

# MARPOL Annex VI Roundtable

## Roundtable 1: Shipping and fuel industry

22 September 2020

## Purpose of today

- Provide summary information about Annex VI
  - requirements
  - timeframes
  - who/what it applies to
  - policy and implementation issues we are considering
- Find out your initial views
- Identify and note major concerns and knowledge gaps for future engagement
- Discuss how we can work with you

## Annex VI relates to emissions to air from ships

MARPOL Annex VI seeks to address:

- impact of air pollution from shipping activities on human health and environments
- impacts of emissions from shipping activities on climate change and ozone layer depletion.
- 94 States are party to Annex VI



## Process to date

- 2018/19 – public consultation on accession
- 49 submissions received
- In late 2019 Government agreed NZ will sign up
- Now - Aligning domestic regulations to accede at end of 2021
- Cross-agency work MoT, MNZ, MfE

## Indicative timeframe (policy stream)

Project	Action	Date
Leg/Rules	Preliminary engagement with key stakeholders	September - November 2020
Rules	Rule drafting and review	November 2020 – May 2021
Leg	Introduce Bill into House/first reading	March 2021
Leg	Bill reported back	May 2021
Rules	Public consultation on rules	May-June 2021
Leg	Second reading of Bill	June 2021
Leg	Third reading and Royal assent	September 2021
Rules	Minister approves Rules	September 2021
Rules	Notification of Rules in Gazette	October 2021
Leg	Deposit of Instrument of Accession with IMO	November 2021
Rules	Rules in force	February 2022

## Emission controls

1. Sulphur oxides (SO<sub>x</sub>)
2. Nitrogen oxides (NO<sub>x</sub>)
3. Energy efficiency requirements
4. Ozone-depleting substances (ODS)
5. Volatile organic compounds (VOC)
6. Shipboard incinerators
7. Fuel composition and quality
8. Port reception facilities

# Survey, document & certification requirements include:

IAPPC

stands for

**International Air Pollution  
Prevention Certificate**



Abbreviations.com

EIAPPC

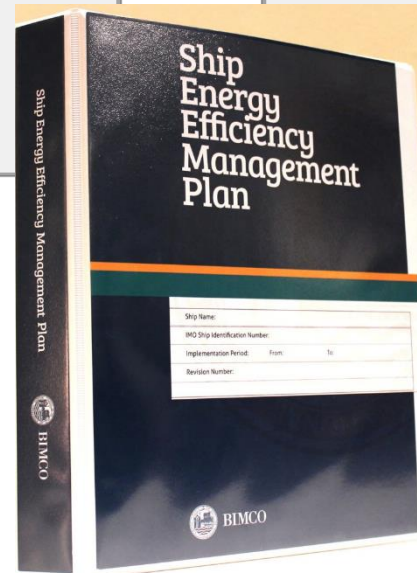
stands for

**Engine International Air  
Pollution Prevention  
Certificates**



Abbreviations.com

- SEEMP
- IAPP certificate
- EIAPP certificate
- Record books
- There are more...



## How does all this apply to ships?

- Annex applies to all ships
- further defined by each regulation
  - e.g. IAPP certificate – 400+ GT, international voyages
  - e.g. NOx – diesel engines >130 kW
  - e.g. ODS – system installation only to 2005
- Areas of discretion in application
- Foreign and NZ flagged
- Commercial and recreational



# Overall policy and implementation considerations

- What would the impact be of different approaches on industry, environment, communities?
- How can MNZ support industry to meet the requirements?
- How will we know that industry is meeting the requirements?

## NO<sub>x</sub> – summary

Applies to

- **diesel engines 130+ kW**, regardless of ship type
- installed or converted after 1/1/2000
- **All ships**, unless (for ships that only travel domestically) flag state establishes alternative controls **or** excludes engines installed/converted before 19/5/2005.

New or converted engines must be designed and approved to meet emissions standards.

NO<sub>x</sub> emission limits - 3 tiers based on ship construction date (and for Tier III, whether voyaging in ECA).

## **NO<sub>x</sub> – issues for consideration**

- Is there an appropriate alternative control regime for ships engaged only on domestic voyages?
- What would be the impact of including or excluding ships on domestic voyages constructed before 2005 (or where the engine has undergone a major conversion before 2005)?

## Energy efficiency – summary (1)

These requirements don't apply to ships that only travel domestically

- **but** countries are required to adopt 'appropriate measures' to ensure these ships are energy efficient.
- 1. Energy Efficiency Design Index (EEDI) – calculates energy efficiency performance based on ship design. It must exceed the required EEDI in Annex VI for that ship type and size. Required EEDI for new ships gets more stringent over time.

**Applies to 400+ GT new ships/major conversions**  
(with some exceptions).

## Energy efficiency – summary (2)

2. Ship Energy Efficiency Management Plan (SEEMP) – operational plan for maintaining and improving energy efficiency. International Energy Efficiency Certificate (IEEC) issued at survey.

**Applies to many 400+ GT ships that make international voyages** (including existing ships).

3. Annual ship fuel oil consumption reporting – recording and reporting on fuel oil usage.

**Applies to many 5000+ GT ships that make international voyages** (including existing ships).

## Energy efficiency – issues for consideration

- What would be the impact of extending energy efficiency requirements to 400+ GT ships that are not engaged in international voyages?

## Shipboard incineration – summary

- Incineration must be carried out in equipment designed for that purpose
- Prohibits certain substances from being incinerated
- Certain shipboard incinerators must be certified
- **Applies to all ships**
- Shipboard incinerators on ships that only travel domestically may be excluded from certification requirement if installed before 19 May 2005

## Incineration – issues for consideration

- What would be the impact of including or excluding incinerators installed on ships before 2005, when the ship is engaged only on domestic voyages?
- About how many NZ ships have incinerators?



## Volatile organic compounds – summary

- **All oil tankers carrying crude oil** must have an approved and effectively implemented ship-specific VOC management plan.
- States may decide to regulate VOCs at specific ports or terminals. They can specify which ships and cargo will be regulated (**NB - not limited to crude oil carriers**)
- At regulated ports or terminals, regulated tankers must have an approved vapour emission control system installed and the port must also have a vapour emission control system.

## VOCs – issues for consideration

- What would be the impacts of establishing VOC-regulated ports or terminals in NZ?
- If a VOC-regulated port or terminal was established, what types of ship/cargo should be regulated?
- Are there any concerns about VOC emissions associated with particular ports or terminals in NZ?
- Is this currently an issue for any NZ flagged ships?

## SO<sub>x</sub> – summary

- The sulphur content of fuel oil used or carried for use on board a ship shall not exceed 0.50% m/m
- If a ship is operating in an Emission Control Area the sulphur content shall not exceed 0.10% m/m. Ships that carry fuel with different sulphur content must have a documented fuel change-over procedure when moving into/out of an ECA
- As an alternative means to meet the requirement, a flag state may accept use of higher sulphur content fuel if the ship is fitted with an appropriate Exhaust Gas Cleaning System (scrubber)
- **Applies to all ships**

## SO<sub>x</sub> – issues for consideration

- What measures are industry currently adopting to comply with the requirements?
- What issues are you facing?
- What would be the impact of NZ:
  - allowing alternative means of compliance, e.g. scrubbers?
  - monitoring, prohibiting or restricting discharge from open loop scrubbers in NZ territorial or coastal waters?

## Fuel oil – summary

- Chemical mix of fuel oil must meet certain standards – **applies to all ships**
- Ships must demonstrate that they are using compliant fuel through use of a bunker delivery note and accompanying sealed sample, which the fuel supplier will provide to the ship. Ship must document steps taken to obtain compliant fuel in case of unavailability (FONAR) - **applies to 400+ GT ships voyaging internationally. May be applied to ships <400 GT at state's discretion**

## Fuel oil – issues for consideration

- Are there any barriers to obtaining or supplying compliant fuel in NZ?
- What would be the impact of extending the bunker delivery note and fuel testing requirements to:
  - <400 GT ships that travel internationally?
  - ships that only travel domestically?

## Ozone depleting substances – summary

- Applies to **all ships with systems installed that contain rechargeable ODS.**
- Deliberate emissions of ODS are prohibited. Accidental ODS leaks may be regulated at discretion of the State
- Installations containing ODS (other than HCFCs) are prohibited on ships constructed from 19/5/2005. Installations containing HCFCs are prohibited on ships constructed from 1/1/2020
- **400+ GT ships voyaging internationally** must keep records of ODS-containing equipment

## ODS – issues for consideration

- What impact will meeting the requirement have on your operation?
- What would be the impact of expanding the record-keeping requirements to include 400+ GT ships on domestic voyages?
- About how many NZ ships have installations containing ODS?



## Port reception facilities – summary

- NZ must provide PRFs to provide a way for ships to safely dispose of ODS and residues from scrubbers
- Ports must:
  - document how they will collect, store and treat the waste products
  - operate reception facilities safely and without undue delay for ships
- Will apply to **designated NZ ports**

## PRFs – issues for consideration

Does NZ have services capable of dealing with:

- ODS?
- Scrubber waste?

What is the practical impact of requiring service providers to do this?

What is the likely demand for these services?

What is the impact on ports? On ship operators?

How many ports should have PRFs? What ports?

## Next steps

Over the rest of this year and into next year we will continue to engage with you. We will also be talking to local authorities, iwi and interested community groups.

- Who else should we be talking to?
- How do we reach parts of industry we haven't talked to yet, eg smaller operators, recreational operators?
- Do you have any suggestions for how we engage with you/others?

Send your questions and comments to:

[MARPOLAnnexVIProject@maritimenz.govt.nz](mailto:MARPOLAnnexVIProject@maritimenz.govt.nz)

## Future roundtables – October/November

Issue	Interest
E.g. sulphur	
Ship survey and certification	
NOx	
....	