

Targeted consultation on the Review Study related to requirements of the Article 52 of the Recreational Craft Directive 2013/53/EU. It addresses a feasibility for further reducing of exhaust emissions from marine propulsion engines, the feasibility of introducing requirements for evaporative emissions and the evaluation of current watercraft design categories.

Fields marked with * are mandatory.

Respondent identification

* Authority

- Academic/research institution
- Business association
- Company/business organisation
- End-user organisation
- EU citizen
- Environmental organisation
- Non-EU citizen
- Non-governmental organisation (NGO)
- Public authority
- Trade union
- Other

Contact person (person to be contacted by GROW in case of questions)

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* Organisation name

EUROMOT

Organisation size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

* Country of establishment

Belgium

Introduction

REVIEW STUDY ON THE RECREATIONAL CRAFT DIRECTIVE 2013/53/EU

Targeted consultation on the Recreational Craft Directive.

As part of the review study on the Recreational Craft Directive, the European Commission DG for the Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) is launching this consultation in order to gather information that will help address the (technical and economic) feasibility for further reducing exhaust emissions from marine propulsion engines, and the feasibility of introducing requirements for evaporative emissions.

The consultation also aims to evaluate how the current set-up of boat design categories affects manufacturers and consumers, providing you with the opportunity to suggest additional specifications and sub-categories of boat design categories, if needed.

The Directive applies to different types of recreational craft such as sailboats, inboard or sterndrive motorboats, outboard motorboats, inflatable boats or personal watercraft. For each type of recreational craft, different propulsion systems can be taken into account (e.g. spark ignition two-stroke or four-stroke,

diesel compression ignition).

The consultation will be one of the tools used to garner information for a European Commission report to the European Parliament and the Council as set out in Article 52 of the Directive.

Structure of the survey

The first part of the survey focuses on the technical and economic feasibility for further reducing exhaust emissions from marine propulsion engines.

The second part focuses on the feasibility of introducing requirements for evaporative emissions.

The third part focuses on how the current set-up of boat design categories affects manufacturers and consumers; it provides you with the opportunity to suggest additional specifications and sub-categories of boat design categories, if needed.

You may choose to answer only one or more parts of the questionnaire. If you have questions and remarks, please contact grow-recreational-craft@ec.europa.eu

PART 1: Exhaust emissions

1.1 Often, the same type of engines used in recreational craft are also used in other on-road or non-road applications. In these other applications, lower pollutant emission levels are achieved. Sometimes, even additional pollutants are limited. Do you agree that a further pollutant emission reduction with new recreational craft propulsion engines is possible without increasing the TCO?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

1.1.1 Please indicate the type of recreational craft you are referring to, and its engine type and power level (in kW).

All recreational craft using compression ignition (CI) engines at power levels > 37 kW

1.1.2 Please indicate the kind of emission reduction technology you are planning to use, as well as the level of emission reduction that you believe to be feasible (in % reduction compared to now).

For CI engines < 37 kW further reduction is possible to align with US EPA limit values for this power category without the need for installing after-treatment. Other CI engines power categories are already at the lowest emissions levels feasible without complex after-treatment. Such CI engine after-treatment is not suitable for most recreational craft applications: this is due to the large space and weight claim of such after-treatment. It also has high surface temperatures, that are incompatible with the materials used for constructing most recreational craft, including fiber glass and wood. In a conventional recreational craft exhaust system raw water is injected into the exhaust gas prior to entering the exhaust system to control the surface temperature: this is also incompatible with after-treatment.

1.2 How much time do you think would be needed to introduce this technology onto the market? Please justify your answer.

For CI engines < 37 kW limited technology development will be required for those manufacturers who are not already providing these products in the USA. Additional time will also be required for the necessary EU conformity assessment process and to adjust supply chain.

1.3 Would you agree with pollutant emission reduction measures that increase the TCO of recreational craft, but where this cost increase is fully compensated by reduction of negative effects on a third party from the use of a product (e.g., an increase in life expectancy)?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

1.3.1 Please explain why you would (not) support this.

The addition of after-treatment to CI engines would require major redesign of both engine and recreational craft resulting in larger heavier craft which will cost more to purchase and consume more fuel to achieve the same performance with associated increase in CO₂ (we believe that the end user would purchase a larger vessel in order to still have available the required space for occupants). Moreover, after-treatment would also increase the weight of the vessel.. This would be disproportionate, given the very low amount of annual operating hours (less than 50) of a typical recreational craft.

1.3.2 Please indicate what type of recreational craft, propulsion system and power level (in kW) you are referring to.

All recreational craft using compression ignition (CI) engines at power levels > 37 kW.

1.4 Using technologies to reduce emissions (of pollutants and/or greenhouse gases) might result in a propulsion system that takes up more volume. This would reduce the space available for other purposes (e.g. storage or accommodating occupants), but would be offset by cleaner air and water. Under these circumstances, would you still agree to a reduction of emissions?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

1.5 Noise and pollutant exhaust emissions from recreational craft could be reduced if national or local authorities impose maximum speed limits (in certain areas/zones and/or during parts of the day). Do you agree that such tailor-made measures are more efficient than setting general limits?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree

Completely disagree

1.5.1 And would this be a sufficient option? Please justify your answer.

Yes, local speed limits for craft would be sufficient. This would enable the solution to be targeted to the location and/or time where the need for emission or noise reduction is greatest, without disproportionately impacting use of recreational craft outside those circumstances.

1.6 Current pollutant emission limits for engines of a given maximum power vary for different driveline configurations (e.g. limits are different for outboard engines/engines for personal watercraft (PWC) compared to limits for engines located inside the boat). In addition, these limits can be different depending on what engine type is being used (for instance spark ignited or diesel, two-stroke or four-stroke). Therefore, the emission legislation is not technology neutral. Do you agree that the current emission legislation, which is not technologically neutral, should be continued?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

1.6.1 Please justify your answer.

EUROMOT generally supports technologically neutral solutions, although recognizes that there may be cases where technology dependent limits may be appropriate. This is particularly the case where for each technology it is necessary to have globally harmonized products to provide the most cost-effective emission reduction.

1.6.2 In your opinion, what would be the consequences of a possible switch to technology-neutral pollutant emission legislation for different driveline configurations and engine types? Please justify your answer.

This would be a major change to the current regulation, which, if it causes deviation from globally harmonized limits, may require uneconomic development of unique products for the EU market.

1.7 The Recreational Craft Directive should anticipate the appearance of new driveline technologies, such as hybrid propulsion systems. Do you agree that the impact of these new driveline technologies on pollutant emission test and certification procedures should be investigated?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

1.7.1 Do you have any suggestions in this respect?

There are applications where such technologies are suitable and beneficial, and others where they are not. The engine emission certification process should be driveline technology-independent (inclusive of hybrid propulsion systems), due to the wide variety of such driveline, compared to annual sale volumes of engines. EUROMOT, in conjunction with IMEC, is actively working on suitable proposals.

1.8 The EU regulates exhaust emission of air pollutants in the recreational craft sector. Regulations also exist elsewhere in the world, but the limit values and corresponding test procedures can differ. Do you agree that the EU regulation should be harmonised with those elsewhere in the world?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

1.8.1 Please justify your answer.

This provides the economies of scale necessary to deliver cost-effective emission reduction.

1.9 Do you agree that the EU should aspire to lead the efforts to reduce emissions in the sector?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

1.9.1 Please justify your answer.

Any further reduction in emission limits should be coordinated at an international level. The EU market is not large enough to sustain an independent reduction in emissions limits.

1.10 Would you agree with the introduction of an emission label to stimulate the implementation of technologies that reduce the emission of pollutant gases?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

1.10.1 Please justify your answer.

Pollutant emissions from CI engines > 37 kW used in recreational craft are already at the lowest practical level with very small variation between the different products. The extreme wide variation in the design of recreational craft makes it impractical to have standard measurement system to provide a comparison of emissions at the craft level.

1.11 Do you agree that CO2 emissions from recreational craft should be regulated?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

1.11.1 Please justify your answer.

The extreme wide variation in the design of recreational craft makes it impractical to have standard measurement system to provide a comparison of emissions at the craft level. Moreover, such a requirement would be disproportionate, given the very low amount of annual operating hours (less than 50) of a typical recreational craft. The greatest practical opportunity for reduction in GHG emissions from recreational craft would be the introduction of low-carbon/renewable drop-in fuels and increased training of the users. This also has the advantage of being valid for both existing and new craft.

Concerning the first aspect (low-carbon/renewable drop-in fuels): ongoing EU legislative processes (most importantly the review of the Renewable Energy Directive) should guarantee a stronger market penetration and a harmonized identification of such fuels.

Concerning the second aspect (training): the RCD review might help, as point 2.5 of Annex I of the current RCD stipulates that the owner's manual "shall provide all the information necessary for safe use of the product drawing particular attention to set up, maintenance, regular operation, prevention of risks and risk management". A requirement to provide information necessary for a fuel-efficient and environmentally friendly operation of the product (which would in turn reduce CO2 emissions) could be added. Outside the RCD, manufactures, boating organizations and governments can encourage users to take training that includes operating with consideration for the environment. An example of this is the French federation of Nautical Industries (FIN) Massive Open Online Course on sustainable boating: <https://nautisme-durable.com/>.

PART 2: Evaporative emissions from fuel systems

Introduction

Evaporative emissions refer to the sum of all fuel-related non-methane volatile organic compounds (NMVOC) emissions not derived from fuel combustion. Specifically, evaporative emissions of VOCs emanate from the fuel of petrol-powered recreational craft. Evaporative emissions from diesel-powered recreational craft are negligible due to the presence of heavier hydrocarbons and the relatively low vapour pressure of diesel fuel and can be omitted.

Evaporative emissions are grouped into the following categories:

- diurnal emissions due to temperature variation throughout the day;
- fuel tank and hose permeation/leakage emissions due to fuel escape through the fuel tank's permeable walls;
- hot soak emissions due to a hot engine turning off;
- running loss emissions due to vapour generated in the fuel tank during engine operation;
- refuelling emissions, which are fuel vapours that escape from the tank due to liquid fuel being displaced.

2.1 The evaporative emissions on recreational craft are not currently regulated at the EU level. Do you agree that they should be regulated?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

2.2 If evaporative emission standards were to be introduced in the Recreational Craft Directive, do you agree that they should be harmonised with other global values for the sector, for example such as those in US legislation?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

2.3 Do you agree that the below evaporative emission sources should be regulated?

	Completely agree	Somewhat agree	Neither disagree nor agree	Somewhat disagree	Completely disagree
Diurnal emissions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fuel tank and/or hose permeation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hot soak emissions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Running loss emissions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Refuelling emissions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2.4 In your opinion, which emission control technologies can be used to regulate evaporative emission levels and what emission levels can these technologies achieve?

	Recreational craft category (sailing boats, inboard / sterndrive motorboats, outboard motorboats, inflatable boats, PWCs)	Technology (multi-layer fuel tank, activated carbon canister, etc.)	Emission levels achievable (e.g. in grams /day)	Current costs of this technology (€ /recreational craft)
1				
2				
3				

PART 3: Watercraft design categories

Introduction

The Recreational Craft Directive introduced revised definitions of the watercraft design categories. These categories are now referred to as A, B, C or D, instead of 'Ocean', 'Offshore', 'Inshore' or 'Sheltered Waters'. It is due to a potentially misleading link between the design category and the geographical location of intended use. More important is the relevance of environmental conditions, i.e. the wind force and the sea state (wave heights). These definitions should help manufacturers and the end user to better understand the conditions that a watercraft can withstand. It is investigated whether the upper limit for category A would bring additional legal certainty to both the manufacturers and the end users.

The review clause set out in Article 52 of the Directive requires an evaluation of how the current set-up of watercraft design categories affects manufacturers (particularly SMEs) and consumers, with the possibility to suggest additional specifications and sub-categories of watercraft design categories, if needed, while taking into account developments in international standardisation.

To help you better understand the questionnaire, the most important terms are explained below:

- clearness of the information concerning the design categories refers to clarity or quality of the information.
- sufficiency of the information concerning the design categories refers to the amount of information.
- specification of the design categories refers to the division criteria. Currently, the Directive's categories have two division criteria: wind force and significant wave height.
- sub-division of the design categories refers to the possible introduction of more categories in addition to the current four: A, B, C and D.

3.1 Do you agree that the current specifications (wind force and significant wave height) and/or divisions (A, B, C, D) of watercraft design categories provide sufficient and clear information to **manufacturers**?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

3.2 Would you agree that additional or different specifications and/or further sub-divisions could provide clearer and more sufficient information to manufacturers (in particular SMEs)?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

3.3 Do you agree that the current specifications (wind force and significant wave height) and/or divisions (A, B, C, D) of recreational craft design categories provide sufficient and clear information to **end-users** on the types of risks connected with using watercraft?

- Completely agree

- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

3.4 Would you agree that additional or different specifications and/or further sub-divisions could provide clearer and more sufficient information for the end-users?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

3.5 Do you agree that the Recreational Craft Directive should specify any upper limits of wind force and wave height for category A?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

3.6 Do you agree that a further subdivision of category D into two parts (one with a wind force up to and including 2 with a significant wave height up to 0.3 metres and another with a wind force up to and including 4 with a significant wave height up to 1.5 metres, leaving category C as is) would allow manufacturers to bring more clarity and logic into the classification of the design categories?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

3.7 Do you agree that a further subdivision of category D into two parts (one with a wind force up to and including 2 with a significant wave height up to 0.3 metres and another with a wind force up to and including 4 with significant wave height up to 1.5 metres, leaving category C as is) would provide **end-users** with clearer information on the types of risks connected with using recreational crafts?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

3.8 Do you agree that a further subdivision of category C into two parts (one with a wind force up to and including 5 with a significant wave height up to 1.25 metres and another with a wind force up to and including 6 with a significant wave height up to 2.5 metres, leaving categories D and B unchanged) would allow **manufacturers** to bring more clarity and logic into the classification of the design categories?

- Completely agree

- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

3.9 Do you agree that a further subdivision of category C into two parts (one with a wind force up to and including 5 with a significant wave height up to 1.25 metres and another with a wind force up to and including 6 with a significant wave height up to 2.5 metres, leaving categories D and B unchanged) would provide **end-users** with clearer information on the types of risks connected with using recreational crafts?

- Completely agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree

3.10 If you proposed sub-divisions of design categories or additional specifications, please provide information on any additional costs (e.g. investments, production costs, certification costs, etc.) and other possible impacts (e.g. on manufacturer productivity, safety, standardisation, etc.) related to your proposal.

Further information

If you wish to add further information or comments – relevant to the scope of this questionnaire – please do so here:

EUROMOT would like to emphasize that the greatest practical opportunity for reduction in GHG emissions from recreational craft would be the introduction of low-carbon/renewable drop-in fuels and increased training of the users. This also has the advantage of being valid for both existing and new craft.

EUROMOT can help in the drafting of any future amendment and associated standards to ensure compatibility with low-carbon and renewable fuels. Moreover, ongoing EU legislative processes (most importantly the review of the Renewable Energy Directive) should guarantee a stronger market penetration and a harmonized identification of such fuels.

The practical training of users does not fit in a “placing on the market” directive, although the mandatory provision of information on good operating practises that encourage minimising the impact of the craft on the environment could be included with the supply of craft (for example, in point 2.5 of Annex I, on requirements related to the owner’s manual). There is, however, no substitute for practical training, and national programs to encourage the uptake of this would be most beneficial. It is a real win-win with the environment benefiting and the user getting more pleasure from the use of the craft.

Feel free to upload a concise document, such as additional evidence supporting your responses, or a position paper. Please note that the uploaded document will be published alongside your response to the questionnaire, as it will be an essential input to this consultation. This document will provide additional background to help readers better understand your position.

Please upload your file

The maximum file size is 1 MB

The only file types allowed are: pdf, txt, doc, docx, odt, and rtf.

Please upload your file

Useful links

[Recreational Craft Directive 2013/53/EU \(https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013L0053\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013L0053)

[Sectorial website \(https://ec.europa.eu/growth/sectors/maritime/recreational-crafts/ec-support_en\)](https://ec.europa.eu/growth/sectors/maritime/recreational-crafts/ec-support_en)

Contact

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