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Sailors for the Sea Sustainability Report

52nd International Knarr Championship

Arranged by

ROYAL DANISH YACHTCLUB

and

DANISH KNARR ASSOCIATION

Rungsted, Denmark

6th – 14th August 2022

7th November 2022



Background:

Kongelig Dansk Yachtklub / Royal Danish Yacht Club (KDY) is a non-profit organisation and is Denmark's largest yacht club, with more than 2,000 members of all ages. KDY's members come from all levels of sailing, ranging from the international elite sailors, where KDY have Olympic level selected crews, to beginner and junior level sailing.

KDY organises both national and international regattas such as the World Championships, the European Championships, Nordic and National Championships. During the 2022-season, KDY will host or has already hosted, more than 20 national and international regattas, one being the 52nd International Knarr Championship (IKC), with 100+ sailors and family members from Norway, USA and Denmark.

Sustainability is a key priority for KDY, and a board dedicated to the management and implementation of the sustainability strategy has been set up – the Green Team. KDY feels a strong sense of responsibility to lead the way, both nationally and internationally, when it comes to being a sustainable sailing club and promoting sustainable regattas.

KDY has experience in arranging clean regattas, and though has been awarded platinum certificates already from Sailors for the Sea, KDY is still trying to add new elements to the way we can become more sustainable. This will be done by way of making all regattas and daily activities sustainable as recommended by Sailors for the Sea and ensuring that sustainability is embedded in all the activities of KDY. This philosophy and drive were naturally utilized for the 52nd IKC, where the Danish Knarr Association was the co-organizer.

Therefore, it was only natural that KDY and the Knarr Association joined forces in pursuing the highest standards of sustainability throughout the event.



The IKC is an annual event, hosting of which alternates between Norway, USA and Denmark. Several yacht clubs are involved in the IKCs. When IKC is organised in Norway, it is either co-arranged by Royal Norwegian Yacht Club based in Oslo or by the Bergen Sailing Association based in Bergen. When in the USA the co-host is either The San Francisco Yacht Club or St. Francis Yacht Club. In Denmark a few clubs have historically organized IKCs, with KDY being the most frequent partner.

The races are sailed over one week, including a lay-day, and the participants are sailing in borrowed boats provided by the members of the local Knarr Association. Each day, the teams change the boats, which are drawn by lots.

As the host nation supplies the Knarrs used during the regatta, the IKC organization avoids the long-distance transport of sailing boats and thereby protects the environment even before the first race of the regatta.

The IKC is an annual reoccurring event taking place in Denmark every third year and similar for Norway and USA, and hence it is very important this year to promote and to show the international guests how to make a sustainable regatta according to the guidelines set forth by Sailors for the Sea.

Action and process:

To achieve a sustainable and clean regatta requires planning, and the KDY Green Team immediately activated the Clean Regatta workplan and together with the Danish Knarr Association registered the regatta with the objective to make the International Knarr Championship a “Clean Regatta” (as defined by Sailors for the Sea”) for the first time.

The planning for a top-level achievement for the IKC 2022 commenced more than 6 months prior to the regatta, and the 20-point action plan was launched. Together with the race committee and Green Team of KDY, as well as the newly formed Knarr sustainability committee, fully supported by Rungsted Harbour and Hørsholm Municipality, the mission was to make the championship a Clean Regatta.



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

The 52nd IKC team from KDY and the Knarr Association included

- 1) Regatta management and coordination,
- 2) Registration, results and communication,
- 3) The race committee with a support team on the water,
- 4) The protest committee, and
- 5) The onshore team, organising the social events and ensuring food, beverage etc. were available.

The team included approx. 50 people, and at meetings leading up to the regatta, the KDY and/or the Knarr sustainability team was present, and with that, was making everybody involved aware of the processes, and gave the wider team the ability to give input and take ownership in making the event a top tier sustainable regatta.

Follow-up:

A Clean Regatta is only a success if the experience and the processes are shared with other clubs, both locally, regionally and of course, globally. Accordingly, KDY and the Danish Knarr Association have established a follow-up strategy and clear guidelines to ensure that future regattas will be executed as Clean Regattas. (See guidelines below.)

Furthermore, to keep up the momentum, KDY arranged a follow up on Saturday 17th September for the World Clean-up Day 2022 in the KDY home harbour.



GUIDELINES – BEST PRACTICE:

The following guidelines are based on the experience and work undertaken before and during the 52nd International Knarr Championship, co-arranged by the Royal Danish Yacht Club (KDY) and the Danish Knarr Association. The objective was to achieve as many, and, if possible, all the 20 recommended "best practice" outlined by Sailors for the Sea plus bonus points for new initiatives.

- 1) Start your planning well in time (minimum 3-6 month) before the regatta.
- 2) Call a meeting with all the parties involved and make a detailed plan and delegate responsibilities and deadlines.
- 3) Contact your partners in advance and ensure that time is available to deliver the services and products required.
- 4) Work with your local municipality.
- 5) Arrange communication jointly with local partners.

"Harbour clean-up" has proven to be very fruitful, both to ensure a sustainable regatta, but also for communication. All harbour visitors will notice the clean-up team and their work both on shore and in the harbour basin. With reference to the latter, KDY does Harbour Clean-up with a DPOL, which is a new device cleaning the harbour basin. See also below.



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

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

A free, reusable, water bottle was sponsored by KDY. The Clean Regatta bottles and water stations received positive feed-back from the sailors.



Reusable Water Bottles

Water Refill Station

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

The reusable water bottles were placed in each of the welcome bags given to all the sailors. The welcome bags were produced by recycled Knarr sails donated by members of the Knarr Association, and the production of them was sponsored by North Sails (see section 4).



2. Eliminate Plastic Straws



Plastic straws are banned under the laws of the European Union. Furthermore, straws are not normally used in Denmark at regattas. However, Abena (www.abena.dk/), a company providing a range of products for the food service industry, previously sponsored KDY with several packs of non-plastic and sustainable straws, which were on display and available to the participants for soft drinks during the regatta.

3. Serve Food with Plastic-Free Dinnerware



The photo above illustrates a meal of fish and chips on sustainable “dinner-ware” utilized during the event, being environmentally friendly kraft paper without any plastic or other coating and a compostable wooden fork. Other meals, e.g. at the Midweek party (see section 10), were served on traditional china dinner-ware being dish-washed and re-used. All food was served with biodegradable and compostable napkins.



Special reusable glasses and cups for soda water and beer.



The KDY branded reusable glasses were very popular. Several participants brought some home, as they were a "Unique Collector's Item" and proved yet another push factor for the promotion and usage of reusable and environmentally correct items. After just three uses, the CO₂-emission is lower than for single-use plastic equivalents.

KDY has utilized these glasses for a couple of years now.





The text “Brugte krus” on the container collecting used glasses for washing reads in translation “Used glasses”, and the name of the provider, Genkrus. Inside the container, several tubes are fixed. The glasses are dumped into holes in the lid whereby the glasses are automatically stacked in the tubes. Securing the stacking in this way, the capacity of the container is utilized to the maximum and thus the number of containers and transports to the washing station is limited – further reducing emissions and cost.



The automatic washing machine at the provider of the reusable glasses, Genkrus.



4. Use or Provide Reusable Bags



During the off-season, prior to the event, members of the Danish Knarr Association donated used/worn out Knarr-sails, which were recycled and transformed into bags printed with the logo of the 52nd IKC and labelled with the name of the sponsor, North Sails. See photo above.

A total of 226 bags were produced from 25 recycled sails. The welcome bags were very popular with the participants and the entire event-community. They were also on sale at the merchandise-shop – and quickly sold out.



KDY volunteers in action packing the recycled welcome bags.



On arrival, each boat-team received one of the recycled sail bags as a welcome bag. It contained various sponsored products for “boats and bodies” for use during the regatta and to take home. They included the reusable water bottles for each member of the crew, a small container copper and biocide free underwater coating and several other environmentally friendly products from Hempel, the Danish manufacturer of coatings for the shipping and off-shore industry as well as the yacht segment. For the sailors’ bodies, a tube of sunscreen was included in the welcome bag.

In addition, each boat was given red environment rubbish bags from The Royal Danish Navy. The Navy sponsors and organises the campaign “Havmiljøvogter”, which translates to “Sea Environmental Guardian”. All the sailors were instructed to use the red rubbish bags to collect all waste on-board, and after the day’s racing, bring the rubbish ashore to one of the recycling stations and sort the rubbish according to material (see section 11).



HAVMILJØ VOGTER bags were given to all boats ensuring no waste in 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 receives the perpetual International Knarr Trophy, which was instituted in 1969.

The race results of each of the participating boats are written on a wooden batten at every IKC, which was moved up and down on the scoreboard, which is on display during the event. Eventually, the battens were handed over to the crews at the awards ceremony.



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 wellbeing.

For the event, the Knarr Association had various clothing branded with the event logo for sale such as T-shirts, polo shirts and an Oxford shirt, all made of ecological cotton materials. Pre regatta, a special website was set up, from which the participants could pre-book the items desired, both style and size, which contributed to reducing overproduction and prevent unsold stock, thereby avoiding unnecessary environmental exposure. After several previous IKCs, the organizers of the merchandise are experienced optimizers, and the number of excess items produced was very limited, and almost all of which is now in use, having been sold post regatta.

6. Publicize Your Sustainability Efforts

The participants were made aware of the application to Sailors for the Sea in the Notice of Racing. The sailing instructions also addressed the subject of trash disposal:

23 CONDUCT

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

24 FURTHER INFORMATION

ACCOMMODATION

Regarding accommodation, we need your reply as soon as possible and, best before May 15 2022, to secure your preferred place to stay either private or hotel. Otto Langhorn is responsible for housing and you can reach him for questions by email to otto.langhorn@outlook.dk

SUSTAINABILITY

The event has applied for Platinum status by "Sailors of the Sea". We encourage participants to be inspired from this.

CONTACT INFORMATION

Danish Knarr Association:

Peter Böttcher, 52. IKC Event chairman

23 OFFICIAL BOATS

Official boats may display the KDY burgee.

24 SUPPORT BOATS

Team leaders, coaches and other support personnel shall stay at least 50 meters away from any racing boat and the starting area from the time of the preparatory signal for the start until all boats have finished or retired or the race committee signals a postponement, general recall or abandonment.

25 TRASH DISPOSAL

Boats shall not put trash in the water. Trash may offshore be placed aboard support and race committee boats and onshore in dedicated trash containers.

26 HAUL-OUT RESTRICTIONS

Boats shall not be hauled out during the regatta except with and according to the terms of prior written permission of the race committee.

27 DIVING EQUIPMENT AND PLASTIC POOLS

Underwater breathing apparatus and plastic pools or their equivalent shall not be used around keelboats during the regatta. Nobody other than the organizing authority can clean any boat any time during the dates of the regatta

Notice of Racing

Sailing Instructions



The event programme/magazine was created and published in an electronic version by the Knarr Association, which was accessible from the event website www.ikc52.dk – a direct link to the publication is here:

<https://indd.adobe.com/view/1bc57067-fd65-4c79-8223-f9a895947d8e>

Please note the cover page with the photo of a couple of Knarrs downwind with offshore wind turbines in the horizon. The photo was specifically chosen by the editors, not only because the image was found to be suitable for the event, but most importantly because it showed the production of green electricity at sea in the home waters of KDY.





In a three-page article under the heading “Sustainability is here to stay” the successful efforts of the KDY Green Team are described, including mentioning the Platinum Certification, with which Sailors for the Sea awarded the club in 2021 for the J/70 Europeans. Specifically, for the 52nd IKC, the joint efforts of KDY and the Knarr Association in providing a clean regatta is highlighted. Another article is about the electrical self-positioning marks. Also, the importance of keeping trash out of the sea and sorting all waste is stressed in the text and photos.

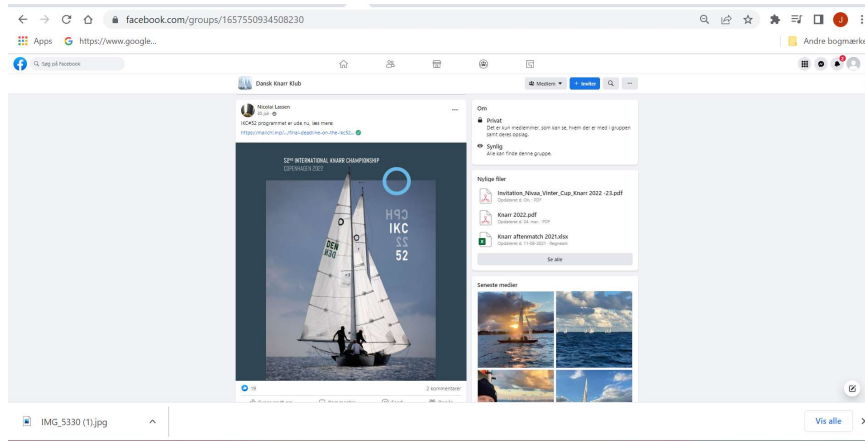


A screen shot of the three-page article about sustainability at KDY in general and at the Knarr event.

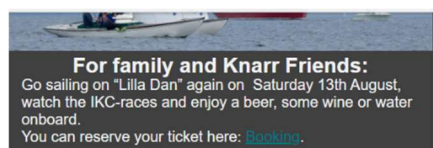
Other articles also included topics of sustainability, including information on the Danish designed electrically driven powerboat from RAND Boats and the double-sided advertisement from Volkswagen featuring their latest electrical model, ID.5, both of which underlined the message of sustainability. A link to the electronic event programme/magazine in a flip-book version was sent to all advertisers, sponsors, the press and other involved parties, thus saving paper and distribution cost, both in terms of money but also with a view to avoid emissions from physical distribution.



Link to the programme/magazine also appeared on the Facebook page of the Knarr Association.



For several weeks prior to the regatta and during the event, electronic newsletters were produced and published by the Knarr Association. The newsletters included reference to the fact that the 52nd IKC was a clean and sustainable regatta, e.g. as shown on the screenshot below.

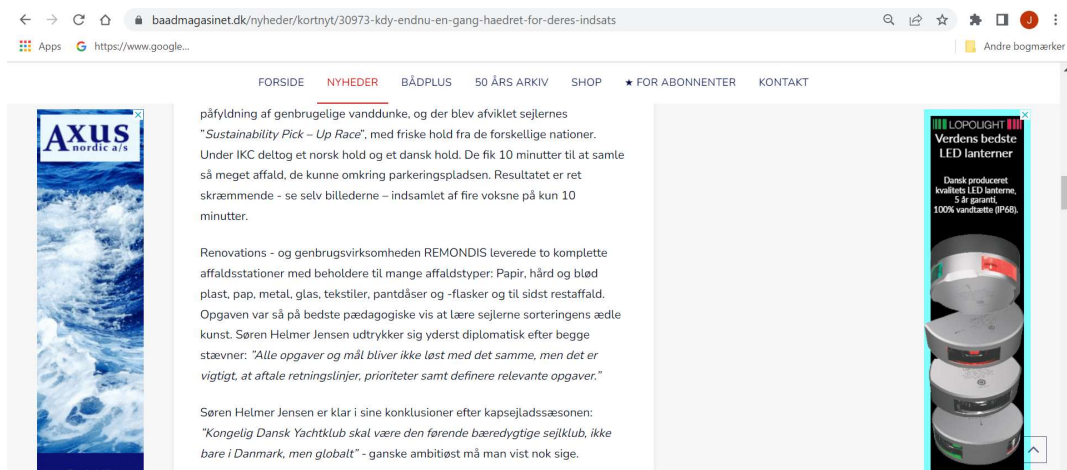


PLEASE REMEMBER: 52nd IKC is a sustainable regatta – and it's not a waste to sort your waste!

Remember to sign up:



An article about the clean regatta and the collecting of trash from the harbour area (see section 14) was published in the yachting magazine Bådmagasinet. Please see an extract of the article on the screenshot below.



7. Involve Local Organizations

Local organisations are key to success, especially to ensure a strong legacy by following-up and keeping the momentum post regatta. (Local is defined herein as present in the local municipality.)

The local organisations included:

Rungsted Harbour

Hørsholm Municipality

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

Bike rental by Rungsted Harbourmaster's office



A major part of the event sponsors was either locally located companies or companies with strong ties to the local community. All parties were invited to visit Rungsted harbour during the championship.

8. Post Educational and Reusable Signage

The examples of signage as pictured below are reused at all major events at KDY, and thus also at the 52nd IKC.





Selected reusable signage.

The KDY Sailors for the Sea process book will be updated with the experience gained during this regatta and shared with other sailing clubs. Also, the KDY key regatta teams as well as the youth team will receive instruction on how we prepare for a sustainable yachting event.



9. Serve Local Food or Source Seafood Sustainably



At all International Knarr Championships, the Wednesday is a lay-day, i.e. after half of the scheduled races have been completed.

On the evening prior to the lay-day there is a Midweek-party. At this year's IKC the main course on the menu was "shellfish galore" consisting of locally caught and sourced products.





The draught beer served was locally brewed by the Danish brewer Carlsberg/Tuborg. The beer was dispensed by the DraughtMaster system which, in contrast to regular systems, is a CO₂-free dispensing system. Also please see the photo under section 3 above.



10. Organize a Green Team

KDY has seven dedicated sailors on the sustainability team (Green Team) headed by Søren Helmer Jensen. The team also included Susanne Allerup, who took an active part in the regatta, and hence the 50-plus team of volunteers all took ownership and participated in the sustainability effort.



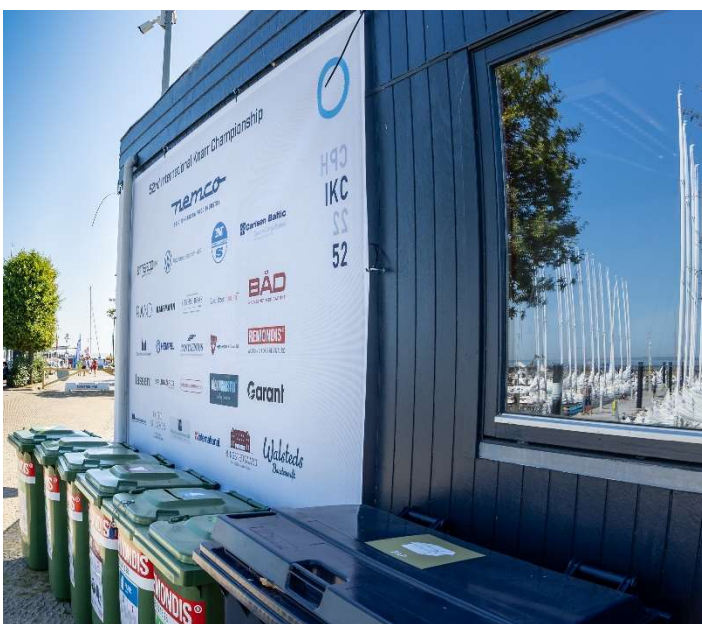
The Knarr Sustainability Team was new to the task, however, the members contributed substantially – and with a lot of joy.



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



Recycling Station Two



The two recycling stations were strategically positioned on the harbour site, one just at the end of the dock, where the Knarr boats were moored, the other where the sailors were passing to and from the clubhouse.

Aerial view of the “Knarr dock”



The waste management company, REMONDIS, regularly emptied the containers at the two stations and recorded the weight of each waste fraction with the following result:

Waste fraction	Kilos
Plastic, soft & hard	140
Paper	40
Cardboard	100
Glass	120
Metal	50
Textiles	10
PET-bottles	20
Residual waste	200
Total	680

Out of the above totals, according to REMONDIS, almost 83% of the material received could be recycled, thus clearly proving: **“It’s not a waste to sort your waste”**.



12. Divert Food Waste from Landfill.

All food prepared for sailors' dinner is normally consumed; in case of leftovers, the KDY catering will place them in the freezer for later use.

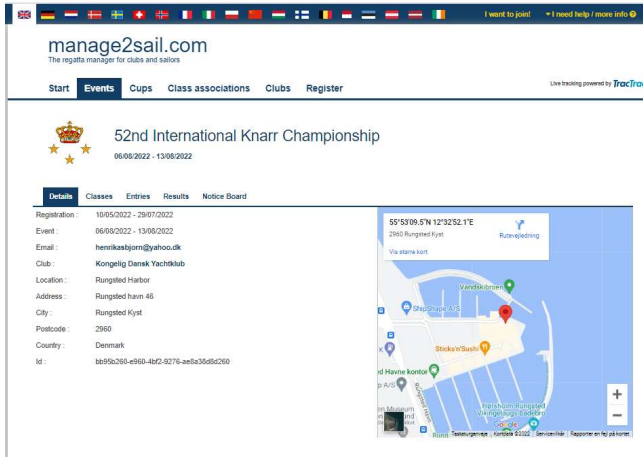


13. Use Paperless Event Management

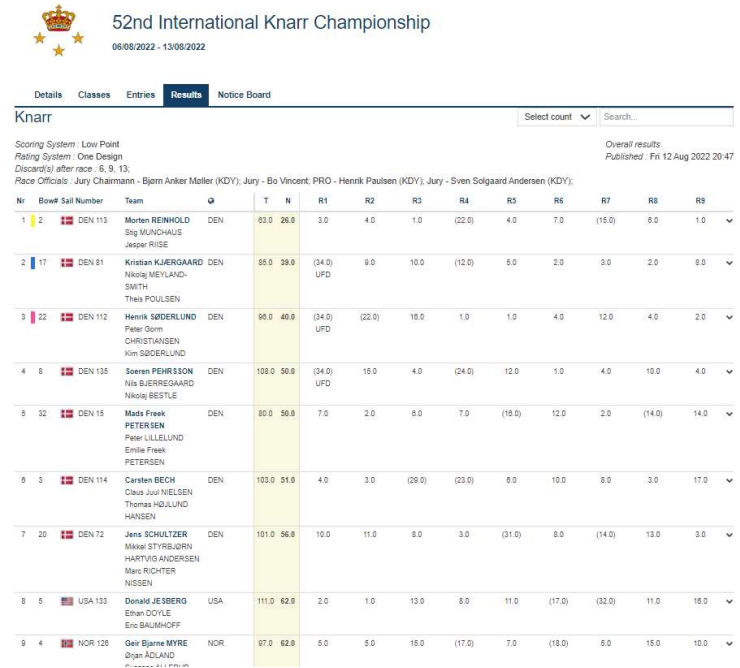
KDY managed the championship with the on-line system "Manage2Sail", through which the participants could register, name helmsman, crew and yacht club etc. The system also provided the event documents on-line as well as both the official notice board and the results.

<https://www.manage2sail.com/en-US/event/bb95b260-e960-4bf2-9276-ae8a38d8d260#!/>

Below are a couple of screenshot examples from Manage2Sail.



Welcome page



Results page

The Knarr Association had a special website for the event – www.ikc52.dk – with links to e.g. Manage2Sail, the class’s event programme/magazine and to the website of Sailors for the Sea.



With a view to easily guiding the participants and the public to the electronic event information at www.ikc52.dk, a sign with a QR-code was placed at the entrance to the Knarr dock, see photo below.



All in all, the management of the 52nd IKC was to the very greatest extent a paperless event eliminating usage of a substantial amount of paper during the regatta.

14. Host a Beach or Marina Clean-up

Next to the KDY clubhouse, the yacht club has placed a sign asking the public to help keep the harbour area clean, both the water and ashore. As shown on the picture to the left, a couple of trash collecting toolsets are provided.



To motivate people not to dump trash, part of the text on the sign - highlighted to the right above - explains how long time it takes for various types of trash to disintegrate, which reads in translation:

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

In combination with an after-sail snack-and-beer event, a “clean-up the harbour area” competition between the sailors was arranged. Equipped with trash collecting tools, a claw grabber and a bucket, and dressed in safety-vests, the teams trolled the area in the vicinity of the Knarr dock for trash. After a while, they were called in and returned with a lot of trash in their buckets, the winning team being Denmark, having collected the most. The teams were awarded prizes in front of all sailors and volunteering officials, thus underlining to all the importance of keeping trash out of the environment and that the 52nd IKC was a clean regatta.



As part of the KDY sustainability activities and to ensure a cleaner harbour, KDY has invested in a DPOL. The shipping company D/S Norden sponsored a second DPOL this summer, and a third DPOL is expected to be sponsored later this year. This is indeed a breakthrough and a direct result of the achievement following the Sailors of the Sea guidelines.



During the 52nd IKC the DPOL was strategically installed in Rungsted Harbour near to the Knarr dock and was visible to other sailors and to the public visiting the harbour.

15. Promote Alternative Transportation

Denmark has a very efficient public transport system, which we stated to all participants and recommended the use of bus or train, both being within walking distance from the harbour.

Bikes for rental were available outside the harbour master's office, which we signposted – see photo below.



Several of the US-participants had booked accommodation at a conference centre in Rungsted, in use as a hotel during the summertime. Ahead of their arrival, we recommended they utilize the free hotel-bikes, rather than renting a car. Other participants stayed in houses situated not far from the harbour as well, and most borrowed bikes from their hosts.

16. Increase Awareness of Wildlife and Habitat Protection



Sign showing the way to a platform for exploring the wildlife within the harbour – a popular spot for both children and adults.



17. Offer Vegetarian or Vegan Alternatives



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

18. Use Eco-Smart Race Management Techniques.

In the spring of 2022, KDY acquired five self-positioning floating marks with a view to limit the use of the fuel-intensive RIBs when placing the starting line and the racecourse, and indeed when a change of the racecourse is needed due to a change in the wind direction. The marks have proved to be very effective in conducting the races, not the least since the number of RIBs required has been reduced to a third, thus significantly increasing the level of sustainability of the entire event.



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



Rounding a self-positioning top mark

When the marks were launched, the committee boat took all in tow out to the race area. When in the area, each mark was released and instructed, via an app on a smartphone, to sail to its specific position. The marks are equipped with an electric motor and a GPS-system maintaining the position.

In fact, there was no need for any RIBs at all, however, for safety reasons one was deployed.

For the press and photographers, the Knarr Association provided an electric powerboat sponsored by the manufacturer, RAND. The RAND boats are built of materials developed from recycled plastics and bio-based hybrids to reduce the environmental impact.



19. Prevent Toxins from Entering the Water.

The latest environmental underwater coating from the Danish manufacturer of marine paint Hempel, Silic One, is a biocide- and copper-free environmentally friendly primer for yachts of a type that has been on large ships for many years.

Silic One has been used at KDY for a couple of years, and it was pre regatta applied on the KDY RIBs, including the one assisting with the regatta.

The paint has been tested on, among other things, a Rungsted based Aphrodite 101 yacht, where the vegetation has been reduced, Various RIBs have also been tested with Silic One, where the product works optimally. Vegetation has a really hard time sticking to Silic One, as you can remove vegetation and roughen with a sponge, Hempel say.



20. Encourage Green Boating Practices:

A sponsored can of Hempel's Silic One came with the welcome bag given to all participating teams, meaning that knowledge and use of this environmentally friendly product will be spread among Knarr sailors and their friends in all three participating countries, Denmark, Norway and the USA.



Bonus Opportunities

Clean Harbour competition

In combination with an after-sail snack-and-beer event a “clean-up the harbour area” competition was arranged (see section 14 above).



Clean Harbour station at Rungsted



Clean Harbour station at Skovshoved

The concept of Clean Harbour is permanently established at Rungsted and Skovshoved, both of which are Knarr-bases.

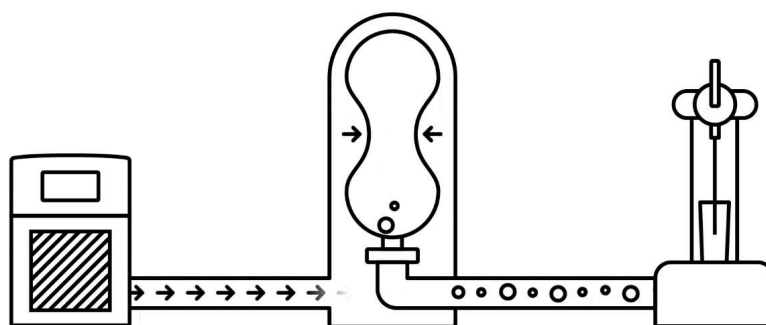
Self-positioning marks (see section 18 above)





CO2 free draft beer

As mentioned under section 9, draught beer from Carlsberg/Tuborg was served utilizing the CO₂ free DraughtMaster dispensing system.



As shown above, compressed atmospheric air is pumped into the pressure chamber with a collapsible beer container, whereas in traditional draught beer dispensers, CO₂ is pumped into the beer.

DPOL

A DPOL is a small robot developed in 2020 by the Francqueville company in France for cleaning water in ports.



During the 52nd IKC, the DPOL was strategically installed in Rungsted Harbour near to the Knarr dock and visible also to other sailors and to the public visiting the harbour.