

# Status of the revision of MARPOL Annex VI



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# IMO – specialised UN agency



- London headquarters
- Secretary-General:  
Admiral Efthimios E. Mitropoulos, Greece
- 168 Member States
- 51 IGOs and 66 NGOs
- Almost 50 Conventions
- 800 Codes, Guidelines, Performance Standards, etc
- Annual budget £24+ M
- Secretariat – 320 staff
- 50 Nationalities



**Safe, secure and efficient  
shipping on clean oceans!**



# Marine Environment Protection Committee

## MEPC



**MEPC that consists of all members, shall consider any matter within IMO's scope concerned with the prevention and control of marine pollution from ships and in particular:**

- Perform functions such as adoption and amendments of regulations, in accordance with the conventions under its competence**
- Consider measures to facilitate enforcement of the same conventions**
- Provide scientific, technical and any other practical information for dissemination to states, in particular to developing countries**
- Promote co-operation with regional organizations**
- Consider and take action with respect to any other matters which would contribute to the prevention and control of marine pollution**
- Meet at least once a year (every 9 months for the last 20 years)**





# Air pollution one of the last major ship pollutants to be regulated



Work started at IMO in the 1980's

Adopted on 26 September 1997



Limits and regulations in Annex VI were set at very modest levels in order to be accepted

Applies to new engines only, manufacturers had no problems to meet the limits



# MARPOL Annex VI

## Prevention of Air Pollution from Ships



**Protocol of 1997 (Annex VI) entered into force 19 May 2005**

**Ratified by 25 States, representing 50 % of the world tonnage**

**Only Parties to MARPOL 73/78 may become Parties**

**1 June 2007 ratified by 42 States / 72.8 % of the world tonnage**

**Emission means any release of substances subject to control by this Annex  
from ships into the atmosphere or the sea**

**Annex VI applies to all  
ships and to fixed and  
floating drilling rigs**

**Regulation 13 and the  
NO<sub>x</sub> technical code  
applies to diesel engines  
of 130 kW or more**



## MARPOL Annex VI – Prevention of Air Pollution from Ships

**It is widely acknowledged that technology improvements exist that will enable significant improvement over existing standards in Annex VI.**

Leading manufacturers have confirmed that significant emission improvements can be achieved in engines made before 2000 through valve upgrades and other routine maintenance.

**Proposals for more than 70 unified interpretations**



**Therefore MEPC 53 decided to review Annex VI**

## Terms of Reference for the revision of Annex VI

- 1 Examine available and developing techniques for reduction of emission of air pollutants;
- 2 Review the relevant technologies and potential for reduction of NO<sub>x</sub>, and recommend future limits of NO<sub>x</sub> emission;
- 3 Review technology and the need for reduction of SO<sub>x</sub>, justify and recommend future limits of SO<sub>x</sub> emission;
- 4 Review relevant technology and the need and potential for reduction of VOC, and recommend future control of VOC emission;
- 5 With a view to controlling emissions of particulate matter (PM), study current emission levels of PM from marine engines, including their size distribution, quantity, and recommend actions to be taken for the reduction of PM from ships. Since reduction of NO<sub>x</sub> and SO<sub>x</sub> emission is expected to also reduce PM emission, estimate the level of PM emission reduction through this route;
- 6 Consider reducing NO<sub>x</sub> and PM limits for existing engines;
- 7 Consider whether Annex VI emission reductions or limitations should be expanded to include diesel engines that use alternative fuels and engine systems/power plants other than diesel engines; and
- 8 Review the texts of Annex VI, NO<sub>x</sub> Technical Code and related guidelines and recommend necessary amendments;



# Revision of Annex VI, the NO<sub>x</sub> Code and related Guidelines

The task is delegated to the Sub-Committee for  
**Bulk Liquids and Gases – BLG**

With target completion date of 2007



**BLG 10 held in London 3 – 7 April 2006 started the work with more than 30 documents to consider**

A Working Group on Air Pollution was established under the chairmanship of Mr. Bryan Wood-Thomas, USA

BLG 10 decided to hold an intersessional meeting in the WG to make progress and Norway offered to host the meeting

**BLG-WGAP 1 was held in Oslo 13 – 17 November 2006**

**BLG 11 was held in London 16 – 20 April this year**



# Revision of MARPOL Annex VI – Outcome of BLG 11

Following a full day's debate in the Plenary on Monday, the Sub-Committee agreed on terms of reference for the working group, the most disputed issues could only go through after “show of cards”.



Participation in the working group was overwhelming with a total of 142 participants

Fuel issues and retrospective NO<sub>x</sub> regulations for existing engines are the most contentious questions

# Outcome of BLG 11



## BLG 11 reached agreement on:

- Introduction of VOC management plans for tankers
- A three tier approach on NOx limits for new engines
- Recording of handling of ozone depleting substances

## BLG 11 could not reach agreement on:

- Reduction of SOx and PM emissions and related fuel issues
- NOx and PM limits for existing engines

## Work remains on:

- PM definitions and measurement methods
- Implementation and enforcement matters
- The NOx Technical Code and related Guidelines



# Revision of MARPOL Annex VI – Outcome of BLG 11

**In response to the large number of different proposals that had been tabled on possible options to reduce air pollution from ships, in particular SO<sub>x</sub> and PM, the IMO Secretary-General announced his intention to seek MEPC's concurrence with the establishment of a cross Government/Industry Scientific Group of Experts to conduct a study to address the impact of the proposed options, which would provide the Committee with the advice it needs to make balanced decisions, based on sound criteria and practicable, and find achievable and affordable solutions.**

**Document already submitted to MEPC 56.**







# Cross Government/Industry Scientific Group

The Study will assess:

The number of ships the amended Annex VI will apply to (distributed by gross tonnage/installed power).



The volume of fuel being consumed by international shipping, showing the proportion of distillate and residual fuels.

The predicted fuel and emission trends leading to 2020, based on current MARPOL Annex VI regulations .



Any other relevant trends in the global fuel markets and the world fleet leading up to 2020.

The consequential impact on CO<sub>2</sub> emissions from ships and refineries.



## Cross Government/Industry Scientific Group

The Study will evaluate the repercussions for relevant industry sectors (shipping, petroleum, bunkering, engine and equipment manufacturers) resulting from application of those options requiring specific fuels, to ascertaining the feasibility and the global availability of the fuels in question.

And the implications arising from various proposed implementation dates (e.g. 2012, 2015, 2018, etc.), taking into account commercial considerations for different trades and segments of the shipping industry.

The study will be conducted by a group of selected members, nominated by Member Governments and industry organizations, with appropriate expertise on matters within the scope.

The Group will work under a very tight time schedule and deliver its report by mid December 2007 to avoid any delay and so both BLG 12 and MEPC 57 can benefit from its work.





# Progress



**MEPC 56 in July 2007 to:**

- extend the target completion date by one year
- approve another intersessional meeting of BLG-WGAP
- review the work done so far
- endorse the establishment of the Cross Government/Industry Scientific Group including the Group's composition and ToR. (The Scientific Group's report to be submitted to BLG 12 and MEPC 56)



## Progress 2



**BLG-WGAP 2 (29 October - 2 November 2007)**  
to continue the revision work, hosted by Germany in Berlin

**BLG 12 (4 - 8 February 2008)** to finalize the draft amendments  
taking into account the report of the Scientific Group

**MEPC 57 (31 March – 4 April 2008)** to approve the draft  
amendments to MARPOL Annex VI



**MEPC 58 (6 – 10 October 2008)** to adopt the amendments

**The amendments to MARPOL Annex VI to enter into force 16 months after adoption in accordance with the tacit acceptance procedure in Article 16 of the MARPOL Convention, which is on 1 February 2010, or a later date as may be decided by MEPC 58.**



# Towards a global regime...



- Shipping being targeted by regional regulators for unilateral action to solve air pollution problems at local level
- This could lead to a patchwork of differing regulations with which shipping would find difficult to comply
- IMO needs to demonstrate that it can provide an efficient and timely global regulatory framework to prevent harmful emissions from ships anywhere
- To achieve this, Governments and industry need to collaborate closely

Except for CO<sub>2</sub>, near zero air emissions are possible even with current technology but comes at a cost and often with a fuel penalty – willingness to invest is required





**IMO'S RESPONSE  
TO CURRENT  
ENVIRONMENTAL  
CHALLENGES** 2007

# Thank you for your kind attention!

For more information, please visit our website: [www.imo.org](http://www.imo.org)