

# Climate Mitigation Policy: Bridging the Gap Between the UNFCCC and the Montreal Protocol

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**Event: Targeting Non-CO2 Climate Forcers for Fast  
Mitigation to Complement CO2 Cuts —  
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# Addressing

- Montreal Protocol Decision XIX/6 (2007) to phase-out HCFC encourages minimisation of environmental impacts, in particular impacts on climate, as well as meeting other health, safety and economic considerations;
- ODS phase-out leading to climate impact (hitherto & expected);
- Synergies (EC Communication) and Micronesia-Mauritius Proposal (2009);
- Stockholm Group Work (incl. 3rd April 2009 Report of 8 May 2009);
- Energy Efficiency, feedstocks, management of banks, compliance aspects;
- Summary.

# Background – control regimes

## Some Basics

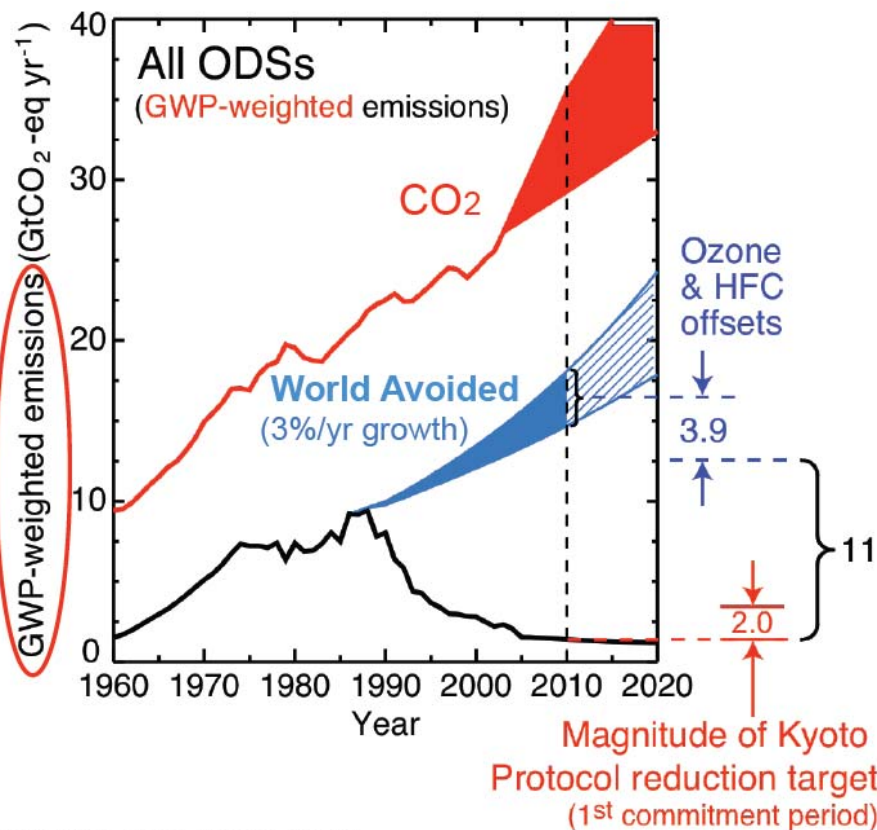
### Montreal Protocol:

- Production and consumption phase-out;
- Multilateral Fund covers incremental costs;

### Kyoto Protocol

- Emission controls;
- Flexible mechanisms, CDM, JI, ET.

## Global Warming Potential (GWP) of ODS Emissions

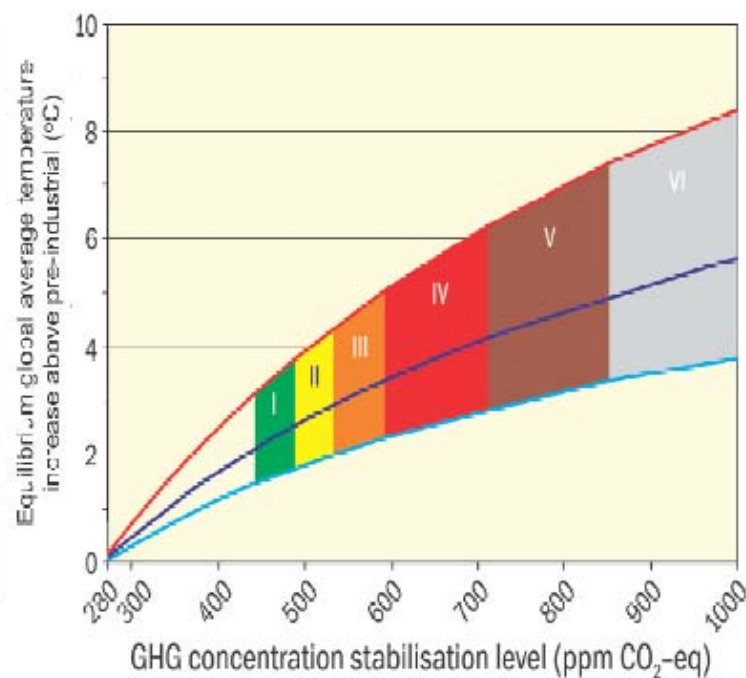
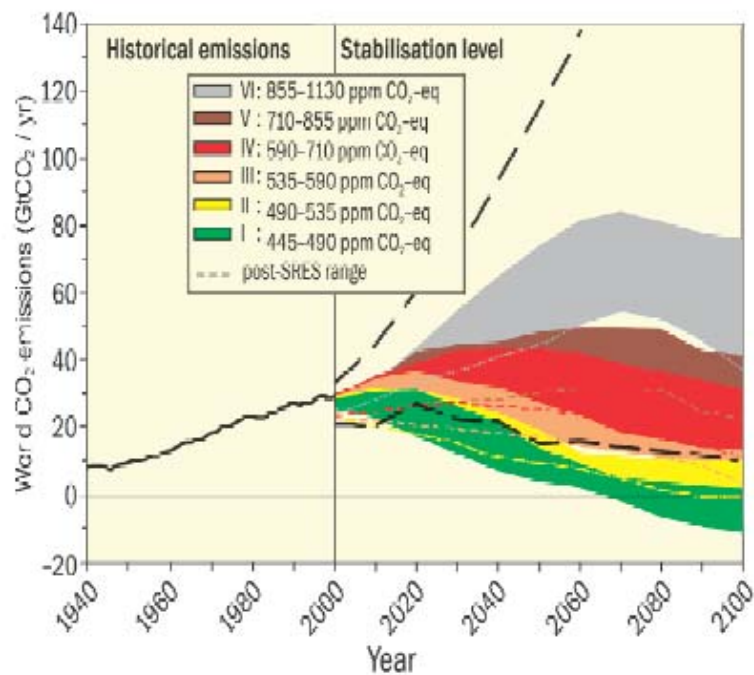


The Montreal Protocol will have reduced net GWP-weighted emissions from ODSs in 2010 by 5-6 times the reduction target of the first commitment period (2008-2012) of the Kyoto Protocol.

The Montreal Protocol will have reduced net GWP-weighted emissions from ODSs in 2010 by about 11 Gt CO<sub>2</sub>-eq yr<sup>-1</sup>.

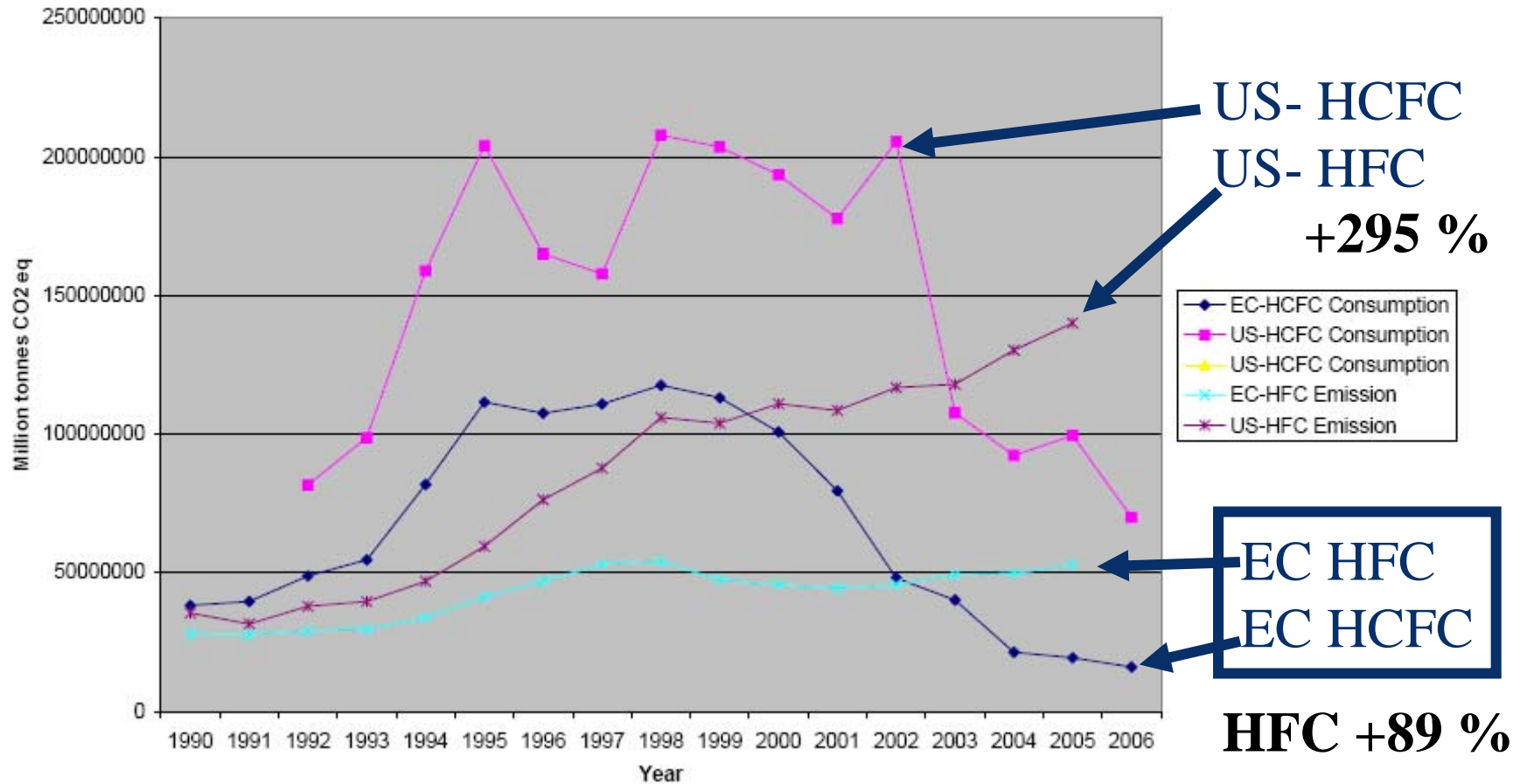
G. Velders *et al.*, PNAS, 2007

## The lower the stabilisation level the earlier emissions must go down



# 4- An Industry in Transition

HCFC Phase-out; HFC emissions for the EC and the US



# HFC Emission Projections

- Key sectors for HFC growth are refrigeration and foam in a business as usual (BAU) scenario; Banks, other F-gases etc are additional;
- There is a 10 year lag of emissions, i.e. all production is emitted;
- HFCs risk contributing to a substantial fraction of total carbon dioxide (CO<sub>2</sub>) emissions in 2050 (CO<sub>2</sub>-eq basis);
- Radiative forcing of HFCs of the order of 0.5 Wm<sup>-2</sup> compared to overall CO<sub>2</sub> forcing of 2.5 Wm<sup>-2</sup> stabilization scenario for 450 ppm
- HFCs represent a substantial 20 percent fraction of global CO<sub>2</sub> forcing.

# Bridging Gaps MP-UNFCCC (1/4)

- Cooperation on HFCs by both regimes (UNFCCC-Copenhagen and MP-VC);
- Examples exist, like the Basel, Stockholm, Oslo & Paris (OSPAR) Conventions;
- OSPAR, on marine environment of the North-East Atlantic, started in 1972 with the Oslo Convention against dumping, broadened to cover land-based sources and the offshore industry by the Paris Convention of 1974. These two conventions were unified, up-dated and extended in 1992 as OSPAR Convention. A new annex on biodiversity and ecosystems was adopted in 1998 to cover non-polluting human activities that adversely affect the sea.

# Bridging Gaps MP-UNFCCC 2/4

- EC Communication (COM 2009-39) "RECOGNIZES that the accelerated phase-out of HCFCs mandated under the Montreal Protocol may lead to a rapid increase in the use of HFCs, many of which are very potent GHGs; therefore, PROPOSES that the Copenhagen agreement include an international emission reduction arrangement for HFC emissions; ...that this arrangement will contribute towards meeting the EU's 30% commitment".
- Micronesia and Mauritius Proposed MP Amendment regarding HFCs;
- Expression of positive US interest.

# Bridging Gaps MP-UNFCCC 3/4

Some design elements (without priority ranking):

- Baseline issues taking into account HCFC consumption/production & that HCFC phase-out is not be jeopardized;
- Start dates and decline of emissions; technology transfer— allow introduction of benign new technology in the key sectors to achieve the reduction;
- How to deal with inadvertent production, By- and co-products; and products containing the substances;
- Time differentiation between parties;
- Import/export of regulated substances (implicitly trade related issues);
- How to deal with the other F-gases i.e. PFCs, SF<sub>6</sub> etc;
- End of life management and destruction of banks of unwanted substances
- Energy Efficiency.

# Bridging Gaps MP-UNFCCC 4/4

- Regarding Energy Efficiency: The Multilateral Fund of the MP is looking at options and methodology linking the issues (ozone protection, climate change mitigation, energy efficiency, safety and other environmental benefits);
- One such option is the conceptual Functional Unit ("FU") that would link HFC alternatives and a simplified life cycle analyses. The FU remains to be clarified in detail and demonstrated but is expected to encourage best alternatives while phasing out remaining ODSs (HCFCs);
- Energy efficiency can get complicated in agreements, however, there are also good examples of energy efficiency initiatives and devising revolving financial instruments around such efforts.

# Summary

VISION: UNFCCC and VC-MP work out a progressive arrangement that leverages MP institutions and UNFCCC reduction targets, i.e.

1. An emissions reduction arrangement owned and confirmed by UNFCCC-Copenhagen Agreement
2. Details are worked out and delivered by Montreal Protocol Regime.
3. Finance for GHG emission reduction is provided via climate mechanisms with timely assistance that includes Montreal financial mechanism, including bilateral and multilateral financing, that addresses existing and new facilities.
4. Provide stakeholders a transparent and simple global regime with compliance obligations.
5. Time schedule: June 2009 + VC-MP + Copenhagen + [1 year].