

MARPOL Annex VI - Prevention of Air Pollution from Ships

Overview and Chapters 1 and 2



National Workshop (virtual) on Ratification and Effective Implementation of
MARPOL Annex VI for Egypt
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Content

Introduction

MARPOL Annex VI overview

Chapter 1 - General

Chapter 2 - Survey / certification & Means of Control

Shipping air emissions and its impacts

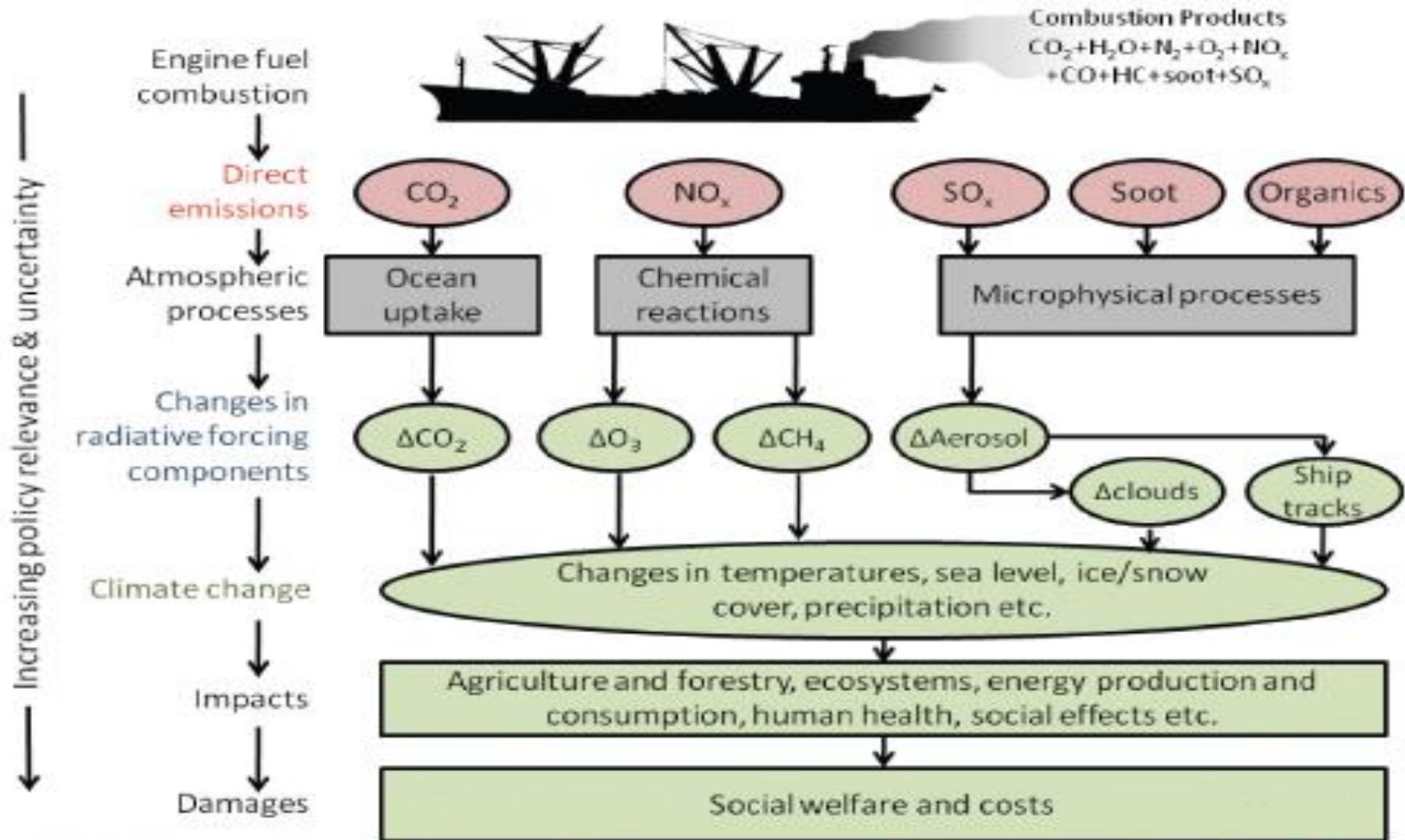


Figure 8.1 Schematic diagram of the overall impacts of emissions from the shipping sector on climate change (from Lee et al., 2009a)

Policy approaches to air emissions control

- **Regulations**
 - Command and control principle
- **Market-Based Measures (MBM)**
 - Polluter pays principle

International Convention for the Prevention of Pollution from Ships (MARPOL)

Air Pollution Conference 1997

- MARPOL: Main international convention covering prevention of operational or accidental pollution of the marine environment by ships
- Air Pollution Conference **1997** adopted new Annex VI “Regulations for the Prevention of Air Pollution from Ships” through adding a Protocol to MARPOL 73/78
- Entered into force May **2005**

Annex I	Annex II	Annex III	Annex IV	Annex V	Annex VI
Oil	Noxious Liquid Substances carried in bulk	Harmful Substances carried in Packaged Form	Sewage	Garbage	Air Pollution & Energy Efficiency

MARPOL Annex VI – Regulations for the Prevention of Air Pollution from Ships

MARPOL Annex VI

- 1997 Protocol adopted 26 September 1997
- Entered into force 19 May 2005

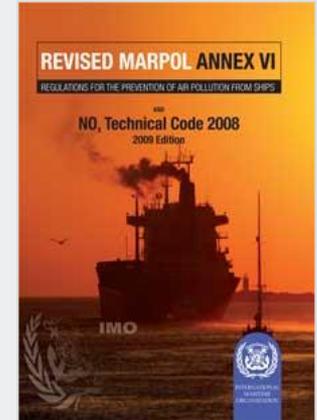
Revisions to Annex VI

- Adopted October 2008
- Entered into force 1 July 2010

Chapter 4 on Energy Efficiency

- Adopted 15 July 2011
- Entered into force 1 January 2013

- Number of Contracting States: 93 (as of 21 May 2019)
- Total world gross tonnage covered: 96.68 %



Changes to regulations or guidelines takes place in almost all MEPC meetings

MARPOL Annex VI – Regulations

Chapter 1 - General

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Chapter 2 - Survey, Certification and Means of Control

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MARPOL Annex VI – Regulations

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Nitrogen oxides (NO _x)	Reg.13
Sulphur oxides (SO _x) and Particulate Matter (PM)	Reg.14
Volatile organic compounds (VOC)	Reg.15
Shipboard incineration	Reg.16
Reception facilities	Reg.17
Fuel oil availability and quality	Reg.18

MARPOL Annex VI – Regulations

Chapter 4 - Energy Efficiency Regulations

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Required EEDI	Reg.21
SEEMP	Reg.22
DCS (Data Collection System)	Reg.22A
Technical cooperation and technology transfer	Reg.23

MARPOL Annex VI – Chapter 1

General

Regulation 1 - Application

1. The provisions of this Annex shall apply to all ships, except where expressly provided otherwise in Regulations 3, 5, 6, 13, 15, 16, 18, 19, 20, 21, 22 and 22A of this Annex

Application



All Ships

Does not apply



- When suffering damage to ship or equipment
- When saving life at sea
- When securing safety of ship
- Ship trials for research
- Emissions from sea bed activities
- Ships smaller than certain size
- Certain ship size and ship types based on specific regulations

Regulation 2 – Definitions

- A large number of terms are defined (more than 50).
- Example terms defined are:
 - **Emission Control Area** where the adoption of special mandatory measures to control NO_x or SO_x ...
 - **Fuel oil** means any fuel delivered to and intended for combustion including gas, distillate and residual fuels.
 - **Marine diesel engine** means any reciprocating internal combustion engine operating on liquid or dual fuel ... In addition, a gas fuelled engine installed on a ship constructed on or after 1 March 2016 ...

Regulation 3 - Exceptions and Exemptions

- Regulations of this Annex shall not apply:
 - When **suffering damage** to ship or equipment
 - When **saving life** at sea
 - When **securing safety** of ship
 - Ship **trials for research**
 - Emissions from **sea bed activities** (for platforms)

Regulation 4 – Equivalents

1. **The Administration of a Party** may allow any ... apparatus .. or compliance methods used as an alternative if such ... appliances or compliance methods are at least as effective as that required by this Annex,
2. **The Administration of a Party** which allows such an alternative shall **communicate** to the Organization for circulation to the Parties the particulars thereof, for their information and appropriate action ...

Notifications from Parties are available through the IMO Global Integrated Shipping Information System (GISIS)



Global Integrated Shipping Information System

Example: **SOx Scrubbers**

<http://gisis.imo.org/Public/>

Welcome to the Public Area



Ship Particulars

Ship identification and particulars.



Recognized Organizations

Information submitted by Member States under MSC/Circ.1010-MEPC/Circ.382.



Port Reception Facilities

Data on the available port reception facilities for the reception of ship-generated waste.



Pollution Prevention Equipment

Pollution prevention equipment required by MARPOL 73/78.



Facilitation of International Maritime Traffic

Reports on stowaway incidents (FAL.2/Circ.50/Rev.2); Reports on unsafe practices associated with the trafficking or transport of migrants by sea (MSC/Circ.896/Rev.1).



Radiocommunications and Search and Rescue

Information on the availability of Search and Rescue (SAR) Services.



MARPOL Annex VI

Notifications communicated under the provisions of MARPOL Annex VI (Regulations for the Prevention of Air Pollution from Ships).



Maritime
Information
(Code).



Marine
Data on



Contact
Electron



Piracy
Reports



Simula
Informa



Condit
Electron
amende



Evalu
Reports
retrieva

MARPOL Annex VI

In 1997 a new annex was added to the International Convention for the Prevention of Pollution from Ships (MARPOL). The Regulations for the Prevention of Air Pollution from Ships (Annex VI) seek to minimize airborne emissions from ships (SO_x, NO_x, ODS, VOC) and their contribution to global air pollution and environmental problems. Annex VI entered into force on 19 May 2005 and a revised Annex VI was adopted in October 2008 which entered into force on 1 July 2010.

Administrations are required to make notifications to the Organization under the following regulations of MARPOL Annex VI:

- [Regulation 4.2](#): equivalent compliance method;
- [Regulation 11.4](#): detection of violations and enforcement;
- [Regulation 13.7.1](#): approved methods for certain marine diesel engines installed on a ship constructed prior to 1 January 2000;
- [Regulation 15.2](#): ports or terminals regulating the emissions of Volatile Organic Compounds (VOCs);
- [Regulations 17.2](#): ports, terminals or ship-breaking facilities where reception facilities are available;
- [Regulations 17.3](#) : ports, terminals or ship-breaking facilities where reception facilities are alleged to be inadequate;
- [Regulation 18.1](#): fuel oil availability;
- [Regulation 18.2.5](#): evidence of non-availability of compliant fuel oil;
- [Regulation 18.9.6](#): failure of fuel oil suppliers to meet the requirements specified in regulation 14 or 18 of Annex VI;
- [Regulation 19.6](#): allowance, suspension, withdrawal or declination of application of regulation 19.4 of Annex VI;
- [Regulation 19.6](#): allowance, suspension, withdrawal or declination of application of regulation 19.4 of Annex VI and;
- [Specimens](#) : specimens of certificates.

MARPOL Annex VI – Chapter 2

Survey, Certification and Means of Control

Regulation 5 – Surveys and Inspections

- Every ship of 400 gross tonnage or above and every fixed and floating drilling rig and other platforms shall be subject to the surveys specified below:
 - a. an **initial survey** before the ship is put into service or ...
 - b. A **renewal survey** at intervals specified by the Administration, but not exceeding five years,
 - c. An **intermediate survey** within 3 months before or after the second anniversary date or within 3 months before or after the third anniversary date of the certificate....
 - d. An **annual survey** within three months before or after each anniversary date of the certificate...

- Surveys of ships ... shall be carried out by **officers of the Administration** or **RO** (Recognised Organisation)

Regulation 6 – Issue or Endorsement of Certificates

1. An **International Air Pollution Prevention (IAPP) Certificate** shall be issued, after an initial or renewal survey ..., to:
2. An **International Energy Efficiency (IEE) Certificate** shall be issued, after an initial survey....
3. A **Statement of Compliance** related to fuel oil consumption shall be issued to the ship
4. All certificates are issued by the Administration or by Ros on their behalf.

Regulation 7 – Issue of a Certificate by another Party

- A Party may, at the request of the Administration, survey a ship and, ...shall issue or authorize the issuance of an IAPP Certificate ...
-
- No IAPP Certificate shall be issued to a ship which is entitled to fly the flag of a State which is not a Party.

Regulation 8 – Form of Certificates

The IAPP Certificate and its Supplement* shall be drawn up in a form corresponding to the model given in **appendix I** to this Annex ...

Form of International Air Pollution Prevention (IAPP) Certificate (Regulation 8)

INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE

Issued under the provisions of the Protocol of 1997, as amended by resolution MEPC.176(58) in 2008, to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as “the Convention”) under the authority of the Government of:

.....
(full designation of the country)

by

*(full designation of the competent person or organization
authorized under the provisions of the Convention)*

Particulars of ship*

Name of ship

Distinctive number or letters

Port of registry

Gross tonnage

IMO Number**

Guidance on the Supplement
to the IAPP Certificate
(MEPC.1/Circ.849)

Regulation 9 – Duration and Validity of Certificates

- An **IAPP Certificate** shall be issued for a period specified by the Administration, which **shall not exceed five years**.
 - Renewal details, dates, etc. given
- An **IEE Certificate** is valid for the life of the ship.
- A **Statement of Compliance** for fuel oil consumption DCS is valid for one year.

Regulation 10 – Port State Control on Operational Requirements

1. A ship, when in a port or an offshore terminal under the jurisdiction of another Party, **is subject to inspection by officers duly authorized by such Party**
2. ... the Party shall take such steps as to ensure that **the ship shall not sail** until the situation has been brought to order in accordance with the requirements of this Annex.

And other aspects

Regulation 11 – Detection of Violations and Enforcement

1. **Parties shall co-operate in the detection of violations** and the enforcement of the provisions of this Annex
2. **Any Party shall furnish to the Administration evidence**, if any, that the ship has emitted any of the substances in violation of the provisions of this Annex.
3. Upon receiving such evidence, **the Administration shall investigate the matter** and when sufficient evidence is available ..., **it shall act against the ship in accordance with its law** as soon as possible.

And other aspects

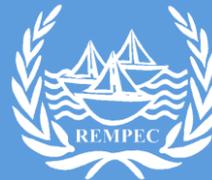
Self assessment – False or True?

1. MARPOL Annex VI applies to all ships?
2. A ship belongs to a Flag that has not ratified MARPOL Annex VI. Is this ship exempt from PSC inspections?
3. All ships are required to have an IAPP certificate?
4. GISIS belongs to Flag administrations and is used to share information about their ships?
5. You can access GISIS through your Administration?
6. IAPP certificate is valid for the life of the ship?
7. The Class Societies are responsible to ensure that the ships carry the required certificates?
8. Flag Administrations have the authority to accept “equivalent methods of compliance” subject to required conditions?

Self assessment – False or True?

1. An initial survey is more or less similar to a renewal survey?
2. Parties to MARPOL Annex VI should help each other to detect regulatory violations by ships?
3. MARPOL Annex VI survey and certification can be done by a Party on behalf of another Party?
4. There is no need for a non-Party's ships to comply with regulations?
5. IAPP certificate is normally valid for 10 years after which it should be renewed?

REMPEC, an IMO / UNEP Centre assisting the Mediterranean coastal States in ratifying, transposing, implementing and enforcing international maritime conventions related to the protection of the marine environment



Thank you

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