ICOMIA Environment Committee

# GLOBAL ENVIRONMENTAL LEGISLATION GUIDE

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Edition July 2011
3rd Update

# UPDATES

# Global Environmental Legislation Guide

**Updates are drafted in red**

**Attachments:**

1. Factsheet zinc oxide
2. Factsheet related to BREF documents, belonging to the IED Directive of EU legislation, Directive 2010/75/EU on industrial emissions (review of integrated pollution prevention and control/2008/1/EC )

**Updates:**

- New: upcoming rules in China
- EU:
  - Recast/review of nine directives
  - Developments of new directives
- US:
  - Federal, including styrene
  - State level
- General themes, strategies/policies and IMO:
  - Loss of biodiversity (UN) and IMO bio-fouling guidelines
  - Noise/sound and underwater noise
  - Styrene (with differentiation in emissions and exposure)
  - Recycling in coordination with the international policy on “waste”
  - Strategies/policies on themes regarding air, water and ground/soil

# ICOMIA Environment Committee - Global Environmental Legislation Guide

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**Introduction**

The Global Environmental Legislation Guide will provide ICOMIA members with information on global environmental legislation. This guide will offer a general overview and further detailed information. The ICOMIA fact sheets will supply relevant data.

The environmental guide will be updated every quarter by ICOMIA's Environment Manager and is intended as the principal reference document. Therefore MIAs are requested to supply ICOMIA's Environment Manager with the latest environmental legislations that might affect our industry.

The environmental guide is divided into the following regions and/or continents and international organisations:



## I. Industry related legislative developments within Australia/Asia

**Australia:**

1. BIASA and HHA Approval for Grey water Treatment Systems – Commercial River Craft

The aim of the regulation is to manage grey water discharge. As of 31 December 2007 (for all newly constructed vessels), 31 December 2009 (for existing commercial vessels in survey and permanently occupied vessels) and 31 December 2010 (for all other vessels) all vessels must manage grey water discharge. An on-board wastewater treatment system must obtain the following discharge:

- Suspended solids <50mg/L
- Biological oxygen demand (BOD) <30mg/L
- Total grease <15mg/L
- Nitrogen <10mg/L

- Phosphorus <1mg/L
- Enterococci <40 cells/100mL (requires disinfection)

Please note that dilution is not acceptable.

2. Code of Practice for vessel and facility management

**The aim is to protect South Australia's waterways, inland or marine.**

This code embraces the prevention of pollution that may arise from the construction, use and maintenance of vessels and related facilities. It provides guidance for ship and boat builders and repairers, shipping companies, maritime construction engineers, fishing organisations, yachts people and even the lone enthusiast who occasionally goes to sea in a 'tinny' with fishing rod and icebox on board. The code is for boaters who earn a living from the sea as well as for the ones who use south Australian waters for holidays, recreation and sport.

South Australia's Environment Protection Authority has drafted the code with the assistance of a community-based advisory group including the recreational marine industry, whose members have wide-ranging interests in the waterways. Members of this advisory group volunteered to contribute to the code and acted in an honorary capacity.

3. National bio fouling management - Guidelines for recreational vessels

The aim of these guidelines is to help recreational craft owners and operators reducing the risk of spreading marine pests by managing bio fouling on vessels.

**Issues for the recreational marine and superyacht industries**
It should be noted that legislations, regulations and byelaws might vary between different jurisdictions and ports in Australia. Consequently the guidelines do not purport to state what is necessary or sufficient to comply with laws applying in any place.

4. Proposal for gasoline engine exhaust emissions requirements

Engine exhaust and fuel system evaporative emissions' requirements are entirely in the hands of the Australian Federal Government. A regulatory impact statement has been issued with comments required by the end of July 2010.

**Further actions**
AMIF is invited to attend the briefing session to report to the industry and coordinate actions.

5. Recycling Expanded Polystyrene Australia;

In the 1990's, the Australian authorities and the producers of Expanded Polystyrene (EPS) produced boxes identifying a significant waste and disposal problem with a variety of EPS

packaging. Recycling Expanded Polystyrene Australia (RESPA) was established to assist authorities and industry with the management of EPS related issues.

REPSA is committed to the continued success of EPS recycling in this sector. It provides a forum for discussion of the environmental issues relating to the use and recycling of EPS, as well as acting as the main body when dealing with public, government and business misconceptions on the recyclability and value that EPS offers.

**Issues for the recreational marine and superyacht industries**
One of the topics is the recycling/reclaiming/disposal of "old" marina pontoons, which are covered with cement and filled with foam. The marine pontoons were mainly manufactured during the 1970's and are used worldwide as floating pontoons in marinas and pleasure craft harbours. It is likely that the pontoons soon have to be replaced by new ones. Recycling or re-use of the foam and or cement cover will be considered.

**Asia**

1. **Hong Kong**
2. **China**

1. **The Hong Kong and Guangdong Proposed Volatile Organic Compounds Regulations**

The proposed volatile organic compounds regulation sets out the Hong Kong special administrative region government's proposed regulatory scheme for the reduction of volatile organic compound emissions (VOC's) from vehicle refinishing paints, marine vessel paints and pleasure crafts used in Hong Kong.

The Hong Kong regulation is based on regional air quality goals. To improve the air quality of the Pearl River Delta region, the Hong Kong authorities and Guangdong provincial government reached a consensus to reduce the regional emissions major pollutants like sulphur dioxide, NOx, greenhouse gases and VOC's (VOC's with 55%) by 2010 compared to the emission levels of 1997. This will also improve the smog problem.

**Issues for the recreational marine and superyacht industries**
The Hong Kong regulations differ from the EU rules (which are based at the average approach), by demanding so-called product based limits. This affects the quality aspects of the recreational marine and superyacht industries.

2. **China**

a. Shipyard pollution regulation

Industry discussions with authorities regarding the developments of a Chinese shipyard pollution regulation with the aim of reducing VOC Emissions were held in March.

Although it is official, it has not been decided whether the Chinese authorities will follow the EU approach (averaging) or the US approach (product based limits). It seems as if the Chinese authorities are considering an approach similar to the one in place in the USA and

Hong Kong for the reduction of VOC emissions from coating operations on commercial ships. This approach relies on defining a set of coating categories which are assigned maximum VOC limits to each (product based limits). Following a request of those writing the regulation, paint manufacturers have submitted relevant coating categories, definitions and challenging VOC limits relevant to the Chinese shipbuilding industry.

A draft regulation is expected in early 2012. The industry will then have one or two months to leave their comments. Following this period, the final draft will be sent to the Chinese Ministry of Environmental Protection for approval. A final regulation is expected in 2012. The yacht market is excluded from this regulation as it only applies to the large commercial shipyards of China. It is unclear whether superyachts are within the scope of the new regulation. At a later stage, coatings applied to oil rigs and similar structures within shipyards will also be regulated. The drafters have indicated that additional categories and VOC limits relevant to this sector will be added to the pollution regulation at this time.

**Issues for the recreational marine and superyacht industries**
The Chinese regulations differ from the EU rules (which are based at the average approach), by demanding so-called product based limits. This affects the quality aspects of the recreational marine and superyacht industries.

**Actions**
ICOMIA will in close coordination with the paint industry approach the Chinese authorities in order to lobby the "averaging approach" in the upcoming Chinese shipyard pollution regulation.

b. Progress of China RoHS (June 2011) (see EU recasts of RoHS Directives 2002/95/EC and 2002/96/EC)

Continuous regulatory work has and will be carried out on the subject RoHS by the Chinese authorities. The following Chinese RoHS standards were adopted in May 2011 and will come into force 1 August 2011:

- Standards on the requirements of concentration limits for certain restricted substances in electrical and electronic products
- Standards on electrical and electronic products - measurement of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers)

As of July 2011, Chinese authorities are working on the following RoHS standards which should be published shortly:

- Marking for control of pollution caused by electrical and electronic equipment which would replace SJ/T 11364-2006
- Guidance of risk assessment for substances of certain hazardous substances contained in electrical and electronic equipment
- General rules of the screening of restricted substances in electrical and electronic equipment - X-ray fluorescence spectrometry

- Application requirement of soldering process for lead free component

The National Chinese Certification and Accreditation Administration will soon publish "Implementation Rule on Certification on Pollution Prevention and Control of Electrical and Electronic Products" which will define details on the certification of electrical and electronic products.

## II. Industry related legislative developments within EU:

1) Industrial Emission Directive (a framework directive; integration of seven directives and replaces the IPPC directive)
    a. 2008/1/EC Integrated Pollution Prevention and Control (IPPC)
    b. 1999/13/EC Solvent Emissions Directive (SED)
    c. The five other directives 2000/76/EC incineration of waste; 78/176/EC waste from the titanium dioxide industry (plus two other related directives); 2001/80/EC large combustion plant directive repealed with effect as of 1 January 2016
2) Updates: (Paint) Product Directive
3) National Emission Ceilings Directive
4) Updates: Biocidal Product Directive and Biocidal Product Regulation
5) Updates: European Pollutant Release and Transfer Register Directive
6) Waste Directive (framework directive)
7) Updates: Water Framework Directive including the daughter directives
8) Updates: Marine Strategy Framework Directive
9) Update: **R**egistration, **E**valuation, **A**uthorization and restriction of **Ch**emical substances regulation
10) Updates: EU Council; regulations for timber certification to halt deforestation, (also see Lacey Act in USA) Regulation EU - 995/2010 (20 October 2010)
11) Updates: Recasts of directives 2002/95/EC and 2002/96/EC restricting the use of hazardous substances in electrical and electronic equipment and promoting the collection and recycling of such equipment.

    1. IED directive; Industrial Emission Directive (2010/75/EU); a recast of seven EU directives into the framework directive IED.

**The Industrial Emissions Directive (IED) came into force 6 January 2011 and must be implemented within two years according to the law (i.e. 7 January 2013).**

The IED is in fact a recast of seven other EU directives which are integrated into the IED:

a) Reviewed EU IPPC directive; 2008/1/EC Integrated Pollution Prevention and Control
b) 1999/13/EC Solvent Emissions Directive (SED)
c) 2000/76/EC Incineration of waste; 78/176/EC Waste from the titanium dioxide industry (plus two other related directives); 2001/80/EC large combustion plant directive repealed with effect of 1 January 2016

**The seven directives (a); b); c) are repealed with effect as of 7 January 2014**

The purpose of the IED is to provide for an integrated approach to the prevention and control of emissions in air, water and soil, to waste management, to energy efficiency and to the prevention of accidents.

- Reduce unnecessary administrative burden
  It is intended to reduce the unnecessary administrative burden and to implement commission conclusions on the thematic strategy of air pollution, soil protection and recycling of waste. In addition to this, it constraints the use of more flexible instruments such as $NO_x$ and $SO_2$ emission trading systems.
- Permits and Best Available Techniques (BAT)
  Activities of the IED must operate according to a permit which should reflect the Best Available Techniques (BAT). The permit conditions will be reviewed within four years after the BAT conclusions have been published. Emission limit values specified in the IED should not be exceeded. However it is possible that some values specified in BAT reference documents (BREFs) for certain activities may be more onerous than the IED. (Please see attached factsheet BAT/BREFs)
- Exemptions
  In certain circumstances, including disproportionate costs compared to environmental benefits, the IED allows competent authorities to set emission limit values that deviate from BREF levels. The limits of the IED must not be exceeded. Temporary derogations are allowed for testing emerging techniques.
- Soil groundwater protection (see also Water Framework Directive)
  IED requires that the operation does not lead to deterioration in the quality of soil or groundwater. It also obliges that permit conditions include appropriate measures to mitigate these and that conditions should be included to require monitoring of soil and groundwater to ensure that the mitigation measures are effective. The frequency of monitoring will be dependent on the type of prevention measures in place. Groundwater monitoring should be undertaken at least once every five years and soil monitoring at least every ten years, subject to risk assessment. Baseline conditions of a site and restoration back to this status are as per the original IPPC directive.
- Waste
  Any waste produced must be dealt with in accordance to the waste hierarchy as per the Waste Framework Directive. Permit applications must include alternative options.

**Effects/issues of the Industrial Emission Directive (2010/75/EU) for the recreational marine and superyacht industries:**

- Environmental permit requirements and relation to Best Available Techniques
- Emission levels (within environmental permit)
- Solvent emissions policy and levels (VOC thresholds)
- Priority (hazardous) substances
- Relation to National Emission Ceiling Directive
- Relation to pollutant release and transfer register and European pollutant emission register

A positive development for the marine industry is the increased influence of the Best Available Techniques in relation to the environmental permit.

a. IPPC Directive (96/61/EC) and the review of IPPC Directive 2008/1/EC (IPPC is integrated into the IED)

The original directive (96/61/EC) on Integrated Pollution Prevention and Control (IPPC) was adopted in 1996. The aim of IPPC is to achieve a high level of environmental protection through integrated prevention and control of the pollution arising from a wide range of industrial and agriculture activities such as production of metals, minerals, chemicals, etc. Integrated pollution prevention and control is based on an environmental permit system for installations/companies. Member states must ensure that permits for the concerned industrial processes within the facilities of companies comply with emission limit values.

In essence, the original IPPC Directive aims to minimalize pollution from various industrial sources throughout the European Union.

**The original IPPC (96/61/EC) was reviewed in 2006 and put into effect January 2008, after the introduction of the IED (January 2011) all reviewed rules of IPPC 2008/1/EC had been integrated into the IED, Directive 2010/75/EU.**

b. Solvent Emission Directive 1999/13/EC (SED, integrated in the IED)

The purpose of the Solvent Emissions Directive (SED) is to prevent or reduce the direct and indirect effects of emissions of volatile organic compounds (VOCs) from organic solvent users. The SED is not limited to air releases but relates to the control of fugitive releases to all media. The SED is aimed at the emission limits of the facilities within the (marine) companies and/or yards.

**Issues for the recreational marine and superyacht industries:**

- Many VOCs are harmful to human health. They can also undergo chemical reactions causing the formation of ground-level ozone, an air pollutant. Therefore a reduction of VOC emissions is necessary. In general, the SED operators will have met SED requirements to achieve compliance. This could entail meeting an Emission Limit Value (ELV) in waste gases (mg/CN m3), a fugitive ELV (% of solvent use) or a total emission limit value. These limitations can cause a reduction in the quality of the painting process within the recreational marine and superyacht industries**.**
- Due the review of the product directive (PD - 2004/42/EC) the thresholds for wood coating might be lowered.

**The original SED (1999/13/EC) was reviewed in 2008/2009 with effect as of January 2010, after the introduction of the IED (January 2011) all reviewed rules of SED 1999/13/EC had been integrated into the IED, Directive 2010/75/EU.**

**The directive allows two approaches to achieve compliance:**

a) Product based limits

b) Averaging of solvents use within specified limits known as the reduction scheme by EU authorities (averaging approach).

When the averaging approach is used, the industry has to comply with the following emissions targets:

- Max. 5 – 15 tonnes VOC emissions per year. 37,5% VOC (solvents – solids ratio) in weight;
- 15 or more tonnes of VOC, max. 27,3% VOC (solvent – solid ratio) in weight;
- Wood and metal coatings to be treated separately;
- Wood: max. 15 to 25 tonnes, 61,5% and 25 tonnes and more with a maximum of 50%

**Measurements by using the ICOMIA SED Tool:**
ICOMIA has developed a special management tool to assist MIAs and their members to measure if the Company and or Yard are in compliance with SED targets and levels. The tool is free to download from the ICOMIA Website www.icomia.org. The yards and boat builders can use the tool for important production management information.

***The Averaging of Solvent Emissions Content Methodology explained***
*This methodology looks at whether the total amount of solvent used over a 12-month period is within the set target of the emission limit or reduction scheme that is the average solvent content of the total input. Meeting VOC emission restrictions usually means compromises in product performance especially for topcoats where the required high performance finish cannot be achieved with low VOC products.*

*Compliance is left to the facility-operator/yard to achieve in the most economical fashion. The methodology requires each shipyard to decide, within its installation, which painting systems will be used at each stage of the build. Technological developments, client's demands, the technological demands of the paint warranty system and the quality level of the product vary quite significantly from one shipyard and contract to another. The ultimate objective is to meet the overall limit value in VOC emission.*

**Further actions:**

- ICOMIA, appointed as stakeholder for the SED, will participate in the IED forum related to the SED rules and in the review of the particular BREF documents of the SED activities as is described in the annexes of the IED/SED. (See IED Environmental permits, BAT/BREFs and BREF factsheet.)
- ICOMIA will lobby in coordination with the paint industry for the "averaging approach" (concerning the marine industry) in other parts of the world.

c) The five other in the IED integrated directives are:

Directives 2000/76/EC Incineration of waste; 78/176/EC Waste from the titanium dioxide industry (plus 2 other related directives); 2001/80/EC Large combustion plant directive repealed with effect as of 1 January 2016.

These directives will have not a direct effect or impact on neither the recreational marine industry nor the superyacht industry.

2. Review and implementation of Paints Directive/Product Directive (PD) 2004/42/CE

The purpose of the directive (PD-2004/42/CE) is to limit emissions of Volatile Organic Compounds (VOCs) due to the use of organic solvents in certain paints, varnishes and vehicle refinishing products. The aim is to control the VOC content of certain paints, varnishes and vehicle refinishing products on the market. All products covered by the regulations must be labelled to indicate its volatile organic compound content. In summary, the directive is focused on product based limitations of VOCs for the purpose of offsite activities.

The review of the PD aims to complement national measures in order to ensure compliance with the VOC emission ceilings as set out in Directive 2001/81/EC on national emission ceilings for certain atmospheric pollutants ("NEC Directive").

The products covered by the Paints Directive are paints and varnishes applied to buildings, their trim, fittings and associated structures for decorative, functional and protective reasons as well as products for vehicle refinishing.

The Paints Directive requires that products placed on the market after 1 January 2007 and falling under its scope does not exceed the VOC content limit values set out in Annex II. For paints and varnishes, stricter VOC limit values have been applied in a second phase since 1 January 2010.

**Issues for the recreational marine and superyacht industries:**
ICOMIA was concerned that including the European recreational marine and superyacht industries in the PD would prevent EU yards from maintaining their quality of finished articles.

Thanks to the ICOMIA EURMIG lobbying in 2008/2009, the recreational marine and superyacht industries are excluded from the PD. The only remaining issue is wood coating, which is important for interior and furniture producers.

**Further actions**

- Transferring the marine related wood coating processes of the PD to the SED/IPPC
- New thresholds expected for wood coating within SED/IPPC

3. EU Directive on National Emission Ceilings (NEC) 2001/81/EC

The NEC Directive sets upper limits for each member state for the total emissions in 2010 of the four pollutants responsible for acidification, eutrophication and ground-level ozone

pollution (sulphur dioxide, nitrogen oxides, volatile organic compounds (VOCs) and ammonia), but leaves it largely to the member states to decide which measures – on top of community legislation for specific source categories - to take in order to comply. The NEC Directive has been amended as part of the accession of new EU member states. A consolidated NEC includes the entire community as of 1 January 2007.

Parallel to the development of the EU NEC Directive, the EU member states alongside the Central and Eastern European countries, the United States and Canada have negotiated the "multi-pollutant" protocol under the convention on long-range trans-boundary air pollution (the so-called Gothenburg protocol, agreed in November 1999). The emission ceilings in the protocol are equal or less ambitious than those in the NEC Directive.

**EU Emission ceilings for 2010 (SO2, NOx and VOC)**

- SO2 - 7 832 Kilotonnes
- NOx - 8 180 Kilotonnes
- VOC - 7 585 Kilotonnes: 15% of total VOC emission applies to coating activities

**Issues for the recreational marine and superyacht industries**

Should individual member states fail to achieve their NEC targets, they will be required to take additional measures in order to achieve them. Consequently it is possible that a facility that is meeting the SED/IPPC requirements may be directed by their national/regional authorities to further reduce their emissions to meet the national targets.

**Update:**

According to the European Community Directive 2001/81/EC (NEC directive), member states had to reduce their emissions of certain atmospheric pollutants under national emission ceilings by 2010. The emission ceilings are fixed for four pollutants (ammonia, nitrogen oxides, sulphur dioxide and volatile organic compounds) for each member state and for the European Union as a whole. The main objective of the directive was to improve the protection of the environment and human health against risks of adverse effects from eutrophication, acidification and ground level ozone.

Member states were obliged to report annually on emissions and emission projections until 2010. In addition to this, in 2002 and 2006 they had to establish a national program detailing the planned measures in order to reach the ceilings.

The commission has decided to link this report to the preparation of the thematic strategy on air pollution, presented in the 6$^{th}$ Environmental Action Programme 1. In order to gather relevant scientific information with a view to propose this thematic strategy, the commission launched the Clean Air for Europe (CAFE) program 2 (See IED and PPD).

## Comparison of emissions and projected emissions with the NECD emission ceilings for 2010

All member states submitted emission data and provided projection data required by the directive in the latest (2009) reporting to the commission in 2010. Fourteen member states anticipated they would meet all four of the pollutant-specific emission ceilings specified in the NECD, with the remaining thirteen member states indicating that they would miss at

least one of their respective ceilings (Table ES.1). This was similar to the previous reporting round (2008). Following the changes to their reported projections, Poland anticipated meeting its emission ceilings for all four pollutants, whereas Malta no longer did.

In last year's report of the commission (see Environment Guide 2), for many member states the 2010 emission ceiling for NOX was the most challenging. Eleven member states now report that they anticipate missing it, based on the reported 'with measures' projections. Three member states (Austria, Portugal and Spain) indicated that they will miss their NMVOC ceiling; three member states (Germany, the Netherlands and Spain) expect to miss their NH3 ceiling and one member state (Malta) anticipates missing its SO2 ceiling.

**Note: In the 2008 report by the commission, the national VOC ceilings were exceeded by the member states France, Spain, Portugal and Poland. In the recently published NEC 2009 report, the commission reported that only the member states Austria, Portugal and Spain have in fact exceeded the VOC emission ceilings.**

The results of the contracts and studies will contribute to the review report as required according to the NEC directive. However, additional analysis will be necessary to cover all aspects of the review as defined in the directive itself. As a complement to the report and review requirements defined in the directive, the commission wants to analyse some aspects of the implementation in order to propose new initiatives for the framework of the future thematic strategy on air quality.

The objective of the assignment is to provide support to the commission in the review of the NEC Directive and to analyse some aspects of its implementation.

**ICOMIA's Environment Manager will draft a NEC factsheet (after the publications of the MSs National Reports regarding 2010) about the concern of potential measures which are affecting our industry.**

4. Biocidal Product Directive (BPD) 98/8/EC and the review of BPD into Biocidal Product Regulation (BPR)

The European directive (BPD) provides a framework of regulations that apply to the marketing of biocidal substances and products. The goal of the directive is to coordinate these regulations among the different member states. The BPD requires the authorization of a wide range of biocide products as well as non-agricultural pesticides (i.e., wood preservatives, public hygiene insecticides, rodenticides, surface biocides and antifouling paints). Only biocidal products that contain an active substance, which is listed within the Directive, will be authorized for use.

**Review of BPD 98/8/EC into Biocidal Product Regulation (BPR - Com 2009/67)**
On 12 June 2009, the European Commission adopted a proposal for a regulation concerning the use of biocidal products and placement on the market. The proposed regulation will repeal and replace the current BPD 98/8/EC.

The objective of the BPR proposal is to improve the functioning of the internal market in biocidal products while maintaining the high level of environmental and human health protection. The proposal will be built on the principles laid down in Directive 98/8/EC, in particular the two-tier authorization process: firstly; the inclusion of the active substance and secondly; the authorization of the biocidal product. The proposed regulation is scheduled to come into force on 1 January 2013.

**Issues for the recreational Marine and superyacht industries**

- Active biocide substances used in AF Coatings have to comply with the BPD and in due course with the BPR,
- Companies need to be aware that the Priority Substances Directive includes 'phase-out' dates and reduction requirements for certain biocides. Since this directive also is under review there might be differences between the directive and the BPR,
- Until 2013 national member state regulations will differ from each other,
- When a product like a boat or ship is treated with a product covered by the Biocide Product Regulation it will have to be labelled in the required manner.

**Update:**

Within the assessments of the substances in the BPD and BPR and in regards to the application and removal of AF paints, Do It Yourself activities are a great concern. This can potential affect the current DIY activities at marinas and winter storages (R&M Yards as well).

**Notes:**

- On a national and/or regional level some member states still have issues with copper as biocides. These issues are still one of the main topics in the approach of the authorities,
- For this reason, the industry commences with a study where the effects of bio fouling will be compared to the effects of BPR approved biocides, such as copper,
- One of the examples is the issue in the Baltic area around the use (as a non-biocide) of zinc oxide (See attached fact sheet).

## 5. EU Regulation no. 166/2006/EC; the establishment of a European Pollutant Release and Transfer Register (E-PRTR)

The register will contain information on releases of pollutants in the air, water and land, as well as transfers of waste and pollutants, where emissions exceed certain threshold values and results from specific activities. The register will also cover releases of pollutants from diffuse sources (such as transport including marine sector). The E-PRTR lists the waste and pollutants covered by the register, including greenhouse gases, acid rain pollutants, ozone-depleting substances, heavy metals and certain carcinogens. In particular, it includes those covered by the "IPPC" Directive, for example those associated with metalworking industries, coating activities, chemical plants, paper and timber industries.

How the PRTR will work

First of all, operators carrying out one or more of the activities listed in Annex of E-PRTR will submit information to the competent national authority if their activities involve releases or

transfers of pollutants exceeding certain threshold values. Information gathered at a national level by member states will be reported to the commission and added to the database on a regular basis.

The recently started inventory within the WFD regarding the priority substances and priority hazardous substances will be reported to the E-PRTR so that data can be exchanged. It will be available for competent authorities and the industry.

**Issues of the recreational marine and superyacht industries**
Providing their competent national authorities with required data on an annual basis, the ICOMIA SED tool will be required for VOCs. Other pollutants must be reported using national authorities' requested format.

6. Revisions of EU Directive 2006/12/EC (Waste Framework Directive) into 2008/98/EC.

Directive 2006/12/EC on waste has been revised in order to modernise and streamline its provisions. It sets the basic concepts and definitions related to waste management and lays down waste management principles such as the "polluter pays principle" or the "waste hierarchy". The purpose of the directive (2008/98/EC) is to provide measures to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste, reducing overall impacts of resource use and improving the efficiency of appropriate use.

This directive clarifies and rationalises EU legislation on waste and has replaced the three previous directives since 2008. This is a continuous process.

Therefore, in order to comply with the objectives of this directive, the following targets are applied:

- By 2020, the preparation for re-use and the recycling of waste materials such as paper, metal, plastic and glass from households and other similar origins, shall be increased to a minimum of overall 50 % by weight
- By 2020, the preparation for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials of non-hazardous construction and demolition waste excluding naturally occurring material defined in category in the list of waste, shall be increased to a minimum of 70% by weight
- By 31 December 2014 as the latest, the commission will examine these measures and targets.

**Issues for the recreational marine and superyacht industries**
- Reuse and recycling of waste materials coming from disposed boats/yachts
- Reuse and recycling facilities
- Monitoring and control of "what is waste", related to production processes
- Divided waste facilities for reuse, recycling and waste aimed at the users and production processes

- Cost control

**Further actions:**

- ICOMIA will support actions within the EU Navigation Task Force Group.

## 7. EU Water Framework Directive (WFD) 2000/60/EC

The purpose of the directive is to establish a framework for the protection of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater. It will ensure that all aquatic ecosystems will meet 'good status' by 2015. The directive requires member states to establish river basin districts and individual management plans. The directive envisages a cyclical process where river basin management plans are prepared, implemented and reviewed every six years.

The implementation of the Water Framework Directive raises a number of shared technical challenges for the member states, the commission, the candidate and EEA countries as well as stakeholders (ICOMIA is one of the NGOs/stakeholders) and NGOs. The directive has an ambitious working programme, including the following priority issue:

Expanding the scope of water protection to all waters, surface waters and groundwater by

- Achieving "good status" for all waters by a set deadline
- Water management based on river basins
- "Combined approach" of emission limit values and quality standards
- Getting the prices right
- Getting the citizens involved more closely
- Streamlining legislation

**Issues for the recreational marine and superyacht industries**

The WFD issues for our industry are mostly related to waste water containing priority substances like PAHs, TBT, Mercury, Copper and Zinc coming from point sources, diffuse sources or losses (after dredging). Therefore more attention will be needed for the two daughter directives of the WFD directive in relation to article 1-c of the WFD *(regarding the reduction or phasing out of priority hazardous substances):*

- Groundwater Directive
- Priority Substances Directive

There are two legislative proposals in addition to the water policy of EU:

- Marine Strategy Directive
- Directive on assessment of floods and management

**Further actions:**

ICOMIA – EE will continue attending the relevant WFD meetings and daughter directives including the Marine Strategy Directive and the Directive on Assessments of Floods and Management.

**Global Climate Change:**

Addressing the WFD (Daughter directive 2007/60/EC), the risks of climate change are namely floods, droughts and changing aquatic ecosystems.

Preparing for climate change is a major challenge for water management in the European Union. In the years to come, climate change will increase the likeliness of flooding, droughts and other water related disasters.

The Water Framework Directive provides European countries with a common basis to address these problems. In particular, the directive's river basin approach to water management (centred on the review of river basin management plans every six years) is expected to establish a mechanism to prepare for and adapt to droughts, greater water scarcity and floods.

The EU Directive 2007/60/EC on the assessments and management of flood risks, in combination with the River Basin Management Plans, will take the expected measures of the climate change effects.

EC started with inventory of priority substances;
Pre-meeting of the drafting group which will start working on the preparation of the guidance for the inventory on emissions, discharges and losses of the current 33 Priority Substances (PSs) and Priority Hazardous Substances (PHSs).

**Scope of activities of drafting group:**
The drafting group will focus on the development of technical guidelines for the establishment of inventory on emissions, discharges and losses as requested by the EQS directive of the WFD. They will therefore support the work of the common implementation strategy of the WFD 2000/60/EC. In the final step, the guidelines will be tested and the final draft will be amended according to the findings in the testing phase. *(The control of emissions, discharges and losses of priority substances and priority hazardous substances in the framework of article 16 of WFD (Aug. 2005) is based on the survey of Royal Haskoning in 2003.)*

## 8. Maritime Strategy Framework Directive (MSFD) 2008/56/EC

The aim of the EU Marine Strategy Framework Directive (adopted in June 2008) is to protect the marine environment across Europe. It aims to achieve good environmental status of the EU marine waters by 2020 and to protect the resource base, which marine-related economic and social activities depend on. The Marine Strategy Framework Directive constitutes the environmental component of the EU future maritime policy. The goal of the MSFD is in line with the objectives of the WFD (2000/60/EC) which requires surface freshwater and ground water bodies - such as lakes, streams, rivers, estuaries, and coastal waters - to be ecologically sound by 2015 and that the first review of the River Basin Management Plans should take place in 2020.

**Issues for the recreational marine and superyacht industries**
The marine strategies to be developed by each member state must contain a detailed assessment of the state of the environment, a definition of "good environmental status" at regional level, the establishment of clear environmental targets and monitoring programs.

The method of assessments and the aim of the targets within the program of good environmental status will have potential effects on our industries.

**Further actions**

- Special attention to the assessments within the good environmental status program
- Overlap between WFD and the MSFD, is of a particular concern to our industry
- Noise and underwater noise (See international overview noise policy and measures)
- Aspects of diffuse sources (emissions) coming from production plants and products

## Good Environmental Status (GES)

The commission decision on criteria and methodological standards of good environmental status (GES) of marine waters in the framework of Article 9 (3) of the MSFD contains a number of criteria and associated indicators for assessing the status. This is in relation to the eleven descriptors of good environmental status. The criteria build on existing obligations and developments within the EU legislation, covering further relevant elements of the marine environment that are not yet addressed in the acting policies.

It mainly addresses methodological standards that are available under other community legislation. Further development of methodological standards is required in close coordination with the establishment of monitoring programmes.

**Qualitative descriptors for determining GES**

- Descriptor 1: Biological diversity (See UN and IMO policy)
- Descriptor 2: Non-indigenous species
- Descriptor 3: Population of commercial fish
- Descriptor 4: Elements of marine food webs
- Descriptor 5: Eutrophication
- Descriptor 6: Sea floor integrity
- Descriptor 7: Alteration of hydrographical conditions
- Descriptor 8: Contaminants
- Descriptor 9: Contaminants in fish and seafood for human consumption
- Descriptor 10: Marine litter
- Descriptor 11: Introduction of energy, including underwater noise

Descriptor 10: Marine litter

Marine litter is a global concern, affecting all the oceans of the world. Every year, approximately 10 billion tons of litter ends up in the ocean worldwide, turning it into the world's biggest landfill and thus posing environmental, economic, health and aesthetic problems. Most of the persistence of marine litter is the result from poor practices of solid

waste management, lack of infrastructure and a lack of awareness of the public at large about the consequences of their actions.

**Plastic Soup**: The Great Pacific Garbage Patch is a layer of rubbish in the Pacific Ocean which has been growing since the 1950s. It is the result of whirling currents, pulling rubbish from the world's oceans. It floats between California and Hawaii and is the world's largest landfill. According to estimates, it has pulled 3.5 million tons of rubbish and spans 3.43 million km2 - the size of Europe. The EU has one at its front door - the Atlantic Garbage Patch.

- The aim within the MSFD is that properties and quantities of marine litter do not cause harm to the coastal and marine environment.

**Issues for the recreational marine and superyacht industries**

- The recreational marine and boating industry needs clean and healthy waters; therefore marine litter pollution is a threat to our industry.

Cleaning up the oceans is an option; however it is not solely the responsibility of our industry. The solution is to tackle the problem at the start and prevent littering. The industry can expect a growing demand for recycling, re-use and implementing a wider and more specific infrastructure at the marinas.

Descriptor 11: Energy and underwater noise

The MSFD requires member states to work towards Good Environmental Status (GES) in 2020. Descriptor 11 of the MSDF requires the underwater noise to be at levels that do not adversely affect the marine environment.

A choice for two indicators of underwater noise was made in the commission decision on 1 September 2010, but there was general agreement within member states and stakeholders/industry that further information was needed in order to come to a common understanding on how to use and interpret these indicators.

The EC decided that a technical subgroup on noise and litter should address this issue. NL and UK have agreed to co-chair the TSG noise. The marine directors meeting in December 2010 approved the terms of reference of the TSG noise.

The TSG noise is foreseen to run until the end of 2011 under its current terms of reference. Defining Good Environmental Status remains the responsibility of the member states as opposed to TSG noise. The TSG can, however, share ideas on best practices and developments on GES.

**Progress of TSG Noise**

TSG noise met for the first time on 16 and 17 February 2011 at TNO in Delft, the Netherlands. The attendance of the meeting was high. A second meeting is planned 6 and 7 October 2011 in London. A proposal for a work plan was made before the meeting. The proposed work plan was based on the tasks from the terms of reference. An objective at the meeting in Delft was to adopt the work plan and to agree on the products, task managers and people that will contribute to the product. During the meeting this work plan was discussed and adapted where necessary.

**Issues for the recreational marine and superyacht industries**
Noise and underwater noise is a topic that keeps being raised by national, European and international authorities within current and upcoming legislations and as a subject of interest by industry. At the moment the focus is clearly on underwater noise.

During the MSFD meetings and meetings regarding data/information exchange between member states and EC, it was noticed that "navigation and/or shipping" automatically is translated in affecting marine mammals and/or other species, including fish.

**Further actions:**
To respond to the noticed approach to "navigation and/or shipping automatically is and or will be translated in affecting marine mammals and/or other species, including fish" by the national and or European authorities and Environmental NGO's we need information, data and knowledge.

"It is difficult to mount a defence without information. If we have to rely on assertion – 'You are noisy' - and counter assertion – 'We are not' - the loudest voice will win, and there are some loud voices out there. If we have evidence, we can have an informed debate"

The European Commission recognised the importance of relevant data and knowledge, and therefore underwater noise will be in the next FP7 call.

**Note: In the next edition of the environment guide a complete overview of the progress of the eleven descriptors related to the Good Environment Status will be presented. This will be after the EC meeting in September.**

9. Registration, Evaluation, Authorization and Restriction of Chemical substances Regulation (REACH)

REACH (**R**egistration, **E**valuation, **A**uthorization and Restriction of **Ch**emical substances Regulation) is a European community regulation on chemicals. The new law came into force on 1 June 2007.

The aim of REACH is to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances. At the same time, innovative capability and competitiveness of the EU chemicals industry should be enhanced. The REACH regulation gives greater responsibility to the industry to manage the risks from chemicals and to provide safety information on the substances. Manufacturers and importers will be required to gather information on the properties of their chemical substances, which will allow their safe handling, and to register the information in a central database run by the European Chemicals Agency (ECHA) in Helsinki.

The agency will act as the central point in the REACH system. It will manage the databases necessary to operate the system, co-ordinate the in-depth evaluation of suspicious chemicals and run a public database in which consumers and professionals can find hazard information.

**Issues for the recreational marine and superyacht industries**

Although REACH gives greater responsibility to the industry, it is at the same time more complicated to comply with and import, manufacture or use products/substances within REACH.

**First EU REACH deadline**

The first EU REACH registration deadline was 1 December 2010. A total of 4,300 substances were registered with the European Chemicals Agency. Switzerland has incorporated the EU CLP regulation through the amended ordinance of 10 November 2010 of the protection against hazardous substances.

The EU is currently working on Nano Inventory from REACH.

**REACH Fact Sheet**

The ICOMIA Environment Manager will draft a fact sheet aimed to the recreational marine and superyacht industries.

REACH reinforces communication obligations along the supply chain between manufacturers, importers of substances and downstream users. Downstream users may be formulators of preparations (e.g., the paint industry). The European Commission considers them being “first level downstream users”. Other industries, however, represent “second level” downstream users, meaning that these industries mainly use but do not produce substances or preparations in their engineering processes.

E.g., the second level downstream industries use oils, lubricants, inks, glues, metals, alloys and plastics when producing articles. Most companies, yards and marinas within the recreational marine and superyacht industries are considered being a “second level downstream users”.

To give the industry more detailed information in order to define what their responsibilities are regarding REACH, ICOMIA EE drafted a comprehensive fact sheet aimed to the recreational marine and superyacht industries with the integration of the latest progress and developments of REACH.

10. Rules For Timber Certification to Halt Deforestation, (see Lacey Act in USA); Regulation EU - 995/2010 (20 October 2010)

The European Parliament and European Council have approved the legislation which prohibits the sale of timber logged illegally under the rules of the country of origin. In addition to this, companies must use a system of 'due diligence' to ascertain that the timber they sell in the EU was harvested legally. It was published in the EU under the name of “FLEGT Action plan” and in the US as the “Lacey Act”.
The FLEGT Action Plan contained commitments to examine domestic legislation in EU member states, to analyse whether it could allow action against imports of illegal timber, and to examine options for additional legislation, should existing domestic legislation prove inadequate. There are documents below which contain studies published on this issue.

**Further amendments to the implementation of the regulation are currently being negotiated and will be published in due course.**

The FLEGT Action Plan contained commitments to examine domestic legislation in EU member states, to analyse whether it could allow action against imports of illegal timber and to examine options for additional legislation, should existing domestic legislation prove inadequate. There are documents below that contain studies published on this issue.

In accordance with the goal of the communication, namely to ensure that only timber products that have been produced in accordance with the national legislation of the timber-producing country enter the union, the union has been negotiating Voluntary Partnership Agreements (FLEGT VPAs) with timber-producing countries which create a legally binding obligation for the parties to implement a licensing scheme and to regulate trade in timber and timber products identified in those FLEGT VPAs.
EN 12.11.2010 Official Journal of the European Union L 295/23

**Issues for the recreational marine and superyacht industries**

The newly agreed legislation, published in November 2010, is intended to work alongside the EU FLEGT licensing system, which identifies legal timber and timber products in producer countries and licenses them for import to the EU. This system is being developed through the negotiation of a series of voluntary partnership agreements (VPAs) with cooperating producer countries. For a variety of reasons, some countries that export timber to the EU will not join the proposed VPAs, at least not in the immediate future.

The question of what measures could be taken to exclude illegal products exported from non-VPA countries to the EU have therefore led to a debate on 'additional options'.
After a long period of analysis and consultation, the commission announced its conclusions with the publication of the draft 'due diligence' regulation in October 2008. The draft regulation was debated by the European Parliament and Council in 2009. The council's revised version was published in March 2010 and following a debate on potential strengthening amendments in the Parliament's Environment Committee, the final legislation was approved by parliament in July 2010. It was later formally approved by the council on 11 October 2010.

11. Recasts of Directives 2002/95/EC and 2002/96/EC restricting the use of hazardous substances in electrical and electronic equipment and promoting the collection and recycling of such equipment.

EU legislation restricting the use of hazardous substances in electrical and electronic equipment (Directive 2002/95/EC) and promoting the collection and recycling of such equipment (Directive 2002/96/EC) has been in force since February 2003. The legislation provides for the creation of collection schemes where consumers return their used e-waste free of charge.

**Aim:**

The objective of these schemes is to increase the recycling and/or re-use of such products. It also requires heavy metals such as lead, mercury, cadmium and hexavalent chromium and flame retardants such as polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE) to be substituted by safer alternatives.

Despite rules on collection and recycling, only one third of electrical and electronic waste in the European Union is reported as separately collected and appropriately treated. A part of the other two thirds is potentially still going to landfills and to sub-standard treatment sites in or outside the European Union. The collection target of four kg per person per year does not properly reflect the amount of WEEE arising in individual member states. Illegal trade of electrical and electronic waste to non-EU countries continues to be identified at EU borders.

Inadequately treated e-waste poses both environmental risks and health hazards. In December 2008, the European Commission therefore proposed to revise the directives on electrical and electronic equipment in order to tackle the fast increasing waste stream of such products. The aim is to increase the amount of e-waste that is appropriately treated and to reduce the volume that goes to disposal. The proposals also aim to reduce administrative burdens and ensure coherency with newer policies and legislation covering e.g. chemicals and the new legislative framework for the marketing of products in the European Union.

The commission proposes to set mandatory collection targets equal to 65% of the average weight of electrical and electronic equipment placed on the market over the two previous years in each member state. The recycling and recovery targets of such equipment would cover the re-use of whole appliances and weight-base targets would increase by 5%.

Member states with a high consumption of electrical and electronic equipment would have more ambitious collection targets under the new directive, while others with lower consumption levels would have targets that are appropriately adapted.

**Updates:**

EU RoHS recast, which was approved by the council of the European Union on 27 May 2011, is still one of the top issues. The commission initially submitted the recast of directive 2002/95/EC to the parliament on 3 December 2008. The scope of the directive would be extended to cover all types of electrical and electronic equipment (EEE), with the exception of those specifically excluded by the directive (e.g. active implantable medical devices or photovoltaic panels).

**Issues for the recreational marine and superyacht industries**

An effect could be an increase of the facilities and obligations for producers as well as suppliers; waste facilities at marinas and R&M yards.

## III. Industry related legislative developments within USA

1. National emission standards for hazardous air pollutants: shipbuilding and ship repair (surface coating) operations

In 2007, EPA took a direct final action on the amendments to the national emission standards for hazardous air pollutants (NESHAP) for shipbuilding and ship repair (surface coating) operations under the authority of the Clean Air Act (CAA). These direct final regulation amendments close an unintended gap in the scope of activities subject to the NESHAP by amending the definition of ''ship'' to include all marine or freshwater vessels that are (1) 20 meters or more in length.

**Issues for the recreational marine and superyacht industries**

The EPA direct final regulation did not clarify the difference between larger pleasure craft - superyachts and ships. The issue is of importance to the large yacht industry. It was inappropriate of the agency to delete the definition of "pleasure craft" and amend the definition of "ship" to include surface coating operations of recreational boats over 20 meters in the shipbuilding and ship repair (surface coating) operations MACT ("Shipbuilding MACT").

**Results**

The EPA direct rule was redrawn after receiving the comments from NNMA, ICOMIA and the paint industry.

**Further actions**

Based on the comments, EPA will propose a new regulation coordinated with the industry. A positive detail is that the former competent EPA officer would like to be informed how to integrate the EU averaging approach. This is based on his input and the results of the International Superyacht Coatings Conference.

**Update**

See below the update of the CTG's

2. Control techniques guidelines in lieu with regulations for miscellaneous metal product coatings etc.

EPA proposed for Control Techniques Guidelines (CTGs) in lieu of regulations for miscellaneous metal products coatings, plastic parts coatings, auto and light-duty truck assembly coatings, fibreglass boat manufacturing materials and miscellaneous industrial adhesives. The purpose of the CTGs is efficiency of national regulations regarding VOC/HAP emissions from coating activities and boat manufacturing.

**Issues for the recreational marine and superyacht industries**

The proposed CTGs will potentially impact the control of emissions at the production facilities and will overlap other EPA regulations, like NESHAP.

**Further actions**

EPA adopted the comments from the industry relating to production of fibreglass boats. The comments relating to the coating activities are still pending. ICOMIA and the paint industry received a proposal from EPA regarding to the averaging approach, which will be supported by industry.

**Updates:**
The adoption of CTG's by the individual American states continues, despite EPA releasing a memo suggesting that they work with the industry to form a more suitable regulation. The state of Missouri has indicated that it intends to adopt the industry position. The marine and paint industries intend to use this as an example to other states of a guideline that is acceptable to the industry in order to encourage others to adopt something similar. It is noticed that the memo EPA sent out has caused confusion. Therefore the industry will request that EPA consider regulating VOC emissions from pleasure craft coatings in a national regulation instead. NMMA continues to lobby on Capitol Hill and has renewed focus on the IP identified states of Florida, Rhode Island and New Jersey.

3. GHG emission factor project tentative for the summer of 2010

In 2009, USEPA finalised a rule requiring engine manufacturers to report emissions of carbon dioxide CO2, nitrous oxide N2O and methane CH4. Small business engine manufacturers, defined as having less than 500 employees, are exempt from this reporting requirement.

The EPA GHG testing requirements specify that catalysed engines will need to report N2O and CH4 emissions by model year 2012. Non-catalysed engines will need to report CH4 emissions only.

**Further actions;**
NMMA is planning to collect N2O emissions from approximately five or six boats with catalysed stern drive/inboard engines operating on the Fox River in Illinois. The CH4 samples from outboards and PWC will be collected at NMMA member engine test facilities and finally reported to industry and competent authorities.

**Issues for the recreational marine and superyacht industries**
Not all but several NMMA members have the capability to measure CH4 or have the capability to contract this work out to private labs. The FTIR at Argonne will also provide CH4 from the catalysed SD/I engines, so this data is a supplement to the data from the manufacturers.

4. Clean Boating Act implementation & marine sanitation device standards.

In the Clean Boating Act, EPA exempted recreational vessels of all sizes from its vessel permit. The American industry and NMMA have continued to engage EPA and the U.S. Coast Guard as the agencies study discharges from all vessels and develop the best practices for boaters.

**Further actions**
EPA presented the progress of implementing the Clean Boating Act in its March 2010 report to congress on small commercial vessel discharges, and its examination of marine sanitation device standards. EPA is looking at the MSD standards due to two petitions the agency has received.

**Issues for the recreational marine and superyacht industries**

EPA will have an additional focus on invasive species and copper paint. EPA, along with the Coast Guard, is preparing boaters' best practices. Best practices will look at clean marinas with an additional focus on invasive species (see IMO) and copper based AF paints.

**Note: The state law was not pre-empted so it may still see some additional regulation at state level (California).**

**More water related issues within Clean Boating Act:**

Black water:

Permit issues in U.S. are handled differently for black water. EPA is now looking at MSD standards – two petitions (see above).

In the meanwhile, no discharge zones are growing and NMMA has formed a committee to work with EPA as it decides how to respond to these petitions.

- Grey water discharge is still largely unregulated except for inland lakes. This might change when vessel permits are renewed in five years
- Copper is under attack of all forms of pesticide registration continuing
- NMMA expects to see more in water cleaning bans
- Gulf Oil Spill will result in a rewriting of Oil Pollution Act or other action, it creates opportunity for new mandate
- Invasive species remains a concern but extremely difficult to address in the US. Aquatic invasive species have caused closures to travelling boats (inland). Boats need to be able to dry out (see also IMO update)

**Updates Clean Water Act regarding the marine sanitation devices**

The Clean Water Act is the federal legislation addressing pollution in US waters. According to the legislation, discharges of sewage from vessels are controlled by regulating the wastewater treatment equipment and holding tanks and devices, named the marine sanitation devices (MSDs).

What is MSD?

As regulated in the CWA, a marine sanitation device is any equipment for installation on board of a vessel which is designed to receive, retain, treat or discharge sewage and any process to treat such sewage.

Who is required to use a MSD?

The CWA requires the use of operational and certified MSDs on board a vessel which is equipped with installed toilets and which operates on US navigable waters, including the three mile territorial seas.

The different categories of MSD:

| | | | |
|---|---|---|---|
| **Type I** | Flow-through treatment devices that commonly use maceration and disinfection for the | May only be installed on vessels less than or equal to 65 feet of | Must produce an effluent with:<br>• No visible floating solids<br>• A faecal coliform bacterial |

| | | | |
|---|---|---|---|
| | treatment of sewage | length | count not greater than 1000 per 100 millilitres |
| **Type II** | Flow-through treatment devices that may employ biological treatment and disinfection (some Type II MSDs may use maceration and disinfection) | May be installed on vessels of any length | Must produce an effluent with:<br>• A faecal coliform bacterial count not greater than 200 per 100 millilitres<br>• No more than 150 milligrams of total suspended solids per litre |
| **Type III** | Typically a holding tank where sewage is stored until it can be disposed of at shore-side or sea (beyond three miles from shore) | May be installed on vessels of any length | No performance standard, but pursuant to Coast Guard regulations, a Type III MSD must "be designed to prevent the overboard discharge of treated or untreated sewage or any waste derived from sewage". 33 CFR 159.53(c). |

The CWA sets out the principal framework for regulating sewage discharges from vessels. The vessel sewage is in general controlled by regulating the equipment (MSDs) that treats or holds it through establishment of areas in which the discharge is not allowed (the "no discharge zones"). These no discharge zones are published on the EPA website http://water.epa.gov/polwaste/vwd/vsdnozone.cfm (for each state within the US)

5. Safety standards for pressurized OMTs. (ABYC H-25 )

The implementation date for the EPA and CARB outboard marine fuel tank (OMT) regulation has been extended until 1st January 2011.

**Issues for the recreational marine and superyacht industries**

Issues are arising from fuel spillage due to the five psi pressure requirement. Fuel tank manufacturers are currently well on their way to resolving this issue.

**Further actions**

To ensure that any OMTs offered for sale in the US are safe, the industry (ABYC, NMMA) and the US EPA have been working together to develop a safety standard test protocol. EPA will review the protocol prior to certifying an outboard marine fuel tank. Although EPA does not have jurisdiction for boating safety, they can notify the USCG and ABYC/NMMA of any tank that has not been tested to ensure that the proper steps are taken to ensure public safety.

6. CARB Staff to Finalize Boat Builder Evaporative Emission Rules.

In April 2011, the California Air Resources Board (CARB) staff held a workshop to present the final draft of recreational marine evaporative emission staff recommendations. They plan to present it to their board for approval in September.

**Issues for the recreational marine and superyacht industries**
The proposal contained some very controversial requirements, including onboard vapor recovery (ORVR) and a stringent 5 g/m2/day @ 40oC fuel hose requirement.

By using a combination of inventory data and technical analysis NMMA has been successful in tabling ORVR and convincing CARB staff to revise the fuel hose requirement to a more reasonable 10 g/m2/day at 28oC.

As a replacement for ORVR, fuel cap manufacturers have agreed to develop fill systems that are compatible with Stage II vapour recovery nozzles at gas stations. The diurnal and plastic fuel tank emission standards are more stringent than EPA. Both the canisters and the fuel tanks will be certified to meet both the EPA and CARB requirements.

**Further actions:**
The one requirement in the rule that industry/NMMA has opposed to is the boat builder certification. Following the requirements in the SORE rule (small engine, lawn and garden) CARB will require boat builders to certify vessels and receive a certificate prior to offering a boat for sale in California. The CARB requirements go into effect in 2014, but boat builders will need to certify that they meet the EPA requirements with California starting model year 2012.

7. The U.S. Lacey Act

On May 22nd 2008, the U.S. congress passed a ground breaking law banning commerce in illegally sourced plants and their products — including timber and wood products. The new law is an amendment to a 100-year-old statute, named the Lacey Act after the congress man who first championed it. The Lacey Act sets a ground breaking precedent for the global trade in plants and plant products, acknowledging and supporting other countries' efforts to govern their own natural resources and putting powerful incentives in place for companies trading in these commodities to do the same.

The new U.S. law will:

- prohibit all trade in plant and plant products (e.g., furniture, paper or lumber) that are illegally sourced from any U.S. state or any foreign country
- require importers to declare the country of origin of harvest and species name of all plants contained in their products
- establish penalties for violation of the act, including forfeiture of goods and vessels, fines and jail time

Note: It is important to note that the Lacey Act does not impose U.S. law on other countries. "Illegally sourced" is defined by the content of sovereign nations' own laws. The law applies equally to plants taken, harvested, transported or exported in violation of the relevant laws in any of the 50 U.S. states.

The Lacey Act requires importers to provide a basic declaration for every shipment of plants or plant products. The purpose of these declarations is to increase transparency of the timber and plant trade and enable the U.S. government to properly enforce the law. The declaration must contain:

- the scientific name of any species used,
- the country of harvest,
- the quantity and measure,
- the value

**Issues for the recreational marine and superyacht industries**
The legislation not only bans logs and lumber, but also prohibits all flora- and forest products (ranging from furniture and flooring to paper) made with illegally harvested wood or plant materials.

**Further actions:**
A report to the congress on the implementation of the Lacey Act is due in November. The report is being prepared as this guide went to print. It will also include recommendations for changes. It is likely that any legislative changes would be a part of the 2012 Farm Bill. Any new phase of reporting (including new products to the list required to file declarations) will likely be held off on until the report to the congress is finalized.

## IV. International Organisations

**International Maritime Organisation (IMO):**

A. Ship and yacht recycling (based on the relevant IMO conventions)

The International Maritime Organization (IMO) has started to work on an international convention for the safe and environmentally sound recycling of ships. In principle, the transfer of end-of-life ships from industry to developing countries is covered by international law on the shipment of waste. The European Parliament and non-governmental organisations have demanded action at EU level. (*Some maritime countries are developing national strategies for government vessels and ships flying their flag)*

The Global Environmental Legislation Guide will give the recreational marine and superyacht industries a general overview related to the legislative developments within ship and yacht/boat recycling:

1. Aim/purpose of the recycling regulations
2. Conventions
3. IMO
4. ILO
5. Working Group of IMO, ILO and Basel convention parties
6. EC
7. EPA – US (EPA Australia is following the guidelines of the WG of IOM, ILO and BC /Basel convention parties)
8. ISO

1. The aim/purpose of the IMO convention for the safe and environmentally sound recycling of ships:

The Hong Kong International Convention for the safe and environmentally sound recycling of ships in 2009 was adopted May 2009. It is aimed to ensure that ships, when recycled after reaching the end of their operational lives, do not pose any unnecessary risks to human health or to the environment. The new convention intends to address all the issues around ship recycling including the fact that ships sold for scrapping may contain environmentally hazardous substances such as asbestos, heavy metals, hydrocarbons and ozone-depleting substances. It will address concerns raised about the working and environmental conditions at many of the world's ship recycling locations.

The text of the ship recycling convention has been developed over the past three years with input from IMO member states and relevant non-governmental organisations and in co-operation with the International Labour Organization and the parties to the Basel convention.

Regulations in the new convention cover the design, construction, operation and preparation of ships so as to facilitate safe and environmentally sound recycling, without compromising the safety and operational efficiency of ships, the operation of ship recycling facilities in a safe and environmentally sound manner and the establishment of an appropriate enforcement mechanism for ship recycling, incorporating certification and reporting requirements.

Ships to be recycled will be required to carry an inventory of hazardous materials, specific to each ship. Ships will be required to have an initial survey to verify the inventory of hazardous materials, additional surveys during the life of the ship and a final survey prior to recycling. Ship recycling yards will be required to provide a "ship recycling plan", to specify the manner in which each ship will be recycled depending on its particulars and inventory. Parties will be required to take effective measures to ensure that ship-recycling facilities under their jurisdiction comply with the convention.

A series of guidelines are being developed to assist in the convention's implementation.

2. Conventions/conferences:
   - Basel convention in force since 1992 and the technical guidelines for the environmentally sound management of the full and partial dismantling of ships since 2002 (Decision VI/24)
   - London convention, May 2005
   - Hong Kong international convention on the safe and environmentally sound recycling of ships adopted May 2009

3. IMO (RESOLUTIONS):
   a) A.962(23) IMO Guidelines on Ship Recycling. Adopted December 2003
   b) MEPC.113 (50) Ship recycling for the smooth implementation of the amendments to Annex I of Marpol 73/78. Adopted December 2003
   c) A.980(24) Amendments to the IMO Guidelines on Ship recycling (Resolution A.962(230) Adopted December 2005
   d) A.981(24) New legally binding instruments on ship recycling. Adopted December 2005, in force after the Hong Kong convention May 2009, attended by 63 flag states. (Min. required flag states, 15 representing 40% gross tonnage)

The legal instruments are related to:

- The design, construction, operation and preparation of ships so as to facilitate safe and environmentally sound recycling without compromising the safety and operational efficiency of ships
- The operation of ship-recycling facilities in a safe and environmentally sound manner
- The establishment of an appropriate enforcement mechanism for ship recycling, incorporating certification and reporting requirements

4. ILO
   - See also: Joint ILO-IMO-Basel convention working group on ship scrapping
   - Guidelines for Asian countries and Turkey, 2004 (ISBN 92-2-115289-8)
   - Documents of the ILO governing body, 289th session, Geneva, March 2004
   - Basel convention adopts guidelines on the full and partial dismantling of ships, Geneva, December 2002

ILO conventions and recommendations on occupational safety and health, as international instruments that are relevant to ship dismantling:

- Guarding Machinery Convention (No. 119) and Recommendation (No. 118), 1963
- Maximum Weight Convention (No. 127) and Recommendation (No. 128), 1967
- Occupational Cancer Convention (No. 13 9) and Recommendation (No. 147), 1974
- Working Environment (Air Pollution, Noise and Vibration) Convention (No. 148) and Recommendation (No. 15 6), 1977
- Occupational Safety and Health Convention (No. 155) and Recommendation (No. 164), 1981
- Occupational Health Services Convention (No. 16 1) and Recommendation (No. 171), 1985
- Asbestos Convention (No. 162) and Recommendation (172), 1986
- Chemicals Convention (No. 170) and Recommendation (177), 1990

Codes of practices on occupational safety and health relevant to ship dismantling:

- Ambient factors in the workplace, 2001
- Guidelines on occupational safety and health management systems, 2001
- Recording and notification of occupational accidents and diseases, 1995
- Safety in the use of chemicals at work, 1993
- Technical and ethical guidelines for workers' health surveillance, 1992
- Safety in the use of asbestos, 1984
- Occupational safety and health in the iron and steel industry, 1983
- Occupational exposure to airborne substances harmful to health, 1980
- Protection of workers against noise & vibration in the working environment, 1977
- Safety and health in ship building and ship repairing, 1974

5. Working group of IMO, ILO and Basel convention parties

IMO, the International Labour Organization and the conference of parties to the Basel Convention on the control of transboundary movements of hazardous wastes and their disposal established a joint working group on ship scrapping.

The group aimed to promote a coordinated approach to the relevant aspects of ship scrapping with the aim of avoiding duplication of work and overlapping of roles, responsibilities and competencies between the three organizations and identifying further needs. The three organisations believe that ship recycling can contribute to sustainable development, which can only be achieved through the minimization of the environmental, safety and occupational health risks related to the ship dismantling process.

6. **EC**
   - Green paper on better ship dismantling. Brussels, May 2007. (COM (2007) 269 Final). Referring to IMO/ILO/BC.
   - An EU strategy for better ship dismantling. Brussels, November 2008. (COM (2008) 767 final).
   - European parliament resolution of 21 May 2008 on the green paper on better ship dismantling (2007/2279(INI)).
   - Regulation (EC) No 1013/2006 of the European parliament and of the council on shipments of waste amended by commission regulation (EC) No 308/2009
   - 2008/98/EC (Waste Framework Directive) regarding reuse en recycling of materials.

7. **EPA – USA**

Environmental Protection Agency (EPA) jointly develop guidance recommending environmental best management practices (BMPs) to be used in the preparation of dismantling vessels. It also responds to provide national environmentally based best management practices for the preparation of dismantling vessels.
An interagency workgroup, chaired by EPA, was established to develop the BMPs. The workgroup included representatives from the EPA, U.S. Coast Guard, U.S. Navy, MARAD, U.S. Army Corps of Engineers, National Oceanic and Atmospheric Administration and the U.S. Fish and Wildlife Service.

The BMPs are based on the IMO/ILO/BC conventions.

8. **ISO**

ISO TC 8 has developed or started developing eight standards related to ship recycling management and best practice management procedures and standards.

ISO 30000

Ships and marine technology -- ship recycling management systems -- specifications for management systems for safe and environmentally sound ship recycling facilities

ISO/AWI PAS 30001

Ship recycling management systems -- best practice for ship recycling facilities – assessment and plans

ISO/FDIS 30002

Ships and marine technology -- ship recycling management systems -- guidelines for selection of ship recyclers (and pro forma contract)

ISO 30003:

Ships and marine technology -- ship recycling management systems – requirements for bodies providing audit and certification of ship recycling management

ISO/AWI PAS 30004

Ship recycling management systems -- guidelines for implementing ISO 30000

ISO/DPAS 30005

Ship recycling management systems -- information control for hazardous materials in the manufacturing chain of shipbuilding and ship operations

ISO/CD 30005

Ship recycling management systems -- information control for hazardous materials in the manufacturing chain of shipbuilding and ship operations

ISO/DIS 30006

Ships and marine technology – location of hazardous materials on board ships

ISO/DIS 30007

Ships and marine technology – measures to prevent asbestos emission and exposure during ship recycling

ISO/AWI 30008

Ship recycling management systems -- yachts recycling

**Issues for the recreational marine and superyacht industries**

To develop a management system within ISO and for the industry to work at floor level to integrate design, construction, operation and preparation of ships/yachts so as to facilitate safe and environmentally sound recycling

B. International convention for the control and management of ships' ballast water and sediments (BMW convention)

To give full and complete effect to the provisions of the convention and the annex in order to prevent, minimise and ultimately eliminate the transfer of harmful aquatic organisms and pathogens through the control and management of ships' ballast water and sediments. Parties are given the right to take (individually or jointly with other parties) more stringent measures with respect to the prevention, reduction or elimination of the transfer of harmful aquatic organisms and pathogens through the control and management of ships' ballast water and sediments, consistent with international law. Parties should ensure that ballast water management practices do not cause greater harm than they prevent to their environment and health.

Ships are required to be surveyed and certified and may be inspected by port state control officers, who can verify that the ship has a valid certificate; inspect the ballast water record

book; and/or sample the ballast water. If there are concerns, a detailed inspection may be carried out. The party carrying out the inspection shall ensure that the ship does not discharge ballast water until it can do so without presenting a threat of harm to the environment, human health, property or recourses.

The convention came in force in 2005, and the new BMW Convention will come in force in 2012.

**Issues for the recreational marine and superyacht industries**
Recreational crafts are generally exempt through the principles of "equivalent compliance" but the flag state authority must agree to this. The principle of equivalent compliance can be applied on "pleasure crafts used solely for recreation or competition (…) less than 50 meters in overall length and with a maximum ballast water capacity of eight cubic meters". Yachts in commercial use, yachts exceeding a maximum length of 50m or exceeding a ballast water capacity of 8m, $^{3}$ have to fully comply with the BWM convention.

C. <u>The international convention on control of harmful anti-fouling Systems on ships (IMO AFS Convention)</u>

The convention will prohibit the use of harmful substances in anti-fouling paints used on ships and establish a mechanism to prevent the potential future use of other harmful substances in anti-fouling systems. Under the terms of the new convention, parties of the convention are required to prohibit and/or restrict the use of harmful anti-fouling systems on ships by flying their flag, as well as ships not entitled to fly their flag but which operate under their authority and all ships that enter a port, shipyard or offshore terminal of a party.

Ships of 400 gross tonnage and above engaged in international voyages (excluding fixed or floating platforms, FSUs and FPSOs) will be required to undergo an initial survey before the ship is put into service or before the international anti-fouling system certificate is issued for the first time and a survey when the anti-fouling systems are changed or replaced. Ships of 24 metres or more in length, but less than 400 gross tonnage, engaged in international voyages (excluding fixed or floating platforms, FSUs and FPSOs) will have to carry a declaration on anti-fouling systems signed by the owner or authorized agent. The declaration will have to be accompanied by appropriate documentation such as a paint receipt or contractor invoice.

In 1990, IMO's Marine Environment Protection Committee (MEPC) adopted a resolution which advised governments to adopt measures to eliminate the use of anti-fouling paint containing TBT on vessels of less than 25 metres in length. In November 1999, IMO adopted an assembly resolution that called for the MEPC to develop an instrument, legally binding throughout the world, to address the harmful effects of anti-fouling systems used on ships. The resolution called for a global prohibition on the application of organotin compounds which act as biocides in anti-fouling systems on ships by 1 January 2003, and a complete prohibition by 1 January 2008.

D. <u>IMO Guidelines to minimize bio fouling</u>

Member states of the International Maritime Organization (IMO) made a clear commitment to minimizing the transfer of invasive aquatic species by shipping. Studies have shown that

bio fouling can also be a significant vector for the transfer of invasive aquatic species. Bio fouling on ships entering the waters of states may result in the establishment of invasive aquatic species which may pose threats to human, animal and plant life, economic and cultural activities and the aquatic environment.

While the international convention on the control of harmful anti-fouling systems on ships, 2001 (AFS convention) addresses anti-fouling systems on ships, its focus is on the prevention of adverse impacts from the use of anti-fouling systems and the biocides they may contain, rather than preventing the transfer of invasive aquatic species.

The potential for invasive aquatic species transferred through bio fouling to cause harm has been recognized by the IMO, the Convention on Biological Diversity (CBD), several UNEP regional seas convention, e.g. Barcelona Convention for the Protection of the Mediterranean Sea against Pollution, the Asia Pacific Economic Cooperation forum (APEC), and the Secretariat of the Pacific Region Environmental Program (SPREP).

**IMO Bio fouling guidelines adopted**

**IMO – MEPC adopted the first set of international recommendations to address bio fouling of ships in order to minimise the transfer of aquatic species.**

Studies have shown that the bio fouling process begins within the first few hours of a ship's immersion in water. The bio fouling that may be found on a ship is influenced by a range of factors:

- design and construction, particularly the number, location and design of niche areas;
- specific operating profile, including factors such as operating speeds, ratio of time underway compared with time alongside, moored or at anchor, and where the ship is located when it is not in use (e.g. open anchorage or estuarine port);
- places/ports visited and navigation routes;
- maintenance history, including: the type, age and condition of any anti-fouling coating system, installation and operation of anti-fouling systems and dry-docking/slipping and hull cleaning practices

Implementing practices to control and manage bio fouling can assist in reducing the risk of the transfer of invasive aquatic species. Such management practices can also improve a ship's hydrodynamic performance and can be effective tools in enhancing energy efficiency and reducing air emissions from ships. This concept has been identified by the IMO in the 'Guidance for the development of a ship energy efficiency management plan'.

**Guidelines objectives:**

The objectives of these guidelines are to provide practical guidance to states, shipmasters, operators and others on measures to minimize the risk of transferring invasive aquatic species from ships' bio fouling. It is important for bio fouling management procedures to be effective as well as environmentally safe, practicable, designed to minimise costs and delays to the ship, and based upon these guidelines whenever possible.

**Implementation and management**

Implementation of an effective bio fouling management regime is critical for minimizing the transfer of invasive aquatic species. The bio fouling management measures to be undertaken on a ship should be outlined in a bio fouling management plan and records of bio fouling management practices kept in a bio fouling record book.

**Focus on commercial vessels and superyachts**

The guidelines should focus on commercial vessels and recreational vessels greater than 24 metres in length (superyachts). Guidance for small recreational craft of less than 24 metres in length should be developed as a stand-alone document. The two documents should contain appropriate cross references.

**The guidelines including a set of the "bio fouling management plan" and "bio fouling record book" for superyacht and recreational craft (less than 24 meters) will be separately forwarded to MIAs.**

E. IMO MARPOL 73/78 ANNEX VI: Prevention of air pollution from ships

The International Maritime Organisation (IMO) is an agency of the United Nations; its MARPOL convention, originally settled in 1973 and 1978, addresses limits for emissions of sulphur (SOx) and nitrogen oxide (NOx) (adopted in the 1997 protocol – annex VI). The 2008 amendments to annex VI set further limits and apply both globally and in dedicated emission control areas (ECAs), both for sulphur and nitrogen oxide[1]. Coming into force on 1 July 2010, the revised annex VI allows for an emission control area to be designated for SOx and particulate matter, or NOx, or all two types of emissions from ships.

The main changes to MARPOL annex VI will see a progressive reduction in sulphur oxide emissions from ships, with the global sulphur cap reduced initially to 3.50% (from the current 4.50%), effective as of 1 January 2012; then progressively to 0.50 %, effective from 1 January 2020, subject to a feasibility review to be completed no later than 2018. The limits applicable in Sulphur Emission Control Areas (SECAs) were reduced to 1.00% on 1 July 2010 and will be further reduced to 0.10 %, in 2015.

Progressive reductions in nitrogen oxide (NOx) emissions from marine engines were also agreed. NOx emission limits are set in MARPOL annex VI for diesel engines depending on the engine maximum operating speed (n, rpm), as shown in Table 1 and presented graphically in Figure 1.

**Tier I and Tier II limits are global, while the Tier III standards apply only in NOx emission control areas.**

**Table 1.** MARPOL Annex VI NOx Emission Limits

| Tier | Date | NOx Limit, g/kWh | | |
|---|---|---|---|---|
| | | n < 130 | 130 ≤ n < 2000 | n ≥ 2000 |

[1] Current ECAs include the Baltic Sea (SOx, adopted: 1997/entered into force: 2005), North Sea (SOx, 2005/2006), North American ECA, including most of US and Canadian coast (NOx & SOx, 2010/2012).

| | | | | |
|---|---|---|---|---|
| Tier I | 2000 | 17.0 | $45 \cdot n^{-0.2}$ | 9.8 |
| Tier II | 2011 | 14.4 | $44 \cdot n^{-0.23}$ | 7.7 |
| Tier III | 2016† | 3.4 | $9 \cdot n^{-0.2}$ | 1.96 |
| † In NOx emission control areas (Tier II standards apply outside ECAs). | | | | |

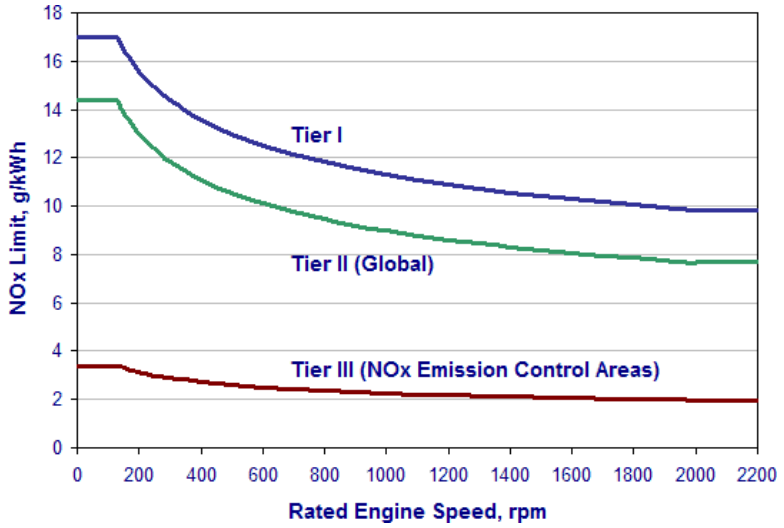



***Figure 1*** *MARPOL annex VI NOx emission limits*

Tier II standards are expected to be met by combustion process optimization. The parameters examined by engine manufacturers include fuel injection timing, pressure and rate (rate shaping), fuel nozzle flow areas, exhaust valve timing and cylinder compression volume. Tier III standards are expected to require after-treatment dedicated to NOx emission control technologies.

**Sulphur limits:**

Annex VI regulations include caps on sulphur content of fuel oil as a measure to control SOx emissions and, indirectly, PM emissions (there are no explicit PM emission limits). Special fuel quality provisions exist for SOx emission control areas (SOx ECA or SECA). The sulphur limits and implementation dates are listed in Table 2 and illustrated in Figure 2.

**Table 2.** MARPOL annex VI fuel sulphur limits

| Date | Sulphur limit in Fuel (% m/m) | |
|---|---|---|
| | SOx ECA | Global |
| 2000 | 1.5% | 4.5% |
| 2010.07 | 1.0% | |
| 2012 | | 3.5% |

| | | |
|---|---|---|
| 2015 | 0.1% | |
| 2020[a] | | 0.5% |
| a - alternative date is 2025, to be decided by a review in 2018 | | |

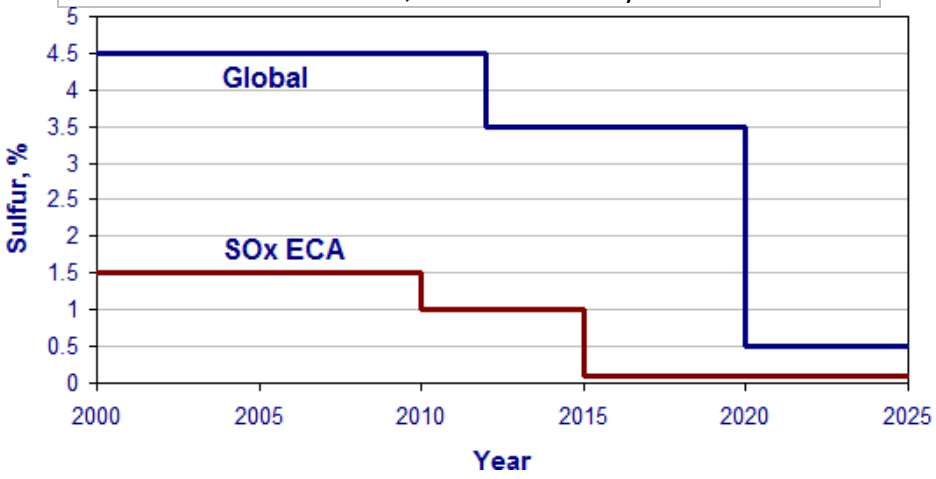



***Figure 2*** *MARPOL Annex VI fuel sulphur limits*

Heavy Fuel Oil (HFO) is allowed, provided it meets the applicable sulphur limit (i.e., there is no mandate to use distillate fuels).

Alternative measures are also allowed (in the SOx ECAs and globally) to reduce sulphur emissions, such as through the use of scrubbers. For example, in lieu of using the 1.5% S fuel in SOx ECAs, ships can fit an exhaust gas cleaning system or use any other technological method to limit SOx emissions to ≤ 6 g/kWh (as $SO_2$).

**Issues for the recreational marine and superyacht industries**

The combination of the IMO regulations for the prevention of air pollution from ships with EU regulations regarding the priority substances (water related legislations), where PAHs (Polycyclic Aromatic Hydrocarbons or Poly nuclear Aromatic Hydrocarbons) are labelled as priority or hazardous. PAHs are substances of high concern due to their toxicity and persistence in the environment. Many PAHs and/or their metabolites are known or suspected carcinogens, which mean it has to be phased out to zero before 2020 according to EU law.

## V. UN convention on biological diversity

Global – UN;

Biodiversity – the variety of ecosystems, species and genes – is the world's natural capital. It is integral to sustainable development by providing vital goods and services, such as food, carbon sequestration, and seas and water regulation that underpin economic prosperity, social well-being and quality of life. Together with climate change, loss of biodiversity is the most critical global environmental threat and gives rise to substantial economic and welfare losses. In 2002, at the Johannesburg World Summit on Sustainable Development, world leaders agreed on the need for an international regime on access and benefit-sharing (ABS).

The 4,000 participants attending the eighth meeting of the conference of the parties, held in March 2006, agreed to finalise negotiations as soon as possible and no later than 2010.

A total of 600 delegates from governments, civil society and indigenous and local communities met from 10 to 16 July 2010 to come to agreement on the final version of the text.

EC

In 2001, the EU set the target to halt biodiversity loss in the EU by 2010. In 2002, it signed up to a global target of significantly reducing biodiversity loss worldwide by 2010.
Efforts to tackle biodiversity loss were subsequently stepped up, and an EU Biodiversity Action Plan (BAP) was adopted by the Commission in 2006 to accelerate progress.
Despite the efforts to date, however, there are clear indications that the EU will not achieve its target. At its March 2009 meeting on the environment, the council called for a new EU vision and target for biodiversity. Built on a global vision for biodiversity beyond 2010, it is a part of an updated strategic plan to implement the United Nations convention on biological diversity. The plan was supposed to be adopted by the end of 2010 however due to delays it was not approved until July 2011.

**Issues for the recreational marine and superyacht industries**

- Control and management of ships' bio fouling to minimize the transfer of invasive aquatic species (will be regulated by the IMO convention)
- Control and management of ships' ballast water and sediment (will be regulated by the IMO convention)
- Pollution by emissions (see IMO regulations)
- Unsustainable practices (design, use, service and production processes)

## VI. International regulation of styrene

International regulations of styrene can be divided into two important areas:

A. Exposures to human bodies

B. Emissions to the environment

A. Exposure to human bodies:

The following policy developments set on global basis the limits for styrene exposure levels at the production facilities of GRP/FRP boats/yachts;

- The International Agency for Research on Cancer (IARC) in Lyon, France, upgraded styrene's classification from a Group 3 (not classifiable) to a Group 2B (possibly carcinogenic to humans). This reclassification resulted from revisions to IARC's classification scheme and considerations of styrene oxide, an intermediate formed during styrene metabolism. It is important to note that IARC specifically states that its classifications are intended for hazard identification only.

- Based on IARC's classification, the Danish occcupational safety and health administration chose to adopt the IARC 2B and set a 25-ppm workplace ceiling value in 1994.

- Health Canada, co-administrator with Environment Canada of the Canadian Environmental Protection Act (CEPA), concluded that styrene is "non-toxic," and as such does not require regulation under CEPA. As part of its internal evaluation, Health Canada's classification structure required that styrene be classified as a class III possible human carcinogen, largely following the IARC conclusion.

- The United Kingdom's Health and Safety Executive (HSE) has drafted a comprehensive risk assessment for styrene on behalf of the European Union. It was completed between 2005 and 2007 and concludes that there is no concern for cancer in workers or community members.

- A thorough assessment by the Texan commission on environmental quality, completed in 2008, found that the data on styrene did not support a concern for cancer.

- In 2008, an international panel of top epidemiologists reviewed the studies of more than 60,000 workers exposed to styrene and determined that there is no support for a concern for cancer in humans.

- In 2008, US - federal register notice, the department of health and human Services National Toxicology Program (NTP) proposed to list styrene as a "reasonably anticipated" carcinogen in the NTP's 12th Report on Carcinogens (RoC).

- The US EPA Office of Environmental Health Assessment concluded in a February 2010 draft report that styrene should be considered to be a "carcinogen for the development of a health-protective level in drinking water". U.S. EPA is reviewing styrene data to prepare an updated listing for the agency's integrated risk information system database.

**Updates:**

- Following the conclusions of the EPA Office of Environmental Health Assessment, see above item. The US Department of Health and Human Services (HHS) has listing on 10 June 2011 styrene in its "12$^{th}$ report on carcinogens" as a substance that is "reasonably anticipated to be a human carcinogen". The US HHS publishes under congressional mandate.

    - The statement of US HHS department has been attributed in whole or part by SIRC. Legal processes have started and the results are expected before end of 2011.

    - NNMA has presented their statement and are challenging the decision and publication of the US HHS Department.

**Based on above global policy developments, the following occupational exposure limits are set in various European countries and the United States**
**Limit values are in ppm.**

1. Austria 20
2. Belgium 50
3. Denmark 25
4. Finland 20
5. France 50
6. Germany 20
7. Ireland 50
8. Italy 20
9. Netherlands 25
10. Norway 25
11. Spain 20
12. UK 100
13. USA 20

Other countries are to be added.

B. Emissions to the Environment;

**Assessment of styrene emission controls for yacht and boat building industries in the US and Europe:**

**USA:**
The fiberglass-reinforced plastics (FRP/C) and fiberglass boat building industries have many alternatives for reducing styrene emissions. Styrene emissions can be reduced by using resin materials and application equipment that generate less styrene emissions, improving operator techniques to reduce overspray, changing open-moulding processes to closed-moulding processes and using add-on emission control devices. The actual reduction achieved by these alternatives, taken separately or in various combinations, can vary widely.

Lacking the regulatory mandates, add-on pollution control systems are not often used to reduce styrene emissions in the FRP/C and boat building industries. Low concentrations and high air flow rates also have made conventional emission controls very expensive and in some cases less efficient in destroying the emissions. The FRP/C and boat building industries need information. To meet this need, the cost and performance of several conventional and emerging add-on pollution control technologies and air flow management practices, potentially applicable to these industries, have been evaluated.

**Europe:**
More than 60 publications and reports were found to contain usable data on styrene exposure of workers in the European FRP/GRP industry. The data also show that efforts to lower styrene emissions have been very effective, as the following findings will show:

- Styrene emissions and exposure in the open mould sector of the GRP industry has fallen by an average of more than 3% per year over the last 32 years.

- Whereas styrene monomer content in the resin of about 40-45% was normal 30 years ago, nowadays standard resins contain around 35% styrene and in some cases even less. The addition of LSE additives to the resin significantly reduces the emission of styrene, especially during the static phase of open mould processing.
- By modifying the molecular backbone of a resin, it is possible to reduce the styrene content further and developments continue into improved, lower styrene content resins. In certain cases resin formulations have been developed with styrene monomer content as low as 20%, but the complicated processing of these resins reduces the possibilities for their more widespread use.
- Open mould techniques, like hand lamination and spray-up, still retain a prominent place in the processing of unsaturated polyester resins, but the shift to closed moulding is gaining. Technological advances have introduced new closed moulding techniques, such as vacuum resin infusion, which significantly reduce emissions of styrene.

**EU legislation:**

- On a European scale, styrene is subject to a risk assessment procedure according to European regulation 793/93. (based on the older EU Directive 93/21-EC) In the framework of this regulation existing high volume chemicals have to be risk assessed – a procedure that has led to a much greater understanding of the toxicological profile of styrene.
- The United Kingdom's (UK's) Health and Safety Executive (HSE) on behalf of European Union drafted the comprehensive risk assessment for styrene related to EU Regulation 793/93. The risk assessment report was finalised 2007. Based on the outcome, no new regulation is set by the EC at this moment.

## VII. International developments on noise and underwater noise:

Noise and underwater noise is a topic that keeps being raised by national, European and international authorities within current and upcoming legislations and as a subject of interest by industry. Several studies are under way with even more to come. At the moment the focus is clearly on underwater noise.

**The following international bodies/organizations are developing policy and measures/guidelines to reduce sound and or underwater noise emissions**

- IMO- Correspondence group
- EU-MSFD: Technical (sub)-group noise
- OSPAR: Quality status report 2010
- ESF - Marine board
- Others: CEDA, ASCOBANS, International quiet ocean experiment

### 1. IMO

IMO/MEP share the view that underwater noise, in particular background ambient noise caused by human activities, is a serious concern. It is particularly an issue for marine mammals but also for other species including fish. Although there is still considerable uncertainty about the relationship between noise levels and their effects, there is growing evidence of the adverse effects of human noise on marine life. It is inevitable that increasing background ambient noise levels sooner or later will have serious consequences.

A team of scientists specialises in marine mammal research using acoustic methods. This research has included the development of acoustic equipment and techniques to study whales from different vessels. The studies also include measurements of noise levels from ships and other sources. The design of the new purpose-built IFAW research vessel “Song of the whale” incorporated many measures to reduce noise output from the vessel; including propeller design, engine mountings and exhaust and transmission systems.

**Some factors to consider**

There are a large number of design, maintenance and operational factors that influence the noise levels from vessels. These include speed, loaded displacement, effects of wind and waves, fouling or propeller damage. Although measurements of noise output exist for many vessels, they are generally not available across the full range of operating conditions. Noise level measurements that are available demonstrate a high level of variability between vessels of similar type. Understanding this variability and the factors that contribute to noise output from commercial ships is an important step towards developing mitigation measures to reduce underwater noise. The report of a correspondence group (MEPC) has noted that propellers are the main sources of ship-generated underwater noise and that issues such as "propulsion", “hull design", "on board machinery" and "operational modifications" relate to ship design and equipment (as mentioned above).

2. **EU:**

**MSFD Introduction:**

The MSFD (Maritime Strategy Framework Directive) requires member states (MS) to work towards Good Environmental Status (GES) in 2020. Descriptor 11 of the MSDF requires underwater noise to be regulated so it does not adversely affect the marine environment. The commission decided on two indicators for underwater noise on 1 September 2010. There was a general agreement within member states and stakeholders such as the navigation task force group (represented by ICOMIA and ESPO/Rotterdam) that further information was needed to understand how to use and interpret these indicators. The EC decided that a technical subgroup on noise (and litter) should address the issue. The Netherlands and United Kingdom have agreed to co-chair the TSG noise. The marine directors meeting in December 2010 approved the terms of reference of the TSG noise. The TSG noise is foreseen to run until the end of 2011 under its current terms of reference. Defining Good Environmental Status remains the responsibility of member states and is not a responsibility of TSG Noise. The TSG can, however, share ideas on best practices and developments on GES.

**Progress of TSG Noise**

TSG noise met for the first time on 16 and 17 February 2011 at TNO in Delft, the Netherlands. Many attended the meeting. A second meeting is planned 6 and 7 October 2011 in London. A proposal for a work plan was made before the meeting. The proposed work plan was based on the tasks from the terms of reference. An objective of the Delft meeting was to adopt the work plan and to agree on the products, task managers and people who will contribute to the product. During the meeting this work plan was discussed and adapted where necessary.

The TSG will also be seeking information on distributions of existing loud, impulsive low and mid frequency noise sources in member states waters. This will be required in order to establish an appropriate framework for indicator 11.1.

**Future/expecting products of TSG are:**

- Product 1.1: Summary of the existing data and knowledge of member states
- Product 1.2: Review of existing knowledge on noise monitoring methods and other noise issues
- Product 2.1: Glossary of indicator terminology (under water noise terminology)
- Product 2.2: Methodological standards for describing source levels of low- and mid-frequency impulsive sounds
- Product 2.3: A framework of options for member state decisions on levels of anthropogenic sound sources exceeding levels likely to entail significant impact on marine animals
- Product 2.4: Proposal for the establishment of a registration of loud, impulsive low- and mid-frequency sound sources
- Product 3.0: Interpretation of indicator 11.2.1
- Product 3.1: Proposal for a monitoring scheme for low frequency continuous sounds
- Product 3.2: Technical specification of monitoring equipment
- Product 4.1: Assessment of the need to develop criteria and indicators for other forms of energy
- Product 5.1: Considerations that may be taken into account when defining Good Environmental Status
- Product 6.1: Recommendations for further research
- Product 7.1: Interim reports for the WG GES

## 3. ISO

ISO/TC8/SC2 (Ship and marine technology – marine environment protection) is currently developing ISO 16554 (Protecting marine ecosystem from underwater irradiated noise) "Measurement and reporting of underwater sound radiated from merchant ships". This was following a request from the IMO/MEPC for an international standard for the measurement of ship underwater noise. The standard is currently at the committee draft stage (CD), aimed to be published in 2012, and ISO will report to IMO/MEPC on the status of the development.

## 4. DNV: Notation for underwater noise (in coordination with IMO and as an example)

A low underwater noise level is an essential design feature for the operation of certain ship types as well as when operating in environmentally sensitive areas. On 1 January 2010, the first ever notation of underwater noise was published by Det Noske Veritas (DNV). Particularly operators of offshore survey vessels, fishery research vessels, ocean research vessels, seismic vessels, fishing vessels and military vessels have noticed increased problems due to sound masking resulting from underwater noise. Such vessels are extremely sensitive to underwater noise radiation because a high noise level will directly interfere with their operational ability. Research vessels employ hydro acoustic sensors to perform their work tasks as fishing and fishery research vessels depend on not scaring away the fish, luxury yachts and cruise vessels require a high degree of personal comfort and military vessels need to operate undetected and avoid triggering of mines.

Obviously, noise control will have to be given high priority throughout the design and construction phases of the vessels mentioned above. From an environmental point of view, the Marine Environmental Protection Committee (MEPC) of the International Maritime Organization (IMO) stated in July 2009: “The committee urges governments to review their commercial fleets to identify the ships that contribute most to underwater noise pollution”. At the same time, the International Fund for Animal Welfare (IFAW) estimates that the noisiest 10% of ships contribute the most to the noise problem.

DNV explains that an efficient noise and vibration control can be integrated in vessel design without increasing building costs significantly. It identifies the propellers to usually be the number one source for noise. Radiation of structure borne noise is identified as the second. The new optional class notation by DNV covers a complete set of criteria and rules for verification and is intended to ensure operational capability for four different types of ships. It is divided into five sub-notations:

**Acoustic (A)**
Requirements for vessels using hydro-acoustic equipment as an important tool in their operation, e.g. survey vessels, ocean research vessels, pipe layers, diving vessels, various offshore support vessels etc.
**Seismic (S)**
Vessels towing heavy streamers and airguns and therefore have a high demand on propulsion power.
**Fishery (F)**
The requirement is not to scare the catch away.
**Research (R)**
Requirement based on the existing ICES 209, however with a low frequency modification. This is an extremely demanding criteria requiring “submarine” type technology.
**Environmental (E)**
Environmentally conscious owners may demonstrate environmental compliance through the “Environment Notation”. This voluntary class requirement, which comes in the two levels called “Transit” and “Passage”, will achieved without increasing costs significantly. They will only require engineering advice with regards to the propeller design and propulsion.

5. **ASCOBANS Advisory Committee (UNEP), report of the noise working group**

Potential terms of reference for a report (or reports) that might examine ways in which ASCOBANS can assist parties in meeting the requirements of the relevant European directives and other bodies that countries have elected to adhere to which are concerned with marine noise. This section depends strongly on the work of the EU technical subgroup noise.

This work is still in progress and therefore this section needs to be amended later this year. However, the SC7 of ACCOBAMS (Monaco, 29-31 March 2011) suggested creating a common ASCOBANS/ACCOBAMS working group on the EU Marine Strategy Framework Directive to work on general aspects of the directive (not limited to noise). This working group will go deeper into this issue to collect more material for the next ACCOBAMS Scientific Committee.

6. **The recreational marine industry**

In 2003, the EU funded the sound boat project in co-ordination with the recreational marine industry. Several ICOMIA marine industry associations were involved as well as IMEC. The project collected a significant amount of surface noise data/knowledge. The attachments/graphs show in essence the results and that we as an industry do not have a problem with surface noise.

**PERSONAL WATERCRAFT SOUND TEST REPORT 2003 at Jet Ski Village in France**

Following the successful sound test conducted in 2001, the IMEC PWC Task Force brought five new Personal Watercrafts (by three manufacturers) together. They have been developed and marketed in European community since then. The chosen units employed newly developed technology for PWC such as 4-stroke engines, the latest direct fuel injection technology, catalyze technology on a 2-stroke. The sound test was conducted in pass-by mode per ISO 14509. The results confirm a satisfactory repeatability of the pass by sound levels can be attained for PWCs. Once again, these results also demonstrated the great efforts that the industry has made to further reduce the sound level of the products.

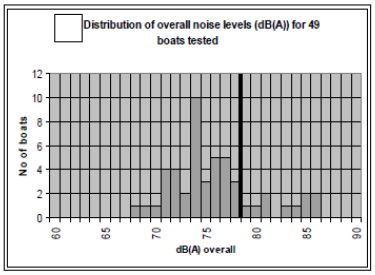
**See below: Data from the sound boat project.**

ICOMIA
INTERNATIONAL COUNCIL OF MARINE INDUSTRY ASSOCIATIONS

**Good data obtained from 55 Boats**

- 41 Twin Screw
- 3 Stern Drive
- 11.5 to 23.6 m LOA
- 147 to 2312 Kw
- 21 to 38 knots

SoundBoat

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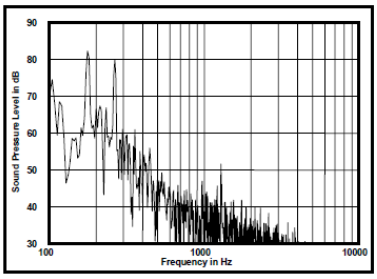
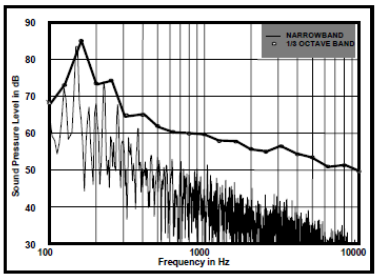


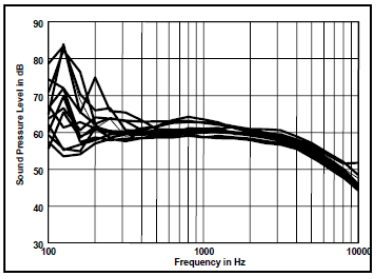

Typical Passby Noise Spectrum

SoundBoat



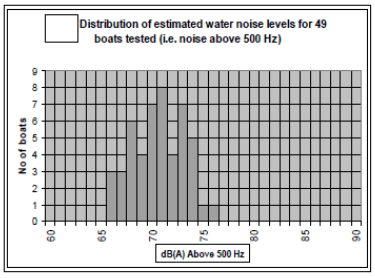

Comparison of Analysis Bandwidth

SoundBoat




Comparison of Passby Spectra for 13 Different 2 Engined Planing Vessels

SoundBoat




SoundBoat

**Issues for the recreational marine and superyacht industries:**
Often “navigation and/or shipping” are automatically associated with affecting marine mammals and/or other species, including fish.

To respond to this, we need solid data, information and knowledge:

It is difficult to mount a defence without information. If we have to rely on assertion – ‘You are noisy’ - and counter assertion – ‘We are not’ - the loudest voice will win, and there are some loud voices out there. We need evidence for an informed debate.

There is a lag of data, information and knowledge of underwater noise.

The UN, IMO, ISO and the European commission recognised the importance of relevant data and knowledge. The US and EU stimulate studies regarding underwater noise.

# FACTSHEET

## Anti Fouling (AF) paints and the non biocidal function of Zinc Oxide.

### I. Introduction ICOMIA:

ICOMIA (International Council of Marine Industry Associations) is the worldwide trade association of the International Recreational Marine Industry Associations (MIAs) with 34 members in 33 countries including 17 in the EU/EEA.

ICOMIA has a specific interest in a number of European directives which affect our business. These include Environmental and Health & Safety directives such as the Water Framework Directive (WFD) 2000/60/EC, the Marine Strategy Framework Directive (MSFD) 2008/56/EC, and Biocidal Product Directive, 98/8/EC and the Biocidal Product Regulation etc.

### Sector characteristics within EU

The recreational marine industry in the EU is a success story with sustained growth over the last 20 years, which other industries with higher profiles are hard pressed to match. It has not only retained its global leadership in many sectors but has also improved in others.

- The European leisure boating industry covers 37200 businesses, including marinas, boat and yacht builders and the repair and maintenance sector which construct and services vessels up to 24 meters in length.
  - All recreational craft from 2.5 m to 24 m built after June 1998 needs to comply to the Recreational Craft Directive (RCD) 94/25/EC and 2003/44/EC.
- Super yachts are usually defined as recreational vessels greater than 24m in length, registered either for private use or charter. The Super Yacht building sector is enjoying a growth rate of more than 70% since 2003 and **13 of the world's top 20 Super Yacht Builders are located in Europe.**
  - European Super Yacht Yards are worldwide market leaders with over 260 projects currently under construction for yachts over 40 meters in length. This totals more than 17100 m of hull length generating a revenue of 1.5m EUR per meter produced (the total value of those projects alone is around 25,650bn EUR).
  - Super Yachts are build in compliance with the rules and standards of Class Societies, MCA, the particularly ISO standards for Large Yachts and the particularly IMO rules.
  - There are today around 10,000 super yachts in the world representing a large market for refit, repair and maintenance services.

## II. Recreational Marine Industry uses AF paints to proactively control (bio)fouling!

**Explanation:**

The potential for invasive aquatic species transferred through "(bio) fouling" to cause harm has been recognized by the International Maritime Organization, the Convention on Biological Diversity (CBD), European Union, several UNEP Regional Seas Conventions (e.g., Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution), the Asia Pacific Economic Cooperation forum (APEC), and the Secretariat of the Pacific Region Environmental Program (SPREP).

**Why is the transfer of invasive species a problem**

The transfer of invasive aquatic species threatens freshwater and marine environments, human, animal and plant life, economic and cultural activities. Even if there is no visible biofouling it is important that preventative measures are taken. Once invasive aquatic species are established in a new habitat, they are often impossible to eradicate.

**IMO guidelines for ships and recreational craft:**

The IMO Guidelines for the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species (hereafter "the Guidelines") aim to provide a globally consistent approach to the management of (bio) fouling. These guidelines include the Super Yachts (over 24 meter) **. Recreational craft (below 24 meter):** These Guidelines apply to all owners and operators of recreational craft below 24 meters in length. All craft can potentially transfer invasive aquatic species.

**Controlling (bio) fouling:**

Operating profile has a great influence on (bio) fouling. The operating profile of the Recreational craft and Super Yachts differs from those of Commercial ships/vessels, especial for operating speed, time underway compared with time moored or anchored, water temperature, and where the craft/vessel is normally kept;

**"According to IMO by actively controlling the (bio)fouling by using AF paints on the craft/vessel/ship, it will greatly reduce the risk of transfer of invasive aquatic species and can also improve the craft's speed and energy efficiency".**

## III. Zinc oxide use as a component in AF paints

This section outlines how zinc oxide is used in antifouling paints, and provides a general explanation of the function of zinc oxide in antifouling paints. From this it is clear that zinc oxide is added to antifouling paints to fulfil a non-biocidal function and not for the purpose of acting as a biocide.

It also should be noted that in some countries with existing registration schemes for antifouling paints, zinc oxide is not considered a biocide[1]. The information/data presented below was used to justify the fact that zinc oxide is not used as a biocide.

**Zinc oxide - function in AF Paints**

In antifouling coatings zinc oxide is added to the formulation to:

- Regulate the dissolution of the paint film during service (i.e. control the film polishing rate)
- Stabilise wet paint in the can
- Modify dry film properties e.g. act as a UV absorber
- Pigment the system

Zinc oxide is primarily used in antifouling coatings due to its unique solubility characteristics. In addition, zinc oxide has a number of properties described in the following sections, which are beneficial for the final antifouling formulation. **To date no alternatives have been found that provide the equivalent solubility characteristics of zinc oxide.**

**Regulation of dissolution of the paint film during service**

Controlling the solubility of the paint film, and hence the polishing rate, is critical to the effective performance of the paint. Zinc oxide is a critical paint ingredient used to control the polishing rate of the paint. Creating a paint that is too soft (i.e. poor mechanical integrity) when dry will mean that the paint polishes away too quickly revealing the inert undercoating beneath which will foul. In combination with the resin system chosen, zinc oxide is incorporated into the film at the product design level to give the right balance of mechanical strength and solubility to ensure that the required in service life time is achieved.

**Stabiliser for wet paint**

Zinc oxide combines readily with free acid groups present in the paint, resulting in the formation of zinc soaps. The acids might, if not neutralised, react with other paint ingredients and lead to the formation of an unstable wet paint. Viscosity increase or even gelation could be the result of such incompatible systems. Whilst other compounds are available which have the same properties of neutralising free acid groups, the solubility characteristics of these compounds are not suited for use in antifouling coatings.

**Modify dry film properties**

Zinc oxide absorbs ultra-violet light which is damaging to the stability of organic biocides and some binder systems. For antifouling coatings this is an important issue whenever films are not continually immersed e.g. the boot-top area, or in cases where extended dry-docking periods are required (such as in yacht refitting). Zinc oxide actively absorbs UV and hence protects photo-sensitive binders and pigments from degradation by UV-light. **Current alternatives to zinc oxide do not show comparable UV-absorbing properties.**

[1] Both the UK and Dutch authorities have reviewed the use of zinc oxide in antifouling paints under existing local laws and judged its use as non-biocidal. This has been communicated to individual companies within CEPE.

**Pigment the system**
Zinc oxide can be used to create the desired colour of the paint system (especially for white and bright colours) i.e. zinc oxide acts as a pigment in this context. Other antifouling coating pigments can be used but do not have the same opacity or are prohibitively expensive and are not used as a substitute for zinc oxide in antifouling for these reasons.

**Conclusion of ICOMIA Factsheet regarding Zinc Oxide:**

***ICOMIA*** *is not opposed to EU or National legislation containing high environmental standards. On the contrary, ICOMIA and her members were supportive of the implementation of several European and National Environmental Regulations, and in coordination with her partners take active roles in discussion regarding the BPR and the BPD. However, in this specific case ICOMIA is concerned that a possible inappropriate designation of Zinc Oxide being biocidal in antifouling paints could have significant ramifications for the The Recreational Marine and Super Yacht industry. And therefore explained her position regarding the Zinc Oxide use in AF paints.*

*The Recreational Marine and Super Yacht industry is a global business. Yachts can dock in any part of the world, and an unfavourable change in environmental legislation, or mistaken re-classification of antifouling paint ingredient use – as is the case here – could lead to a very tough, competitive disadvantage and detrimental loss of business to EU shipyards.*

*ICOMIA considers that the classification of Zinc Oxide as a biocidal ingredient in antifouling paints and bottom coats is incorrect based on the weight of evidence held within the industry.*

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# What is the scope and aim of BREF:

## I. General information:

**BREF = Best Available Techniques Reference Documents, a important part of the Industrial Emission Directive; 2010/75/EU.**

**Purpose document:**
Purpose of this document is to give a comprehensive information what is the scope and aim of BREF, and the issues for the recreational marine and super-yacht industries.

The Industrial Emission Directive (2010/75/EU) requires the European Commission to organize an exchange of information between Member States (MSs), the Industries concerned and non-governmental organizations promoting environmental protection in order to draw up, review and, where necessary, update Best Available Techniques Reference documents(BREFs). The BREFs shall be the reference for setting (environment and emission) permit conditions for the installations/companies covered by the IED.

According to the Directive, this exchange of information shall, in particular, address the following:

a) the performance of installations and techniques in terms of emissions, expressed as short- and long-term averages, where appropriate, and the associated reference conditions, consumption and nature of raw materials, water consumption, use of energy and generation of waste;
b) the techniques used, associated monitoring, cross-media effects, economic and technical viability and developments therein;
c) best available techniques and emerging techniques identified after considering the issues mentioned in points (a) and (b).

## II. Definition BREF:

**BAT reference document (BREF),** resulting from exchanged information between MSs, Industries and Organizations , is defined in Article 3(11) of the IED. It is a document drawn up for defined activities describing, in particular, applied techniques, present emission and consumption levels, techniques considered for the determination of BAT as well as BAT conclusions and any emerging techniques, giving special consideration to the criteria listed in Annexes of the IED.

- Therefore, by definition, a BREF is a descriptive document and it does not prescribe the use of any technique or specific technology, nor does it interpret the IED.

**Best available techniques (BAT)** are defined in the IED as the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing the basis for emission limit values and other permit conditions designed to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole.

1. 'Techniques' includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.
2. 'Available techniques' means those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking

into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator.

3. 'Best' means most effective in achieving a high general level of protection of the environment as a whole.

The IED also defines **'BAT conclusions'** as the parts of a BREF laying down the conclusions on BAT, their description, information to assess their applicability, the emission levels associated with the BAT, associated monitoring, associated consumption levels and, where appropriate, relevant site remediation measures. The BAT conclusions are to be adopted through the procedure referred to in the IED (implementing acts).

**They shall be the reference for setting (environment and emission) permit conditions for the installations covered by the IED**. As mentioned in the IED, the main aim of a BREF is to determine BAT, and to limit imbalances in the EU as regards the level of emissions from industrial activities. BREFs should provide information to the competent authorities of Member States, industrial operators, the Commission and the public at large on what BAT and emerging techniques are for the activities covered by the IED.

## III. 'Horizontal' and 'vertical' BREFs

BREFs may either be restricted to issues related to particular industrial activities ('vertical' BREFs) or may deal with cross-sectoral issues ('horizontal' BREFs), such as monitoring, economics and cross media effects, industrial cooling systems, emissions from storage, common waste water and waste gas treatment/management systems in the chemical sector and energy efficiency.

'Horizontal' and 'vertical' BREFs should be developed so as to be complementary for the purpose of setting permit conditions for installations covered by the IED. The 'horizontal' BREFs include information of a generic nature that can be used across many activities which fall under the scope of the IED. Information should be included in 'horizontal' BREFs where this supplements the information contained in 'vertical' BREFs on aspects that cut across several industrial sectors. In order to facilitate the use of both 'vertical' and 'horizontal' BREFs in a complementary way, appropriate cross-references need to be made in a BREF to other relevant 'vertical' and 'horizontal' BREFs.

In The Netherlands there are some good and positive experiences with horizontal and vertical BREFs, and being used in the "Industrial Activity Permit Conditions "which started in the late '90's and finalized around 2005. For example in the Industrial Activity Permit Conditions the Marina Permit Conditions (developed in coordination with Competent Authorities and Industry) were with success integrated!

## IV. General procedure for drawing up and reviewing of BREFs

The Commission organises and coordinates the exchange of information through the involvement of the European IPPC Bureau (EIPPCB, within DG Joint Research Centre) and DG Environment. The stakeholders involved in the exchange of information as stipulated in the IED (Member States, industries concerned, environmental NGOs, and the Commission) oversee the process through the Forum established according to IED. They contribute to the drawing up and reviewing of BREFs by participating in the technical working groups (TWGs).

- Note: ICOMIA participated in the TWG's of the IPPC, and will participate in the TWG of the IED!

**New BREF's**

Since the IED covers some new activities compared with the activities of the reviewed IPPC Directive (2008/1/EC), new BREFs need to be drawn up. The workflow for the drawing up of a new BREF presents many similarities with the workflow for the review of a BREF. Main differences are for the newly BREF wishes.

- Note: In the case of the Marine Recreational Industry and Super Yacht Industry we have to realize that the SED is integrated into the IED. And the former BREFs (2005) of the IPPC Directive where related to activities excluding those from the SED. All BREFs related to SED activities has to be drawn up as a new BREFs.

**Reviewing BREF's**

The reviewing of BREFs is a continuing process, due to the dynamic nature of BAT. For example, new measures and techniques may emerge, science and technologies are continuously developing, and new or emerging processes are being successfully introduced into the industry. In order to reflect such changes and their consequences for the BAT, BREFs have to be periodically reviewed and, if necessary, updated accordingly. This is explicitly addressed by recital 13 of the IED, which indicates that the Commission should aim to update the BREFs no later than eight years after the publication of the previous version.

The decision to review a BREF should take into account information in the 'Emerging Techniques' chapter and 'Concluding Remarks and Recommendations for Future Work' section of the BREF together with other factors such as an indication that new techniques might be available, the need to expand the scope of the BREF, and the need to include products/substances or processes that were not yet covered.

## V. <u>Further actions:</u>

In order to review the current BREFs (within the IPPC) of the Super Yacht Industry and drawn up the new BREFs, mostly related to the SED part of the IED, ICOMIA needs to participate in the following forums:

- Article 13 Forum of the IED (Strategic Coordination Group of IED) within DG Environment
- The Technical Working Group of the IPPC/IED within the European IPPC Bureau (EIPPCB, within DG Joint Research Centre)

ICOMIA and IEC in coordination with her partners needs continue to focus and being pro active on the VOC legislations and the developments of BREF as part of the implementation of the IED, with paying attention to;

- The recast of the IPPC into the IED
- The effects of the NEC status reports 2010
- PPD and the relation with the SED (which became a part of the IED)
- The new VOC targets and levels which will be finalized in 2013 (based on outcome NEC 2010 in relation with IED and Thematic Air Policy of the EU with 2020 targets)
- Following the International Developments regarding VOC emissions and procedures related to the IED activities concerning our Industry

- Priority and Priority Hazardous Substances within WFD/MSFD in relation with BPD-BPR
- Copper issue
- Review of BREF regarding application and removing of AF paints/coatings (is a part of IED) Including the assessments within BPR/BPD for AF application for professional workers
- The developments and results of the review of the Waste Framework Directive
- Reports from the EPRTR
- On National level the developments of the Environment Permits in particular the aspects related to the IED activities.

Note: The above legislations/regulations are of main influence on the BREF developments for our Industry. But we have to realize that not only Super Yacht Builders and SY Refit Yards will face the IED and therefore the BREFs. Yacht Builders of smaller yachts, but with reasonable amount of production and exceed the 5 tonnes VOC emission a year will be integrated as well.

And on the moment it is not clear what will be the effects of GRP/FRP Boat builders, although they are for reasons of lamination not in the scope and structure of the SED part of the IED, some yacht builders (examples in France and Germany) are using such a amount of VOC outside the lamination process that they will exceed as well the 5 tonnes a year VOC emission!

- **General conclusion: ICOMIA, IEC and Environment Manager needs to be pro active on the IED and developments and review of BREFs concerning our Industry!**