

## Youth Multihull Evaluation Evaluation Panel Report

16 October 2014

### 1 Introduction

ISAF Council approved in November 2013 Submission 052-13: To evaluate, select and introduce as soon as possible, suitable equipment for the Open (or Mixed) Multihull event at the ISAF Youth Sailing World Championship. The submission highlighted that the new equipment should have daggerboards and a spinnaker. The acceptance of this submission has the effect that the current equipment choices, the Sirena SL 16 and the Hobie 16 no longer meet the criteria for the equipment to be used at the event in the future.

### 2 Summary Recommendation

**The Evaluation Panel recommends the NACRA 15 catamaran be selected** as the multihull for the ISAF Youth Sailing World Championships. The NACRA 15 is a new design featuring curved dagger boards and rudder elevators with an emphasis on robust construction and a price of €11,850 (ex.Tax. ex.Works) The NACRA 15 provides a clear pathway to the Olympic NACRA 17.

### 3 Evaluation Panel

At the 2014 ISAF Mid-year Meeting in May 2014 an Evaluation Panel was formed:

Dina Kowalyshyn, Chairman (Equipment Committee), Cédric Fraboulet (Equipment Committee), Nadine Stegenwalner (Events Committee), Cathy Macaleavey (Youth Worlds SC), Enrique Figueroa (Multihull advisor).

The timeline established at the Mid-year meeting to meet the requirements of the Youth Worlds Subcommittee's site selection process was to produce a report for consideration at the 2014 ISAF Annual Conference.

### 4 Request for Information

A Request for Information (RFI) document was published at the beginning of July of 2014. The RFI was used to survey the commercial marketplace and solicit feedback from suppliers on boat characteristics, and to determine if there was any group willing to commit to the financial responsibility of supplying and maintaining at their cost, the multihull equipment for the ISAF Youth World Championship each year.

Four applications were received by the deadline of 15 August 2014 with the required application fee:

Bimare 16, NACRA 15, NACRA F16 and RS Sailing

Prior to the deadline, ISAF received correspondence from Goodall Designs, the producer of the Viper F16. The Viper had participated in the Olympic Multihull Selection Trials in Santander in 2011 and had received high evaluation scores. In email received by ISAF to explain why Goodall would not make a submittal in response to this RFI it was stated that; "...Goodall Design is not prepared to offer the VIPER F16 to ISAF for the Youth World Championships as there is no viable business model for supplying VIPER F16 for the Youth Championships. Goodall Design strongly supports the selection of the VIPER F16 as a pathway class for youth development...."

The Evaluation Panel reviewed the bid documents which were received and held a conference call on 28 August 2014 to further develop the final Request for Proposal and discuss the submittals.

The panel considered RS Sailing's submittal that proposed to manage a boat to be designed by the ISAF Evaluation Panel. The Evaluation Panel agreed that due to the limited time available, they favoured a proposed boat that was at least at the prototype stage. The Staff was directed to contact RS Sailing with this decision.

Also, from discussion during the conference call, it was agreed that further information should be sought from Bimare in relation to their business plans to supply the boats to the Youth Worlds. Cédric Fraboulet was asked to approach Bimare's French intermediary for further details.

## 5 Request for Proposals

In order to have the proposals on the same comparable basis, a Request for Proposal (RFP) was issued focusing on the costs involved to supply the boats to the Youth Worlds, and refining the physical requirements. The final RFP was released on 23 September 2014 and is attached. This was circulated to the four participants. A response was received from NACRA within the deadline.

Bimare had submitted a bid document and application fee through their French representative, but around 17 September Lallo Petrucci of Bimare Catamarans released a statement on the internet that: "BIMARE chose not to bid for having one of its catamarans as the next ISAF Official Youth Multihull for financial reasons basically the same already made known by Goodall Design with their recent press release. The calculations carried out by Brett Goodall are self-explanatory and we have nothing to add." Bimare did not respond to the Request for Proposal.

The Evaluation Panel had two compliant bids, the NACRA 15 and NACRA F16. Both NACRA models were submitted for consideration with aluminium one-piece masts. There is a table below comparing the two NACRA designs to the Hobie 16 and the SL 16 which should be familiar to committee members. The costs of new boats are included in the table.

## 6 Conclusion

NACRA's bid documents make it clear that they consider the NACRA 15 the best choice for the Youth Multihull equipment. The new NACRA 15 was designed specifically to meet the characteristics derived from the 2013 submission accepted by the ISAF Council. Cost and durability have been used to control the design of the new boat, along with consideration of the target crew weight. NACRA considered the pathway to the Olympic equipment when designing and used its lessons learned from production of the NACRA 17 to make choices for the NACRA 15 to ensure durability and ease of maintenance. The cost of the NACRA 15 aligns well with the other Youth Championship equipment, with a base price of €11,850. This price includes €1,200 per boat to cover the cost of supplying the fleet at the Youth Worlds. The base price (ex. Tax) in Europe of the 29er is £7,125, 9,000€ (Ovington's website, in the US this is \$13,000 USD).

There are 2 prototypes of the new NACRA 15 and these boats were examined by members of the panel at the ISAF Sailing World Championships in Santander. Reports received after Santander were positive and noted that the boat employed similar systems to the Olympic NACRA 17 making it a good pathway to the larger boat.

The NACRA F16 is considered to be more powerful than required for the target crew weight range with larger jib and gennaker than the NACRA 15 making it require more strength for the sailor who is crewing. The NACRA F16's cost is greater than the projected cost of the NACRA 15. It fits the F16 box rule and offers competitive racing in many nations. It is used by some nations to train youth sailors, but those tend to be older and more experienced in multihull sailing. An F16 is a high performance class that is open to development and if selected the NACRA F16 of today may not be competitive in the F16 fleet 5 or 6 years from now and therefore would not offer older sailors the same training benefits. The NACRA F16 was not seen by the Evaluation Panel to offer major advantages over the NACRA 15 in terms of sailor development.

Based on these discussions the Evaluation Panel recommends the NACRA 15 be selected as future equipment for the ISAF Youth Sailing World Championship equipment. The NACRA F16 does not provide significant advantages in sailor development, it is less durable and costs approximately 4640€ more than the NACRA 15. The NACRA 15 is heavier than the F16 to make it more durable and the overall size and sail areas have been adjusted to meet the needs of the age group. This can be seen by comparison to the SL 16 where hull length and beam are very similar and although the NACRA 15 is lighter it has reductions in mainsail, jib and gennaker areas. The sail area to weight ratio is nearly the same between the SL 16 and the NACRA 15. This gives confidence that similar sized sailors will be served by this new platform. The NACRA 15 is believed to have a higher optimum crew weight than the SL 16, because of the combination of high overall buoyancy of the hulls for a given length and comparatively high lateral resistance. The lifting boards allow the platform to carry heavier crews in displacement mode as well as power-up in lighter winds. Conversely the ability to lift the boards will allow the lighter crews to compete in the upper wind ranges.

## 7 Equipment Comparison Table

Data	Hobie16	SL 16	NACRA F16	NACRA 15	N15-F16
	Current Youth Multihulls		Future Youth Multi Bids		
Hull Length – m	5.05	4.80	5.00	4.70	-0.30
Beam – m	2.41	2.32	2.5	2.34	-0.16
Weight – kg	145	148	135	140	+5
Mainsail m <sup>2</sup>	14.25	13.8	13.35	13.6	+0.25
Jib area m <sup>2</sup>	5.12	3.8	3.7	3.3	-0.4
Gennaker m <sup>2</sup>	14	17.0	17.5	16.5	-1
Self Tacker jib	No	No	Yes	Yes	
Daggerboards	No	No	Curved	Curved	
Complete Price € - excl. tax	€12,300*	€12,200*	€16,500	€11,850	
Builder	Hobie Cat	Sirena	NACRA / CMI (THA)	NACRA / CMI (THA)	

- estimated\*



### General Review

The NACRA 15 is a new catamaran specifically designed by Morelli & Melvin (USA) to meet the youth multihull evaluation criteria. At 4.70m long, the modern hull shape combined with curved daggerboards creating vertical lift, is designed to have a wide competitive crew weight range, lower sheet loads and promote new skill factors on the pathway to the Olympic NACRA 17. The NACRA 15 also features small winglets on the rudder blades which NACRA believe will enable the pitch and semi-flight mode to be better controlled by the teams.



### **Evaluation Panel Feedback**

This is a new design, and is not in conflict with existing F16 box rule, and therefore not subject to development pressures to remain competitive. Production of the boat will meet ISAF's need to have boats available to purchase by November of 2015. If selected, will need initial allocation of orders by ISAF.

If selected, it is envisaged production would commence in Spring 2015, production would be up to 15 boats per month.

### **Builder and Dealer Distribution**

Manufacture-controlled one design. Hulls built at CMI Thailand (Approx. 750 NACRAs of different classes have been built at CMI in last four years). Boats distributed from NACRA International, NED. Sails made by Performance Sails/NED.

Worldwide dealer network & distributors (availability/easy access, training camps, grass root-sailing.... pathway NACRA 460, NACRA 500, NACRA 570, NACRA 580, NACRA Sailing schools already established). Dealers: ARG, AUS, BEL, BUL, CAN(2), CHI, CHN, EST, ESP(3), FRA(4), FIN, GBR(2), GER, HUN, ISR, ITA(2), NED, NOR, POR, SIN, SUI, UAE, USA (15)

### **Hull Construction**

Glass fibre, vinylester resin, sandwich construction.

### **Class Association**

There is an established international NACRA Class Association covering the range of NACRA catamaran models, with worldwide activities and experience in event organization.

### **Provisions of Selection**

Subject to the following:

Signing of an ISAF / Builder Youth Worlds Supply Agreement

Price stays fixed at MNA start-up discount price of €10,450\* for first 75 boats ordered, or until 15 April 2015 whichever is the earlier. ISAF will control allocation of first 75 boats.

After the first 75 boats are ordered or 15 April 2015 (whichever is the earlier), the price will be €11,850. NACRA agree that ISAF will under contract control any subsequent price until November 2019.

Price ex VAT, ex Works (NED).



**9 Boat Name: NACRA F16**  
**Entrant: NACRA Sailing International**

**General Review**

The NACRA F16 was launched autumn 2011, designed by Morelli and Melvin (USA): Modern hull design with stiff platform. Daggerboard case updated in 2014 to accept curved daggerboards. Rudder elevators added.

**MNA Sailor Feedback**

Feedback from 2012 Multihull Evaluation of crew weighing 143kg and 146 kg: Crew too heavy in light to medium wind.

**Builder and Dealer Distribution**

Manufacture-controlled one design. Hull Builder: Composite Marine International (CMI), Thailand, Sails Performance Sails/NED. Boats distributed through NACRA Sailing International (NED).

Worldwide distribution network (84 dealers) - availability/easy access, training camps, grassroots-sailing.... pathway Nacra 460, Nacra 500, Nacra 570, Nacra 580, NACRA Sailing schools already established

NACRA Dealers: including ARG, AUS, BEL, BUL, CAN(2), CHI, CHN, EST, ESP(3), FRA(4), FIN, GBR(2), GER, HUN, ISR, ITA(2), NED, NOR, POR, SIN, SUI, UAE, USA (15)



**Hull Construction**

Glass fibre, epoxy resin, PVC foam core, carbon fibre reinforcement, vacuum bagged.

**Class Association**

There is an established international NACRA Class Association covering the range of NACRA catamaran models with worldwide activities, experience in event organization.

**Provisions of Selection**

Subject to the following:

Signing of an ISAF / Builder Youth Worlds Supply Agreement

Price stays fixed at MNA start-up discount price of €14,950\* for first 75 boats ordered, or until 15 April 2015 whichever is the earlier. ISAF will control allocation of first 75 boats.

After the first 75 boats are ordered or 15 April 2015 (whichever is the earlier), the price will be €16,500. NACRA agree that ISAF will under contract control any subsequent price until November 2019.

\*Price ex VAT, ex Works (NED).

## **Request for Proposal of Equipment for the Two-Person Open/Mixed Gender ISAF Youth Sailing World Championship Multihull For the Period 2017 – 2021**



1. **Introduction:** ISAF seeks a modern, lightweight catamaran designed with spinnaker and daggerboards to be used for the ISAF Youth Sailing World Championships.

### **2. General Instructions and Information to Offerors**

Point Of Contact – Simon Forbes, ISAF Technical and Offshore Manager email:  
[technical@isaf.com](mailto:technical@isaf.com)

ISAF will select the Two Person Mixed /Open Multihull for the 2017-2021(or 2018 - 2022) Youth Sailing World Championships in November of 2014 (or 2015) per ISAF Regulation 24.4.5.

A request for information was published and four Offers with application fees were received.

No physical evaluation event is planned where all potential equipment is gathered in one location.

Documentation as required in Section 5(c) will be considered as the Offerors Notice of Intent to participate. This documentation is primarily the construction plans for the proposed equipment and any class rules or supporting information (for more details see 5.c below). Disclaimer - Information presented in this Request for Proposal (RFP) is subject to change and that incurring expenses or beginning to formulate an approach in preparation for the selection based on information presented in the RFP is solely at the potential offeror's risk.

In order to assess on a comparable basis the offers, the offerors are requested to submit business plans on the basis of a proposed agreement by ISAF to select the equipment for five years. The deadline to submit these business plans is Monday 29 September.

### **3. Evaluation Criteria**

The Offeror shall demonstrate the ability, commitment and present a standardised business plan to supply and maintain at their cost the multihull equipment for the ISAF Youth World Championship each year for the specified time period of five years. This criterion is equal to sailing capabilities in the evaluation. The business plan should address the supply of 25 boats on the following basis:

Transport of 3 Containers to and from venue

Cost of travelling and subsistence for 2 servicing/repair staff

Man hours for the serving/repair staff for 10 days

Depreciation of 25 boats

Financing costs/interest

(Total of annual costs above) divided by 70 (a forecast 70 boat sales per year)=  
additional cost on each boat sold

The proposed equipment must be available for purchase by MNAs by November 2015.

The proposed equipment should highlight the following:

- Represent a distinct pathway to the Olympic multihull
- Athletically challenging to the youth sailors of the world
- Have visual appeal for spectators, media and sailors
- Be equipment that is durable in terms of youth sailing at the higher levels of the sport, but recognizing that the sailors are learning.
- Be equipment that avoids excessive costs for maintenance.
- It is desired that the sailors combined weight will be within the 105-130 kg range

The proposed equipment evaluation will include the following:

Sailing capabilities

- Setting and dousing the spinnaker
- Tacking
- Gybing
- General steering characteristics (course keeping, helm balance)
- Divisions of tasks load for manoeuvres between skipper and crew; does the arrangement work for the tasks?
- Cost, both initial investment and lifecycle. Initial Cost
- Cost control and cost realism considered by price to individuals
- Durability of the hull and of the various parts (longevity)
- Access for maintenance and repair procedures
- Sail costs
- Sail durability to be evaluated by consideration of materials, design and components

Consistency of manufacture delivering fair and reliable equipment. Please provide examples of past performance to substantiate your claims.