 years);
 - › Compliance Rules for carbon sinks;
 - › Improvements in CDM (e.g. Standardised baselines);
 - › Tropical Deforestation (REDD);
 - › Integration of Air and Sea Transportation;
 - › Legal Status of Agreement;
 - › Sanctions;
 - › Shared vision: Accepted Goals/Caps for 2050
 - › Carbon Leakage (e.g. CO₂ tax for imported products from countries with no CO₂ caps);



Development in the EU ETS III



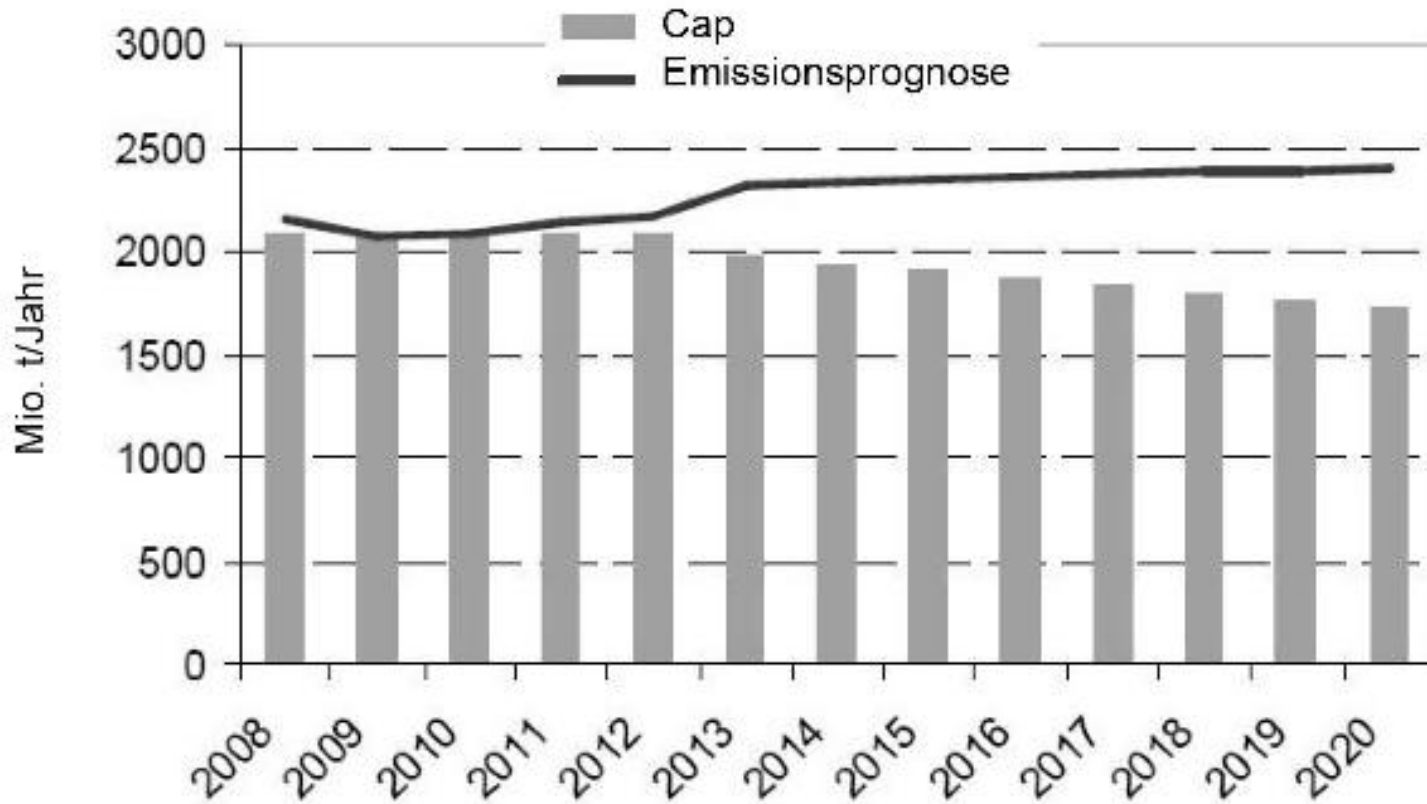
Two scenarios are considered in the directive 2009/29/EC:

- No new agreement being concluded by 31st December 2009:
 - CO₂ reduction target: minus 20 % (basis year: 2005);
 - Prolongation of CERs usage, but no increase of amount;
 - New projects in Least Developed Countries only (with limitation to 3 % of Redemption Capacity);
- New agreement being concluded by 31st December 2009:
 - CO₂ reduction target: minus 30 % (basis year: 2005);
 - Additional types of project credits or other mechanisms;
 - New projects only in 3rd countries that have ratified new agreement;

Banking of CERs / ERUs

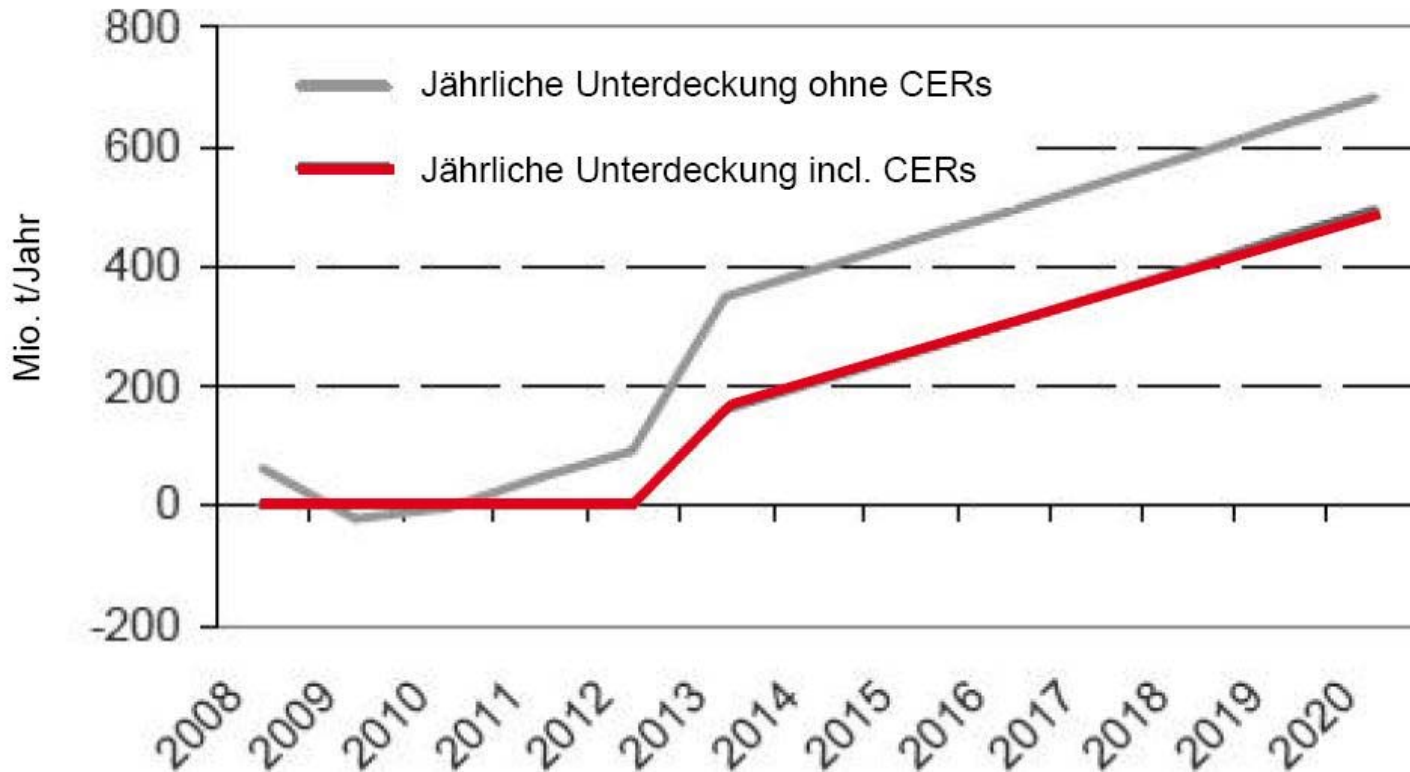
- Banking of CERs and ERUs possible from EU ETS II period (2008-12) to EU ETS III period (2013-20) in case JI/CDM projects are:
 - „eligible for use“ 2008-12
 - „registered before 2013“
 - „new projects [...] in Least Developed Countries“ (limited to 3% of RC);
 - Total CER/ERU usage is in general limited to “redemption capacity” of compliance buyer in EU ETS II but min. 11%;
 - = approx. 6% of total caps in EU ETS II and III (1,600 to 1,700 Mt CO₂e).

Forecast on EU ETS III ER demand



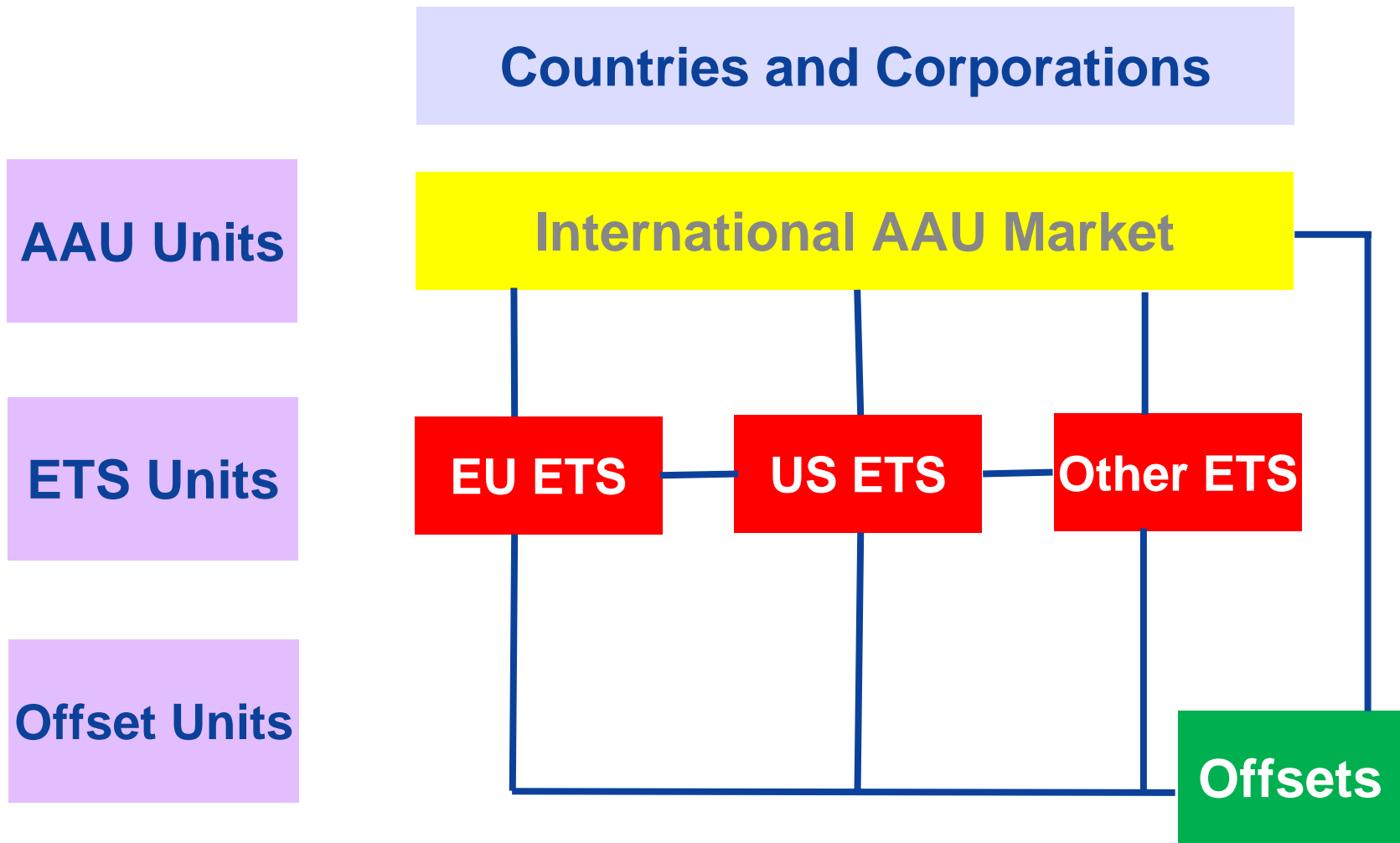
- Short-term decline of the emissions, afterwards (depending on economic development) increase expected
- Phase II likely also without CER/ERU-Imports long
- CER-Import are necessary to cover shortage of Phase III
- If an international treaty will not be developed in Copenhagen, CERs are applicable till 31st March of 2015.

Expected Shortage on ERs in EU ETS III



- Phase III is short
- Sends price-raising signals for Phase II → Banking of Phase II to Phase III
- Electric Power Companies will begin with CO2 complaints' purchases in 2010 for electricity sales ex 2013.
- Increasing prices very probably in the long term
- This scenario incl. CER-Imports generates an **accumulated shortage of approximately 2 billion EUAs**

Linkages of AAU, ETS and Offsets Post 2012



Development of Carbon Market ^{*)}



- Volume of global carbon market in 2012 is expected to reach € 295 billion;
- Considering increased efforts for a global climate change policy further market growth is expected;
- Price expectations are down for 2010, but remain strong for 2020;
- Less companies need to buy EUAs in addition to their EU ETS cap until 2012;
- The economic downturn is still hitting carbon project investments;
- Rising post-2012 activity in the CDM market seen (increasing volume in traded CER forwards for post-2012 delivery);
- It is expected that US will introduce federal mandatory cap-and-trade by 2015.

*) Sources: New Carbon Finance and Point Carbon



**Thank you for
your attention!**

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