An introduction to market-based measures (MBMs)

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OUTLINE

1. The climate change challenge
2. What are market-based measures (MBMs)?
   - The three main types of MBMs
   - Examples of MBMs
3. ICAO and future work
   - Global MBM
   - Voluntary use of MBMs in the context of national action plans

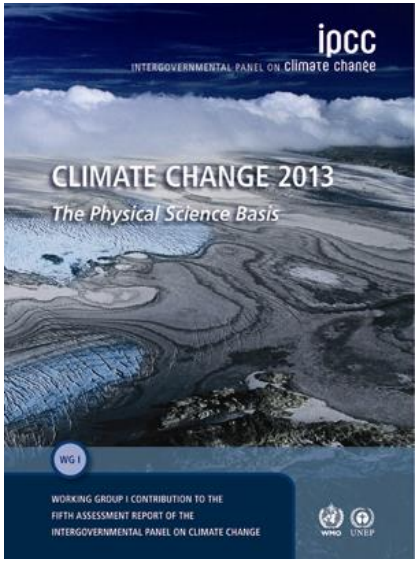


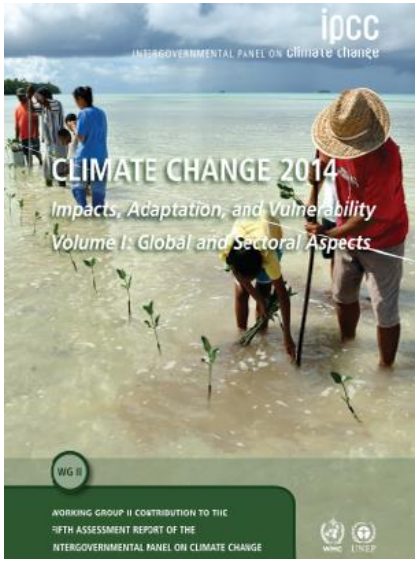


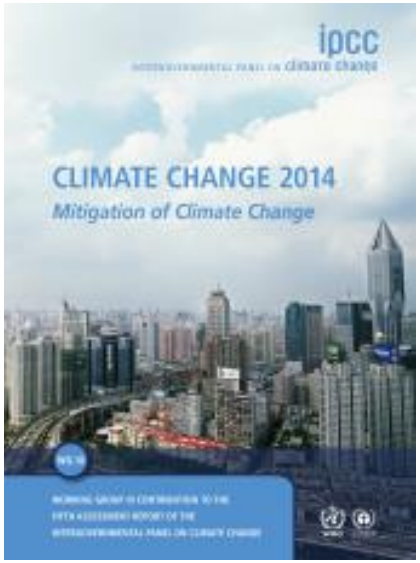
Climate science: the findings

Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5), 2013-2014

- "Warming of the climate system is unequivocal"
- "Human influence on the climate system is clear"
- "It is *extremely likely* that human influence has been the dominant cause of the observed warming since the mid-20th century"

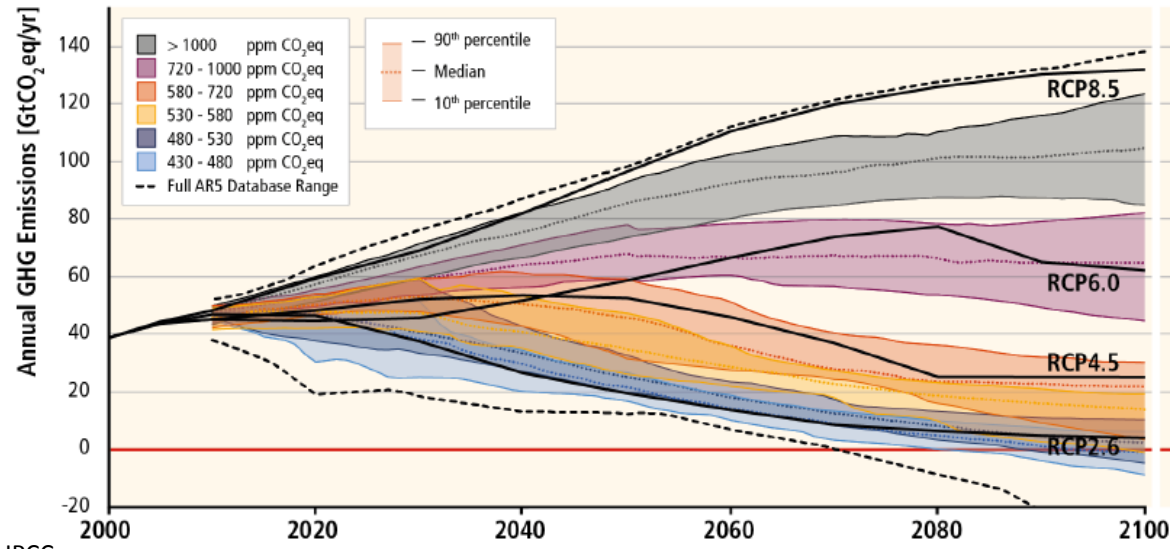




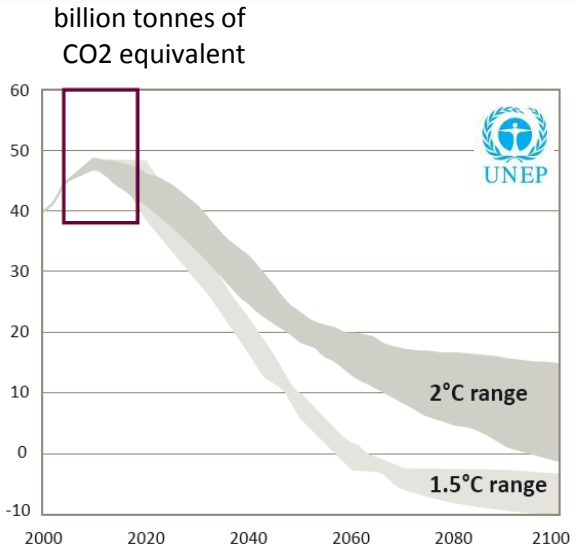


Synthesis report to be finalized in October/ November 2014

Global emissions pathways



IPCC

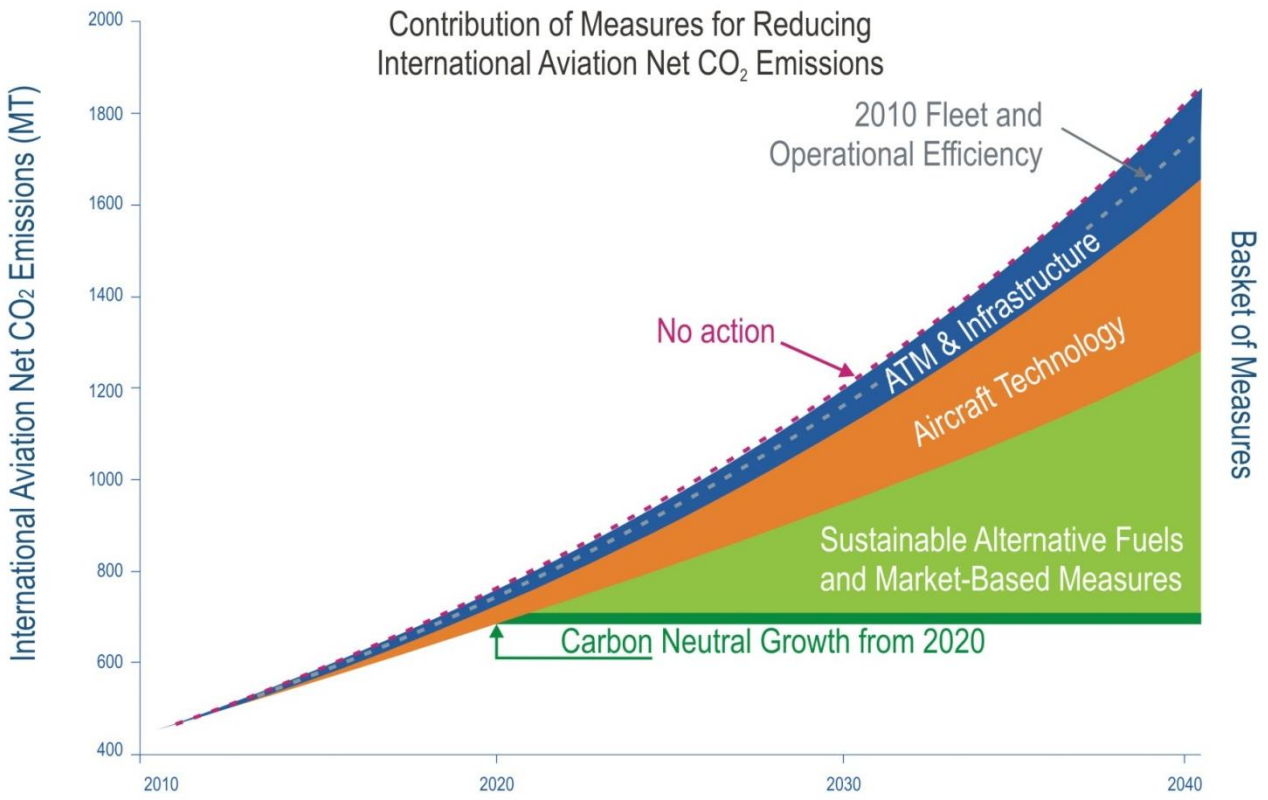


Global emissions are approximately 49 billion tCO2e / year

To limit the global temperature increase above pre-industrial levels to a maximum of 2ºC, global emissions need to peak by 2020 and scale down significantly by the end of the century

Aviation currently represents approximately 2% of global emissions – but traffic is growing rapidly

International aviation emissions



Aspirational goal: carbon neutral growth from 2020

To be achieved through various measures, including market-based measures

Market-based measures

- Market-based measures (MBMs) can help meet climate goals through a more flexible approach than traditional regulatory measures ("command-and-control")
- MBMs provide flexibility to emitters by giving them alternative methods of reducing emissions
- In aviation context, three main types of MBMs:
  - Levies
  - Emissions trading
  - Offsetting





MBM type #1: levies

- A “levy” is a measure for collecting revenue arising from a specific activity
- A levy can fall into one of two categories

1. A “tax” raises revenue from an activity, and this revenue is then pooled into general revenue

2. A “charge” raises revenue from an activity for the purpose of paying the costs of providing facilities and services relating to the activity itself
    - Examples: airport services, navigation services



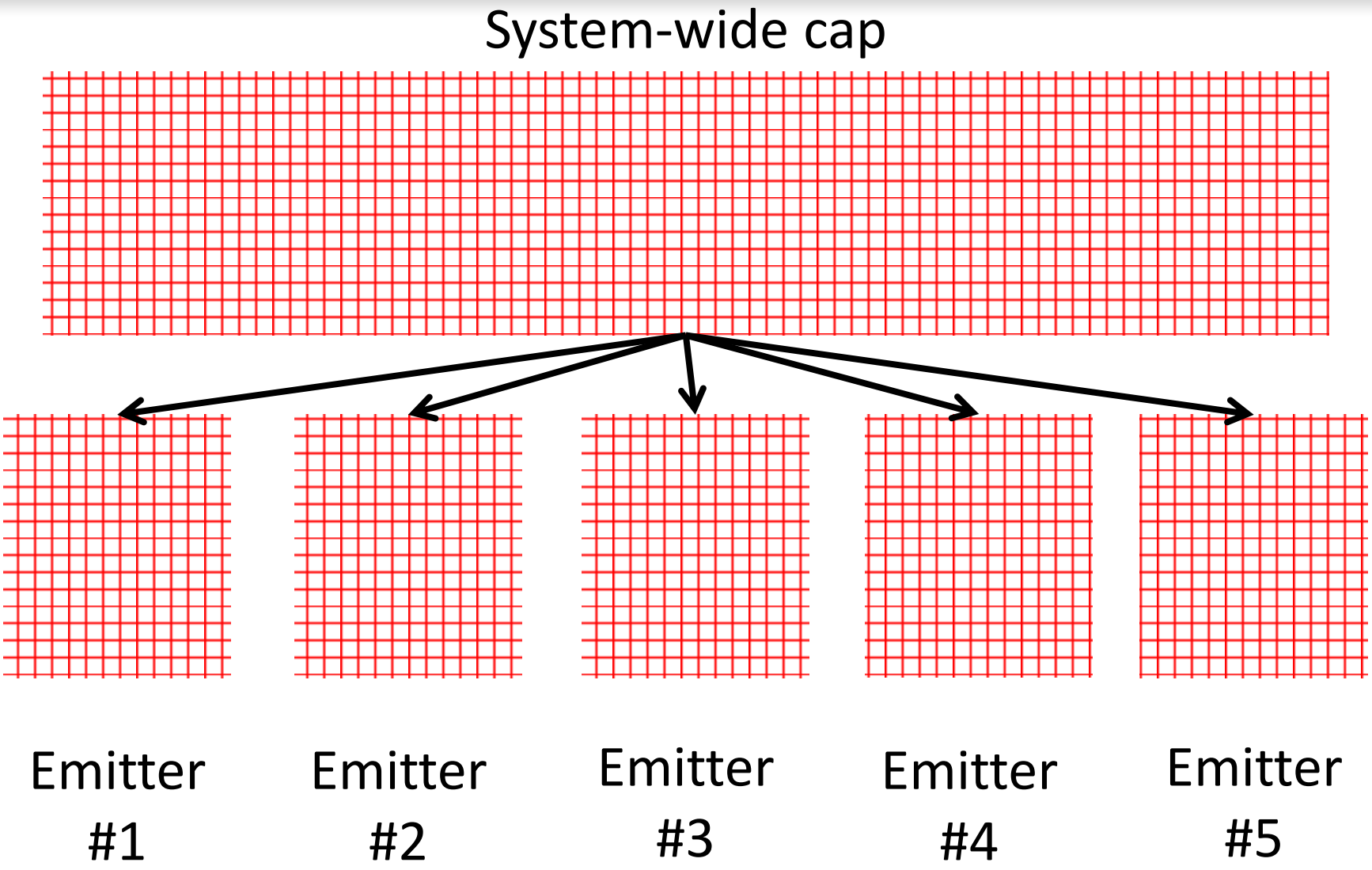


MBM type #2: emissions trading

- A cap (i.e. maximum limit) is placed on aggregate emissions within a country, a sub-national jurisdiction, a sector, etc.
- Units (1 unit = 1 tCO2e) are created equal to the size of the cap, and these units are then distributed to emitters
- Each emitter needs to obtain and redeem units to cover its emissions, typically on an annual basis
- Emitters can trade units among themselves → for example, an emitter which reduces its emissions can sell its surplus units for profit
- As long as the cap is consistent, the system's environmental objective is attained




Emissions trading in action



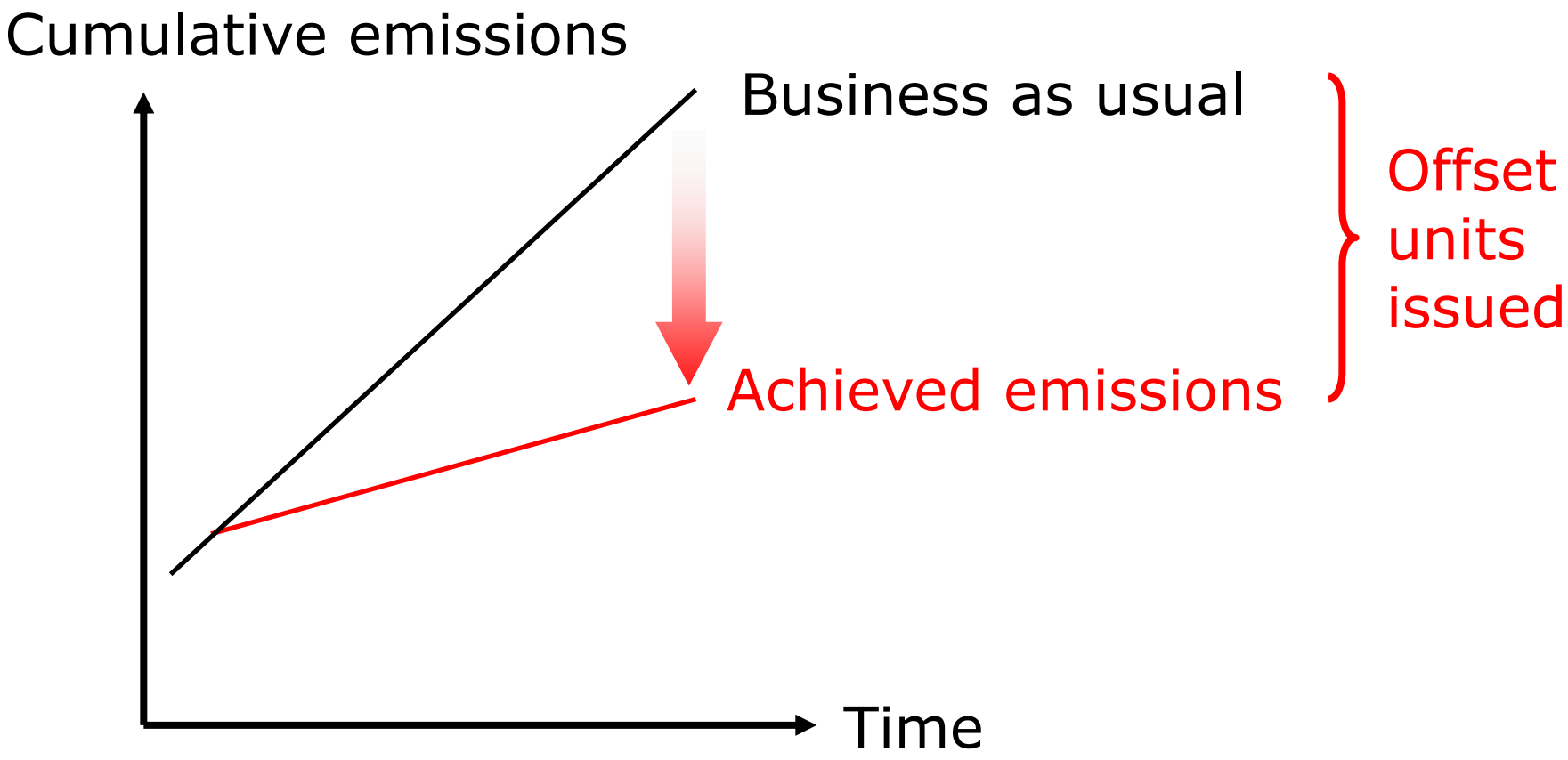
MBM type #3: offsetting

- Offsetting is the concept of reducing emissions in another sector or location, rather than reducing an emitter's own emissions
- From a climate perspective, the origin of the emission reductions is irrelevant → what matters is that emissions are reduced somewhere
- Offsetting may be more cost-effective than reducing an emitter's own emissions → particularly in aviation
- Quality standards are essential to ensure that emissions are actually being reduced in the other sector or location and are not "double-counted" against multiple targets
- Typically also requires the use of units (1 unit = 1tCO2e)



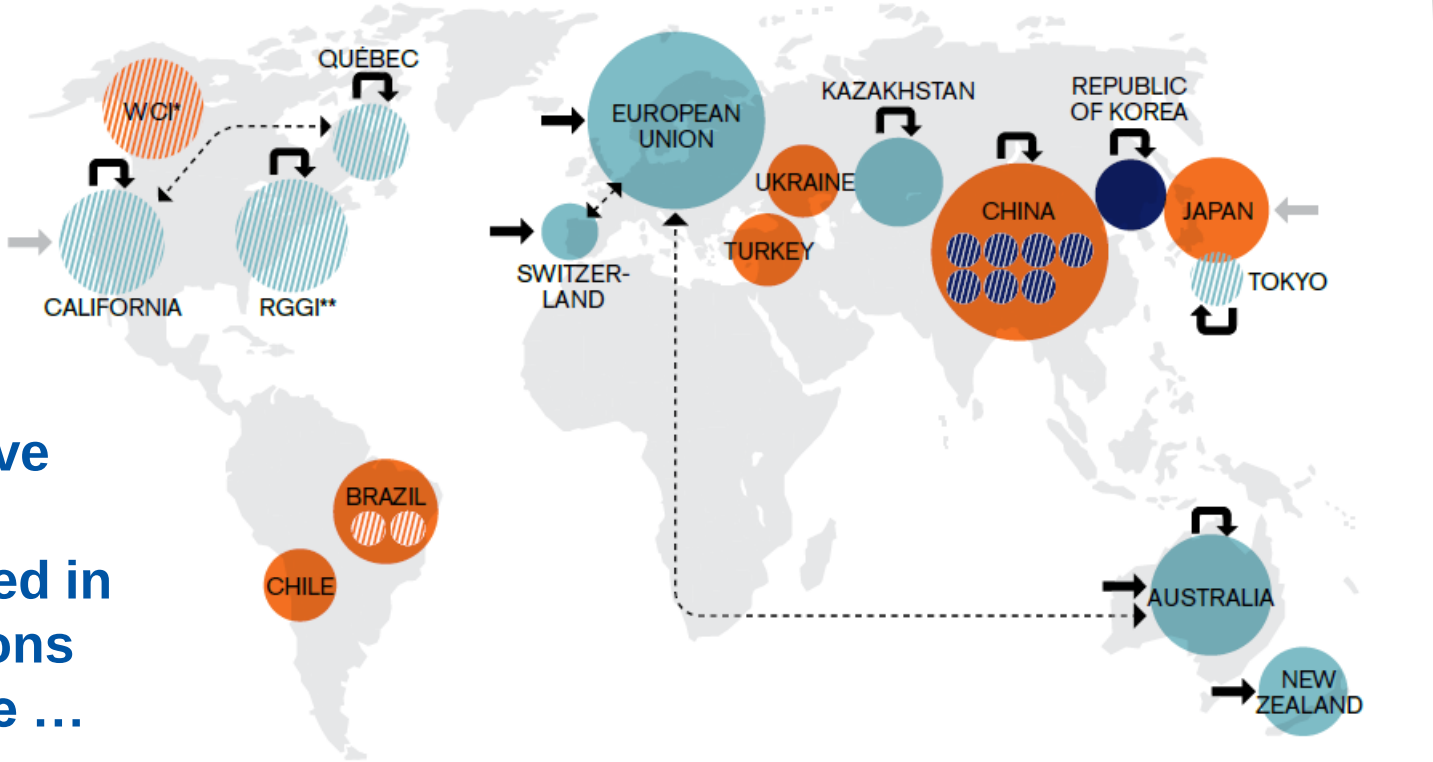


The basis for issuing offset units



The global use of MBMs (1)

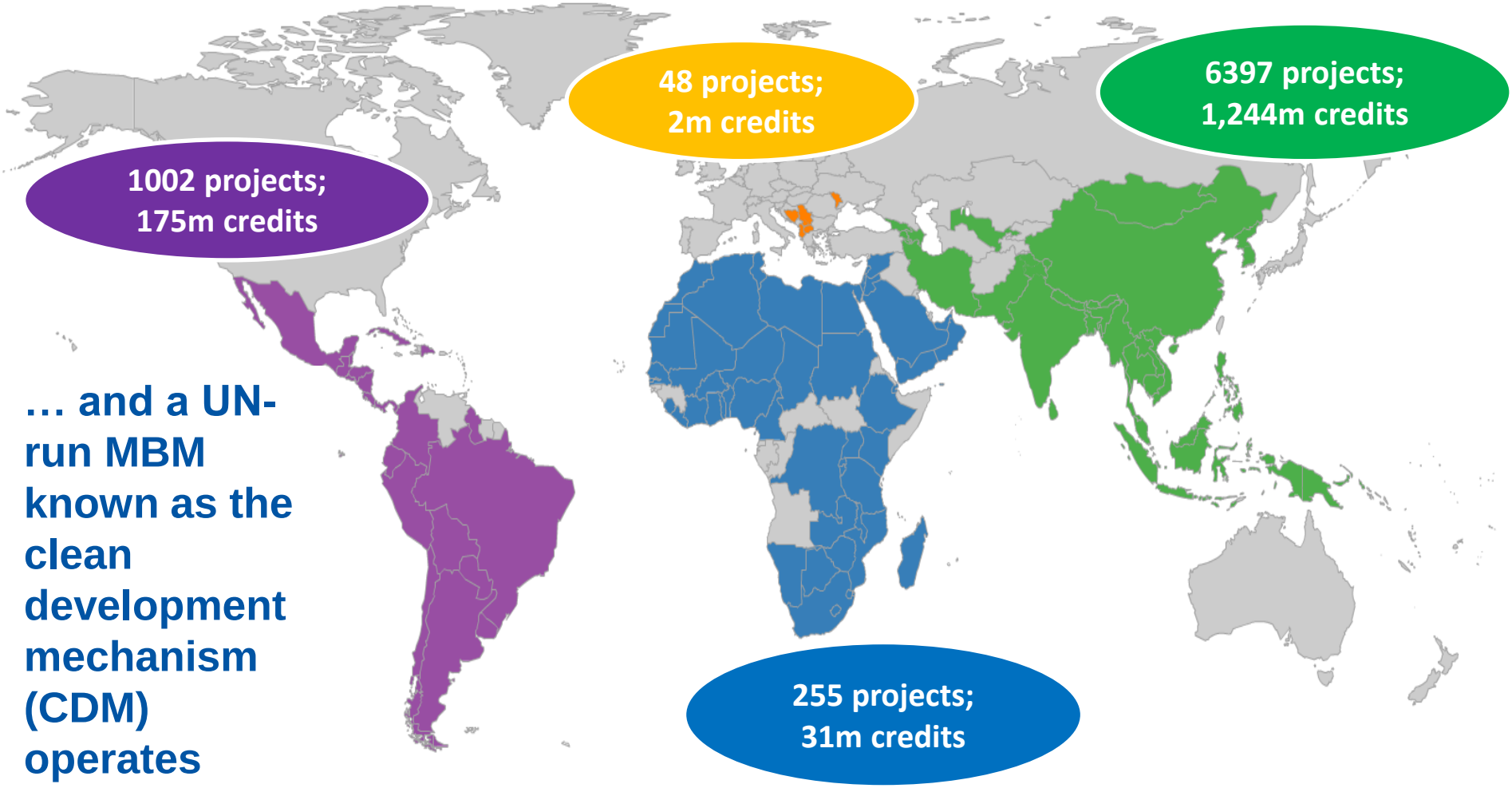
MBMs have been established in jurisdictions worldwide …



World Bank (2013)




The global use of MBMs (2)



… and a UN-run MBM known as the clean development mechanism (CDM) operates worldwide

Developments at A38 (2013)

- Decided to develop a global MBM for international aviation (from 2020 onwards)
- Requested the Council, with the support of Member States, to:
  1. Finalize all preparatory work (technical, environmental and economic impacts, modalities of possible options)
  2. Organize seminars and workshops
  3. Identify major issues and problems, and make a recommendation for a global MBM that addresses them
  4. Report the results of the above work for decision at A39 (2016)

Post-A38 actions

1. Council has created a high-level political body
   - Environment Advisory Group (“EAG”)
   - Responsible for overseeing the development of the global MBM
2. CAEP has also created a technical expert group
   - Global MBM Task Force (“GMTF”)
   - Responsible for considering unit eligibility and emissions measurement, reporting, and verification requirements
3. Analyses to be undertaken
4. Global Aviation Dialogues (“GLADs”) to be scheduled

Pre-2020 actions

- For the pre-2020 period, A38:
  - Recognized the use of voluntary offsetting
  - Invited States to encourage airlines to offset emissions, particularly with units from international MBMs such as the CDM
- In their Action Plans, member States could outline the role of offset units, particularly from MBMs like the CDM
- Over 130 developing countries have a "designated national authority" for the CDM (usually in environmental ministries)





SUMMARY

- Action by all sectors is required to address the climate change challenge
- The aviation sector is faced with high costs for making in-sector reductions
- If the sector wishes to continue growing, it needs to explore all means of addressing emissions
- MBMs may present a cost-effective option for addressing emissions at a global level and at the lowest possible cost