



Sailors for the Sea Sustainability Report

55th International Knarr Championship
Rungsted, Denmark

24th – 30th August 2025

Arranged by
ROYAL DANISH YACHTCLUB
and
DANISH KNARR ASSOCIATION

20th October 2025



Background:

Kongelig Dansk Yachtklub / Royal Danish Yacht Club (KDY) is Denmark's largest yacht club, with more than 2,000 members of all ages across the country. KDY's members represent all levels of sailing - from international elite sailors, including Olympic-level crews, to beginners, juniors, and cruising enthusiasts.

The Danish Knarr Association counts more than 100 members, and the class is the largest and most active in the Øresund region - the waters off Copenhagen - with strong hubs in Skovshoved and Rungsted, both located north of the capital.

KDY organises both national and international regattas, including World, European, Nordic, and National Championships. This year, in cooperation with the Danish Knarr Association, KDY hosted the 55th International Knarr Championship (IKC), welcoming more than 100 sailors and family members from Norway, the USA, and Denmark.

The IKC is an annual event, rotating between Denmark, Norway, and the USA. It is therefore an important opportunity to promote and demonstrate how to stage a sustainable regatta in accordance with the guidelines set forth by Sailors for the Sea.

Sustainability is a key priority for KDY. A dedicated board - the Green Team - has been established to manage and implement the club's sustainability strategy. KDY feels a strong responsibility to lead the way, both nationally and internationally, in advancing sustainable sailing and promoting environmentally responsible regattas.



At the previous IKC in Denmark, KDY and the Danish Knarr Association joined forces as regatta organisers, striving to uphold the highest standards of sustainability throughout the event. Their efforts were recognised with the Platinum Award from Sailors for the Sea. It was therefore only natural that the two organisations came together again this year with the same high ambitions.

The races are sailed over one week, including a lay day. Participants sail in borrowed boats provided by members of the Knarr Association, and each day the teams change boats, which are assigned by draw.

As the host nation supplies all the Knarrs used during the regatta, the IKC competitors avoid the need for long-distance boat transport - thereby reducing the environmental footprint even before the first race begins.

Action and process:

Achieving a sustainable and clean regatta requires thorough planning. The KDY Green Team immediately activated the Clean Regatta work plan and, together with the Danish Knarr Association, registered the event with the intention of making the International Knarr Championship a “Clean Regatta” (as defined by *Sailors for the Sea*) for the second time.

Planning for a top-level outcome at the 55th IKC began more than six months prior to the event, and the 20-point action plan was launched. In close cooperation with the Race Committee, KDY’s Green Team, and the Knarr Sustainability Committee - fully supported by Rungsted Harbour and Hørsholm Municipality - the mission was clear: to make the championship a *Clean Regatta*.



In cooperation with the waste management company REMONDIS, the Knarr Association succeeded in having the company provide two complete waste stations. These were strategically placed in the harbour area, constantly reminding participants that *“It’s not a waste to sort your waste.”*

The 55th IKC team, comprising members from KDY and the Knarr Association, included:

- Regatta management and coordination
- Registration, results, and communication
- The race committee and on-water support team
- The protest committee
- The onshore team, responsible for social events and food and beverage service

The team consisted of approximately 50 people. The IKC Sustainability Team took part in preparatory meetings leading up to the regatta, ensuring that everyone involved was aware of the sustainability processes and could contribute ideas as well as take ownership in making the event a top-tier sustainable regatta.

The Harbour Clean-up initiative proved highly effective, both in supporting the sustainability goals and as a strong communication tool. All harbour visitors could see the clean-up work, both on shore and in the water. For the latter, KDY used a relatively new device that cleans debris etc. from the harbour basin (see below in section 14).

A new feature this year was the use of Vakaros Atlas-2 and RaceSense electronic navigation systems, installed on all Knarrs and on the Race Committee boat, respectively. (see also “Use of Electronics”)



These systems have been adopted by the Danish Knarr fleet this season. Since many of the international participants were unfamiliar with the technology, it was configured with limited functions, primarily distance and time to the starting line, start countdown, and close-hauled course indication.

The use of these systems throughout the week proved highly successful. From a sustainability perspective, it is noteworthy that there were no general recalls at all - saving both time and fuel emissions from auxiliary boats used to reposition the starting marks. Combined with the use of self-positioning marks (see below), this allowed the number of RIBs with petrol engines to be reduced to just one, mainly used to tow the marks to the race area and for safety purposes.

Follow-up:

A *Clean Regatta* is only truly successful when its experiences and best practices are shared with other clubs - locally, regionally, and globally. Accordingly, KDY and the Danish Knarr Association have established a follow-up strategy and clear guidelines to ensure that future regattas are conducted as *Clean Regattas*.

GUIDELINES – BEST PRACTICE:

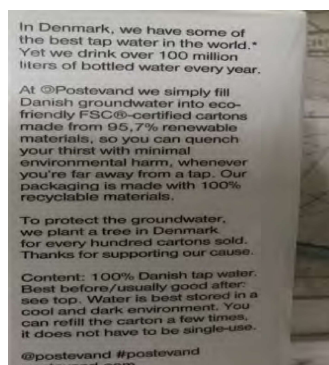
1. Eliminate Single-Use Water Bottles and Provide Water Refill Stations

In recent years, sailors at major regattas have often been provided with complimentary water bottles, and most of us now have several stored at home. To reduce unnecessary distribution, the Notice of Race invited participants to bring their own reusable bottles. Only a few were handed out to those who had forgotten theirs.

The local water board, Novafos, arranged two water stations, each with four outlets. The water filling stations were strategically placed around the harbour area.



Water Refill Station

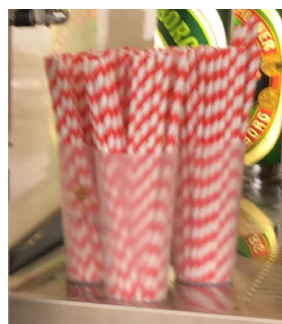


Danish tap water is the best
<https://www.postevand.com/>

2. Eliminate Plastic Straws

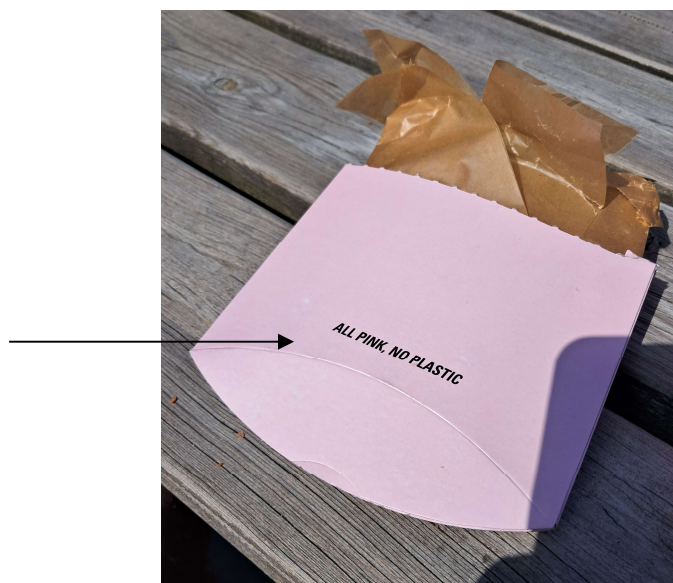
Plastic straws are banned under EU law, and are generally not used at Danish regattas.

Nevertheless, Abena (www.abena.dk), a long-time KDY sponsor and supplier to the food service industry, provided several packs of



sustainable, non-plastic straws. These were displayed and made available to participants for soft drinks during the event.

3.Serve Food with Plastic-Free Dinnerware



Lunch sandwiches were provided for the team, with the supplier chosen specifically for its sustainable, plastic-free packaging.



Participants were offered sandwiches for on-water meals, wrapped in paper - a renewable and compostable alternative to plastic bags. Even the carry bags were made of paper.



The sailor in the photo to the right took sustainability to the next level - he reused the same paper bag for his sandwiches several times.



After each day's racing, a meal was served at the clubhouse. The photo below shows *frikadeller* (meatballs) and potato salad served on eco-friendly, plastic-free dinnerware and eaten with compostable wooden cutlery. Other meals, such as at the Midweek Party (see Section 10), were served on traditional china dinnerware, washed and reused. All food was accompanied by biodegradable and compostable napkins.





Special reusable glasses and cups for soda water and beer.



Special KDY-branded reusable glasses and cups for soft drinks, water, and beer were used throughout the week. These items have been in service at KDY for several years and continue to promote the use of durable, environmentally friendly alternatives.

After just three uses, their CO₂ footprint is already lower than that of single-use plastic cups.

The collection system for used glasses featured clearly labelled containers -“Brugte krus” (Danish for Used Glasses) - supplied by Genkrus, the provider. Each container was fitted with vertical tubes inside the lid openings, allowing the glasses to drop neatly into place and stack automatically.





This design maximised the container's capacity, reduced the number of transports to the washing facility, and thereby lowered both emissions and costs.



The photo shows the automatic washing machine used by Genkrus for cleaning and sanitising the reusable glasses.

4. Use or Provide Reusable Bags



During the off-season, members of the Danish Knarr Association donated used and worn Knarr sails, which were recycled into stylish bags. Each bag featured the 55th IKC logo on one side and the North Sails sponsor logo on the other.



A total of 213 bags were produced from recycled sailcloth. Upon arrival, each team received one as a welcome bag, containing sustainable and sponsored products for “boats and bodies” - including a small container of copper- and biocide-free antifouling and other eco-friendly items from Hempel, the Danish manufacturer of coatings for the shipping and offshore industry and the yacht segment, as well as sunscreen for the sailors.

The welcome bags were extremely popular among participants and volunteers alike, and quickly sold out in the event’s merchandise shop.

Each boat also received red environmental waste bags from the Royal Danish Navy, which sponsors the Havmiljøvogter (“Sea Environmental Guardian”) campaign. All crews were instructed to use the red bags for collecting waste onboard and to bring the filled bags ashore after racing for sorting at the designated recycling stations (see Section 11).



HAVMILJØ VOGTER bags were provided to all boats, ensuring no waste was released into the sea.



Admiral Torben Mikkelsen, Royal Danish Navy, endorsing the "HAVMILJØVOGTER" campaign.

5. Award Practical Items or Use a Perpetual or Upcycled Trophy

The winner of the International Knarr Championship is awarded the perpetual International Knarr Trophy, first instituted in 1969.

At mid-week, the regatta leader also receives a perpetual prize - the Georg von Erpecom Trophy.

At every IKC, the race results for each participating boat are recorded on individual wooden battens, which are moved up and down the scoreboard throughout the event to reflect the standings.

At the conclusion of the championship, the battens are presented to the crews during the awards ceremony as memorable keepsakes from the regatta.



Scoreboard with wooden battens.



The perpetual International Knarr Trophy



The Georg von Erpecom Perpetual Trophy



Other prizes were all manufactured in glass (a few with contents), which is a sustainable material.

A quote from Glass Alliance Europe:

Glass is a sustainable, fully recyclable material which provides great environmental benefits, such as contributing to mitigating climate change and saving precious natural resources. It is also highly appreciated in many applications for its inert nature and its contributions to safeguarding people's health and well-being.



For the event, the Knarr Association produced T-shirts for the volunteers, who generously dedicated their free time to support the regatta. Volunteers came from both KDY and the Knarr community, representing a wide age range and including both women and men.

The T-shirts were carefully selected to be sustainably made from vegan, plant-based, and recycled materials, such as organic cotton, hemp, linen, bamboo, and recycled fibres.





6. Publicise Your Sustainability Efforts

The participants were informed of the Clean Regatta application to Sailors for the Sea in the Notice of Race.

In addition, the Sailing Instructions specifically addressed the topic of waste management and disposal, ensuring that all competitors were aware of their environmental responsibilities throughout the event.



22. CONDUCT

All competitors shall conduct in a manner consistent with the RRS, World Sailing Regulations and the principles of sportsmanship.

23. SUSTAINABILITY

The 55th International Knarr Championship apply for Platinum-level Clean Regatta certified by Sailors for the Sea.



<https://sailorsforthesea.org/programs-green-boating-guide/>

Bring your reusable bottles and food containers and follow waste sorting instructions at the recycling stations.

At all times while afloat, no trash must under any circumstances be disposed of into the sea. RRS 47 applies.

24. FURTHER INFORMATION



26 TRASH DISPOSAL

26.1 At all times while afloat, no trash must under any circumstances be disposed of into the sea. RRS 47 applies. Trash may be placed aboard official vessels.

27 BERTHING

27.1 [DP] Boats shall be kept in their assigned places while in the harbor.

28 HAUL-OUT RESTRICTIONS

28.1 [DP] Boats shall not be hauled out during the event except with and according to the terms of prior written permission of the Technical Committee.

29 DIVING EQUIPMENT AND PLASTIC POOLS

29.1 Underwater breathing apparatus and plastic pools or their equivalent shall not be used around keelboats between the preparatory signal of the first race and the end of the last race of the event.

29.2 Keelboats shall not be cleaned below the waterline by any means during the event, except as authorized by the Technical Committee.



Notice of Racing

Sailing Instructions



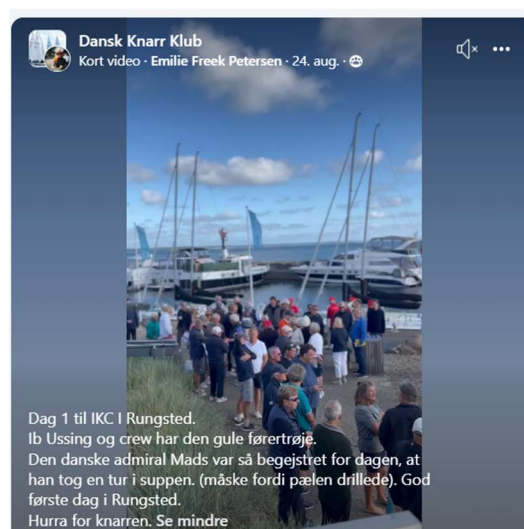
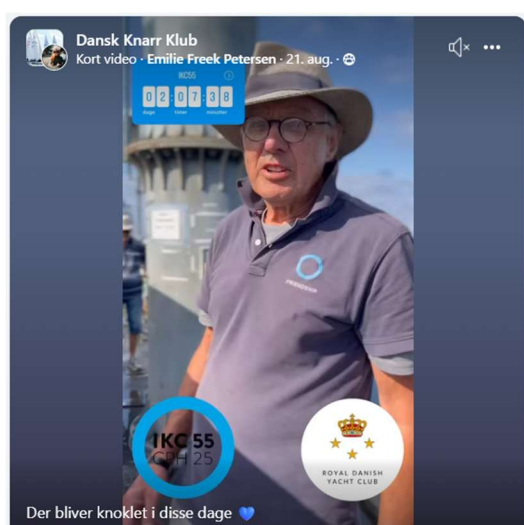
The event programme and magazine were produced and published electronically by the Danish Knarr Association and made accessible through the event website.

A direct link to the publication is available here: [Event programme](#)



The link to the electronic event programme and magazine was distributed to all advertisers, sponsors, media representatives, and other involved parties - including, of course, the participants and their families.

This digital approach saved both paper and distribution costs, while also reducing emissions associated with transport.



For several weeks leading up to the regatta - and throughout the event itself - the Danish Knarr Association produced and published a series of electronic newsletters.

Each edition highlighted that the 55th IKC was organised as a clean and sustainable regatta, reinforcing the event's environmental focus and commitment.

7. Involve Local Organizations

Local partnerships were key to the success of the event - particularly in ensuring a strong legacy and maintaining momentum post-regatta.

("Local" is defined here as organisations within the local municipality.)



The local organisations included:

Rungsted Harbour

Hørsholm Municipality

Gentofte Municipality

Novafos, the local water board, arranging water stations for the refill of the participants' water bottles

Bike rental by Rungsted Harbourmaster's office



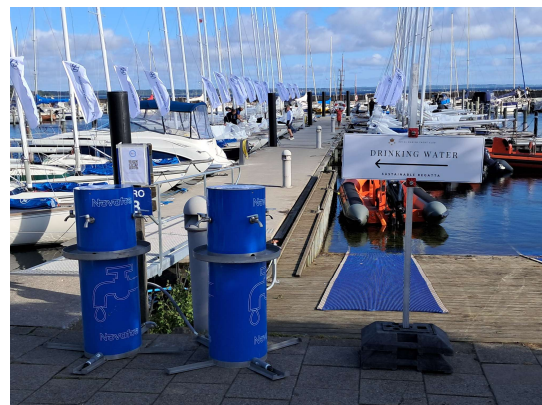
A major share of the event sponsors were either locally based companies or businesses with strong ties to the community.

All parties were invited to visit Rungsted Harbour during the championship.

8. Post Educational and Reusable Signage

Signage from previous KDY events was reused at the 55th IKC, in line with KDY's ongoing commitment to sustainability and resource efficiency.





Selected reusable signage

The KDY “Sailors for the Sea” process book will be updated with insights gained from this regatta and shared with other sailing clubs. Furthermore, both the KDY regatta management teams and the youth section will receive training on how to prepare for and execute sustainable sailing events.

To strengthen awareness and foster a generational handover of sustainable values, the KDY Green Team will, from November 2025, include members from the youth section.

9. Serve Local Food or Source Seafood Sustainably



At every International Knarr Championship, Wednesday is a lay day, marking the halfway point of the racing schedule



The evening before the lay day traditionally features a midweek party. At this year's IKC, the first course consisted of locally caught shrimp and tuna.

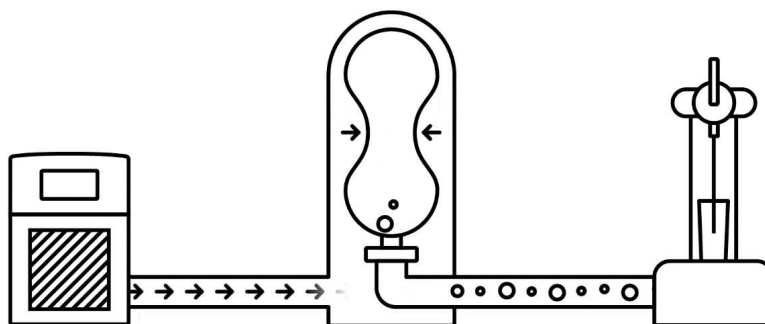


Another example of the food served was an afternoon snack following the races: Home-baked focaccia bread with tapas, including salmon, a slice of beef left over from the previous day, and cheese, garnished with a fig picked from the chief steward's own garden.

The draught beer served was locally brewed by Carlsberg/Tuborg and dispensed using the DraughtMaster system, a CO₂-free dispensing technology.



Instead of using CO₂ to push the beer through the tap, the system employs compressed atmospheric air to apply pressure around a collapsible inner container, ensuring that the beer flows naturally to the tap, eliminating CO₂ use entirely.



10. Organise a Green Team

KDY's Green Team consists of seven dedicated sailors, led by Søren Helmer Jensen.

The IKC sustainability team also included members of the Knarr Sustainability Leadership and other representatives of the Knarr community.

Together, this group - along with more than 50 volunteers - took ownership of the regatta's sustainability efforts and played an active, enthusiastic role throughout the event.

The Knarr Sustainability Leadership (Jes Thomsen, below-also showing collected waste) was created specifically for the championship, and its members contributed significantly, with great enthusiasm.





11. Ensure Proper Waste Bin Placement and Signage



The sustainability mantra of the event: "It's not a waste to sort your waste"



Recycling Station One

Two recycling stations were strategically located on the harbour site:



- One at the end of the dock where the Knarrs were moored
- One along the main route between the boats and the clubhouse



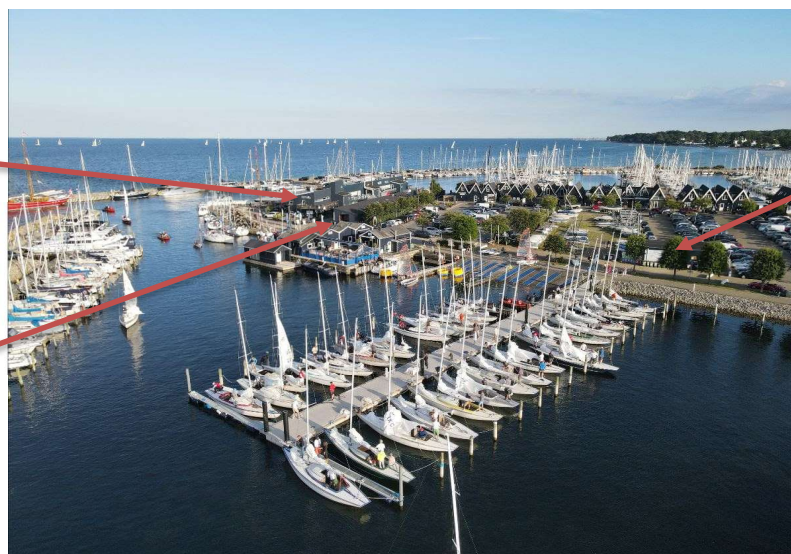
Recycling Station Two

The information banners were reuse from previous regattas.

Aerial view of the “Knarr dock”

*KDY
Clubhouse*

*Recycling
station
Two*



*Recycling
station
One*

The waste management company REMONDIS regularly emptied the containers and recorded the weight of each waste fraction, producing the following results:

Waste fraction	Weight (kg)
Plastic, soft & hard	540
Cardboard	200
Glass	440
Residual waste	1400
Total	2580

According to REMONDIS, 100% of the plastic, cardboard, and glass fractions were recyclable - clearly demonstrating that ***“It’s not a waste to sort your waste”***.

12. Divert Food Waste from Landfill.

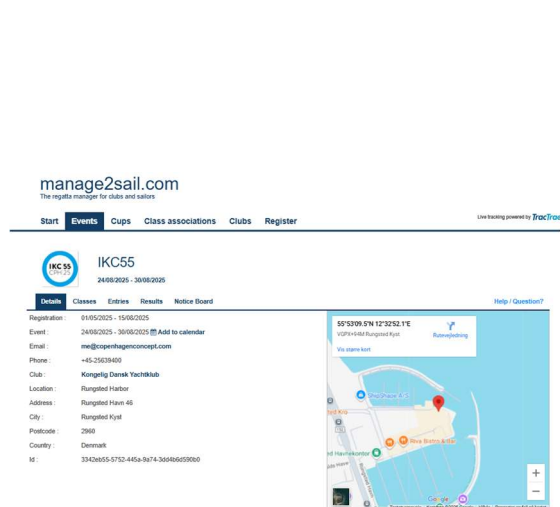
All food prepared for the sailors’ dinners was typically consumed. In the rare cases of leftovers, the KDY catering team froze the surplus for later use, thereby ensuring minimal food waste.



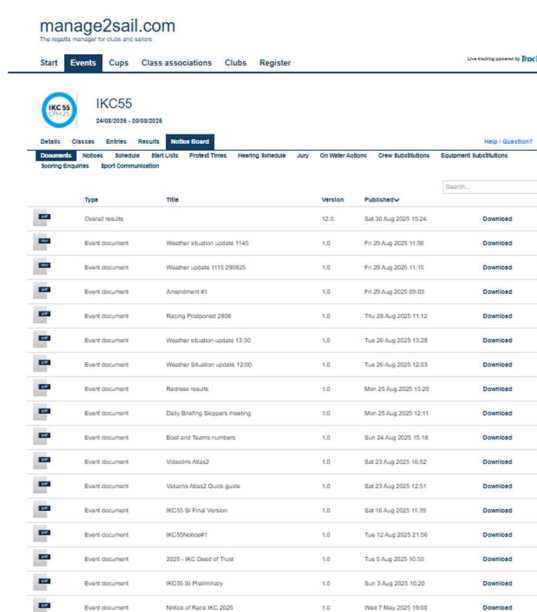
13. Use Paperless Event Management

KDY managed the championship entirely through the online platform Manage2Sail, where participants could register, provide crew and club details, and access all event documentation, including the official notice board and results: [55th IKC Manage2Sail](#)

Below are a couple of screenshot examples from Manage2Sail.



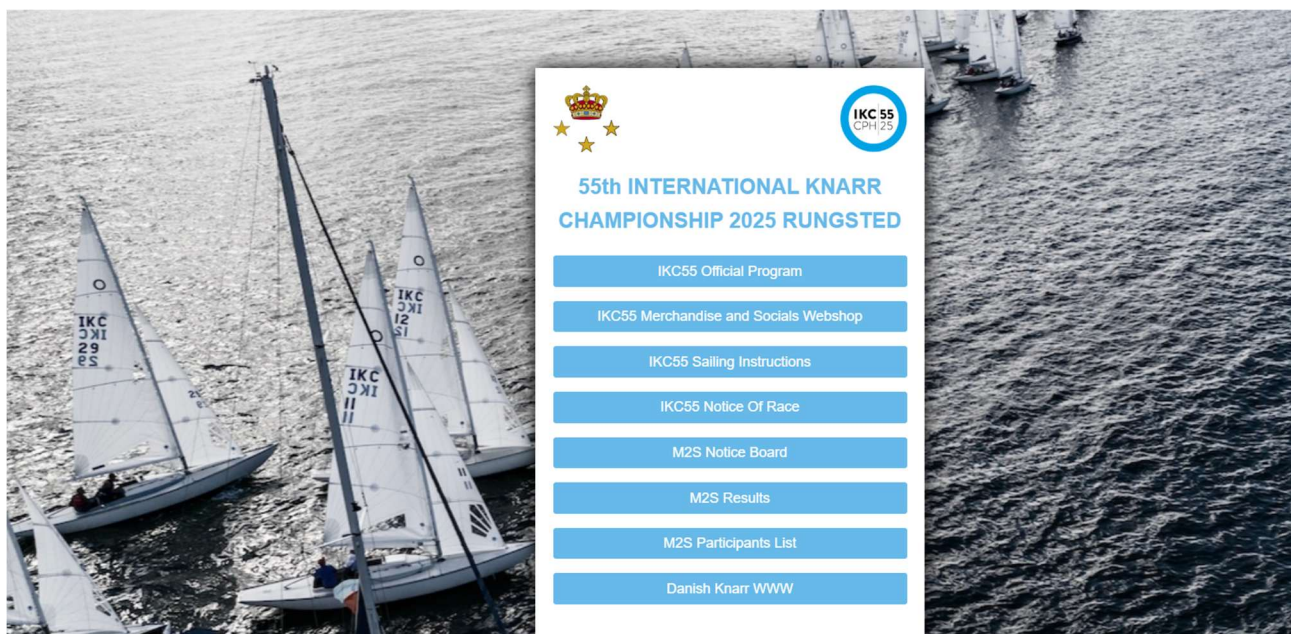
Welcome page



The official notice board



The Knarr Association also hosted a dedicated event website - ikc55.knarr.dk - with links to Manage2Sail and the class's electronic Event Programme / Magazine.



To help participants and visitors easily access information, a QR-code sign linking to the event site was displayed at the entrance to the Knarr dock.



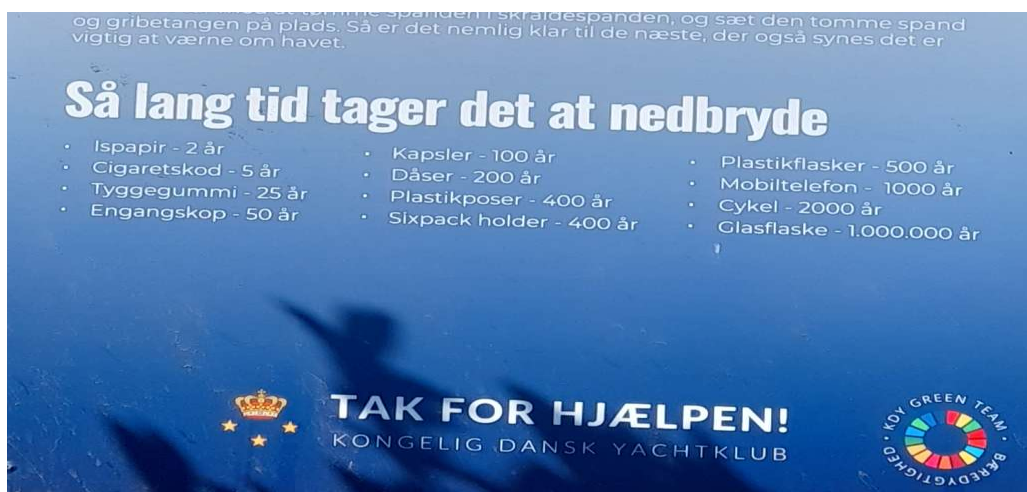
Overall, the management of the 55th IKC was conducted almost entirely paperless, eliminating the use of substantial amounts of printed material during the regatta.



14. Host a Beach or Marina Clean-up

Next to the KDY clubhouse, a sign encourages the public to help keep the harbour clean - both on the water and ashore. As shown in the accompanying photos, trash-collecting tool sets are available for public use

Paper from icecream	2 years	Capsules	100 years	Plastic bottle	500 years
Cigarette end	5 years	Tins and cans	200 years	Mobile phone	1.000 years
Chewing gum	25 years	Plastic cups	400 years	Bicycle	2.000 years
Single use cup	50 years	Sixpack holder	400 years	Glass bottle	1.000.000 years





To raise awareness about littering, the sign also highlights the decomposition times for various types of trash, reminding visitors how long common items remain in the environment before disintegrating. The sign reads in translation:

As part of an after-sail snack-and-beer event, a “Clean Up the Harbour Area” competition was held among sailors from each participating country. Equipped with trash-collecting tools, including claw grabbers, sacks, and safety vests, teams searched the area near the Knarr dock for litter.

After 30 minutes, all teams returned with filled bags - a total of 18 kg of trash collected. The winning team, Denmark, gathered 8 kg and was honoured in front of fellow sailors and volunteers, reinforcing the importance of keeping the environment clean and showcasing the 55th IKC as a truly clean regatta.





During the 55th IKC, the DPOL was strategically installed in Rungsted Harbour, next to the Knarr dock, where it was visible to other sailors and the visiting public.



Photograph of DPOL



15. Prevent Toxins from Entering the Water.

To prevent toxic substances from entering the marine environment, KDY uses Silic One, a biocide- and copper-free coating developed by Danish marine paint manufacturer Hempel.

Silic One, which has been used on large ships for years, provides an environmentally friendly alternative to traditional antifouling paints. KDY has applied this coating on its RIBs and other support vessels, including the one assisting during the regatta.

The paint has also been tested on a Rungsted-based Aphrodite 101 yacht, where marine growth was significantly reduced. Tests on various RIBs showed that vegetation has great difficulty attaching to Silic One, and any build-up can be easily removed with a sponge.

As Hempel notes, “vegetation has a really hard time sticking to Silic One.”



16. Increase Awareness of Wildlife and Habitat Protection



A signposted platform in Rungsted Harbour invites visitors to explore local wildlife, providing a popular spot for both children and adults to observe harbour habitats and species in a respectful way.

17. Offer Vegetarian or Vegan Alternatives



Each morning, breakfast was served at the KDY clubhouse for participants and volunteers.

The KDY steward prepared freshly baked vegan rolls, made simply from flour, water, salt, and yeast, topped with seeds.



Breakfast included yoghurt and, as a vegan alternative, a variety of fresh fruits.



At the dinners, in addition to green/vegetarian dishes, both organic and vegan wines were served.

18. Promote alternative transportation

Denmark's efficient public transport system was promoted to all participants, with recommendations to use buses or trains, both easily accessible from Rungsted Harbour.

Before the regatta, participants were informed that Uber had recently acquired a Danish taxi company, enabling rides to be booked via the Uber app. The company's entire fleet operates on electricity or hydrogen, offering a sustainable transport option.



Bicycles for rent were available outside the Harbourmaster's Office, with signage provided. There was also bike parking available outside KDY Clubhouse.



Several U.S. participants stayed at a nearby conference centre (used as a hotel during summer) and were encouraged to use the free hotel bikes instead of renting cars.

Others, staying in private homes nearby, also borrowed bicycles from their hosts.

KDY has invested in five self-positioning floating marks to reduce reliance on fuel-intensive RIBs for setting race courses.

These marks significantly improved the regatta's sustainability by reducing fuel consumption and emissions.

At the 55th IKC, no RIBs were required for course setting; however, one was deployed mainly for safety reasons.



Launch of self-positioning marks with idle RIBs in the background.



The regatta RIB is towing the self-positioning marks to the racecourse

When the marks were launched, the committee boat and the single RIB towed them to the race area. Each mark, equipped with an electric motor and GPS, was then instructed via a smartphone app to move autonomously to its assigned position.



Rounding self-positioning top marks



19. Reduce Day-of Emissions

Several measures were taken to minimize carbon emissions during the 55th IKC:

- Participants were encouraged to use Uber's electric and hydrogen-powered taxis.
- Clear signage directed sailors to the harbour's bike rental station.
- The regatta sailed in locally borrowed Knarrs, avoiding yacht transport emissions.
- Operators of the committee vessel and RIB were instructed to sail at reduced speeds, conserving fuel.
- Self-positioning marks reduced RIB usage to just one vessel.
- The RIB was coated with Hempel's eco-friendly Silic One antifouling.
- The use of Vakaros electronic race instruments ensured precise starts, preventing general recalls - eliminating unnecessary repositioning of marks and further reducing fuel use and emissions.

20. Inspire future action

To spread awareness and encourage future sustainability, each participating team received a can of Hempel's Silic One in their welcome bag.

This initiative will help extend the use of this environmentally friendly product among Knarr sailors in Denmark, Norway, and the USA.

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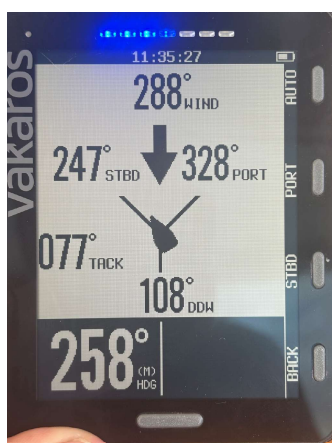


Bonus Opportunities

Use of electronics

For the first time at an International Knarr Championship, Vakaros' "Atlas 2" system was used on all Knarrs, in conjunction with the RaceSense base unit on the committee boat.

The setup provided sailors with essential race information, including time to start, distance and time to the starting line, and course details incl. the closehauled courses.



Vakaros Atlas 2

The distance-to-line feature combined with the countdown timer proved highly effective - there were no general recalls throughout the regatta, in contrast to previous IKCs where several had occurred.

This improvement led to flawless race execution, no wasted time, and - in combination with the self-positioning marks - a significant reduction in emissions from RIBs previously needed to adjust starting lines.



Clean Harbour competition



Clean Harbour station at Rungsted

Clean Harbour station at Skovshoved

The Clean Harbour concept is now a permanent initiative at both Rungsted and Skovshoved Harbours, the two main bases for the Knarr fleet.

This concept focuses on maintaining clean and healthy marine environments through continuous community engagement, practical clean-up activities, and sustainable infrastructure.

As part of the 55th IKC, and in connection with an after-sail snack-and-beer event, a “Clean-Up the Harbour Area” competition was held (see Section 14). Sailors from each participating country took part, reinforcing the Clean Harbour principles through friendly competition and hands-on environmental action.



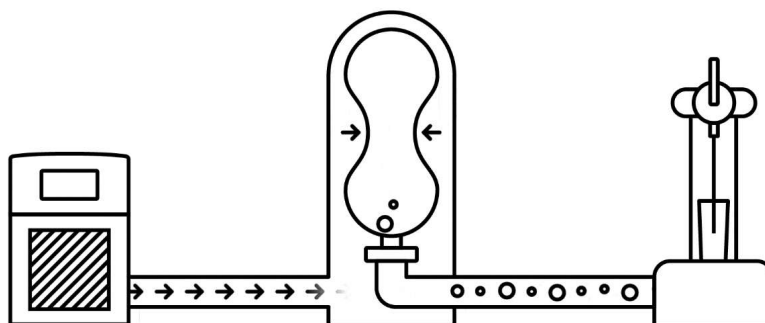
Self-positioning marks (see section 18 above)

CO₂ free draft beer

As noted in Section 9, all draught beer served during the event was supplied by Carlsberg/Tuborg and dispensed via the CO₂-free DraughtMaster system.

Unlike traditional beer dispensing systems - where CO₂ gas is pumped directly into the beer - the DraughtMaster system uses compressed atmospheric air, which is pumped into a pressure chamber containing a collapsible beer container.

This innovative design eliminates the use of additional CO₂, reducing emissions while maintaining the same high quality and freshness of the beer.



By using this system throughout the 55th IKC, KDY demonstrated that even small choices, such as how drinks are served, can make a tangible difference in reducing the event's environmental footprint.

DPOL – floating waste collector

To further improve harbour cleanliness, KDY invested in a DPOL, a floating device designed to collect debris, plastics, and oil residues from the water surface.

During the 55th IKC, the DPOL was strategically installed in Rungsted Harbour, adjacent to the Knarr dock. Its placement ensured visibility not only to sailors but also to visiting spectators, promoting public awareness of proactive waste management.



The DPOL investment marks a significant step in KDY's commitment to environmental stewardship and represents a lasting legacy from the Clean Regatta initiative.

Tunas in the Øresund



At the time of the 55th IKC, tuna had once again been observed in the northern part of the Øresund Strait, only a few nautical miles from Rungsted.

Tuna disappeared from the area in the 1960s, reportedly due to pollution and deteriorating water quality.

However, in recent years, the gradual return of tuna has been seen as a positive indicator of improved marine

conditions and healthier ecosystems in the region.

During the regatta, one of the competitors managed to capture a photograph of a tuna - a symbolic and encouraging reminder of why sustainable sailing and marine conservation matter.

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