GHG SMART Training Programme

Module 1 - Introduction to Climate Change, International Regulatory Framework and SIDS and LDCs

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INTERNATIONAL MARITIME ORGANIZATION

Module content

This module is formed of 5 main sections.

1	Section 1 - Introduction to air emissions and their impacts
2	Section 2 - International regulatory framework for climate change control
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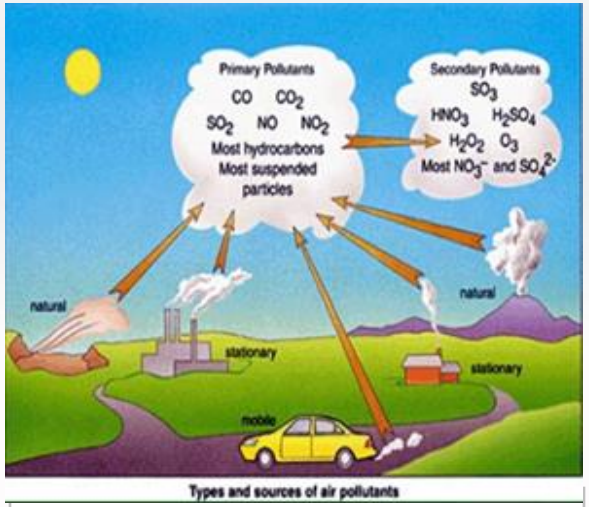
Section 1 - Introduction to air emissions and their impacts

Air emissions sources and impacts



Types and sources of air pollutants

- Primary air emissions
- Secondary air emissions
- Anthropogenic air emissions
- Air pollutants
- GHG emissions

Air pollutants:

- SOx (SO2 and SO3)
- NOx (NO and NO2)
- PM (Paticulate Matters)
- HC: Unburned hydrocarbons

GHG emissions:

- CO2
- CH4
- ODSs
- Black carbon
- Etc.

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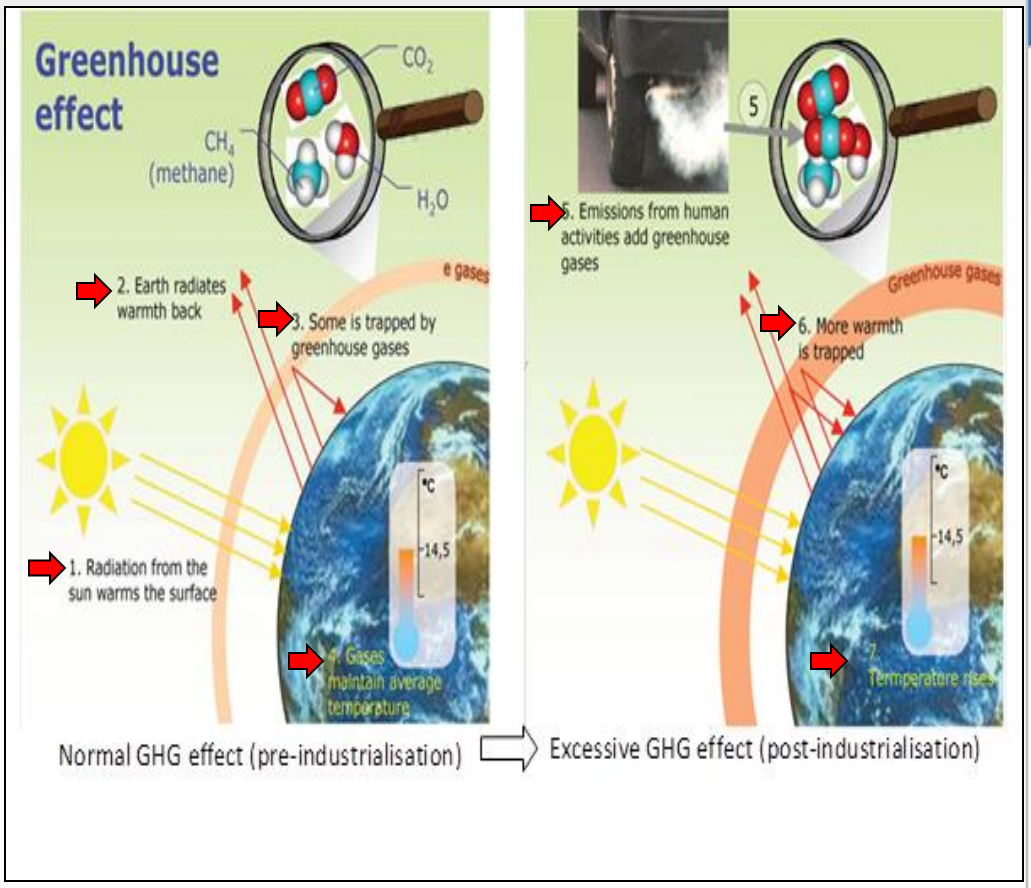
GHG Effect and global warming

GHG Effect ➔ Global Warming



GHG Effect and Global Warming

1. Radiation from the sun warms the earth surface.
2. Earth radiates warmth back.
3. GHG surrounding the earth reflects back some to the earth.
4. This keeps the global temperature moderate and fit for life.
5. Human activities add to GHG in the atmosphere.
6. Thicker GHG layer develops. More heat is radiated back to the earth.
7. Global temperature rise occurs.

Carbon cycle

Understanding carbon cycle helps to appreciate the impacts of too much GHG emissions

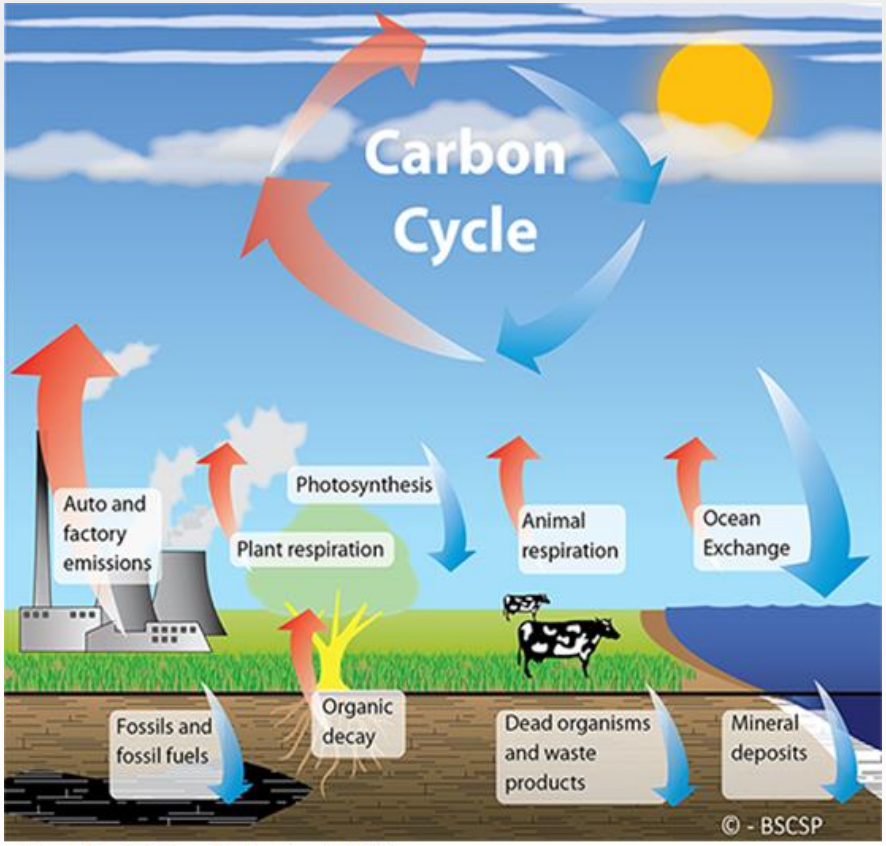


Diagram from http://www.bigskyco2.org/node/125

Carbon Cycle

- RED arrows: Carbon production
- Blue arrows: Carbon absorption
- Main production: Industrial activities
- Main absorption (sinks): Oceans
- Main storage area: Atmosphere
- Plants and animals (biomass) play their role.
- On average, we emit ~50 giga tonnes / year of GHG emissions (35 from fuels).
- A big percent of the above aborbed by oceans.

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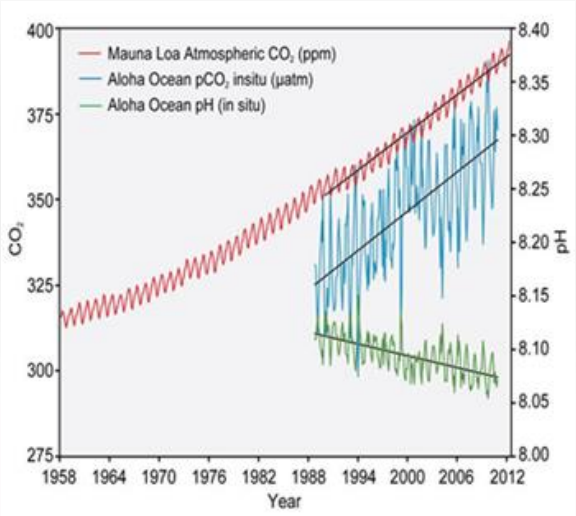
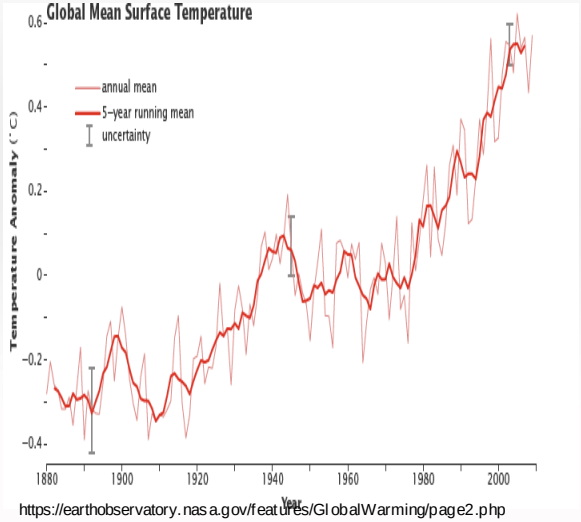
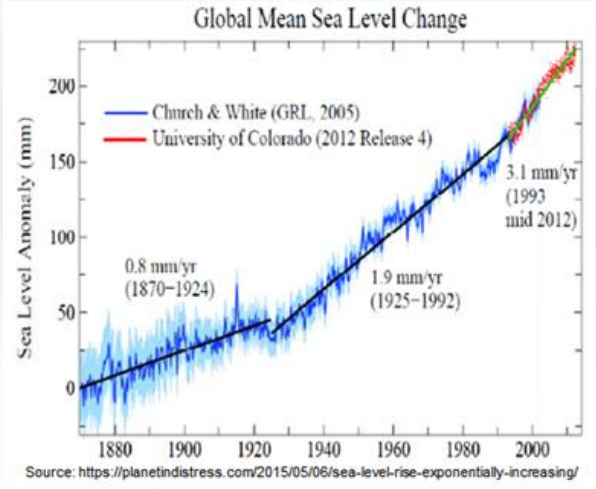
GHG emissions have multiple negative impacts





https://earthobservatory.nasa.gov/features/GlobalWarming/page2.php



Source: https://planetindistress.com/2015/05/06/sea-level-rise-exponentially-increasing/

- CO_2 emissions rise in the atmosphere.
- Part of this is absorbed by the oceans.

- Global temperature rise
- Change in climate system

(less snow, ice, extreme climate, etc.)

- Sea temperature rise

- Leads to ocean acidification
- Harms marine resources and ecosystem

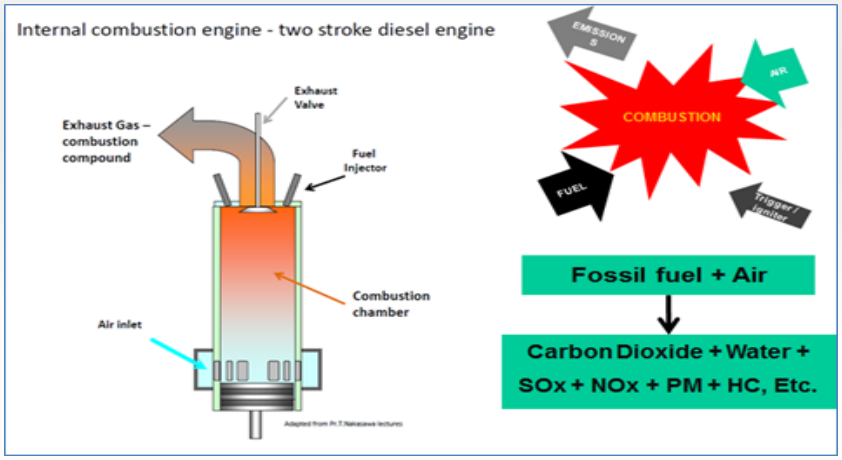
- Melting of polar ice and snow.
- Sea level rises
- Harms low laying countries

- Harms marine resources and ecosystem

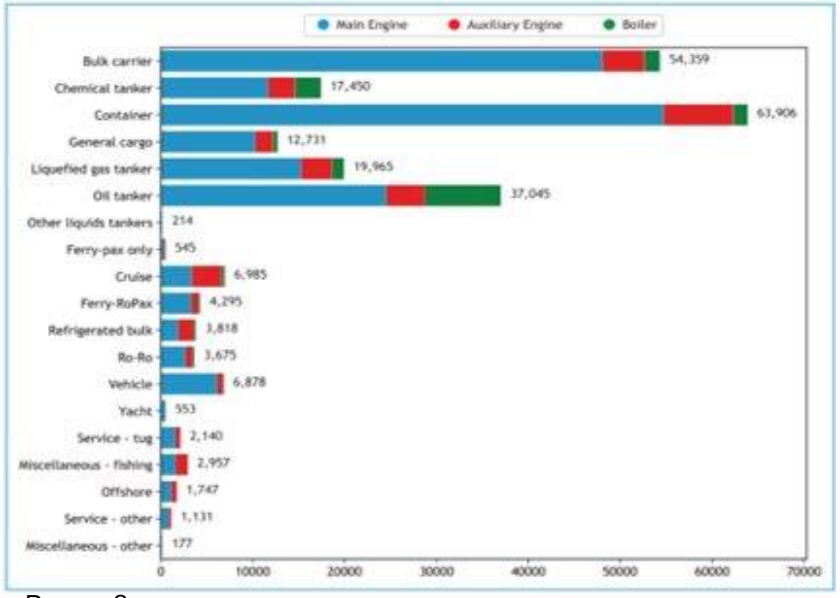
(marine habitats, marine life and biodiversity, etc.)

Main source of air emissions in ships

Combustion of fuels is the main source of emissions from shipping



- Main engine (~80% of fuel)
- Auxiliary engines (~10% of fuel)
- Boilers (~10% of fuel)
- More than 90% of ships use diesel engines
- More than 99% of fuel used in shipping are fossil fuels.



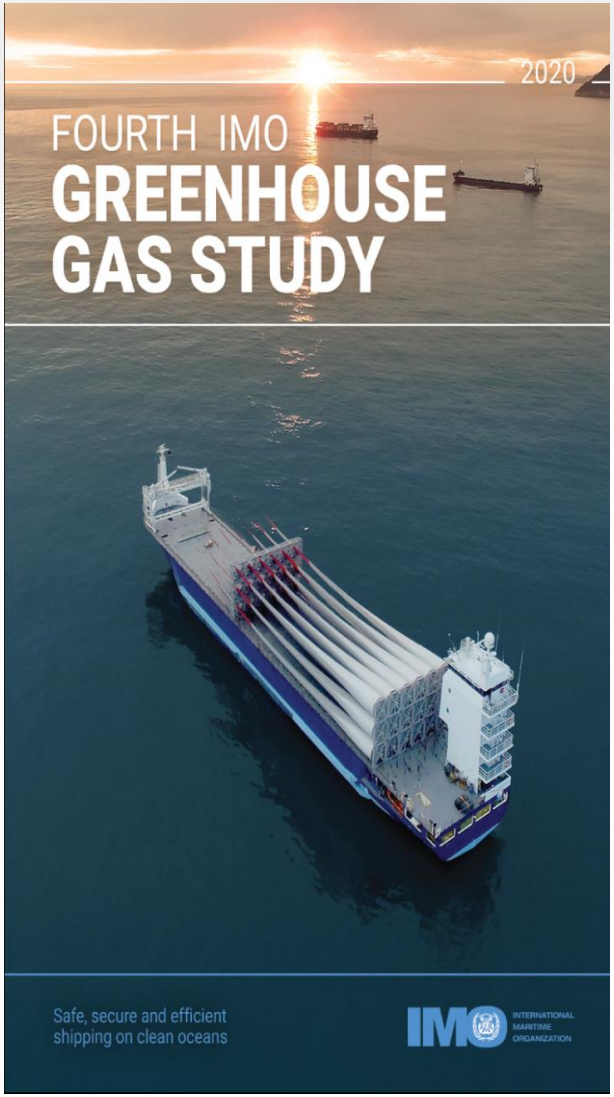
- Share of emissions from various ship types is different.
- Depends on number of ships, their size and their speed.
- The higher the ship speed, the higher is its fuel consumption.
- Ships that emit most GHG emissions:
  - (1) Container ships
  - (2) bulk carriers
  - (3) tankers

IMO GHG studies

IMO has carried out four GHG studies since year 2000

Year	Global anthropogenic CO_2 emissions	Total shipping CO^2	Total shipping as a percentage of global
2012	34,793	962	2.76%
2013	34,959	957	2.74%
2014	35,225	964	2.74%
2015	35,239	991	2.81%
2016	35,380	1,026	2.90%
2017	35,810	1,064	2.92%
2018	36,573	1,056	2.89%

In 2018, international shipping share of global anthropohenic GHG emissions was 2.89%



What about National Shipping?

- IMO is not dealing with domestic shipping.
- However, IMO GHG studies provide an indication of GHG emissions by domestic shipping.
- Domestic shipping is in the national jurisdiction.
- GHG emissions from such ships would be reflected in UNFCC related NDCs.
- GHG emissions reduction NAPs could include this element.
- For most of SIDS and LDCs, domestic shipping may have more priority.

Summary on “introduction to air emissions”

- Air emissions are produced both by nature (naturogenic emissions) and by humans (anthropogenic emissions).
- The great majority of all types of air emissions have negative impacts on natural ecosystem and life.
- Generally, air emissions lead to climate change, air pollution and ozone depletion.
- Climate change and global warming is the result of too much GHG in the atmosphere that lead to “GHG Effect”.
- There are significant levels of data confirming that global warming has been accelerated as a result of industrial activities and extensive use of fossil fuels.
- There are evidences that CO2 emissions not only cause global warming but increase ocean acidification, causing melting of snow and ice leading to sea level rise and sea water temperature rise.
- All the above have high negative impacts on marine habitats (e.g. coral reefs), marine biodiversity (e.g. number of abundance of marine animals) and food resources.
- The most single factor that contributes to all these is the use of fossil fuels.
- To deal with the above environmental issues, the shipping dependency on fossil fuels must be reduced.

Section 2 - International regulatory framework for climate change control

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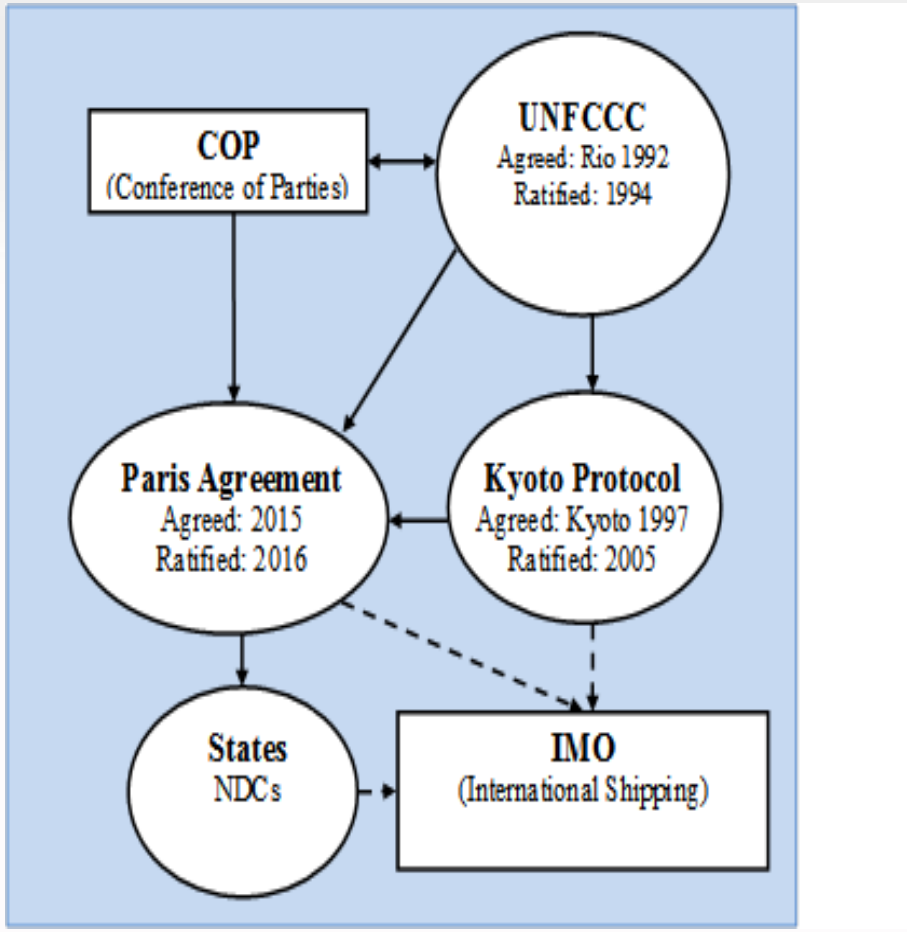
International regulatory framework on climate change control

UNFCCC (1994) ➔ Kyoto Protocol (2005) ➔ Paris Agreement (2016)



Climate Change Control

- UNFCCC: United Nations Framework Convention on Climate Change
- Kyoto Protocol
- Paris Agreement
- COP: Conference of Parties
- NDCs: National Determined Contributions
- Countries define their NDCs, implement and report through a well defined process.

International regulatory framework on climate change control

Kyoto Protocol (ratified 2005)

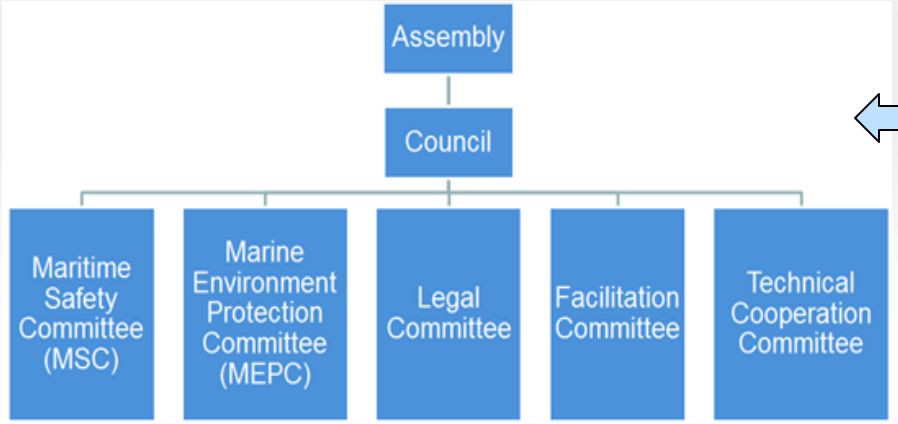
- Set binding emission targets for the developed countries listed in its Annex I of the Kyoto Protocol.
- Main principle: CBDR (Common but Differentiated Responsibilities).
- Main mechanism to be used:
  - Emission Trading System.
  - Clean Development Mechanism (CDM).
  - Joint implementation (JI).

Paris Agreement (ratified 2016)

- Replaced Kyoto Protocol.
- Aims to keep the global temperature rise to well below 2 ^{O}C (limit: 1.5 ^{O}C)
- Under Paris Agreement, all the target settings and actions were left to the countries.
- Parties define their GHG reduction targets and actions through “Nationally Determined Contributions” (NDCs).
- Parties work accordingly their NDCs and relevant plans and report their progress.
- No reference to IMO is made in Paris Agreement (Kyoto Protocol Article 2.2 in the past had references to IMO and ICA).
- However, IMO follows the Temperature Goals of Paris Agreement and actively takes part in related SBSTA meetings.

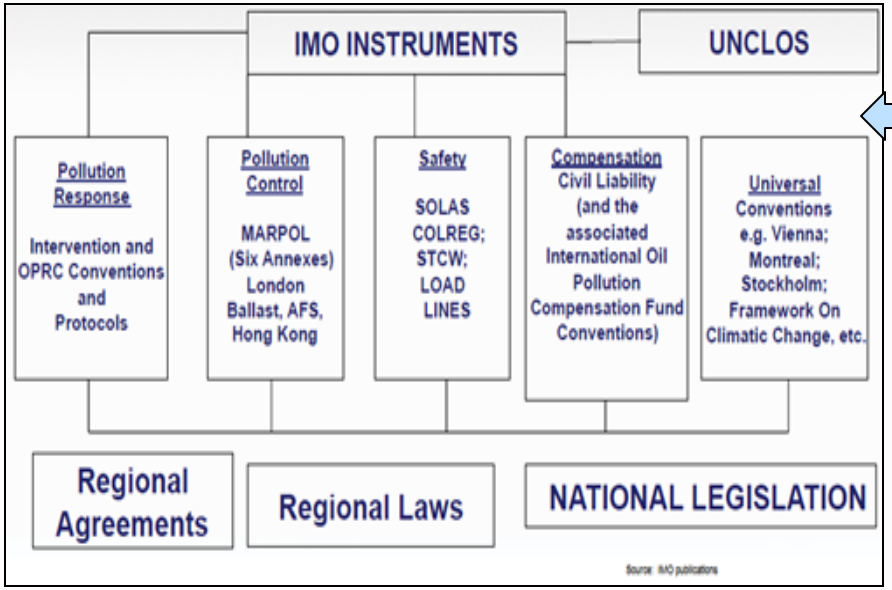
IMO role, governance and instruments

IMO main role is to develop rules and regulations for int. shipping



IMO Governance

- Assembly: All Parties
- Council: 40 members elected for 2 years.
- Comittees (e.g.):
  - MEPC: Marine Environment Protection Committee
  - MSC: Marine Safety Comitteee
- Secretariat: Deals with administrative elements.



Conventions

- International
  - UNCLOS: UN Convention on the Law of the Seas
  - UNFCCC – Climate change
  - Montreal Protocol – Ozone depletion
- IMO
  - MARPOL: Marine Pollution
  - SOLAS of ship safety
  - STCW on maritime training

Summary on "international regulatory framework for climate change control"

- UNFCCC (United Nations Framework Convention on Climate Change) was agreed in 1992 and ratified in 1994.
- COP (Conference of Parties) is the main governing body of the UNFCCC and takes place once every year.
- UNFCCC itself does not set binding GHG emissions targets for countries. Under Kyoto Protocol the targets were set for Annex I countries. Under Paris Agreement targets are set by countries in their NDCs.
- Under Kyoto Protocol, the principle of CBDR (Common but Differentiated Responsibilities) was agreed as the basis for GHG mitigation efforts.
- ETS (Emissions Trading System), CDM (Clean Development Mechanism) and JI (Joint Implementation) were agreed under Kyoto Protocol as additional mechanisms for emissions reduction.
- Paris Agreement was agreed in 2015 and superseded Kyoto Protocol. Under Paris Agreement, the CBDR was not included but countries agreed to specify their NDCs and carry out GHG mitigation accordingly.
- IMO is the regulatory body for international shipping with no jurisdiction over ports and domestic shipping.
- Over the years, IMO has developed a large number of conventions dealing primarily with shipping safety, environmental protection, training, etc.

Section 3 - Introduction to MARPOL Annex VI and its Implementation and Enforcement

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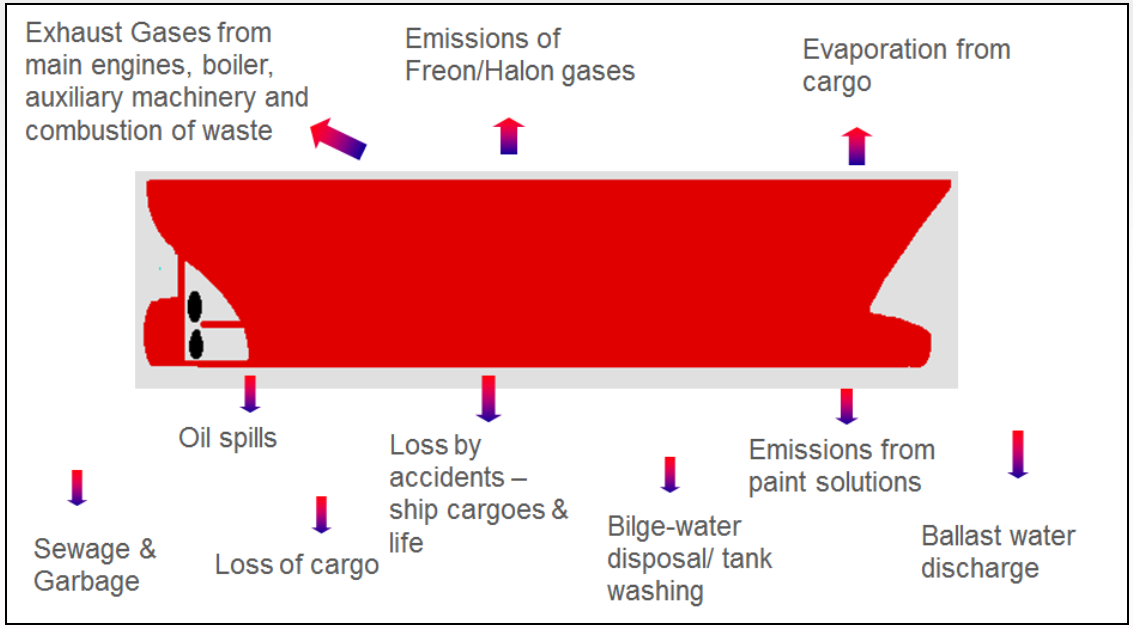
MARPOL

MARPOL includes 6 independent annexes; each dealing with specific types of ship pollutions



Annex I	Annex II	Annex III	Annex IV	Annex V	Annex VI
Oil (1983)	Noxious Liquid Substances Carried in Bulk (1987)	Harmful Substances Carried in Packaged Form (1992)	Sewage (2003)	Garbage (1988)	Air Pollution & Energy Efficiency (2005)

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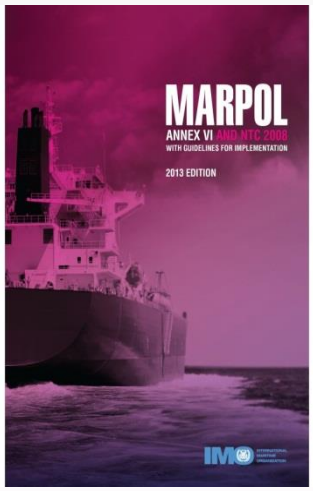
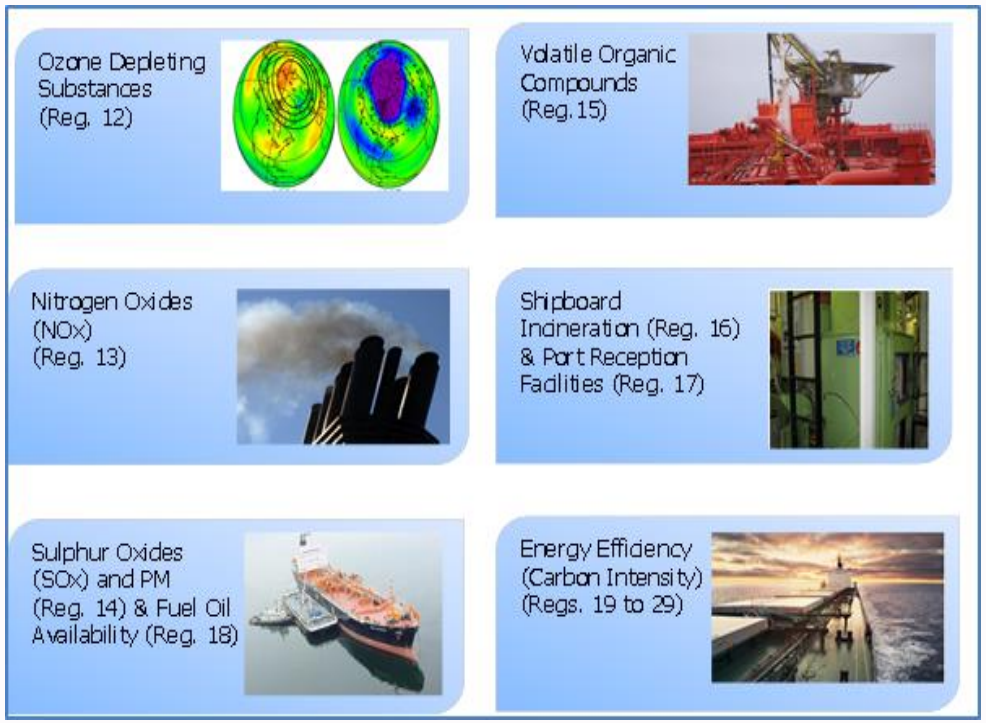
MARPOL Annex VI - Scope





MARPOL Annex VI

- Adopted in 1997 and entered into force in 2005
- Chapter 4 on Energy Efficiency
  - Adopted 15 July 2011
  - Entered into force 1 January 2013
- Number of Contracting States: ~102
- Combined merchant fleets of which constitute ~ 97% of the gross tonnage of the world's merchant fleet
- Comprises of 5 Chapters:
  - Chapter 1 – General
  - Chapter 2 – Survey, certification and means of control
  - Chapter 3 – Requirements for control of emissions from ships
  - Chapter 4 – Regulations on the carbon intensity of international shipping
  - Chapter 5 – Verification of compliance with the provisions of this Annex

MARPOL Annex VI Chapters

Chapter 1 - General

- Regulation 1 – Application
- Regulation 2 – Definitions
- Regulation 3 – Exceptions and exemptions
- Regulation 4 – Equivalents

Chapter 2 – Survey, certification and means of control

- Regulation 5 – Surveys
- Regulation 6 – Issue of endorsement of certificate
- Regulation 7 – Issue of a certificate by another party
- Regulation 8 – Form of certificates
- Regulation 9 – Duration and validity of certificates
- Regulation 10 – Port State control and operational requirement
- Regulation 11 – Detection of violation and enforcement.

Chapter 3 – Requirements for control of emissions from ships

- Regulation 12 – Ozone Depleting Substances (ODSs)
- Regulation 13 – Nitrogen oxides (NOx)
- Regulation 14 – Sulphur oxides (SOx)
- Regulation 15 – Volatile Organic Compounds (VOCs)
- Regulation 16 – Shipboard incineration
- Regulation 17 – Reception facilities
- Regulation 18 – Fuel oil availability and quality

Chapter 4 will be dealt in detail in Module 2

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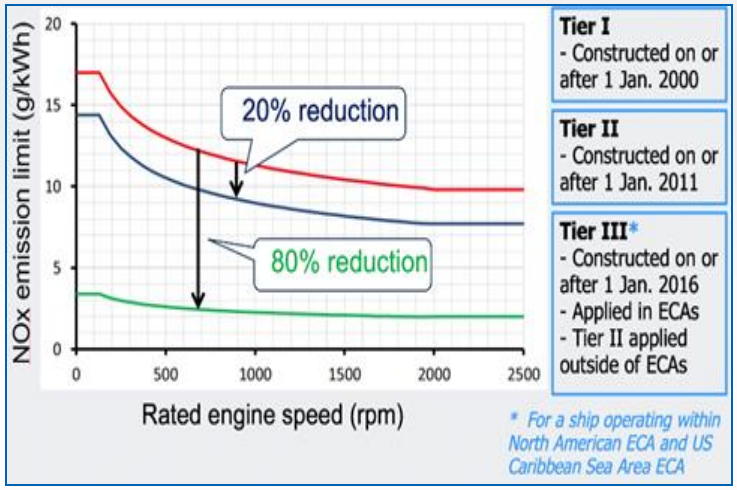
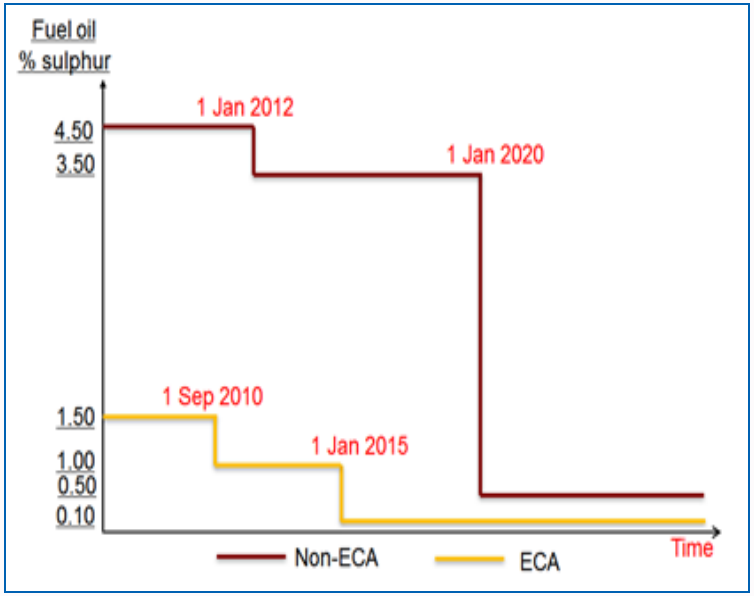
Examples of Chapter 3 regulations

Sulphur (Regulation 14) and NOx (Regulation 13) and Sulphur limits



Regulation 13 – Nitrogen oxides (NOx)

- Tier I, Tier II and Tier III.
- Engines' certification: NOx Technical Code
- Certificates and documents: EIAPP, NOX Technical File
- ECAs and move in and out of ECAs
- Etc.

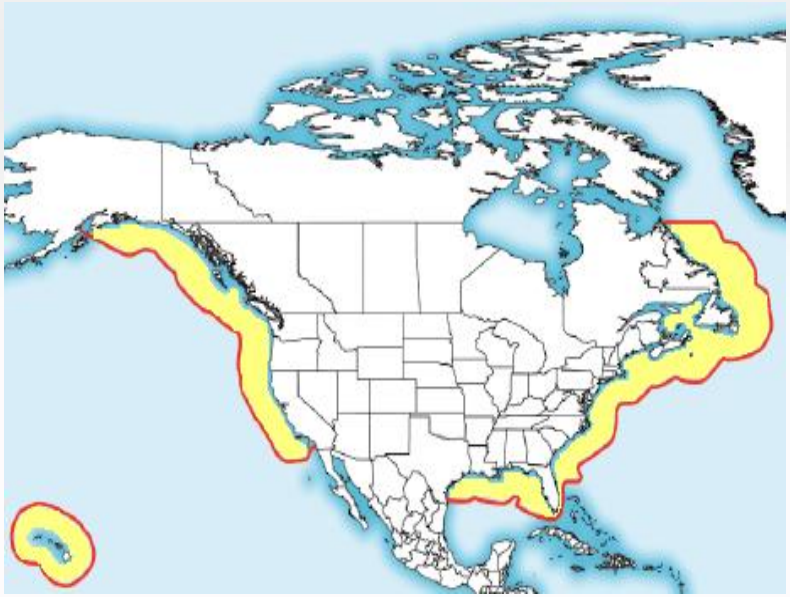


Regulation 14 – Sulphur oxides (SOx)

- Sulphur content limits
- ECAs and change over plan.
- Fuel samples and sampling aspects
- Other aspects (part of Regulation 18)
  - Bunker samples
  - Bunker Delivery Note
  - Carriage Ban
  - Fuel suppliers
  - Etc.

Examples of Chapter 3 provisions – Emissions Control Areas (ECAs)

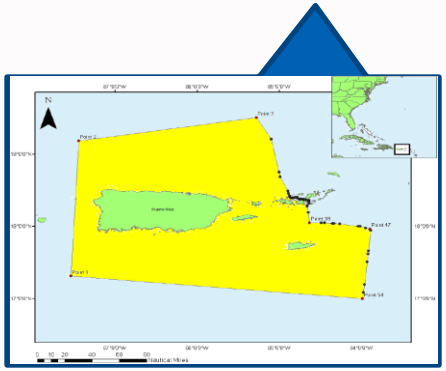
North American ECAs (SOx and NOx)



North Sea and Baltic Sea ECAs (SOx and NOx)

Med-ECA: Adopted at MEPC 79 (2022); comes into from 1 May 2025 (SOx).

U.S. Caribbean ECA (SOx and NOx)



Introduction to Ratification, Implementation and Enforcement

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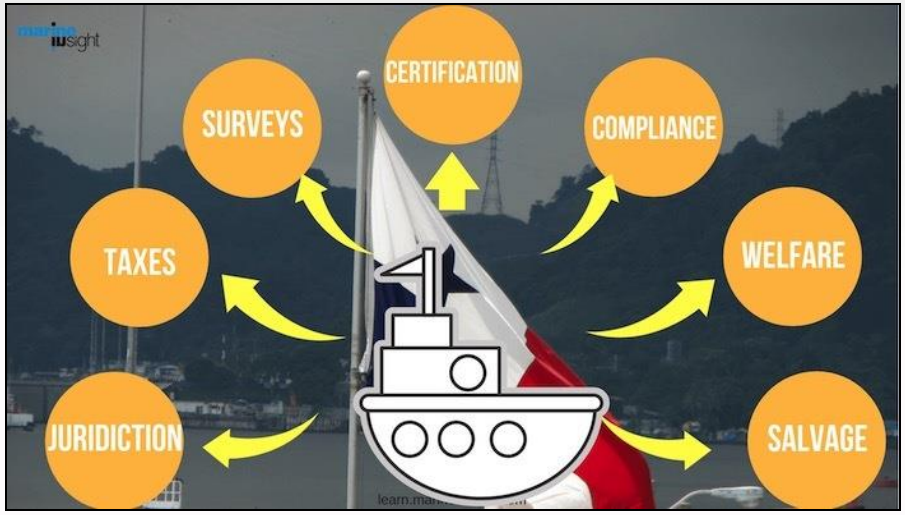
Flag State, port State and coastal State

A State can have three hats when it comes to shipping: Flag State, Port State and Coastal State hats



Flag State (Article 217 of UNCLOS)

- States shall ensure that vessels flying their flag or of their registry carry on board certificates required by and issued pursuant to international rules and standards, do periodically inspection.

Port State (Article 218 of UNCLOS)

- When a vessel is voluntarily within a port or at an off-shore terminal of a State, that State may undertake investigations and, where the evidence so warrants, institute proceedings in respect of any discharge from that vessel.

MARPOL Annex VI ratification, implementation and enforcement

Ratification ➔ Implementation ➔ Enforcement

Ratification

- Ratification means the accession of a country to a Convention.
- Ratification puts commitment on State to implement and enforce.
- A country cannot implement and enforce without ratification.

Implementation

- Implementation means the application of regulations to own flag ships.
- Survey and certification is the responsibility of Flag State.

Enforcement

- Enforcement means acting against a ship to ensure compliance to regulations.
- Enforcement is done mainly via Port State Control (PSC).
- PSC is an inspection of foreign ships in national ports to verify that:
  - The ship is in compliance with international conventions
  - The ship is properly manned and operated according to relevant regulations

Ratification process

The ratification process is country-dependent. However, steps below shows best practice!

Step 1 – Assessment of cost-benefit to the country

- This assessment will provide the main reasons why a country should join MARPOL Annex VI.
- It can be a kind of impact assessment on benefits and costs.

Step 2 - National level preparations: Building of MARPOL Annex VI into national law

- Any Convention can be implemented and enforced after inclusion in national legal system (national law).
- This step is country-dependent.
- Without such national law, the authorities will not be empowered to implement and enforce.

Step 3 – Other preparations: Flag Administration and Port State Control

- Implementation and enforcement will need an administrative system as well as resources.
- Under this aspect, roles and responsibilities and resources will be decided.

Step 4 – Accession via official formalities in IMO

- This is official communication with IMO and declaration of intention to accede.
- After the accession, the implementation and enforcement should start by the State.

Ratification case for SIDS and LDCs

If your country has not ratified MARPOL Annex VI, some relevant questions here for you to follow as part of your TSTP efforts.

Step 1 – Assessment of cost-benefit to the country

Step 2 - National level preparations: Building of MARPOL Annex VI into national law

Step 3 – Other preparations: Flag Administration and Port State Control

Step 4 – Accession via official formalities in IMO

Ratification Main Questions

- About the process itself:
  - What?
  - How?
  - Who
  - When?
- How long will this process likely take for a typical SIDS / LDCs?
- What are the main barriers for SIDS/LDCs to complete the process?
- How can the barriers be overcome?
- What sort of support the country needs and how to get them?
- Timeframe?

Summary on "MARPOL Annex VI and its implementation and enforcement"

- MARPOL Annex VI was agreed in 1997 and came into force in 2005.
- MARPOL Annex VI comprises of 5 Chapters.
- IMO regulations, including MARPOL Annex VI, are implemented and enforced by Annex VI member countries (Parties). They could have the role of Flag, Port or Coastal States.
- Flag State is responsible for "implementation" of regulations via survey and certification of ships.
- Port State is responsible for "enforcement" of regulations on ships visiting their ports via inspections and Port State Control and taking action against the ships not complying.
- Coastal State is responsible for protection of its coastal water's marine environment and has the right to board a ship if found in contravention of regulations.
- In order for a State to do the above diverse roles, it must first become a Party via "ratification" of the convention.
- Ratification involves a number of activities including the incorporation of MARPOL Annex VI into national law and practical preparations for implementation and enforcement.
- IMO supports countries with their ratification, implementation and enforcement via provision of capacity building and technical cooperation activities.

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Section 4 - Introduction to SIDS and LDCs Status

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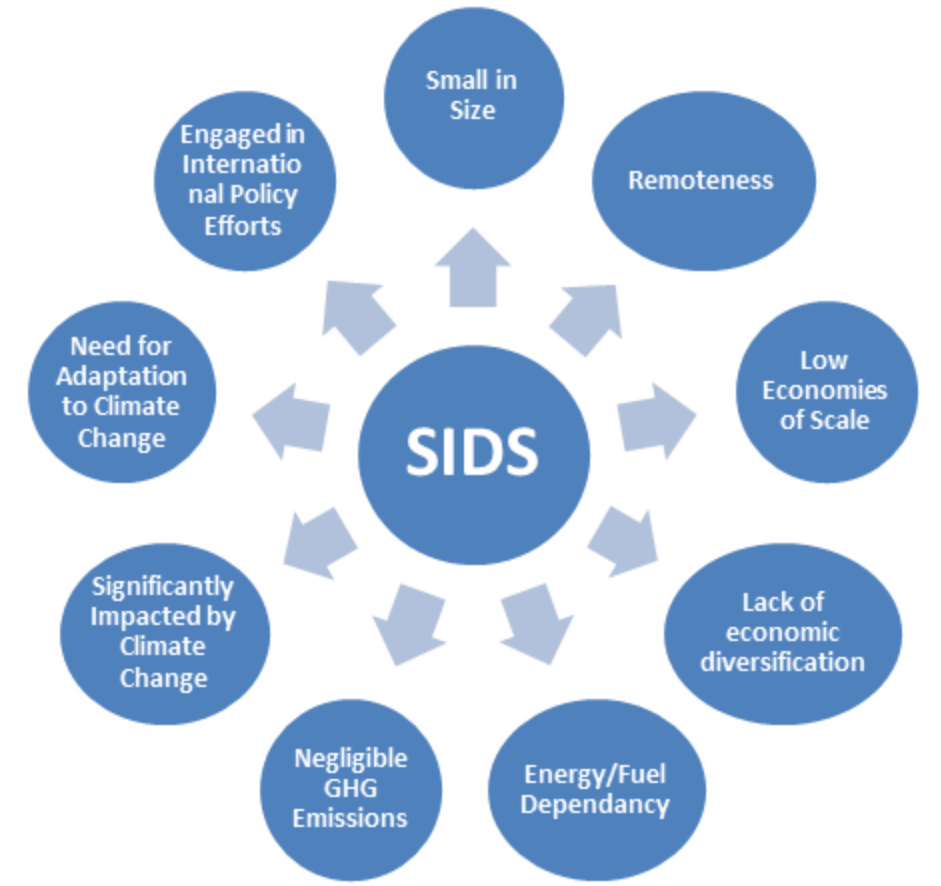
Main characteristics of SIDS

SIDS are ….



Main features of SIDS

- Small in size
- Remote geographically
- Low economies of scale
- Lack economic diversification
- Energy/fuel dependency
- Negligible GHG emissions (less than 0.05%)
- Significantly impacted by climate change
- Active engagement in international policy making.
- Need for adaptation to climate change

SIDS maritime sector

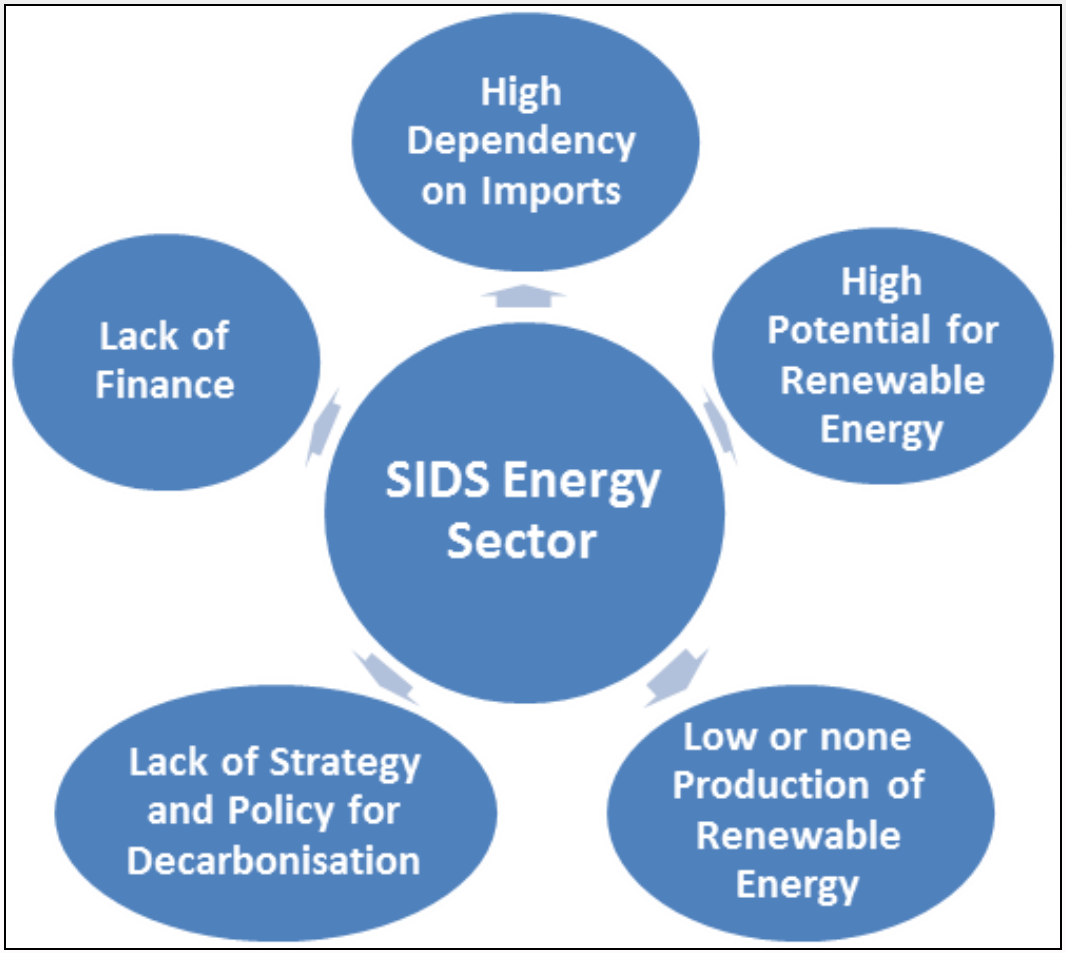
SIDS maritime sector is extremely important for these countries

Main features of SIDS Marine Sector

- **High transport cost:** Small cargo volumes in SIDS limit their ability to benefit from economies of scale or attract shipping services and investors. Use of smaller vessel in SIDS routes as well as long distance and remoteness of some SIDS add to cost of transport
- **Inter-island domestic shipping:** Very important but lacks proper services.
- **High degree of dependency on energy imports:** In some countries transport consumes as much as 70% of total energy used with maritime having a big share.
- **Port infrastructure:** SIDS rely on small scale and often few marine ports. Improvements needed all round.

SIDS and LDCs energy sector and case for renewables

SIDS and LDCs are mostly energy-import countries with high potential for production of renewable energy



Main features of SIDS and LDCs Energy Sector

- High dependency on imported petroleum products.
- High potential for renewable energy production.
- No significant renewable energy production.
- No specific strategy / plan for renewable energy production.
- Financial constraints for energy sector developments.

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Climate change impacts on SIDS and LDCs

SIDS and LDCs are significantly vulnerable to climate change

Major issues faced

- Sea level rise threatens the very survival of certain low-lying SIDS and LDCs.
- Ocean acidification lead to damage to marine environment and loss of marine resources.
- Increased frequency and intensity of storms negatively impacts both the economies and environments.

Main action routes

- Pursue the policy to increase international commitment reducing GHG emissions to an agreed levels within an agreed time frame.
- Support SIDS and LDCs with grants through climate-related sources of financing.

Actions by SIDS and LDCs

- Continue to promote the development and uptake of GHG mitigation policies globally.
- Continue to assess the impacts of climate change, climate variability and sea-level rise on SIDS and LDCs.
- Improve public understanding of the impacts of climate change.
- Promote climate-neutral alternative energy worldwide.
- Promote a more efficient use of energy resources.
- Develop national capacity to deal with all the above topics.

All the above actions would require further studies on feasibility, barriers, financial needs, etc.

Fossil-fuel dependency and the need to eliminate it

SIDS and LDCs are vulnerable to fossil fuel dependency and should move towards renewables

Current Status and Issues

- SIDS are heavily dependent on imported petroleum products.
- SIDS, despite having renewable energy potentials, currently do not generate much renewable energy.
- For renewable energy production, SIDS and LDCs need both technology and finance.
- SIDS are also generally constrained by lack of human capabilities in area of alternative energy / fuels.

Basis for action

- Production of commercially feasible alternative energy such as wind, solar, geothermal, biomass, and ocean energy are feasible.
- Use policy instruments more effectively.
- Development of human capacities to deal with the above is practical.
- Cooperation with international partners in areas of technology and finance for clean energy alternatives provides significant potentials.

Actions by SIDS and LDCs

- Develop and implement relevant strategies, policies and action plans.
- Identify and develop financially feasible projects on alternative electricity / fuels in particular wind, solar, wave, and bio fuels.
- Promote pilot and demonstration projects in areas of maritime renewable energy, alternative fuels and energy efficiency.
- Cooperate with international partners and financial institutions to raise finance.
- Develop national capacity to deal with all the above topics.

Promotion of sustainable transport as the lifeline of SIDS economy

SIDS and LDCs are vulnerable to climate change and they need to act

Major issues faced

- Distance, isolation and economies of scale have resulted in relatively high transport costs for many SIDS and LDCs.
- Transport infrastructures at SIDS and LDCs need development in an integrated manner.
- The environmental protection and sustainability need to be critically considered as part of transport network developments.

Basis for action

- Cooperate and develop viable regional transportation arrangements, including improved air, land and sea transport policies.
- Take initiatives in such areas as access to and the use of information and communication technology.

Actions by SIDS and LDCs

- Continue efforts to strengthen transport services and facilities at national level with low-cost transport solutions.
- Seek support from international community in area of development of innovative energy-efficient transport solutions.
- Improve access to financial and technical resources in support of regional organizations that are advising SIDS in the field of transport.
- Develop national capacity to deal with all the above topics.

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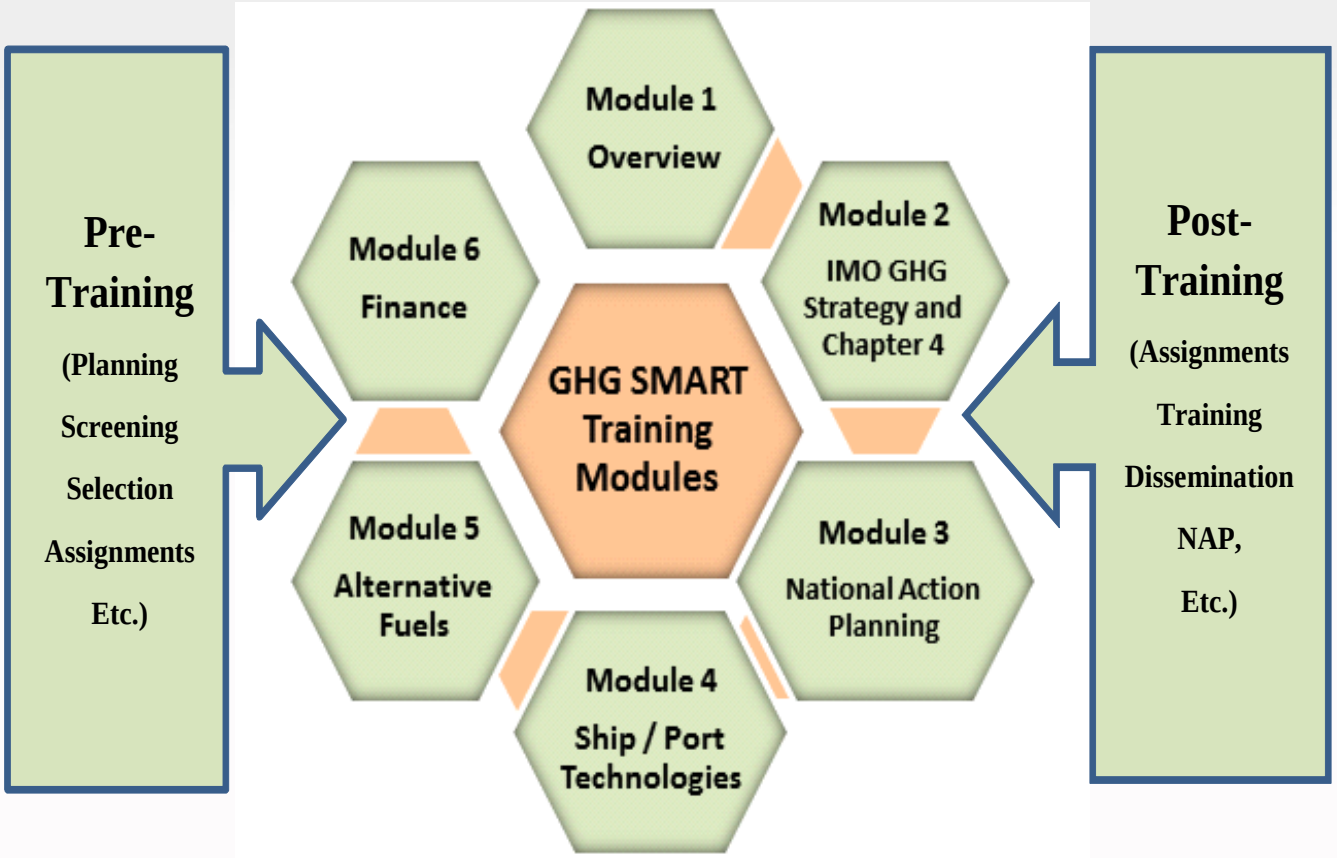
Summary on “SIDS and LDCs status”

- SIDS and LDCs are the two groups of countries that are most vulnerable to climate change and its consequences.
- SIDS main features generally include small size, small population, lack of economy of scale, high dependency on fossil fuel, high dependency on shipping, high economic dependency to marine resources, and so on.
- The main features of SIDS and LDCs indicate that they may be disproportionately impacted by climate change.
- For this reason, they actively take part in international policy making debate on the subject.
- SIDS are active at IMO in particular those SIDS with interest in international shipping and trade (those with large ship registry or acting as a marine transport hub).
- SIDS could benefit significantly if two sectors, i.e. shipping and energy sectors, in the country can be decarbonized.
- While a large number of actions need to be undertaken, capacity building always forms the basis for all the actions and as such GHG SMART Programme can positively contribute to SIDS and LDCs in these areas.

Section 5 - Overview of GHG SMART Training Programme

GHG-SMART Programme Design / Structure

Pre-training ➔ Workshop Core Training ➔ Post-training TSTP and Engagement ➔ Practical Training and Industry Visits



A long term engagement in the training process

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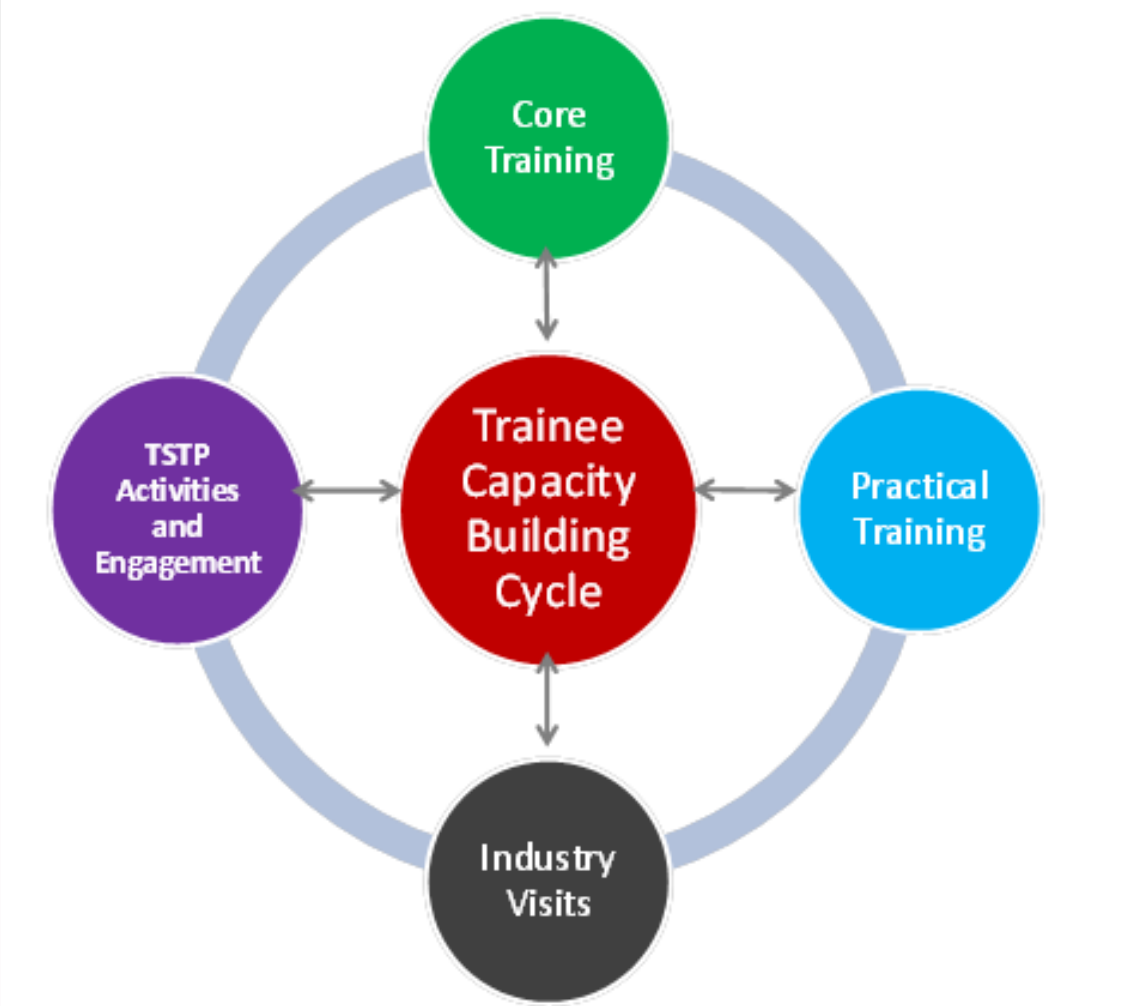
GHG SMART Training cycle

Core Training | **TSTP Engagement** | **Practical Training** | **Industry Visits**



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GHG-SMART Core Training Modules

Regulations | National Planning | Technology | Alternative fuels | Finance

Training Activities and Modules
Module 1 – Introduction international regulatory framework and SIDS and LDCs
Module 2 – Chapter 4 of MARPOL Annex VI and Initial IMO GHG Strategy
Module 3 – National Action Planning and Review of Impact Assessment Reports
Module 4 – Shipping and Ports Decarbonisation Technical and Operational Measures for SIDS and LDCs
Module 5 – Shipping and Ports Alternative Fuels / Energy and How to Promote them in SIDS and LDCs
Module 6 – Financing of Maritime Decarbonisation Projects: Options and Processes

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TSTP: Trainee Structured Training Plan

- A self-developed plan by each GHG SMART participant.
- A CPD (Continuous Professional Development) plan.
- It would explain what you intend / want to do after training in your own country.
- It would ensure that you are in touch with GHG SMART and benefit from support it could provide to your CPD.
- TSTP will be a “live” document and you will change as you move forward.
- GHG SMART will support you along the way.

TSTP: A 4-stage continuous improvement cycle

Four important stages:
Planning ➔ Implementation ➔ Monitoring ➔ Evaluation

TSTP: Trainee Structured Training Plan

A trainee initiated and managed training plan for lifecycle of GHG SMART

Pre-training planning

- You have attended the participants' induction meeting where the TSTP will be presented.
- Next step is by you start working on it.
- You will have an IMO contact point for support.
- GHG SMART SME Team will be avaiable to technically support you where needed.

Training activities

- You will take part in training workshop (this week).
- Training involves half a day in-class session and half a day self-study.

Post-training implementation

- You will work according to your TSTP.
- You will be invited to take part in any of the GHG SMART events.
- You will take initiatives to replicate what you have learned in your country.
- You hopefully will aim to become a “maritime GHG reduction champion” in your country.
- You will receive technical and administrative support from GHG SMART, based on your needs.

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TSTP – Typical post-training activities

- Capacity building activities
- NAP-related activities
- Impact assessment-related activities
- Pilot project ideas and working or promoting pilot projects
- Work on regional cooperation
- Work on or advocate alternative marine fuels in the country
- Raising finance for national projects
- Engaging stakeholders
- Providing specific policy support to your government
- Etc.

Learning Resources

Core Training Learning Resources

Main resources:

PPTs

PowerPoint Presentations

- 6 PPT, one per module, is developed and shared with you during Core Training.

Assignments

A number of assignments and case studies developed and implemented:

- For each Module of Core Training, you will be required to do at least one assignment .
- For Practical Training, ther will be more case studies.

Textbooks

In line with PPTs, textbooks developed and is shared with you now:

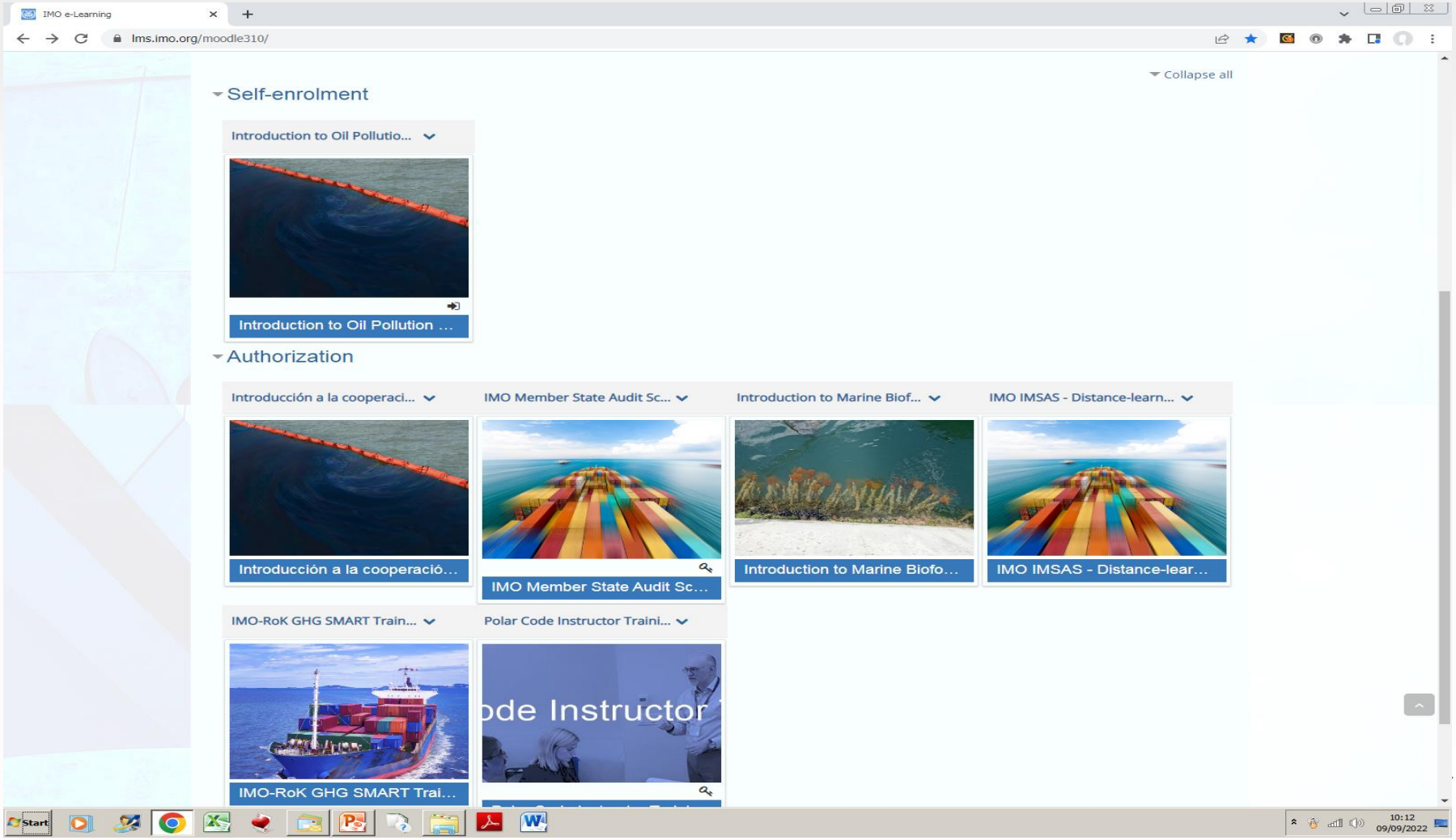
- 6 textbooks, one per Module.
- The textbooks and PPTs are compatible and form the main elements of GHG SMART Core Training.

Additional resources:

- A large number of backup reading material / PPT by external speakers.
- IMO documents inclusive of various Guidelines, Toolkits, etc.
- Country level documents such as NAPs for a number of countries, etc.
- All these are available to you via Moodle.

Where to find the GHG SMART Training Resources?

All GHG SMART learning resources are on relevant IMO e-learning Moodle platform



Core Training Learning Resources – Main Page

Course: IMO-RoK GHG SMART Train

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IMO INTERNATIONAL MARITIME ORGANIZATION IMO-RoK GHG SMART Training Programme

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Module 2 – Global Efforts, IMO GHG Strategy and related MARPOL Annex VI Regulations

- Introduction
- PPT Presentations

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Core Training Learning Resources - Participants' Webinar presentations

GHG SMART Training: Participants' webinar presentations

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Participants' webinar presentations

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- GHG SMART TSTP presentation A. Ibrahim.pdf
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- GHG SMART TSTP presentation C. Dias.pdf
- GHG SMART TSTP presentation D. Tarr.pdf
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« PREVIOUS ACTIVITY IMO meeting documents

NEXT ACTIVITY Introduction »

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Summary on “overview of the GHG SMART Programme”

- GHG SMART Training Programme was developed in support of the implementation of the IMO GHG Strategy for SIDS and LDCs.
- GHG SMART Programme is funded by Republic of Korea and implemented by IMO.
- The design of the programme is based on a Training Needs Assessment study that involved significant consultations with stakeholders.
- The training programme design involves engagement of trainee for a long-term based on Continuous Professional Development (CPD) principles.
- As part of the CPD nature of the GHG SMART, each trainee will have his/her TSTP (Trainee Structured Training Plan) that would include all activities that the trainee will undertake for the long-term development.
- The Core Training of GHG SMART constitutes of 6 training modules.
- Practical Training and Industrial Visits are important part of the GHG SMART Programme that will take place in Republic of Korea towards the end of the year.

Thank You

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