



EU views on  
greenhouse gases and global warming potentials  
and  
options for addressing GHG emissions from  
international aviation and maritime transport

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# Gases and GWP: State of play

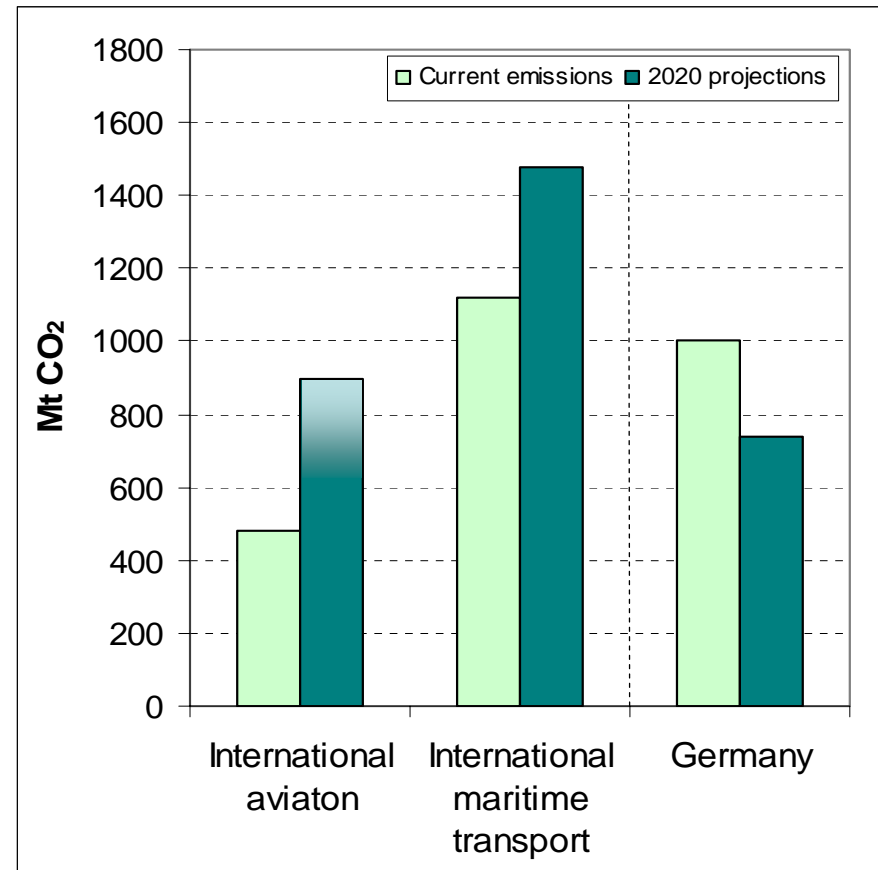
- The 2006 IPCC Guidelines provide estimation methods and/or emission factors for some new gases
  - For some F-gases no GWP has been estimated
- The IPCC Fourth Assessment Report (AR4) also identified additional GHGs and updated GWPs for a number of GHGs already reported
  - Some F-gases that are currently reported under the Kyoto Protocol are not included in the IPCC AR4

# Gases and GWP: EU views

- To ensure environmental integrity a post 2012 regime should
  - cover a broad list of halogenated gases
  - use the latest scientific findings on GWPs
- To ensure transparency and accuracy of GHG emission estimates one needs to consider availability and uncertainty of
  - estimation methods
  - emission factors
- Other issues which need to be taken into account
  - relevance/ overall impact and resource requirements
  - time-series consistency
- Topics for AWG 5.2
  - additional methodological work needed under the IPCC on estimation methods and emission factors
  - research needs as regards certain new/emerging sources
  - sector specific questions (e.g. LULUCF) should be discussed under the respective workstreams

# International transport – a major source of GHG emissions

- Emissions are comparable to large Annex I countries
- International transport is one of the fastest growing sources of GHG emissions
- Growth in emissions in these sectors would significantly impair global reduction effort



IPCC 4th AR, WG3; IMO, BLG 12/6/1; EEA Report 5/2007

# Progress in IMO

- Report on Ships GHG Emissions (2000) now being updated (due for completion in 2009 or 2010)
- No decisions yet on:
  - Level of reductions to be achieved
  - Scope i.e. which ships reductions may apply to
  - Whether application of 'measures' would be mandatory or voluntary
- Scheduled to decide on 'methods for dealing with emissions' in July 2009
- Progress with ship efficiency measure 'IMO CO<sub>2</sub> index' and 'CO<sub>2</sub> baseline'
- Key meetings are MEPC 57 (March) and MEPC 58 (October)
  
- EU takes the view that cooperation and discussion in the IMO should be accelerated in order to tackle international maritime emissions



# Progress in ICAO

- ICAO discussions on market-based measures since 1991 and emissions trading since 1998
- 2004 ICAO Assembly:
  - Decided not to establish new global legal instrument under ICAO
  - endorsed the concept of open emissions trading for international aviation through voluntary emissions trading and the incorporation into State's existing emissions trading schemes
- 2007 ICAO Assembly: measures to address climate impact of aviation a key point of discussion but disagreement on how to apply
- ICAO Council requested to provide advice as soon as possible to the COP of the UNFCCC, encompassing technical solutions and market-based measures.
- Group on International Aviation and Climate Change to develop and recommend "aggressive programme of action on international aviation and climate change" including the identification of "possible global aspirational goals". Outcome expected prior to COP15.

# UNFCCC leadership

- Art. 2.2 Kyoto Protocol: Annex I Parties shall pursue the limitation or reduction of GHG emissions from aviation and maritime bunker fuels through ICAO and IMO
- But ICAO and IMO have not yet been able to agree upon concrete measures or targets
- IMO and ICAO should report at COP 14 on their work programs and deliverables for 2008 and 2009 with a special focus on mandatory measures to be concluded within the organisations before COP 15
- **UNFCCC must show stronger leadership**
  - enhancing cooperation with ICAO to develop a more effective approach to addressing aviation emissions
  - facilitating more effective approaches and faster progress in IMO.
  - address the need for clear and meaningful targets for these sectors as part of a post-2012 agreement



# Some general views of the EU

- International aviation and maritime transport emissions should be included in a post-2012 regime
- Inclusion of these sectors is mainly a political and not a methodological question
- Aviation and maritime should be included in a non-discriminatory manner

# Two main options:

- Inclusion in national totals
  - Emissions from international aviation and maritime are allocated to Parties
  - Emissions part of national GHG inventories and the national quantified emission reduction or limitation target
  - Parties decide whether to address international aviation and maritime transport emissions or increase efforts in other sectors
  
- Sectoral approaches
  - Emissions from international aviation and maritime transport would not be included national quantified emission reduction or limitation targets
  - Targets would be set for the sector and operators would be required to reduce emissions
  - Parties would be responsible for setting up and enforcing scheme
  - Can allow for different policies and measures at a international, regional or national level
  
- Maritime transport and aviation might require different approaches

# Possible approaches: Aviation

- Inclusion in national totals on the basis of route flown or sectoral approach possible.
  
- Operator emissions trading
  - feasible under national total or sectoral approach
  - scope based on route and not nationality of a carrier to avoid distortion of competition



# Possible approaches: Maritime transport

## Inclusion in national totals not feasible

- due to data problems, evasion possibilities, competitiveness issues, fairness and polluter pays principle

## International sectoral approach preferred

### Option 1 - Operator emissions trading

- scope based on route or ship but not on the nationality of a carrier to avoid distortions of competition

### Option 2 - CO<sub>2</sub> charge

- Operators pay charge on CO<sub>2</sub> emissions
- Funds used to reduce and/or offset emissions from the sector and other climate change related purposes, such as adaptation in developing countries or research and development
- Proposal combines IMO and UNFCCC principles:
  - IMO principle of *no more favourable treatment*
    - charge applies to all shipping worldwide
  - UNFCCC principle of *common but differentiated responsibilities*
    - share of revenues used for Developing Countries

# Criteria for assessing different approaches

- Contribution to addressing Climate Change
  - share of global emissions covered by the regime and effectiveness of reducing emissions
  - linkages to the overall regime and especially the international carbon market
  - possibilities for evasion and the environmental integrity of the scheme
- Practical implications
  - impacts on competition
  - administrative burden

# Potential for Revenues



- Need to improve access to adequate, predictable and sustainable financial resources for adaptation, REDD and technology transfer
- Resources needed for adaptation in non-Annex I countries (up to tens of billion USD/yr)
- Potential to generate up to 40 billion USD/yr through international aviation and maritime transport (auctioning, CO<sub>2</sub> charge, ...)
- **International aviation and maritime transport have the potential to provide major share of financial resources necessary**

## Issues to be discussed by AWG KP

- Means available for limiting climate impact of aviation and maritime
- Avoidance of distortions of competition and leakage
- Appropriateness of Annex I/non-Annex I distinction for these sectors
- Impacts on the global carbon market
- Contribution to sustainable development and technology transfer
- Possibilities to provide adequate, predictable and sustainable financial resources to assist developing Parties that are particularly vulnerable to the adverse impacts of climate change in meeting the costs of adaptation
- Enhanced cooperation between UNFCCC and IMO/ICAO and input prior to COP 15

# Main messages

- International aviation and maritime transport need to be part of a post 2012 regime
- Need for stronger UNFCCC leadership and enhanced cooperation between UNFCCC and IMO/ICAO
- Need to respect different features of aviation and maritime transport
- Including aviation and maritime transport post 2012 could contribute to necessary financial resources
- The options put forward by the EU and other Parties should be further discussed here and in the following sessions of the AWG KP