Clean North Sea Shipping
Recommendations
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CLEAN NORTH SEA SHIPPING
RECOMMENDATIONS

Clea North Sea Shipping
March 2014
The challenges ahead?

“The North Sea Commission and others have emphasised the need to support the transport sector [and stakeholders] ...in facilitating an... urgent and demanding change of direction.”

The fundamental CNSS contribution?

*Findings and recommendations of the CNSS project are regarded as an important contribution to the discussions and processes ahead of us.*
The context and process of developing the recommendations?

- **Evidence based**
  - Highly supported by scientific and technical rigour
  - Supported with peer reviewed publications throughout the scientific community

- **Involvement of a wide range of stakeholders**
  - Wide ranging stakeholder membership in the consortium
  - Many meetings and conferences over the project
  - Agreed across the consortium

- **Challenges of multiple audiences**
  - Translation of technical information into a usable format
  - Translation of multiple “terms of reference” into common semantics

- **Peer reviewed**
  - Invited experts from outside the consortium were asked to review the drafts and challenge our arguments
Headline Observations

• Postponement of the NOX limitation for new build ships from 2016 to 2021 (MARPOL)
  • Higher concentrations of NOX in the North Sea Region of 11% to 15%

• The development of onshore power supplies and LNG facilities
  • Lagging behind given the increasing number of ships supporting these energy sources

• Environmental incentive schemes to support clean harbours
  • Not fully transparent
  • Not universal
  • Not consistently used or applied
Air Quality

- CNSS Encourages the use of cutting edge scientific methods to estimate emissions

- FREE models and methods from CNSS are made available for this
RECOMMENDATIONS

Technology and Fuels

• CNSS promotes LNG as a fuel
• CNSS promotes OPS
• CNSS promotes better use of incentive and index schemes

• CNSS promotes a universal approach to incentive and index schemes

• CNSS promotes monitoring, reporting and verification (MRV) to reflect real-world assessment of emissions
CNSS promotes the introduction of NOx Tier 3 regulations for new-build vessels ASAP.

CNSS promotes non-postponement of NOx Tier 3 regulations to 2021 from 2016.
Air Quality

Harbours and Cities

- Size dependent fuel use functions
- Account for fuel use from boilers
- Consistent use of CNSS activity based modelling for harbour emission inventories
- Use of appropriately sophisticated models and expertise for modelling city scale impacts of emissions

North Sea

- Use of load-dependent emission factors
- Increase of on-board emissions data measurements and its distribution
- Use of AIS data for the most realistic and accurate temporal and geographical scenario modelling
- Use of advanced 3D chemistry transport models for regional modelling
Technology and Fuels

**LNG**
- Promotion of LNG throughout the North Sea region
- Stakeholders to promote solutions for the future LNG regulatory framework
- For LNG handling: legislators should avoid local, regional or national regulations (i.e. an international approach should be adopted)

**OPS**
- New ships should be fitted with OPS connections (including 50Hz on small ships)
- Increase in OPS infrastructure in ports
- Standard communications protocols for controlling ship-shore connection
- Standardisation of HVSC on ships
Environmental Performance – Emission Indices

- Development of a unified approach to indexes and incentives
- Account for global effects (GHG)
- Account for local effects (poisons)
- Account for real-world emissions (actual emissions for transients, off-design operation)
- Adaptable and scalable
- Reward truly zero-emissions at-berth
- Deliver real value to the shipper/port
- Simple to administer
- Reward earlier adopters – to promote quick inception
Cross-thematic Policy and Regulation

- Avoid postponement of Tier 3 regulations to 2021
- Avoid postponement of sulphur cut from 2020 to 2025
- Implement standards for NOx, PM and sulphur at berth
- Implement incentive schemes for promotion of cleaner shipping
- Education, training, accreditation and certification towards the adoption of LNG
Thank You