



# Marine and Aviation transports – options post 2012 and challenges

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## Who is Lloyd's Register?

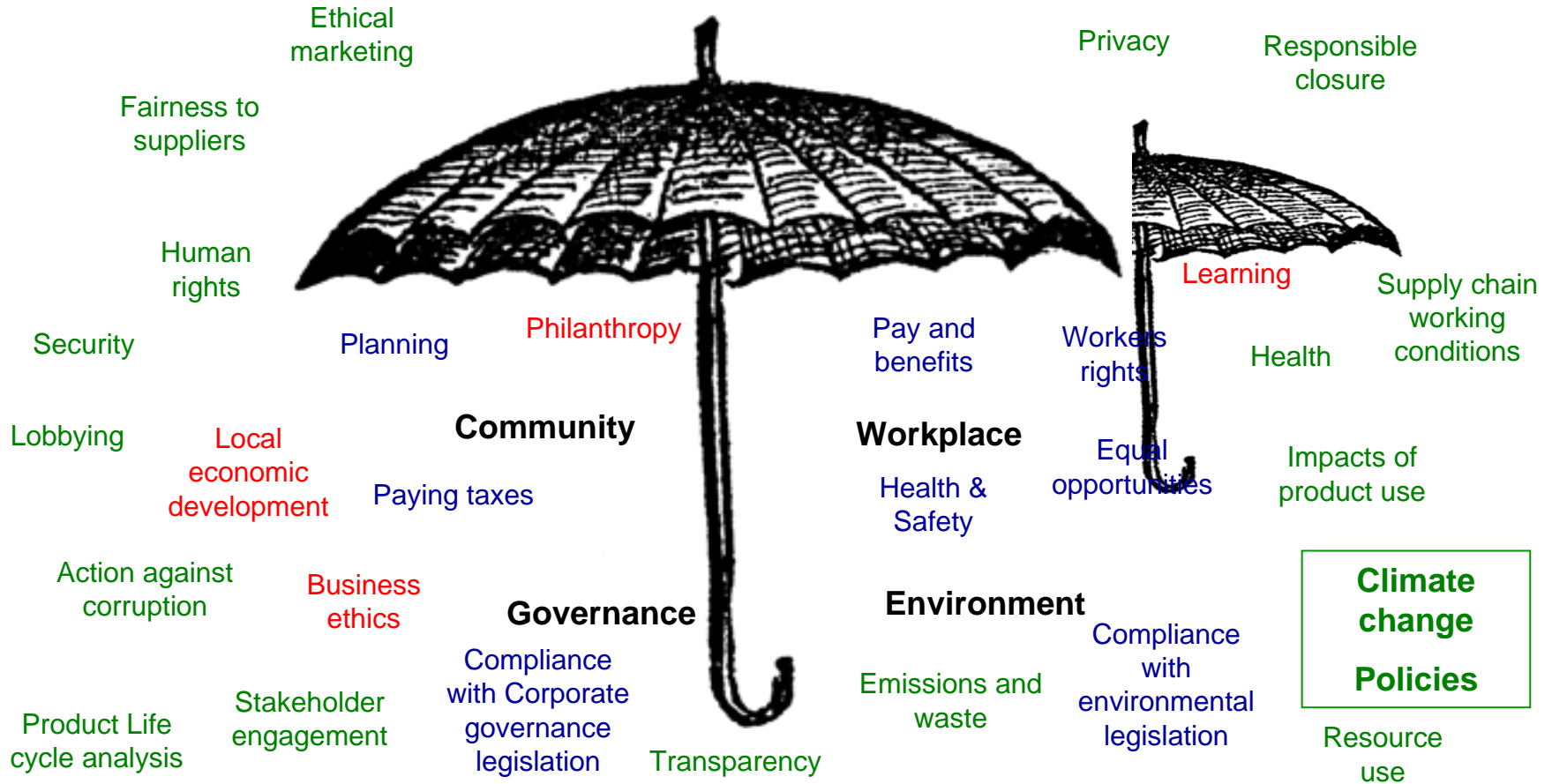
- Lloyd's Register is a Group of 249 years of reputation building, positioned in more than 200 countries with 7,000 employees, attending to more than 100 out of the 200 largest global companies, for the purpose of safety of life, property and environment.
- Areas of action: Marine; Energy; Transport and Management Systems (ISO, OHSAS, SA, PAS, others, Climate Change, CSR).
- World Wide leader in Climate Change Validation and Verification (CDM, ISO14064, JI, ETS) through the Business Assurance concept;
- Latin America Climate Change structure covers all LA countries from offices and Business Centres locally positioned.

# How Climate Change fits into current Business Models

From traditional responsibilities....

...to established good practise....

...to emerging risks and opportunities



Historical moment for mindset adaptation to new economic pattern

# Climate Change Actions on Maritime and Aviation

## Control – command instruments

EU ETS Integration. Aviation Ok;  
Marine to be defined after COP15

IMO (International Maritime  
Organization) step (ex: NOx?).

Post 2012 Agreements. Global Cap  
and Trade.

Levy on fuel.

Ex: EPA: GHG are public health  
issue, other regulations (Mexico,  
São Paulo, Cambodia)

## Voluntary Instruments

Climate Change / Sustainability  
policy establishment.

GHG Corporate Inventory.

Adherence to global standards (ex.  
ISO14064), parameter to upcoming  
schemes and regulations;

Fleet Energy efficiency, Redesign.

Ex: GHG Protocol Brazil Program  
has more than 40 large companies  
developing their GHG Inventories

## Marine and Aviation transport emissions in context

### *Break down for modes of transport (approx)*

- Marine about 870 million tonnes CO<sub>2</sub>e (international shipping) approx 3% - comparable to Germany emissions.

Eventual 10% reduction could generate additional USD2.1Bio to the industry (ex: if new CDM methodology compliance), ie: average USD45,000 per ship (47,000 global fleet).

- Aviation about 500 million tonnes CO<sub>2</sub>e approx 2% - comparable to UK emissions.

Will come operate for EU ETS - 2012 onwards.

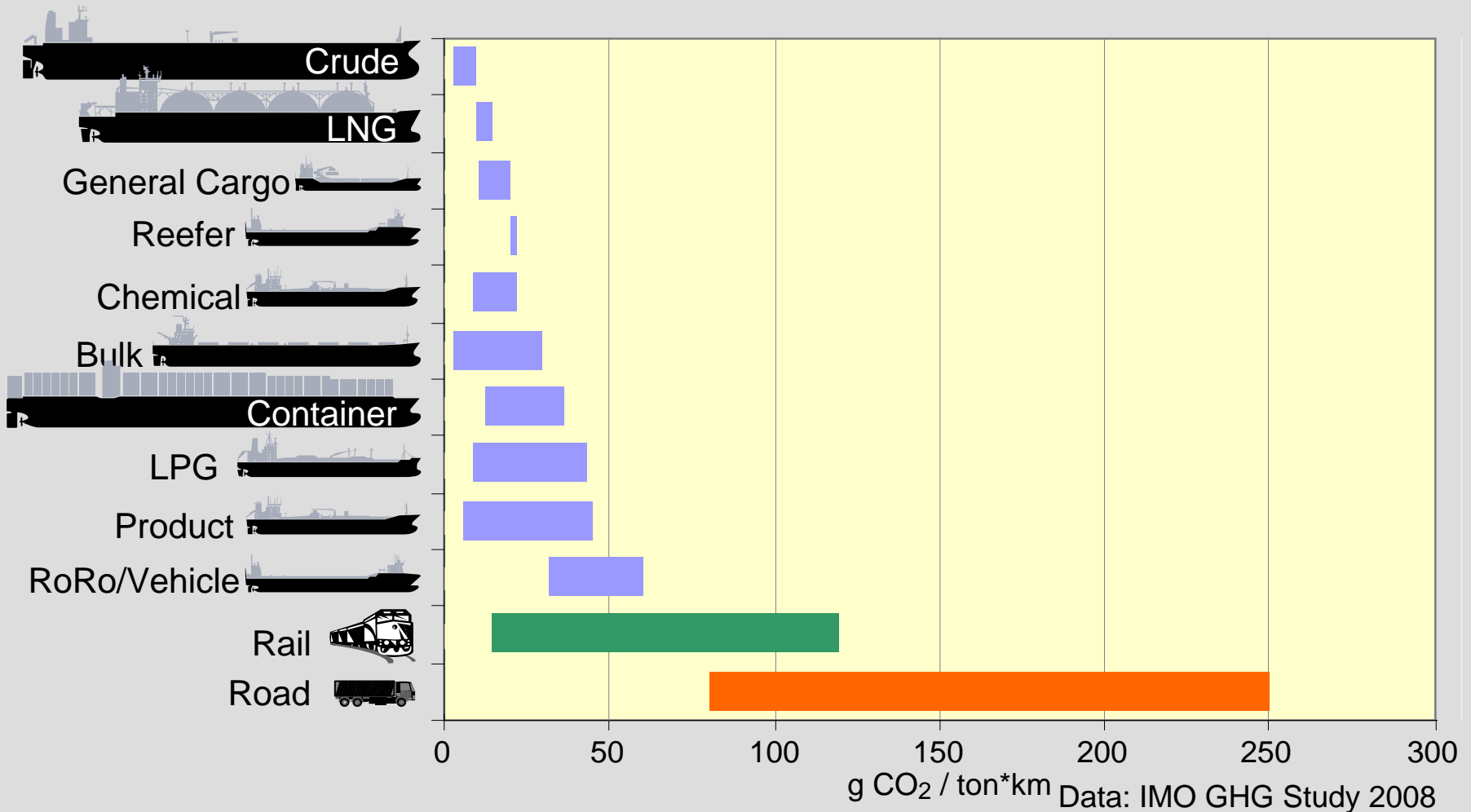
## Aviation (1) and EU ETS model

- European Council and European Parliament agreeing for inclusion of aviation
- All aircraft operators (passenger and freight) that land in and take-off from any of the 27 EU Countries will be included
- All Operators must:
  - Apply for a Baseline & Annual Monitoring Plan by 31 Aug 2009
  - Monitor and have independently verified Tonne-Kilometre data for 2010
  - Monitor and have independently verified annual emissions for 2010 and 2011 as pilot years
  - Monitor and have verified Annual emissions for 2012 onwards years for which allowances must be surrendered

## Aviation (2) and EU ETS model - Exclusions

- **Size** - Flights with max take-off weight 5,700kg
- **Official** – Flights for heads of state, monarchs etc on official missions
- **Military** – Flights for military, customs, police, search & rescue, fire fighting etc
- **Visual Flight Rules** – Flights operated without instruments
- **Training & Testing** – Flights for training operator licence or cockpit crew ratings, testing equipment
- **Minimums** - <243 flights pa, flights with <10,000T pa

# Marine (1) - CO<sub>2</sub> efficiencies map - various cargo carriers



## Marine (2) emissions – post 2012 – challenges

- Maritime as aviation in the AWG LCA negotiation text discussed in Bonn earlier this month
- Number of options within text:
  - IMO to continue its work
  - UNFCCC will cap international shipping and IMO develop approach to achieve cap
  - Member states of UNFCCC will have international maritime emissions included in their inventories and hence their national caps
  - Levy on fuel (aviation and maritime) to fund adaptation
- If no consensus to be included in Copenhagen, strong likelihood of EU ETS integration plan following aviation

A matter of “when”.

## Marine emission – offset opportunities?

- Can marine industry be part of a project mechanism with their own projects?
  - Yes in the voluntary sector at present – but subject to the requirements on ‘additionality’, monitoring, accountability,
  - Future within regulated sector ? – yes depending on the outcome of Copenhagen;
- Possible project opportunities related to:
  - Propulsion systems
  - Routing
  - Hull design
  - Fuel options
  - Energy efficiency

# Conclusions

- Command-control is key towards a more sustainable economy, however voluntary actions taking place demonstrate broader concerns from sectors towards climate change effects;
- Climate Change financial mechanisms could “subsidise” actions towards lower carbon economy, technology improvement and society benefit, also could serving as the first step towards sustainability;
- Post 2012 path established for Aviation (EU ETS most relevant fact);
- Marine may follow Aviation or integrate national inventory for post 2012 agreements;
- The earliest climate change policies take place within corporations, the more effective it will be on attending whichever future regulations;
- Reputation must be carried along the process to ensure that most Climate Change principles are attended: Transparency, Relevance, Completeness, Accuracy, Conservativeness and Consistency.

# Thank you

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