

Working example for an International Maritime Emission Reduction Scheme with climate change fund

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1 Emission cap. The working example assumes a global cap for the CO₂ emissions from international shipping set at a constant level till 2050 and equal to the emissions of 2005.

2 Our example is estimated to result in a shipping price increase of just 2% translating to **less than 0.1% impact on end customer prices**.

3. Maritime unit charge will depend on the emissions above the cap and be linked to the market price of CO₂. According to our calculations, **an initial charge of \$5/tCO₂** would deliver the cap and the adaptation funding for the forecast emission growth of around 2% pa and market price of \$25/tCO₂ (equivalent to 20% of the market carbon price). The unit charge per tonne of CO₂ emitted should be set annually in advance in relation to the emissions above the cap and the CO₂ price trends.

4 We estimate that the combination of the market mechanism, additional technical and operational industry improvements will **reduce the emissions on average by 1% annually** till 2050. Effectively, the emission growth would be reduced by half through the mechanism, including by the programmes paid for by a portion of the funds raised. The total impact would be more than halved due to the long-term effect of bringing forward step changes.

5 **Annual quantum of funding** available for the mitigation and adaptation funds would be in excess of **\$2bn**¹ (adaptation funding is proposed for the developing countries use only). Appropriate execution agencies exist and could be given the tasks to manage the funds.

6 The environmental result of the scheme is estimated as follows (shown in Fig. 1)²:

- .1 Emission avoidance:
7 GtCO₂ before 2050, and 21 GtCO₂ after 2050³
- .2 Emission mitigation (offset):
8 GtCO₂ before 2050, and 10 GtCO₂ after 2050
- .3 **Total environmental benefit:**
15 GtCO₂ before 2050, and 31 GtCO₂ after 2050

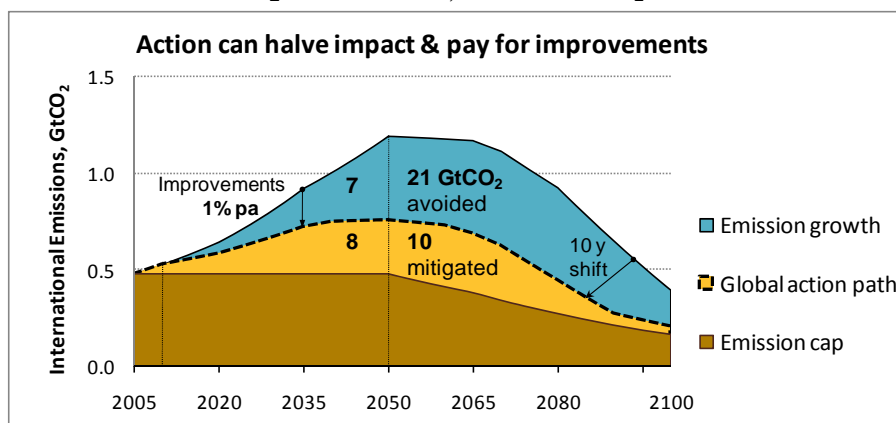


Fig. 1 - Environmental impact of the scheme.

¹ The \$2bn annual funding uses the assessment of international maritime emissions of just under 0.5 GtCO₂.

² Achieved through balancing short- and long-term improvements and offset investments. Assumptions: cap set at the 2005 level and the emission growth forecast as validated in the separate quantification document.

³ 1GtCO₂ – one Giga-tonne of CO₂ equals one billion tonnes of CO₂ (metric tonnes).