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Graduation and deepening: an ambitious climate policy scenario

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Structure of presentation

- Assumptions underlying the scenario
- The concentration target
- Graduation thresholds
- Annex B targets
- Targets for graduating countries – concentric circles of decreasing stringency
- The role of international flexibility
- Carbon sinks
- Further steps

Assumptions underlying the scenario

- Climate change becomes more politically salient due to extreme weather events in key industrialised countries
  - Tendency already seen today: voter reaction on German floods in 2002, uneasiness about hot summer 2003
  - Would Bush continue to negate climate change if a hurricane strikes New York?
- No economic or political catastrophes like Sept. 11 draw all attention of policymakers. Short-termism becomes less prevalent
- Costs of renewable energy and energy efficiency technologies continue to fall; the gap to fossil fuel technologies is narrowed or even reversed

Key elements

- **Principal structure of Kyoto Protocol remains**
  - **Core group of countries with absolute emissions targets valid for a five-year commitment period**
  - **Extension of this group by "graduation". The lower per capita emissions and income, the less stringent the target**
  - **Emission credits can be generated by countries outside the core group. The possibilities are extended from projects to policies**
  - **Broad use of sinks possible**

The concentration target

- **Spurred by the Fourth Assessment Report of the IPCC, policymakers are able to agree on an indicative concentration target of 550 ppm to be reached in the first half of the 22nd century**
- **As indications rise that the rate of climate change has a crucial impact on damages, there is an emerging consensus that global emissions should peak before 2030 and decline constantly thereafter**

Graduation index

- **A graduation index is based on**
  - **Capacity to pay (GDP per capita): GI_{GDP}**
  - **Emissions per capita: GI_{EC}**

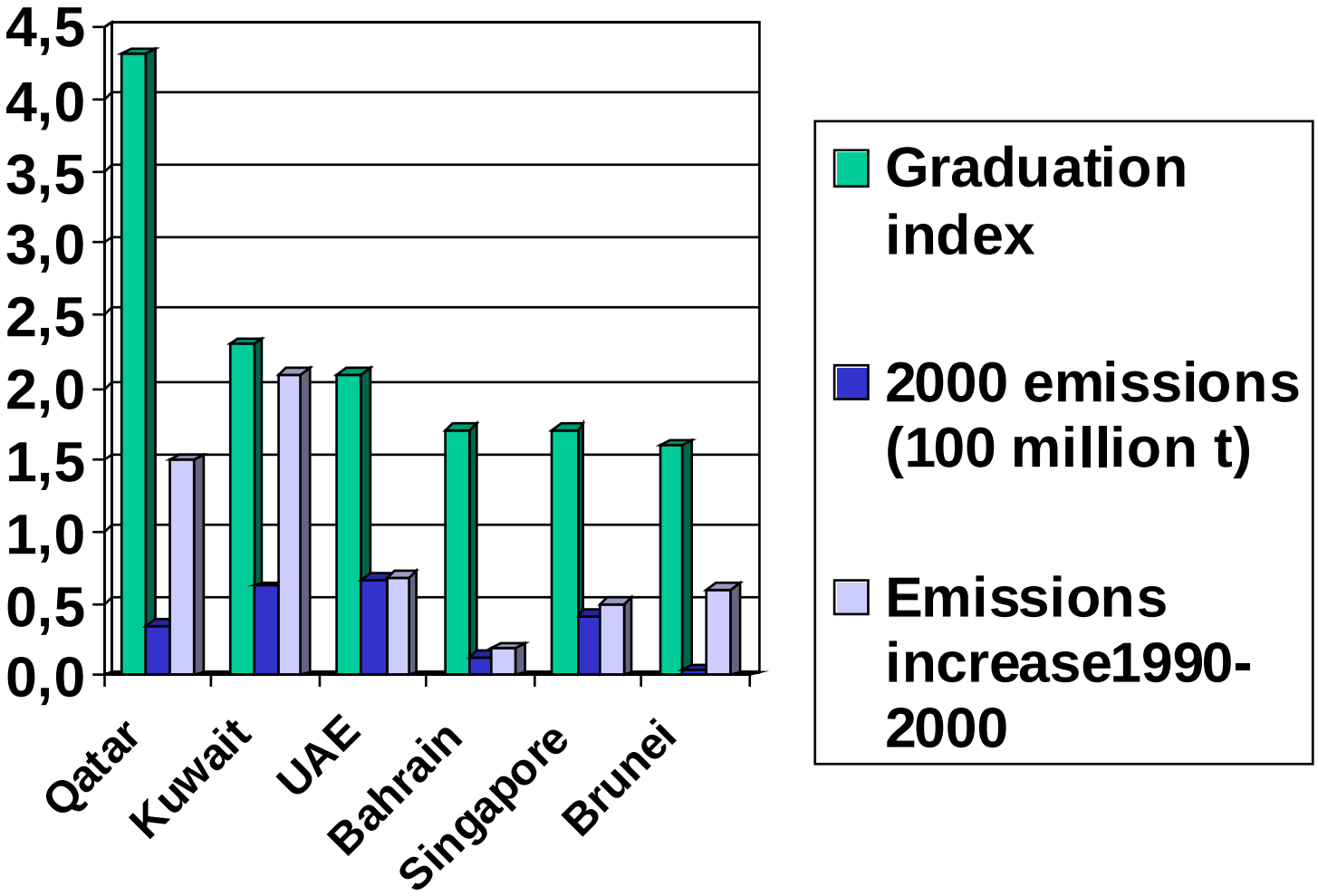
$$GI = (GI_{GDP} + GI_{EC})/2$$

Unit: each 10,000$ GDP per capita and each 10 t CO2 per capita will be defined as 1 unit for graduation index

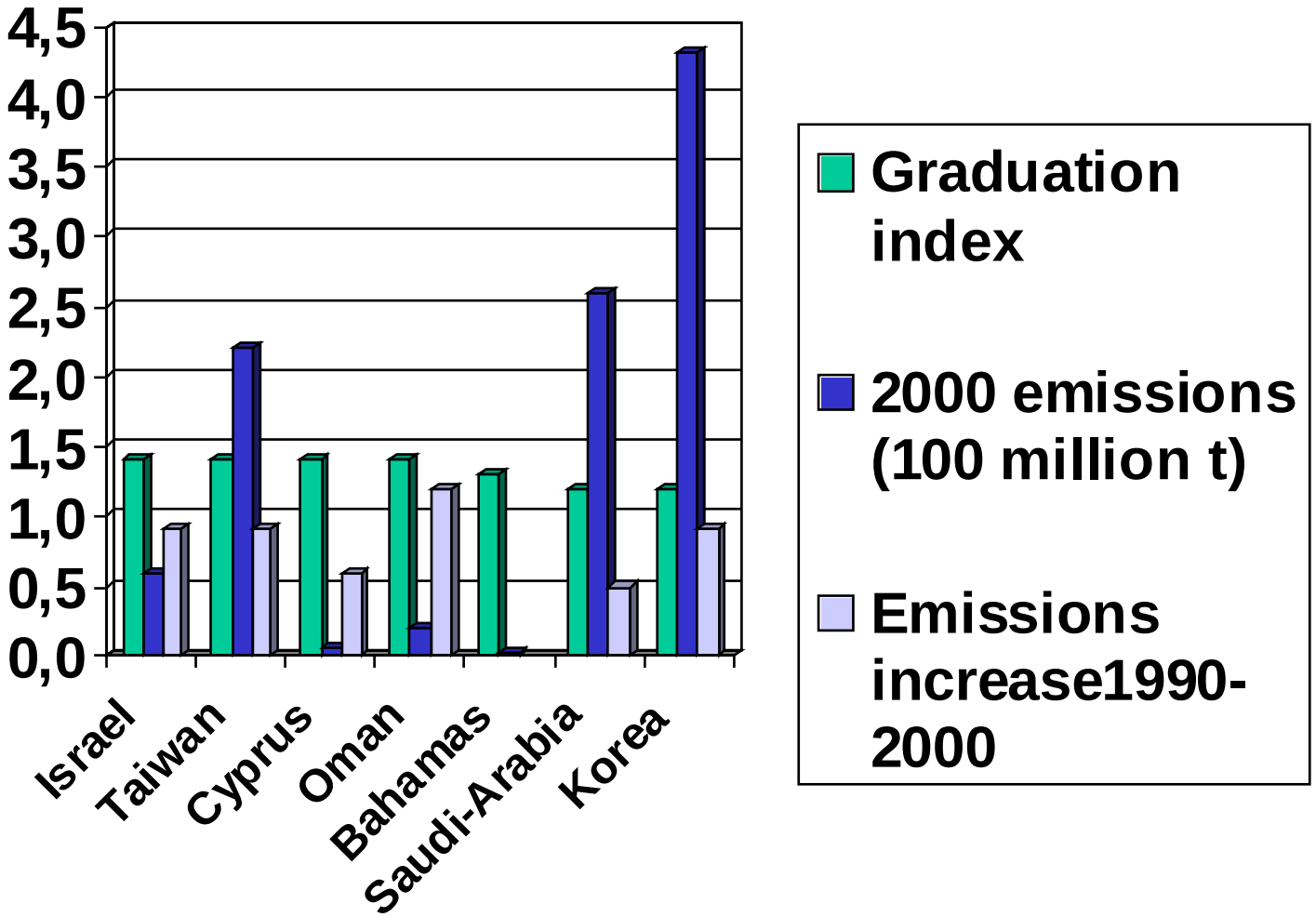
Graduation thresholds

- Non-Annex B countries take up targets if they surpass a "graduation threshold". The stringency of the targets depends on the level of the threshold and Annex B target level
- Thresholds are defined by Annex B average and lowest Annex II respective lowest Annex B level
- Institutional graduation criteria complement the graduation index. EU, OECD and IEA membership equal Annex B average; IDA/food aid recipients are exempt from targets
- Graduating countries that do not take up targets lose right to funding (GEF, CDM) under the UNFCCC

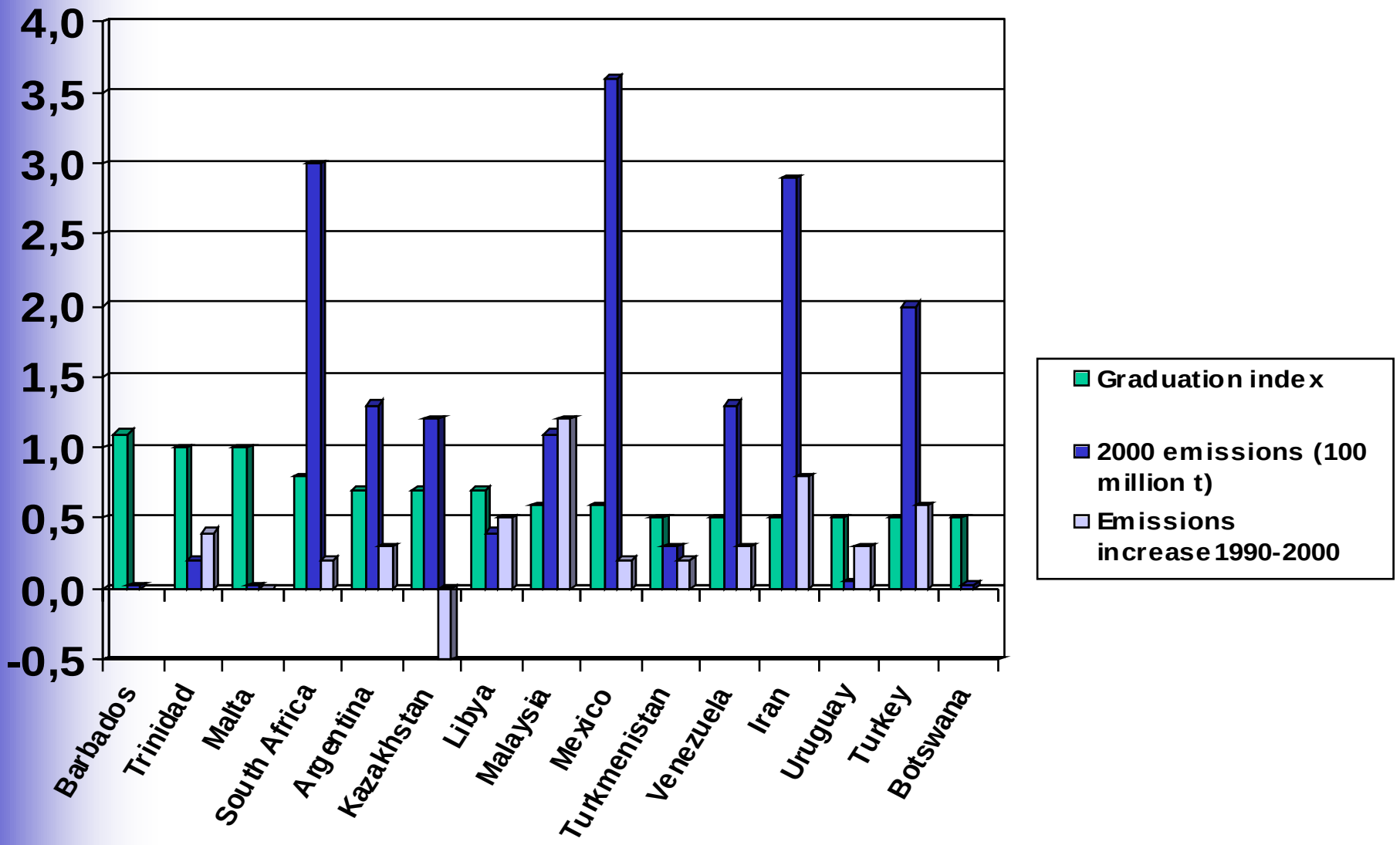
Graduation thresholds: countries above Annex B average



Graduation thresholds: countries above lowest Annex II



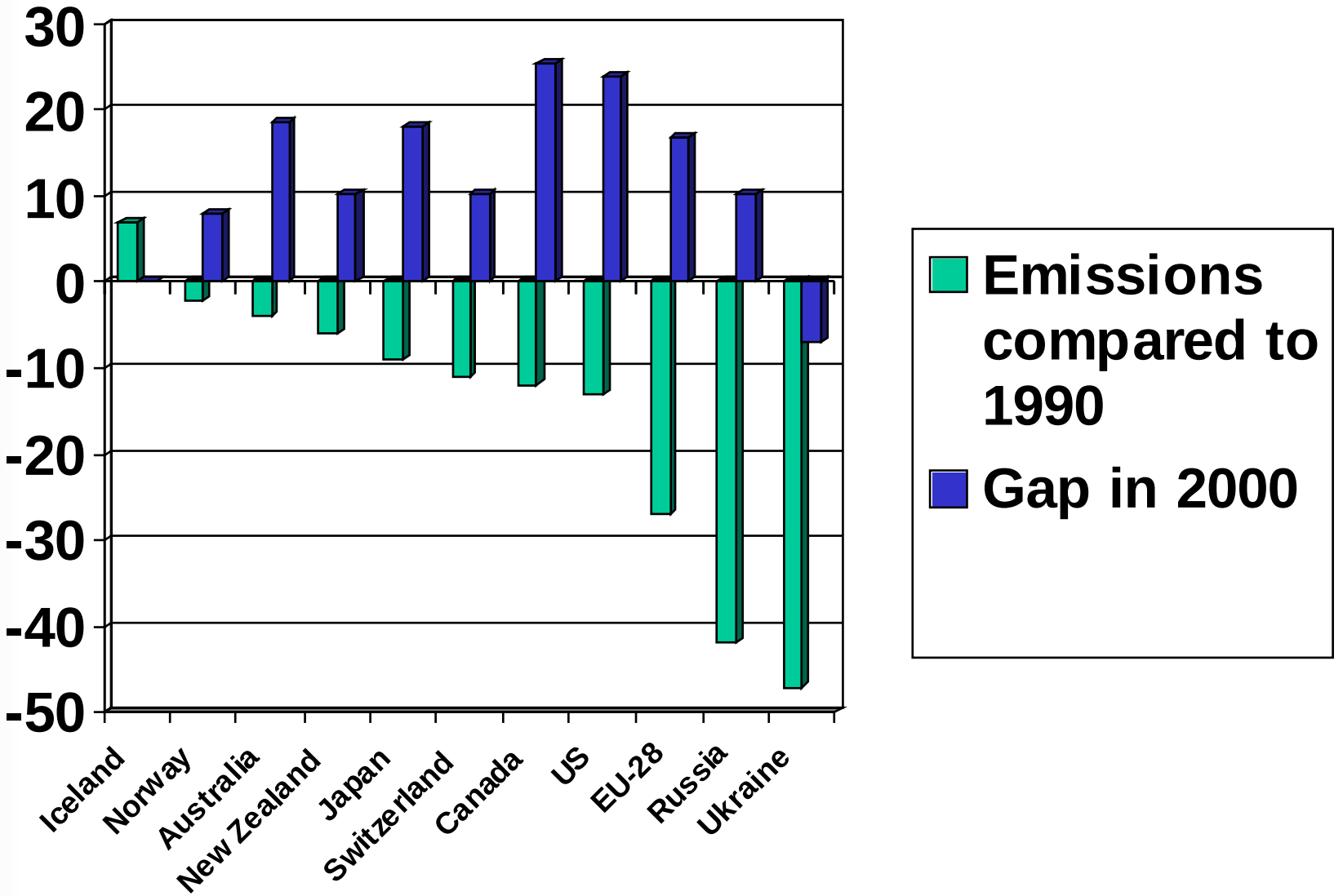
Graduation thresholds: countries above lowest Annex B



Annex B targets

- Annex B mitigation effort intensifies considerably compared to the first commitment period and hot air is eliminated. This is necessary to get Non-Annex B countries to act.
- Targets are based on a simple "reduction from BAU". BAU is defined by review teams for Annex B countries with hot air, and otherwise by first commitment period target levels
- There are three levels of stringency
  - -12%: Australia, EU-28, Russia, Ukraine
  - - 6%: Canada, New Zealand, US
  - - 3%: Iceland, Japan, Norway, Switzerland
- Total Annex B reduction from 1990: 23.3%

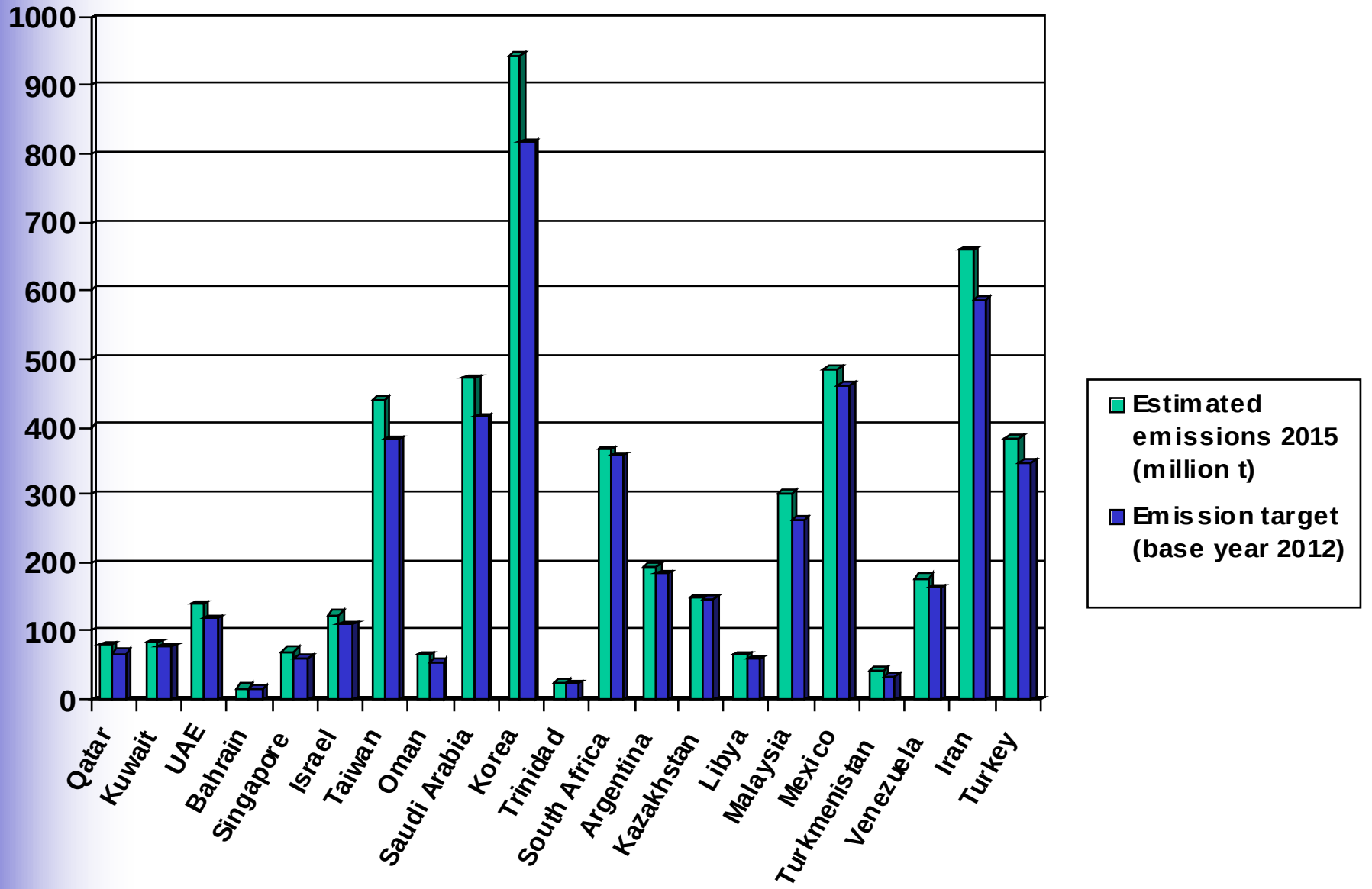
Annex B targets



Concentric circles: targets for graduating countries

- 1st circle: Countries above Annex B average
  - Unweighted Annex B average target: -6%
- 2nd circle: Countries above lowest Annex II
  - Lowest Annex B target: -3%
- 3rd circle: Countries above lowest Annex B
  - Stabilisation
- 4th circle: Large emitters above 50 million t CO_2 equivalent per year that do not graduate
  - CDM on a policy basis and no-regrets commitment
- BAU determination by review team for 2012
  - Avoid perverse incentive for emissions increase
- Targeted technical cooperation to assess mitigation and sinks potential

Targets for non-Annex B countries



The role of international flexibility

- The three mechanisms allowed under Kyoto continue
  - Long term nature of projects started in the first commitment period
  - Challenge: Conversion of CDM into JI when a country graduates
- The CDM gets a window for large emitters that allows crediting of policies and measures
- Challenge: Additionality determination

Carbon sinks

- **Stringency of targets means that sinks options can be fully used in the second commitment period if monitored to agreed standards**
  - **Terrestrial sinks**
    - **Vegetation**
    - **Soils**
  - **Marine sinks in the country's jurisdiction**
  - **Geological sinks**
- **Full liability of countries with targets for reversal of sinks, temporary credits for CDM projects**

Further steps

- Modelling of impacts of graduation and deepening scenario on world emissions and market prices
- Inclusion of other gases
- Estimates of sinks
- Estimates of CDM use
- Development of policy strategies and negotiation support

Thank you!

Further information:

www.hwwa.de/climate.htm

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Briefing Paper:

www.fni.no/post2012.html