



**The first carbon footprint index
for superyachts.**



"The decade ahead will be a decisive one for the future of our planet."

HSH Prince Albert II, President du Yacht Club de Monaco.



"Climate concerns represent a fundamental challenge for humanity. In line with United Nations Sustainable Development Goals for 2030, the next ten years must focus on ocean science to underpin our scientific knowledge, encourage technical innovation and promote new solutions to hopefully reverse the cycle of decline in ocean health. As part of our project to position the Principality as a centre of excellence for yachting, I sincerely believe that through the Yacht Club de Monaco this is a great opportunity to make our sector and what it has to offer heard – to be an original voice in the concert of nations, a voice of experience and hope, of modernity and innovation, attentive to all environmental issues.

That is why, and to meet owners' and the yachting industry's demands, we are delighted to be involved in the launch of the SEA Index, the first benchmark to measure the environmental footprint of superyachts and promote good practice".

HSH Prince Albert II, President du Yacht Club de Monaco.



**A simple , easy to use,
rating system to
assess the
environmental impact
of superyachts.**

**Provided for everyone
by a non-profit
organisation based in
Monaco.**

**Robust , unbiased and
evidence-based
method,
independently verified**

by



A CO₂ rating tool for superyachts

In the absence of a global standard on CO₂ emissions for superyachts, the Yacht Club de Monaco and Credit Suisse created a non-profit organisation The Superyacht Eco Association & the SEA Index:

An accessible rating index to assess the CO₂ emissions for Superyachts (25m+) and improve their environmental performance.

- The index assesses CO₂ emissions
- Applicable to yachts 25meters+
- Voluntary index
- The assessment will result in a 5-star rating
- Incentives for less impactful yachts



The SEA Index is based on the International Maritime Organisation's EEDI/EEXI indexes, plus specific customisations for superyachts.



Evolution of the SEA Index

SEA Index Phase I

SEPT. 2020

The CO₂ rating was a measure of the yacht's carbon efficiency by design, for yachts over 40 meters.

SEA Index Phase II

SEPT. 2021

- The typical operational profile of the yacht (cruising time, berth or anchor)
- The scope & accuracy (possibility to rate hybrids, battery-based propulsion systems)
- Innovative auxiliary power features

SEA Index Phase III

JULY 2023

- Adding new segment: yachts from 25m+ and below 400 GT
- Operational AIS data obtained for 392 for year 2021.

SEA Index Phase IV

SEPT. 2023

- Consumption rating tool 0-24m

SEA Index Phase I – IV :

A comprehensive energy-efficiency rating tool to compare yachts.

Raising awareness

More and more superyacht owners, shipyards and management companies are concerned about their impact on the oceans and are willing to adopt a sustainable approach.

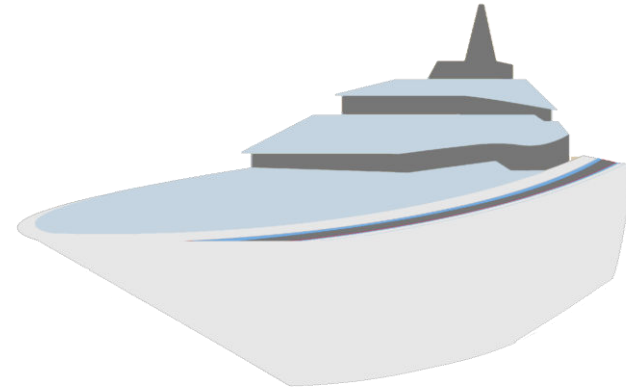


**Be ahead of the fleet,
set your course to 2030
& beyond.**

- Easily rates the carbon impact of superyachts (from 25m and above)
- Recognises superyachts with lower carbon emissions by attributing them with a standard energy- intensity rating.
- Promotes alternative technological solutions reducing CO₂ emissions.
- Available CO₂ certification document, & improvement options document issued by a Class Society on behalf of the SEA Index.



Fast, simple, unbiased



The units of the SEA Index:

- $\text{g.CO}_2/\text{GT.hr}$
 - Carbon emissions per Gross Ton
 - Rated installed power of main engines & auxiliary engines in kW
-
- Evaluates carbon emissions per gross ton, accounts for the rated installed power of main engines & the rated installed power of auxiliary engines.
 - Compares a yacht's carbon intensity with the average of the existing global fleet.
 - The reference line was calculated with data from over 330 superyachts above 40m and over 390 yachts for the 25m + segment.



SEA-Index process



YACHT APPLICATION

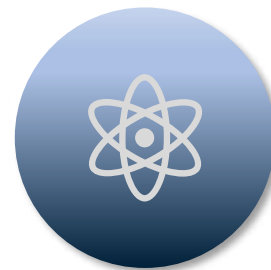
ONLINE FORM



EVALUATION

YACHT DATA
COLLECTION

GROSS TONNAGE
INSTALLED ENGINE POWER
INSTALLED AUX. POWER



DATA VERIFICATION

LLOYD'S REGISTER
INDEPENDENT
VERIFICATION
EVALUATION &
CALCULATION OF SEA
INDEX RATING



CERTIFICATION

REMITTANCE OF SEA
CERTIFICATE
&
ASSOCIATION EMBLEMS

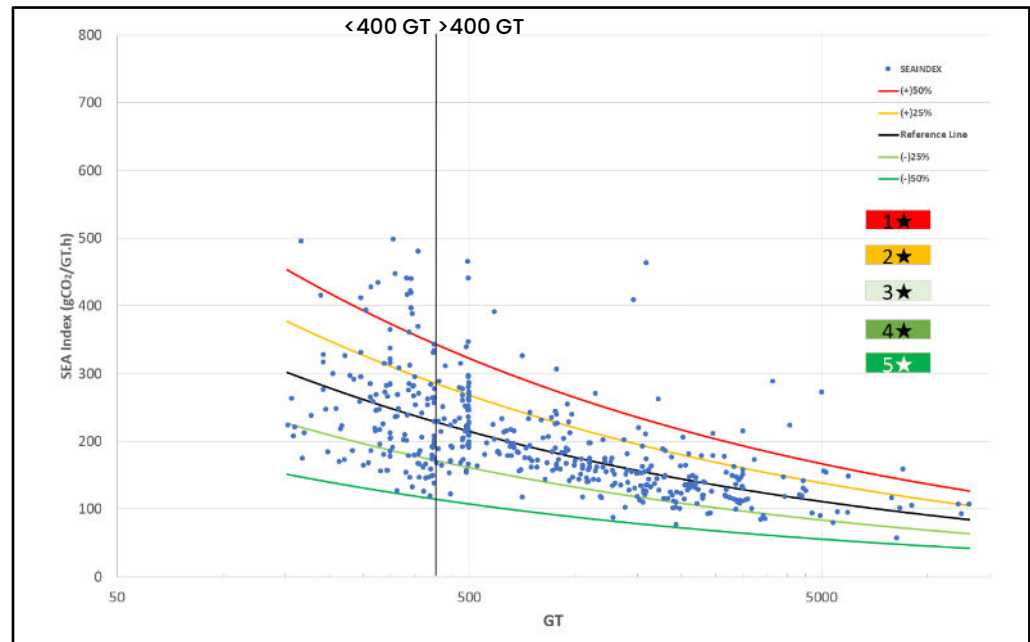


Baseline & results

Phase II and III range distribution

RATING	Percentage of sample with rating <400 GT	Percentage of sample with rating >400 GT
No rating	11.3%	5.3%
1	8.7%	10.1%
2	28%	28.2%
3	28%	49%
4	24%	7.4%
5	0%	0%

Phase II & III baseline



The scale:

'No Rating': Efficiency is below the SEA Index standard. 1* Fair, 2* Good, 3* SEA Index standard, 4* Superior standard, 5* Excellent standard

Example

Certificate no: ATAS/1002172-SEAI-01

SEA Index Certificate

Issued under the authority of the Superyacht Eco Association by Lloyd's Register Advisory Services B.V.

Name of ship	Distinctive number or letters	Port of registry	*Date
		LONDON	1981
IMO number			

*Date on which the keel was laid or the ship was at a similar stage of construction.

This ship has achieved the following SEA Index¹ value and rating as calculated based on the information below:

4★

146 gCO₂/GT.hr

Rating	5★	4★	3★	2★	1★	No Rating
Range (gCO ₂ /GT.hr)	< 106	106 - 158	158 - 211	211 - 264	264 - 317	> 317

DATA USED TO CALCULATE RATING

VARIABLE	VALUE	SOURCE
Gross Tonnage	531 GT	International Tonnage Certificate
Installed power – Main Engines	1,655 kW	Ship Details from Shipyard
Installed power – Aux. Engines	75 kW	A/E Specification
Specific Fuel Consumption - ME	190.0 g/kW.hr	Estimated value used
Specific Fuel Consumption - AE	215.0 g/kW.hr	Estimated value used
Number of ME	2	M/E Specification
Number of AE	3	A/E Specification

This is to certify that the SEA Index of this ship has been determined in accordance with the methodology agreed and defined by the Superyacht Eco Association (LR technical report Z104-0027).

Issued at Athens on 10 July 2023

The undersigned declares that he/she is duly authorised by the Super Yacht Eco Association to issue this certificate.

Olympia Tsitonaki
Decarbonisation Assistant Specialist, Lloyd's Register

¹ SEA Index is based on the IMO Resolution MEPC.94(79) "2022 Guidelines on the method of calculation of the attained energy efficiency design index (EEDI) for new ships" and IMO Resolution MEPC.350(78) "2022 Guidelines on the method of calculation of the attained EEXI".

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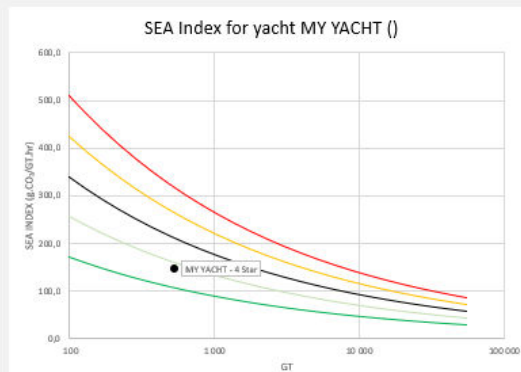
SEA INDEX CALCULATOR

Version number: 0.2
Release date: July 2023



Ship name	MY YACHT
LR/IMO number	
Gross tonnage (GT)	531
Total rated installed power of Main Engine/s	1654 kW
Number of auxiliary engines	3
Rated installed power of aux engine 1	75 kW
Rated installed power of aux engine 2	75 kW
Rated installed power of aux engine 3	75 kW
Does the vessel have any of the following: <i>DLP, deck heating, heated pool/spa, polar coil</i>	No
Check of Planning vessel (optional)	
Maximum vessel speed (knots)	16
Length of vessel (m)	46.2
Result	Displacement Vessel, OK

Calculated SEA Index 146 gCO₂/GT.hr
Rating **4 Star**





Categories

FRIENDS OF THE SEA INDEX

Open to those who wish to join our community but who do not own a SEA Index rated motor yacht, like – minded individuals, companies & organisations who are active in the CO₂ energy transition and engaged in eco – responsible innovations & practices.

[Join the community](#)

PRIVATE YACHT

Open to Private Yachts (25m+ motor yachts). Owners, their representatives, or their Captains can apply for the yacht's membership under this category.

[Private Yacht Membership](#)

PROFESSIONAL

Open to shipyards, commercial agents, naval architects, designers & insurance companies, all specialising in displacement hull motor yachts (25m+)

[Professional Membership](#)





Yacht Club de Monaco



La Superyacht Eco Association + le SEA Index:

Une Assoc' et un outil de calcul d'émissions pour superyachts en vue d'améliorer leur performance énergétique.

- L'indice évalue les émissions CO2 pour le moment... mais c'est évolutif.
- Le YCM applique des mesures incitatives pour les navires les moins impactants (remises sur places à partir 3* Certifiés, tarifs LBCA cours ETYC).
- Certification CO2 offerte aux membres YCM possédant un yacht 25m+



Développements récents:

- Le YCM a pris un engagement fort: tous les nouveaux membres possédant un yacht 25m + Certification SEA Index.
- Recherche en cours: autres paramètres Nox , bruit, H2O

Ok d'accord mais... le but du SEA Index c'est quoi au final ?



- Aider tout propriétaire de yacht à prendre des décisions plus éclairées, choisir des navires moins émetteurs de GAS et mitiger les impacts sur l'Océan.
- Aider l'image du yachting: Plus de transparence et de l'action concrète.

SEA INDEX Certificate

Issued under the authority of the Superyacht Eco Association by Lloyd's Register Advisory Services Ltd.

Name of ship	Registration number or name	Port of origin	Type
	IMO number	LONDON	YACHT

This ship has achieved the following SEA Index value and rating as calculated based on the information below:

4★

144 gCO₂/GTHr

Rating	5★	4★	3★	2★	1★	No Rating
Range (gCO ₂ /GTHr)	< 104	104 - 158	158 - 211	211 - 264	264 - 317	> 317

DATA USED TO CALCULATE RATING

PARAMETER	VALUE	SOURCE
Ship Tonnage	1311 GT	Administrative Storage Certificate
Installed engines - Main Engines	1,010 kW	Ship Technical File (STF)
Installed engines - Aux. Engines	79 kW	A/E Specification
Specific Fuel Consumption - ME	152.2 g/kWh	Engine maker data
Specific Fuel Consumption - AE	215.2 g/kWh	Engine maker data
Number of ME	2	Administrative
Number of AE	2	A/E Specification

This is to certify that the SEA Index of this ship has been determined in accordance with the methodology agreed and defined by the Superyacht Eco Association (technical report 2304-007), issued at Athens on 18 July 2023.

The undersigned declares that he/she is duly authorized by the Superyacht Eco Association to issue this certificate.

[Signature]
Dimitris Tselentis
Registration Services (Yacht Register)

SEA Index is based on the IMO Association 2009-2012Y22 guidelines on the method of calculation of the above-mentioned efficiency range index (EEXI) for the 'Net' and EEXI Reduced (EEXI-RED) 'Net' (based on the index of operation of the vessel)...



OUR SUPPORT NETWORK

SEA INDEX FOUNDERS



INSTITUTIONAL MEMBERS



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OUR SUPPORT NETWORK





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