

Specific CME Strategies and Principles under BWM Convention and

Risk Assessment CME

Status of BWM CME

- CME for ballast water management is still being developed by IMO MEPC, BLG and FSI and in most parts of the world
- There are several CME approaches to address other environmental issues

Overview of the basic concepts in CME for environmental management

- An ideal CME regime for ballast water management would combine the best principles from an effective Port State Control (PSC) regime and some of the best practices employed in environmental CME.
- An effective CME programme would involve several elements that include
 - creating requirements that are enforceable,
 - setting programme priorities after a thorough study of the regulated community,
 - promoting compliance through various means, monitoring compliance and responding to violations.

Successful CME Programme

- A successful programme would also clearly identify the roles and responsibilities of organisations involved in the CME programme.
- A successful programme needs to address all these elements as these elements are interconnected.

International Network for Environmental Compliance and Enforcement

- The International Network for Environmental Compliance and Enforcement (INECE), which is a network of government and non-government enforcement and compliance practitioners from over 100 countries.
- INECE's goals are: raising awareness to compliance and enforcement; developing networks for enforcement cooperation; and strengthening capacity to implement and enforce environmental requirements.
- Globallast encourages the participants to contact INECE for further information on their activities and potential linkages with the network (www.inece.org).

CME provisions in the Convention

- Articles 9 to 12 of the Ballast Water Management Convention include provisions for port state control and therefore PSC is expected to play a major role in BWM CME.
- To be a Port State it is also assumed that one is already a flag state complying with international instruments.
- MEPC Survey guidelines using previous experience with the Antifouling Systems Convention (AFS) and the reaction of PSC regimes to this convention.

PSC MOUs

- There are several regional Port State Control MOUs in place which would harmonize and standardise port state control activities in these regions and can be an important aspect that can be considered in the design of BWM CME approaches.
- The MOUs also allows for national and international level training.

Role of GISIS

- IMO has established an integrated information system namely Global Integrated Shipping Information System (GISIS) for collecting, processing and sharing ship related data and reports.
- There is however no country specific focus on ballast water management in GISIS
- GloBallast has developed a Country Profile Database being which may later be integrated with GISIS (see presentation on second day).

Commercial advantage of non-compliance

- There are obvious competitive advantages that can be gained through non-observance of international rules and standards and some ship owners would operate their ships at a substandard level to enjoy the financial advantages.
- Ballast Water Convention may not be an exception.
- However, the preventative and curative steps under a CME regime that are based on co-ordinated cooperation of
 - flag states and port authorities,
 - classification societies,
 - chartering and marine insurance interests and
 - maritime labour unions
- would greatly help to overcome such non-observance issues thus resulting in increased compliance.

Cooperation between Port and Flag States

- Increased cooperation between flag states and port states becomes all the more relevant when it comes to ballast water issues and management.
- There exist opportunities for such close operations (such as mechanism for joint intervention in case of detention followed by violation) under the regional structures.
- This would also allow Flag States to be able to intervene in a constructive manner

Strategic Partnership agreement

- An effective CME regime would consider strategic partnership among the Port States, Flag States and shipping industry.
- A uniform system of inspection may lead to less inspections and loss of time due to exchange of data.
- Shipping industry can be a partner by submitting data to the Port prior to arrival.
- Developments such as Electronic Reporting System should be seen from this context and can be an excellent tool to facilitate such partnerships and for more effective CME systems.

Lack of CME resources

- A major concern expressed by the participants was the lack of resources available for PSC in many countries where the PSC activities at the moment cover a number of inspection regimes and PSC officers already overwhelmed with the various inspection activities.
- This issue will be even more complex when it comes to ballast water sampling and biological analysis, as in many countries the existing PSC divisions lack expertise and resources to handle such scientific activities.

Essential elements of a BW CME system

- Compliance monitoring and enforcement should be seen as a set of activities to establish if a vessel has met the Port State's BWM requirements.

What a generic CME system should include

- A generic CME system, would include essential elements such as requirement for
- ships to collect and record information about their BWM practices;
- a means for ships to transmit this information to the Port State's BWM regulatory authority and receive directions from them;
- provision for examination/auditing of the ships' official log books or other official records to ascertain compliance with the BWM requirements of the Port State;
- an ability by the appropriate authority to take ballast water and sediment samples and carry out any necessary testing;
- a legal provision for 'enforcement', where necessary, for non-compliance with the required BWM requirements;
- and a requirement for notification of arrangements to IMO.

BWE and BWMS

- Ballast water exchange (BWE) is currently the primary method for reducing the risk of species transfer by ships throughout the world and the IMO ballast water Convention includes BWE as one of the major ballast water management practices.
- Alternative ballast water treatment technologies could be used to achieve the performance standards stipulated by the IMO Convention
- Despite critical limitations to the effectiveness of BWE, there is a general consensus that it will continue to be a major ballast water management practice for the time being

Incorporating 'risk' in the CME system

- In addition to all the foregoing elements of a CME system there is another factor which should be considered and included.
- This is the issue of risk posed by the ship.
- Developing a sound, risk-based system for decision-making is a key component of the implementation arrangements for a National Strategy.

Incorporating 'risk' in the CME system

- A very wide range of scientific studies and data collected over many years throughout the world have shown that some voyages present a far greater risk of introducing harmful aquatic organisms and pathogens than others.
- It is also known that all voyages, depending on the BW uptake port, pose potentially different risks, due to a wide range of ship-based, environmental and other factors.

Incorporating 'risk' in the CME system

- The environmental similarity between the port where the ballast water is taken up, and the recipient port as well as the presence of certain target species in the donor region.
- Ballast water uptake from such areas should be avoided, or it should be carefully managed during the voyage, and sampled prior to discharge.

Some other important issues concerning 'risk'

- Highly disparate conditions between uptake and discharge ports may reduce the survival of species and organisms transferred in ballast water (environmental mismatch, i.e. different salinities and / or water temperatures).
- The duration of the voyage – i.e. length of time between ballast water uptake and discharge - may also be a factor in determining the number of surviving organisms.

Some other important issues concerning 'risk'

- It is considered by some experts that the longer the ballast water has been in the tanks, the less likelihood there is of survival of aquatic organisms and pathogens.
- Keeping the ballast water onboard as long as possible does not eliminate the risk of species transfer.
- Living organisms were found inside ballast tanks even after three months

Some other important issues concerning 'risk'

- Species reproduction may occur in ballast tanks under certain conditions.
- Under certain circumstances it may be possible to determine if one or more target species known to be present in the water of a specific port, have been taken up by a ship during ballasting.

Some other important issues concerning 'risk'

- Port States are encouraged to carry out biological baseline surveys in their ports to assist in preparing their port.
- These results can be used in assessing potential risk (i.e. presence/absence of target

Two Approaches

- The selective approach under which vessels are usually categorised as ‘high’, ‘medium’ or ‘low’ risk, depending on the BW uptake port/previous history
- The blanket approach under which all ships are considered to pose some (unspecified level) of risk and therefore all are treated equally

Recognising the risk factor

- Recognising the risk factor enables the CME system to target the high risk vessels to ensure full compliance with the BWM requirements.
- At the same time, this optimises the resources used for CME functions.
- **The greater the risk posed by a particular ship, the greater effort should be developed, through the CME, to ensuring that it complies with the BWM requirements**

Recognising the risk factor

- The risk assessment may also result in the identification of low risk vessels which may then be exempted from any BWM requirements

Approaches to Risk Management

- *Uniform application*
 - all vessels considered to pose the same risk & are treated uniformly
 - simple to administer but may result in unnecessary burden on some ships
- *Selective approach*
 - requirements based on individual assessment for each ship (high risk/ low risk)
 - more complex to apply but beneficial for compliant ships

Risk Analysis

- **Applying the risk analysis technique**
 - Risk identification
 - Risk assessment
 - Risk management
- **Aid to decision making**
- **Convention makes provision for exemptions based on Risk Assessment**
- **GloBallast has developed a GIS based risk assessment methodology, which has been further developed by Turkey (see presentation on second day)**

Port Biological Baseline Survey

- To establish a baseline to monitor the effectiveness of the management plan

Provides a list of native and non-native species in the Port

May aid the Risk Assessment process

Not a prerequisite for the Port BWM Plan development

No or ineffective CME

- What are the risks of not applying CME effectively?
 1. Damage to ecosystem
 2. Increased risk to human health
 3. Adverse impact on resources e.g. Fisheries, aquaculture, shore line industries etc.
 4. Queries from political leaders, media, affected parties, members of public
 5. Management of the Administrations
 6. Liability and compensation