



CONGRESS

Meeting

held from 15:00 – 19:30 UTC/GMT

on Sunday, 14th November 2021

partially via live meeting in Athens (ManCom and Staff) and partially via Zoom

MINUTES

Congress Members Present:

Bruno Finzi (Chairman)	Italy	Noboru Kobayashi	Japan
Ecky von der Mosel (Deputy Chair)	Germany	Patrick Lindqvist	Finland
Jose Frers (Deputy Chair)	Argentina	Mario Augusto Martinez	Brazil
Vasily Alexeev	Russia	Alessandro Nazareth	Italy
George Andreadis	WS/Greece	Thomas Nilsson	Norway
Steve Benjamin	USA	Stig Gard Paulsen	Norway
Michael Berghorn	Germany	Maurizio Pavesi	Italy
Thomas Blixt	Sweden	Daniel Pillons	France
Per Boeymo	Norway	Michael Quist	Denmark
Wojciech Denderski	Poland	Raymond Roesink	Netherlands
Willem Ellemeet	Netherlands	Ernst Rohner	Switzerland
Bruno Frank	Switzerland	Wolfgang Schaefer	Germany
Bojan Gale	Slovenia	Laszlo Szeremley	Hungary
Matthew Gallagher	USA	Karl-Hannes Tagu	Estonia
Luc Gelluseau	France	Lazaros Tsalikis	Greece
Philippos Georgakis	Cyprus	Godwin Zammit	Malta
David Griffith	Australia	Chris Zonca	Australia
Zoran Grubisa	Croatia	Dirk-Jan Zweers	Netherlands
Ioannis Kalatzis	Greece		

Apologies for absence:

H.M. King Harald V of Norway	Hon. President	Roberto Peschiera	Peru
Andrew McIrvine	RORC	Heikki Raisanen	Finland
Masuhiko Bamba	Japan	Roni Raviv	Israel
Rafael Bonilla	Spain	Tom Rinda	USA
Ivan Drinković	Croatia	Antonio Roquette	Portugal
Manuel Fraga	Spain	Sukru Sanus	Turkey
Phillip Hagerty	Canada	Javier Sanz	Spain
Joaquin Holzapfel	Ecuador	Gert Schmidleitner	Austria
Magdalena Ion	Romania	Luke Scott	South Africa
June Lee	Korea	Vygantas Stankus	Lithuania
Sven Nuutman	Estonia	Noora Westerlund	Finland

Committee members present:

Gennaro Aveta	Italy	Edoardo Recchi	Italy
Andrew Cloughton	UK	Piret Salmistu	Estonia
Dobbs Davis	USA	Nicola Sironi	Italy
Panayotis Papapostolou	Greece	Matteo Zuppini	Italy
Alberto Pindozi	Italy		

1. CHAIRMAN'S REPORT

The Chairman Bruno Finzi reports that 2021 was very successful with the number of certificates and activities worldwide returning to almost pre-Covid 19 pandemic numbers.

The fleet statistics up to the 3rd QT of 2021 show a total of 13460 ORC certificates (standard, non-spinnaker and double handed) issued to 8193 boats, and through the end of 2020 there were 10154 certificates issued to 7304 boats. These figures show a substantial (25%) increase in the number of certificates over the entire year of 2020, with even a 12% increase in the number of boats receiving certificates. The increase in certificates this year is due not only to recovery in the number of boats racing, but also due to the increase in Double Handed certificates and the introduction of a new Non-Spinnaker certificate type. Increases in ORC certificates from 2020 are observed in 32 of the 45 countries in the world that use ORC. These include ARG, AUS, AUT, BRA, BUL, CAN, CRO, CYP, DEN, ESP, EST, FIN, GER, GRE, HUN, ITA, JPN, KOR, LAT, LTU, MLT, NED, NOR, PER, POL, POR, ROU, RSA, RUS, SWE, UKR and USA.

The 2021 ORC World Championship was a successful event held in Tallinn, Estonia attracting 104 entries from 13 countries, and the 2021 ORC European Championship was also successful held in Capri, Italy with 63 entries from 12 countries. The 2021 ORC Sportboat European Championship was held in Istanbul, Turkey with 27 teams entered from 4 nations.

Details of the 2021 events are found in Section 7 of this report. Besides World and Continental championships, ORC encourages regional and national authorities to organize events, and a total of 16 countries organized ORC National Championship regattas in 2021. Many offered racing in a Double-handed format.

Among several dozen regattas using ORC ratings held in five continents around the world, there have been 4 Rolex-sponsored events in 2021 that also used ORC scoring, including Rolex Capri Race Week, the Rolex Giraglia Cup, the Rolex Middle Sea Race, and the Rolex Sydney-Hobart Race.

ORC's cooperation with the Super Yacht Racing Association (SYRA) started in 2015 and continued through this year, with an increase in the numbers of certificates and boats from 2020 as racing and events have returned from last year's hiatus. The number of regattas using the rule system in Europe, the Caribbean, New Zealand, and the USA is expected to increase even further with new events like this year's inaugural Ibiza JoySail Regatta.

The acceptance of the ORCs system is due in part to its rigorous measurement protocols, flexible and innovative scoring options, and transparency in rules and process which is appreciated by its users, who are often advised by professional America's Cup-level tacticians and crews. Periodic updates are made to the rule to increase its accuracy, with rationale agreed by ORC and SYRA and published on the ORCs rule website.

The ORC Multihull Rule (ORCmh) has made enough development progress to be tested at its first events, the 2021 Multihull Cup in Mallorca, and the Loro Piana Regatta in Porto Cervo. This development work has been focused on creating a viable VPP that can produce reliable results, but also develop a new measurement and VPP infrastructure to measure boats, devise scoring options, and deliver certificates. Besides the ORC technical staff and ITC Chairman Andy Cloughton, Simon Forbes from World Sailing has been an active member of this development group with his knowledge of the MOCRA system.

ORCmh, while complex, represents a significant step forward towards providing fair and scientific handicapping for the growing class of luxury performance multihulls.

The ORC Submission to World Sailing to amend Regulation 13.1(j) by extending already recognized ORC International World Championship status to the Double Handed discipline has been supported and approved by the World Sailing Council and will extend the list of the ORC Championship events to include a new ORC DH World Championship in addition to the ORC DH European Championship already established last year.

Therefore, for 2022 ORC is looking forward to another successful year with new championships, a further increase in the numbers of certificates and an increase in ORC racing all around the globe with several new countries expressing interest for starting racing under ORC rating systems. With ratings provided for monohulls in the form of standard, double-handed or non-spinnaker formats for boats that range in size from Sportboats up to the Superyacht Rule, and the newly-introduced ORC Multihull Rule, ORC can truly be seen as the World Leader in Rating Technology.

2. THE TREASURER'S REPORT

The Honorary Treasurer reported the financial situation for 2021. Finances are slowly getting back to the pre-Covid 19 pandemic situation and expenses were still reduced due to the fact that all meetings were held online with the first live meeting after almost two years held in Athens with the Management Committee and complete staff.

The 2022 budget was prepared based on the income and expenses in 2021, with plans to have some live meetings including the AGM in Abu Dhabi as currently planned by World Sailing.

Following the presented financial situation, it was proposed to keep the levies for issuing ORC certificates for 2022 on the same values as it was 2021:

ORC International	78 Euro
ORC Club	46 Euro
Sportboat One Design	23 Euro

DH and NS certificates are for free when there is a regular certificate.

Super Yacht certificate	as per price list on the website
Multihull certificate	as per price list on the website

The Official 2020 Financial Accounts and the 2022 ORC budget together with ORC levies were approved unanimously.

3. APPOINTMENT OF HONORARY TREASURER

The Congress unanimously reappointed Patrick Lindqvist as Honorary Treasurer.

4. CHANGES IN THE CONGRESS AND COMMITTEES' MEMBERSHIP

The following new nominations for the Congress members were received:

Australia	- David Griffith, Christopher Zonca
Brazil	- Mario Augusto Martinez
Estonia	- Sven Nuutman
Finland	- Heikki Räisänen, Noora Westerlund
Hungary	- Laszlo Szeremley
Lithuania	- Vygantas Stankus
Netherlands	- Raymond Roesink
Norway	- Stig Gard Poulsen
Poland	- Wojciech Denderski
Spain	- Manuel Fraga, Javier Sanz
USA	- Tom Rinda
World Sailing	- Philip Baum

The following changes in membership of Committees were approved with 94% votes for and 6 % votes abstained.

ITC – Chairman Andy Cloughton presents to the Congress the proposal for adding Marcus Mauleverer as regular ITC member and extending ITC Research Associates to include Stu Bannatyne (Doyle Sails) Adolfo Carrau (Botin & Partners), Jeremy Elliot (North Sails), Antoine Lauriot Prevost (VPLP), Bruce Nelson (Nelson & Marek), Mark Mills (Mills Yacht Design), Adam Scott-Mackie (Malcolm McKeon YD), Chris Williams (North Sails)

Offshore Classes & Events Committee – Patrick Lindqvist is nominated as vice-chairman. Manuel Fraga is replacing Jose Martinez. Maurizio Pavesi is added to the committee.

Race Management Committee - Joakim Majander and Bruno Frank are replaced by Agnes Lill and Nora Westerlund

Measurement Committee – Nathan Titcomb is replaced by the US Sailing representative.

Promotion and Development Committee – Piret Salmistu and Stratis Andreadis are added to the Committee

5. REPORTS AND RECOMMENDATIONS OF COMMITTEES

5.1 INTERNATIONAL TECHNICAL COMMITTEE

Andrew Cloughton reported about research and development work during the year, proposed changes to the VPP and responses to submissions

Residuary resistance

The work plan proposed in item 5.1 of the 2020 minutes has been carried out. Whilst the work has not been brought to the point where a VPP change could be confidently proposed, the indications are that this work will provide an improved residuary resistance (Rr) formulation.

Two more fleets of CFD hulls have been added to the ORC database, to extend the speed ranges and hull types. The drag curves derived from the CFD provide the basis to train and test the Neural Networks that calculate the Rr based on the hull shape. This data base now extends to over 1500 boats, there is no other body sailing yacht resistance data like it in the world.

The results are very promising from the comparison of the current 2021 VPP with the latest neural network force model. For all wind speeds and angles the new force model has a standard deviation 3 to 4 times lower than the 2021 VPP. As a guide with a standard deviation of 3%, the VPP would calculate the drag of the hull within +/- 3% of the real value for 70% of the fleet. In due course it is hoped to improve the 16 knots TWS downwind predictions. In this zone where boats speeds are high it is difficult to accurately capture the correct balance between crew position and trim in the CFD.

Whilst the essence of the resistance prediction is the same as when we used the 22 boat Delft Series, the application of state-of-the-art CFD and neural network analysis offers the real prospect of a significant improvement in resistance prediction. The ITC will develop this approach and propose a new residuary resistance formulation for the 2023 VPP.

2022 Certificate

The 2022 Certificate will present the All-Purpose Handicap as introduced last year alongside the traditional GPH. The ITC believes that the APH offers a more reliable single number comparator of all round boat performance and suggests keeping GPH on the certificate for transitional period of one year. The boat drawing (cartoon) on the certificate will present appendages set out of the centerline like centerboard, bilgeboard, DSS or foils defined in the new offset 2.0 by showing silhouette of the hulls and appendages in the side and front view. This approach will be adopted for monohull foiling yachts on an experimental basis in 2022. Due to the designers concerns about having accurate underwater geometry displayed on the certificate the conventional ORCi certificate cartoon will remain in its current form.

VPP and LPP development

Over the last 5 years the ORC programmer Davide Battistin has been working to bring the VPP and LPP code up to date in terms of coding style. This has moved 100,000 lines of Fortran code into a new framework, putting the force model algorithms into logic containers and updating the nomenclature into a consistent framework. This now means the code is easier to maintain, quicker to run, and intelligible to a competent programmer. This work is now complete, and the 2022 handicaps will be calculated using the MkII code.

As part of the MkII updating the capabilities of the LPP have been extended to calculate hydrostatics at a reduced displacement, in preparation for the foiling cases where part (or all) of the weight of the boat is supported by the foil and not buoyancy

Declared and default Crew weight

The current VPP uses the Declared CW to increase the crew righting moment, but the sailing displacement is computed using the Default crew weight. For 2022 the Declared CW will be used to calculate the crew righting moment and the sailing displacement. This has a further benefit; the Stability Index will now be calculated for the sailing condition. This new approach has been evaluated, and the Double Handed All Purpose handicaps show greater s/NM than those for a fully crewed yacht. A soft limit that will be included in the VPP so that a DECLARED CREW WEIGHT above 20% of DEFAULT will be treated as $CW=1.2*DEFAULT$ CW, to avoid any exploitation in light wind races if declaring very heavy crew weights.

Minimum jib and Cat rigs

The VPP will no longer require a "minimum jib sail area" to complete its calculations. A new scheme to measure the sails of Cat rigged mainsails has been prepared. This allows the calculation of a rated sail area for these boats which are characterized by unstayed masts and a sprit or wishbone boom. The VPP can now provide scoring polars for single and twin masted cat rig boats. Sailing without a jib is not something that was envisaged when the IMS VPP was first written. The sail force coefficients, although defined separately as a jib and mainsail combine to give a good answer for conventional sloops. However, there is no guarantee that the current mainsail coefficients used individually are as good as they can be. During 2022 the ITC will conduct research on a set of mainsail in isolation coefficients and review the situation.

PIPA for electric drive and hydro-generation units

Yachts are now appearing in the ORC fleet that have electric propulsion pods and permanently deployed hydro-generators. The measurement scheme and calculation for PIPA will be updated to include these installations. The calculated resistance for a hydro-generator will not be sensitive to the power being extracted from the impeller.

Whisker poles set to leeward sail force calculations

The use of a whisker pole deployed to leeward provides improved sail force by holding the clew of the headsail outboard of the deck edge. The 2022 VPP will include sail force coefficients that model this effect based on our HSF (Headsail Set Flying) research. Initially the switch to these coefficients will be triggered by the presence of a whisker pole in the yachts inventory. The whisker pole length will be recorded at the time of measurement, included in the database, but it will have no effect on the handicapping polars at this time

Spinnaker sail force coefficients

The VPP accommodates three spinnaker configurations, symmetrical or asymmetrical sails on a conventional spinnaker pole, and asymmetrical sails tacked on the yacht centerline. The ease of handling of the latter has seen it adopted on new yachts and retrofitted to earlier designs. The asymmetric sail designs have improved over time, with sails designed for VMG running with a large portion of the sail

projecting to the windward side of the boat. The ITC concluded that the sail force coefficients should be adjusted to better balance the observed performance of differently rigged yachts. This modest change reduces the gybing angles, and speeds up the fleet, which improves the matching of the observed and predicted performance for the yachts in the performance database.

Keel viscous resistance model

A review of calculation of the keel viscous resistance was performed based on input from the ITC observer John Victorin. This include some updates on the way how keels are treated with “5 stripes” method. New approach will discourage keel with large root fillets and very short and fat bulbs.

In due course the geometry defined by the Offset 2.0 methods will allow a better delineation between the keel and bulb. Also, the data assembled to derive the new force models has more insight to offer and the form factor calculations, particularly for the bulb will be reviewed during 2022. Consequently, the keel viscous resistance calculations will probably be improved again in the 2023 VPP.

Atmospheric boundary layer profile (Wind Gradient)

The calculation of the wind speed (V_{Tz}) variation with height (z) above the water surface has remained unchanged since the VPP was first written. The chosen profile has an 'a' value of 0.109. This corresponds to a well-mixed atmospheric boundary layer blowing over a smooth sea. The choice of vertical velocity profile has a large effect on the relative handicaps, because boats with taller masts have more of their sail area in the stronger wind. The current vertical velocity profile lies at the end of the spectrum of anticipated conditions.

Published data suggests that for typical venues more than 85 % of the races will be sailed with more stable profiles, i.e., with less wind speed close to the water, corresponding to a higher 'a' value. Furthermore, the presence of obstacles to the wind flow such as other yachts or nearby land will further thicken the boundary layer, reducing the wind velocity at lower levels. For example, a more stable (i.e. less vertical mixing) boundary layer has an 'a' value of 0.16 and on land the presence of trees and bushes increases the 'a' value to 0.2. Several submissions over previous years have observed that the largest boats in a class do better than smaller ones. An increase in the 'a' value would not only make the VPP vertical velocity profile more similar to that usually experienced, but also provide some handicap relief to the smaller boats in a class. For 2022 the 'a' value will be 0.132.

Submissions

The Committee reviewed 13 submissions with the major recommendations as follows:

- Submission ESP1 is supported in line with the work already performed for proposed change of calculating sailing displacement with declared instead of default crew weight as explained above
- Submission ESP2 is not supported as the ITC is only working on calculations of the ORC sail areas and may not comment calculations of the sail areas with other rating systems. This submission is also deferred to the Measurement Committee.
- Submission GER 1 is supported by amending the calculation of the viscous resistance of keels and bulbs to address the effects detailed in the submission.
- Submission MANCOM 2 is supported. Whilst acknowledging the popularity of single number scoring associated with defined wind bands, the ITC promotes the PCS scoring method, because this makes the best use of the VPP scoring polars. The ORC acknowledges there are obstacles to making the system clearly understood and fluent to use for competitors and race committees. The terminology is one such obstacle. Performance curve scoring might be better described as Polar Curve Scoring, and Implied wind better framed as “Scoring wind”.

- Submission POL 1 is not supported. It is very rare that the Implied Wind (now called “Scoring Wind”) derived from the handicap calculations ever reaches 20 knots, so there would be no improvement to the race scoring by extending the polar table to higher wind speeds.
- Submission RUS 1 is not supported. The ORC VPP’s already handle a wide range of sail types, adding another layer of complexity to the sail force coefficients for symmetric spinnakers is not desirable as the sails described in the submission are used for only a small part of the polar table, i.e. 90- 110 AWA and wind speeds above 14 knots. The spinnaker coefficients have worked well date because the REEF and FLAT functions adequately model the behavior of small area spinnakers in the narrow range of conditions they are used.
- Submission RUS 2 is supported. The rule texts will be clarified to ensure that the rating credit for the furler is limited on the use of a single sail. Permitted Heavy Weather sails and/or storm jibs may still be carried.
- Submission SLO 1 is supported, but solution would be further analyzed during 2022. The ITC will develop a force model that replaces the hard HLP limit with a handicap credit that varies across the wind range based on the single furling headsails HLP.
- Submission USA 1 is not supported similarly to the submission POL 1. It may be noted that use if different available scoring methods may also answer what submission is asking.
- Submission USA 2 is not supported, but the The ITC understands the situation described. There is anecdotal evidence that in light winds an HSF can be used successfully upwind on offshore courses where tacking is infrequent. The VPP polar curves show that the presence of an HSF in the inventory can improve upwind VMG speeds, if such a sail is designed to sail upwind and can be appropriately sheeted. At present the measurements taken of the sails and mast do not offer a way to decide if the sail is so designed or can be properly sheeted. The same issue is apparent to an even greater extent for multihulls, and the ITC are investigating ways to avoid the VPP producing optimistic polar speeds using sails that cannot be set. The problem is acknowledged, and solutions are being sought, but at present there is no proposal for a change to the 2022 VPP.
- Submission USA 3 is not supported. The submission speaks to two matters, planing and the use of GPH for class splits. The CFD data used to calculate the hull resistance curves extends into the “planing” regime. The hull resistance curves show no sudden inflection that suggests planing is an being an on/off switch that occurs at a particular speed. The ITC is confident that the residuary resistance model captures the planning effects accurately. The formula for GPH does not include polar data for points of sail and wind speed where boats are planing. The ITC agreed that further investigation of this and similar issues be addressed through development of the performance database and boat specific CFD work with the interested parties.
- Submission USA 5 is not supported. It is unsafe to use an estimated VCG in deriving a righting arm curve for offshore race compliance. Even for boats of the same class the range of their differing VCG positions can result in differences in the Range of Stability of several degrees. There is no justifiable reason to determine safety criteria by using estimated values, particularly for boats that are close to the limits. These are the boats that should be thoroughly checked.
- Submission USA 7 is answered through the work of the ITC in improving the VPP predictions in four parts:
 - 1) Development of the CFD database and the Neural Network simulations that calculate the hull resistance,
 - 2) Boat specific CFD studies
 - 3) Expansion of the observed performance database
 - 4) Improvement of the race scoring process.

The last three items in the list can only be progressed with the help of sailors and race organizers. The ITC has mechanisms that address this submission and will prepare some more detailed specifications of the methods describe above to facilitate collaboration with new and existing ORC fleets.

The minutes of the International Technical Committee meeting provide more details on discussion and decisions of the Committee.

Recommendations from the International Technical Committee were approved with 91% votes in favour, 3% votes against and 6% votes abstained.

5.2 RATING OFFICERS COMMITTEE

Zoran Grubiša reported.

The Committee discussed 8 submissions, with the most important one being about ORC Certificates in electronic format. The submission is supported with removal of the rule requiring the certificate to be signed by the owner. Accepting this submission, the ORC Database will be amended to have valid certificates validated and uploaded to the database as issued and immediately available online without a need for printed copy. Furthermore, the e-mail field in the DXT file will be used to send an automatically generated e-mail to the owner with the link to the certificate and a note that the owner shall review all certificate data and in case of any doubts contact the relevant rating office. ORC Rules will be amended accordingly.

Submission MANCOM 3 is supported by suggesting an additional step in checking compliance with the certificate in the ORC Rule 305.2(b). This would mean that if there is non-compliance between 0.25 and 0.40% of the GPH there will be a scoring penalty applied of 50% of the score for DNF and the certificate will be re-run and as such used for scoring all races in the event. If the non-compliance is more than 0.4% the penalty will be DSQ, and the boat will not be eligible to race unless she is brought back to compliance with the original certificate.

Submission USA 4 could not be supported, as it was noted that adding additional national scoring options are already available and any additional options just need to be requested with an explanation of how different ratings are calculated. It shall also be noted that as for any other national scoring options, these are defined and should be documented by the relevant national rating offices, while ORC cannot be responsible for answering questions about national scoring options.

Submission USA 6 is not supported. A similar submission was presented and not supported last year. This year there was again no consensus in supporting the submission with some rating offices clearly against the submission and some rating offices asking for support of it. Therefore, the submission could not be fully supported, but it was agreed that during 2022 different options to resolve the issue of overlap of deadlines to present certificates when entering different events will be investigated.

Submissions ESP 4 and GER 2 are supported and requires only small corrections of the rule texts, while Submissions RUS 3 and RUS 4 will be reviewed in development of the next versions of ORC software.

The minutes of the Rating Officers Committee meeting provide more details on discussion and decisions of the Committee.

Recommendations from the Rating Offices Committee were unanimously approved by Congress.

5.3 MEASUREMENT COMMITTEE

Zoran Grubiša reported.

This committee discussed 4 submissions.

Submission ESP 2 is not supported. While recognized that sail measurements are unified between ORC and IRC through the UMS concept, the area calculations may vary in different rating systems and ORC has no control over area calculations in other rating systems.

Submission ESP 3 is supported noting that the place for putting the sail measurement stamp is not defined in the rule, and therefore IMS Rule G7 will be updated addressing what the submission is also asking.

Submission ESP 5 is supported. Even though illustrations in the IMS Rule are clearly defined as “Diagrams for illustration only” a review will be done with some updates for the 2022 rule version.

Some clarification was needed on Submission ESP 6. Spanish measurers will provide more details on this issue that will be reviewed by the staff and the ITC if needed and rules will be updated accordingly.

As a part of the ITC work and a need to define a measurement scheme for quadrilateral sails and a sail set on the wishbone a proposal was made based on the ERS measurements of quadrilateral sails. The new measurements for this type of sails will be added to the 2022 version of the IMS Rule and added to the ORC Manager and IMS Editor software.

The minutes of the Measurement Committee meeting provide more details on discussions and decisions of the Committee.

Recommendations from the Measurement Committee were unanimously approved by Congress.

5.4 SPECIAL REGULATIONS COMMITTEE

Per Boymo made a short report about the Special Regulations Committee meeting.

Please refer to WS Special Regulations Sub-Committee Minutes.

5.5 OFFSHORE CLASSES & EVENTS COMMITTEE

Bruno Finzi reported.

The Committee discussed 7 submissions and made the following recommendations to the Congress:

Submission GER 3 is not supported, but the ITC and staff are tasked to present a study showing possible variations of CDL limits with the new VPP. This study will be presented to the Committee in the first quarter of 2022 to be applied for events planned in 2023.

Submission MANCOM 2 is supported, and Committee agrees with the recommendations from the Management Committee and Rating Officers Committee with the suggested value of 0.4% GPH difference in the new step introduced for checking certificate compliance.

Submission NED 1 is supported. The Committee emphasizes the importance of the safety rules and regulations by supporting this submission with the only a note that this does not apply to the Sportboat events where OSR Appendix B applies.

Submission NED 2 is supported by adding a description of the standard Heat Racing System in the Green Book to be used when the fleet needs to be split into heats. This standard will be based on the one used during the ORC Worlds in Tallin in 2021.

Submission SWE 1 is similar to Submission GER 3 and the Committee’s decision on GER 3 is confirmed for this submission too.

Decision on Submission SWE 2 is deferred to the next Committee meeting to be held during the first quarter of 2022 after getting the report from the staff on a study that will show the results of previously held championships if different scoring coefficients were used for the offshore races and windward/leeward races.

Being closely related to submission SWE 2, submission SWE 3 is withdrawn since the answer to submission SWE 2 covers the issue.

A report of the status of preparations for 2022 championships events was received and bids to host 2023 championships were presented.

ORC Worlds 2022 in Porto Cervo (ITA) – The Notice of Race was issued last October 23rd very late for an event that will be held next June between 22 and 30. A compromise for scoring the forecast combined

IRC/ORC event was not approved by the IRC board and together with the OA YCCS, we were obliged to issue a Notice of Race at least 8 months prior to the event.

ORC Europeans 2022 in Hanko (NOR) – The Notice of Race was just finalized; pre-registration already started with 30 boats from 6 countries already pre-registered.

ORC Double Handed Europeans 2022 was assigned last year to Stockholm (SWE) to be within the Round Gotland Race. However, in the meantime WS has approved the ORC submission to have the right to hold an ORC Double Handed World Championship. Therefore, the Committee endorses the Management Committee proposal to upgrade the event in Stockholm (SWE) to become the ORC Double Handed World Championship while the ORC Double Handed European Championship is assigned to Lavrio (GRE) within the Aegean 600 race as this year's edition had to be cancelled due to the Covid situation.

The bid to host the 2023 ORC World Championship was received from Kiel Yacht Club whose members made a short presentation. The Committee accepted the bid and will recommend to the Congress to assign the 2023 ORC World Championship to Kiel, Germany.

A bid to host the ORC European Championship was already presented by the Royal Malta Yacht Club, but due to the 2020 season being affected by Covid without any championships held, their bid has been deferred to the next available year. Considering also the regular swap of venues for the Worlds and Europeans between the Mediterranean and the Northern Europe, the Committee will recommend to the Congress to assign 2023 ORC European Championship to Malta.

When the bids for the 2022 ORC Double Handed Europeans were presented there was a gentlemen's agreement between Stockholm and Barcelona that Stockholm will organize it in 2022 and Barcelona in 2023 after confirmation by the Congress this year. The Committee is supporting this and as for the Stockholm event, recommends to the Congress an upgrade to the ORC Double Handed World Championship to be held in Barcelona 2023.

The minutes of the Offshore Classes and Events Committee meeting provide more details on discussions and decisions of this Committee.

Recommendations from the Offshore Classes and Events Committee were unanimously approved by Congress.

5.6 RACE MANAGEMENT COMMITTEE

Ecky von der Mosel reported.

The Committee expressed the same position on Submission GER 3 as the Offshore Classes and Events Committee, supporting the idea of a study on the possible variations of the CDL limits.

Submission MANCOM 1 is supported in the same way as it was agreed by the Management Committee and Rating Officers Committee. The committee expressed importance to have the owner always aware of the content of the valid certificate and his responsibility to comply with the RRS 78.1.

The response on Submissions RUS 3 and RUS 4 is the same as from the Rating Officers Committee, while submission USA 4 is not supported but noted that different national scoring options are available to the Rating offices.

The Committee welcomes hearing that some slight adaptations to the Race Management Guide will be made by the ORC Staff as soon as the schedule allows. All members of the Committee (including other qualified users) are asked to review the guidelines and provide suggestions for improvement.

The minutes of the Race Management Committee meeting provides more details on discussions and decisions of the Committee.

Recommendations from the Race Management Committee were unanimously approved by Congress.

5.7 PROMOTION AND DEVELOPMENT COMMITTEE

Dobbs Davis reported.

This committee supports submission MANCOM 1. Notwithstanding new markets and fleets adopting simplified scoring systems, and some cultures such as NED being satisfied with this approach, the committee has been suggested to make a more substantial effort to sell the use of PCS as being more accurate, more objective and in the pre-selected format even easier to apply than choosing a wind band, such as with Triple Number. The committee agrees with the International Technical Committee recommendations for adopting the new terms “Polar Curve Scoring” and “Scoring Wind” to be used in PCS descriptions and promotions.

The minutes of the Promotion and Development Committee meeting provide more details on discussion and decisions of the Committee.

Recommendations from the Race Management Committee were unanimously approved by Congress.

5.8 MANAGEMENT COMMITTEE

Bruno Finzi reported.

Besides other items that are already reported in the Chairman’s report, the Management Committee discussed 6 submissions. The Committee supports the view of other Committees on submissions MANCOM 1, MANCOM 2 and MANCOM 3.

As a result of discussion of Submission RUS 3 the committee acknowledges a need for future development of software and an App that will make regatta management easier for the use of ORC rating systems. It is a long-term project and the Management Committee is ready to budget some amount for this after getting a full project presentation. The intention is to have this project finalized during 2022.

Submission USA 5 is not supported following ITC recommendation. It is very dangerous to use any non-measured data for Stability Index shown on the certificate and ORC cannot take any liability on publishing incorrect data.

Submission USA 6 is not supported for the same reasons as it was last year. It may be difficult and prone to errors and use of wrong certificate data if there is more than one valid certificate at the same time.

The minutes of the Management Committee meeting provide more details on discussion and decisions of the Committee.

Recommendations from the Management Committee were unanimously approved by Congress.

6. CALENDAR FOR 2021 - MEETINGS AND EVENTS

ORC Championship Events

ORC World Championship	Porto Cervo	Italy	22 – 30 June 2022
ORC European Championship	Hanko	Norway	5 – 13 August 2022
ORC DH World Championship	Stockholm	Sweden	3 – 9 July 2022
ORC DH European Championship	Lavrio	Greece	8 – 16 July 2022

Meetings

The next Annual General Meeting is planned in Abu Dhabi, UAE, contemporary to WS meetings, but the situation with travel restrictions and expenses of the AGM will be monitored by the Management Committee with a final decision made few months before the meetings.

Fleet statistics up to 7 November 2021

Standard certificates

Country	Q1		Q2		Q3		Q4		07/11/2021		07/11/2020		Comparison	
	Club	Intl	Club	Intl	Club	Intl	Club	Intl	Club	Intl	Club	Intl	Club	Intl
ARG	61	16	8	2	21	6	22	11	112	35	70	16	42	19
AUS	36	28	52	40	105	61	49	30	242	159	136	88	106	71
AUT	6		17	3	8	2	8	5	39	10	32	1	7	9
BRA	1	8	27	16	13	23	1	3	42	50	1	29	41	21
BUL	2	2	35	5	19	3			56	10	62	3	-6	7
CAN	2		25	2	23				50	2	16	3	34	-1
CRO	7	9	33	17	28	6	17	14	85	46	108	26	-23	20
CYP			13	1	7				20	1	20	1		
DEN			1		23	3			24	3	3	1	21	2
ECU		2		21				10		33		25		8
ESP	241	228	222	211	84	135	34	43	581	617	556	527	25	90
EST	1	1	140	18	44	51			185	70	211	2	-26	68
FIN	7	3	333	43	179	15	1	1	520	62	611	42	-91	20
FRA	85		114	5	44	2	28	2	271	9	264	6	7	3
GBR	3		8	5	7				18	5	11	6	7	-1
GER			219	58	95	42	2	2	316	102	272	94	44	8
GRE	38	7	225	67	90	26	24	9	377	109	310	77	67	32
HKG			1						1		2		-1	
HUN	1		16		18				35		27	1	8	-1
ISR	29		6		9		17		61		55		6	
ITA	79	98	368	306	59	41	130	52	636	497	575	365	61	132
JPN	19		7	2	4		6		36	2	31		5	2
KOR	5		29		28		5		67		47		20	
LAT			4		2	2			6	2	6			2
LTU			20	4	31	6			51	10	49	5	2	5
MLT			1	1	10	1	6	1	17	3	17			3
MNE			1						1		1			
MRI	2		1						3		10		-7	
NED	72	10	603	38	52	14	8	2	735	64	733	66	2	-2
NOR	61		669		116	15			846	15	754	2	92	13
PER			8	11	3	8		5	11	24	1	2	10	22
POL			16	24	21	30			37	54	39	42	-2	12
POR	2	5	45	11	11	11			58	27	48	17	10	10
ROU			22	33	3	10	2	4	27	47	14	15	13	32
RSA	25		27		133		33		218		145		73	
RUS	2	1	68	4	32	3			102	8	55	7	47	1
SLO		1	8	9	2	1	3		13	11	15	8	-2	3
SUI	32	1	77		19		2		130	1	136	1	-6	
SWE			1	39	3	8			4	47		16	4	31
TUR	27		7		14				48		90	1	-42	-1
UKR	1		57	2	8				66	2	38	1	28	1
USA	102	35	363	168	239	87	39	7	743	297	266	80	477	217
Total	949	455	3897	1166	1607	612	437	201	6890	2434	5837	1576	1064	863
		1404		5063		2219		638		9326		7413		1913

Fleet statistics up to 7 November 2021

Double Handed certificates

Country	Q1		Q2		Q3		Q4		07/11/2021		07/11/2020		Comparison	
	Club	Intl	Club	Intl	Club	Intl	Club	Intl	Club	Intl	Club	Intl	Club	Intl
ARG			1						1				1	
AUS		7			2	7		8	2	22	1	6	1	16
AUT	2		7						9		2		7	
CAN			8	2	5				13	2		1	13	1
CYP			15		1				16				16	
DEN			1		2				3		2		1	
ESP	90	104	55	80	14	18	10	9	169	211	91	163	78	48
EST	1		24		3				28		19		9	
FIN	1	1	118	9	41	4			160	14	132	12	28	2
FRA											3		-3	
GBR		1								1		2		-1
GER			104	11	30	2			134	13	60		74	13
GRE	45	10	210	37	76	16	28	8	359	71	199	47	160	24
ISR											3		-3	
ITA	9	10	10	7			8	3	27	20	26	37	1	-17
JPN	19		7	2	4		6		36	2			36	2
KOR			1						1				1	
NED	651	3	79	1	54	8	9		793	12	762	4	31	8
NLS											1		-1	
NOR	66		719		115				900		758		142	
POL			10	10	13	18			23	28	13	7	10	21
POR	1	4	5	2	5	3	2		13	9	4	10	9	-1
ROU			1						1				1	
RSA	29		28		135		33		225		83		142	
RUS					1				1		1			
SLO		1	4						4	1	4	1		
SWE			1		2				3			2	3	-2
USA	11	3	20	13	22	5	2		55	21	40	10	15	11
Total	925	144	1428	174	525	81	98	28	2976	427	2204	302	772	126
		1069		1602		606		126		3403		2506		897

Fleet statistics up to 7 November 2021

Non-spinnaker certificates

Country	Q1		Q2		Q3		Q4		07/11/2021		07/11/2020		Comparison	
	Club	Intl	Club	Intl	Club	Intl	Club	Intl	Club	Intl	Club	Intl	Club	Intl
AUS			5	1	12	1	23	5	40	7			40	7
AUT	2		2		1		1		6				6	
BRA					5				5				5	
BUL			4		3				7				7	
CRO			2		19		6		27				27	
CYP			5						5				5	
DEN					6				6				6	
ESP	24	1	19	3	38	6	9		90	10			90	10
EST			3						3				3	
FIN			38	1	24				62	1			62	1
GER			20		6		2		28				28	
GRE	5		36		26		14		81				81	
ISR	3						2		5				5	
ITA	2	1	19				15		36	1			36	1
KOR					1				1				1	
NED	31		2		4		1		38				38	
NOR	66		705		106				877				877	
POL			9	10	18	22		1	27	33			27	33
POR			2		5		1		8				8	
ROU			5	1	2	1			7	2			7	2
RSA					136		32		168				168	
RUS			2						2				2	
SUI					1				1				1	
UKR			2						2				2	
USA	5		3	1	23	3	13	1	44	5			44	5
Total	138	2	883	17	436	33	119	7	1576	59			1576	59
		140		900		469		126		1635				1635

Number of boats as of 7 November each year

Year	ORCi	ORC Club	DH only	Super Yachts	Total
2021	1,851	6,665	162	28	8,706
2020	1,417	5,371	323	29	7,140
2019	2,020	6,649	0	72	8,741
2018	2,023	6,589	0	47	8,659
2017	2,027	6,871	0	67	8,965
2016	1,949	6,997	0	90	9,036
2015	1,899	6,856	0	65	8,820
2014	1,875	6,385	0	0	8,260
2013	1,785	5,651	0	0	7,436
2012	1,620	4,218	0	0	5,838
2011	1,692	4,300	0	0	5,992
2010	1,738	4,614	0	0	6,352
2009	1,631	4,262	0	0	5,893