



OceanoScientific  
CAMPAIGN  
2009 - 2010

## Liz Wardley opens the way to the *Soloceans* First *OceanoScientific*® Campaign



Caen - Sunday 29 November 2009 - At 01.00pm sharp (1200UT), by force 7 wind, Liz Wardley crossed the start line off Caen - Ouistreham (France) of the *Around-the-world Reference Tour* of the *Soloceans - OceanoScientific*® Campaign 2009-2010. She rounded Cabourg / Dives-sur-mer (Normandy - France) buoy before heading towards Wellington, the Capital of New Zealand.



The young sailor left in the exact conditions of the *Soloceans*\* - the start of the first edition is scheduled on 23 October 2011 - i.e. solo onboard a *Soloceans One-design*, a 16-Meter (52.5-foot) all-carbon high-tech sailing yacht Made In Normandy. This one-design is at the same time a real scientific vessel and a bold oceanic racing vessel with performances worthy of an 18-metre prototype. The *Soloceans One-design* proudly sails the colours of the Lower Norman Region (France), Wellington, Caen la mer urban area (France) and Cherbourg (France) - who have supported the creation and development of the *Soloceans* and the *OceanoScientific*® Campaign since its creation.



The French Ministry of Higher Education and Research is a patron of this campaign. It will give new scientific data to researchers in order for them to better understand the climate of our planet and precisely determine the causes and consequences of Global warming.



**Cherbourg  
Octeville**

[www.soloceans.com](http://www.soloceans.com)

Jean-Louis Borloo, French Minister of Marine Affairs: *"is delighted with this initiative allowing us to better understand the oceans and the effect of Climate Change on our seas. That's why I would like this OceanoScientific® Campaign to be part of the Oceans Round Table actions (Grenelle de la Mer) and to receive very soon an official labelling"*



Liz Wardley plans to be back in Lower Normandy in mid-March, at the end of the second leg between Wellington and Cherbourg i.e. two 50 to 55-day single-handed navigations raced against the clock.



Before the start of such a long voyage, the atmosphere is always special. It was the case this morning on the quays in Caen and then in the lock in Ouistreham with a mix between emotion and respect for this 1.60-metre slip of a woman. With her bunches under her cap, her big sparkling blue eyes and her faithful yellow soft toy "DJ" always at hand - her mascot currently holding the record of highest number-of-nautical-mile sailed! - Liz looked more like a high school student playing truant in order to have a look at the sailing yacht than to a strong sailor from the Southern Hemisphere what she is in fact. Liz Wardley is indeed going to play with Eole and Neptune in the most hostile areas of the world, where the albatrosses like to venture and where the swell never stops.



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Liz will celebrate her thirtieth birthday on 6 December, onboard the *SolOceans One-design* on the racecourse of the *SolOceans*. Moreover, she makes her wish comes true as she will sail solo around the world and against the clock for the very first time. A step forward in her career after being the youngest crew of the *Volvo Ocean Race 2001*'s fleet onboard *Amer Sports Too*. Liz also steered the *SolOceans One-design* from Caen towards Wellington with Charles Caudrelier Benac in Winter 2007-2008. She tested and fine-tuned this one-design which was designed for long slides in the breeze and who has now been optimized to be swift in the light winds.

Liz Wardley was born and spent her youth in Papua New Guinea (North of Australia). She has an Australian and a British passport. She moved then to New Zealand in order to build her first oceanic race prototype: a 6.50m long Mini in order to race the *Transat 6.50* between France and Brazil. In 2005, she moved to France - the country of oceanic solo racers - in order to pursue her career. The company Triballat Noyal (Sojasun) takes part to all her projects. Papuan, Australian, British, New Zealander, French? Well, Liz Wardley is a Citizen of the World, with the Ocean her home and the horizon the borders of her territory.

Liz Wardley is renowned in the Southern Hemisphere for her numerous titles gained in the Hobie Cat 16 catamaran Class and, most importantly, for her oceanic racing skills. In fact, Liz Wardley was the first woman to win the famous *Rolex Sydney Hobart Race*.

In France, Liz is known for racing in the Figaro Bénéteau Class. She did not get her best results in the coastal regattas but showed her skills during the offshore races. She finished fourth in the *Transat BPE 2007* single-handed race, behind Nicolas Troussel, Thomas Rouxel and Charles Caudrelier Benac.

*"Liz is a complete sailor who can basically do everything onboard, a sailor who is used to long navigations in the most hostile oceans of the world. She is an accomplished solo sailor",* explained Yvan Griboval, CEO of SailingOne, who retained Liz's application to do this *Around-the-world Reference Tour* of the *SolOceans* and the first *OceanoScientific® Campaign*.

*"Liz was very committed to the fine-tuning of the SolOceans One-design. This boat has a soul thanks to her. This one-design is really "her" boat. Thus, it's very natural for her to become the first sailor to steer her around the Planet single-handedly in order to establish the Reference Time of the SolOceans. Liz has a strong environmental awareness. The way she observes the fauna, the flora and the pollution on sea surface is precious. Especially as she will be able to compare her observations to her previous navigations in those latitudes. Liz will be THE perfect Ambassador of the first International OceanoScientific® Campaign".*

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*"It's a great pleasure for me to set off on this single-handed circumnavigation, even though the conditions in the English Channel and Bay of Biscay are going to be very tough!", Liz explained in the Ouistreham lock. "It is also an honour for me to open the way for a new round-the-world race. I am equally conscious of the fact that it is the first OceanoScientific® Campaign that could benefit researchers all round the world who work constantly to understand Climate Change; even though the SolOceans One-design does everything automatically: collecting scientific data and transmitting them via satellite. I would like to dedicate my work as a sailor to the success of the Copenhagen Climate Council. It would be so great if governments around the world all agree in order to help us protect our Planet..."*

### **In 2005, the SolOceans\* was created with two integral parts**

**A sportive aspect with Sustainable Development in mind** - The SolOceans is the first around-the-world single-handed race where all sailors - men and women - will be on equal footing. Where the sponsors will also be on equal footing, thanks to reduced and controlled budgets, without any risk of increases. It is the first oceanic race with a media coverage guaranteed by contract, and not depending on the sportive result. Something that never happened before

Moreover, it is the first oceanic race with Sustainable Development in mind. In fact, the SolOceans will allow the sailors to protect their natural resources: their sponsors-owners' money. That is to say the opposite to what is happening in the prototypes competitions where the game is to spend as much money as possible as quickly as possible to make sure that your prototype is lighter, stronger and go faster than the competition. A dangerous game seeing skippers taking financial and technical risks that can prevent them from sailing.

**Major scientific aspect** - The vocation of the OceanoScientific® Programme is to give to Scientists around the world data in order to: 1- Allow them to better apprehend the evolution of the Climate Change of our Planet; 2- To help people around the world becoming aware of the inevitability of this phenomenon; 3- to pass on to the largest international audience concrete facts of this climatic situation which threatens Humanity.

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Since its origins (2005), the *SolOceans One-design* has been created as an *OceanoScientific® Vessel*. Each Euro invested in the *SolOceans* by the partners of the event and by the sailors' sponsors entered in the race contributes to the financing of scientific researches on Climate Change. The *OceanoScientific® Programme* contributes to the preservation of our Planet to serve Humanity.

The *OceanoScientific® Programme* really took off in November 2006, when the Scientists agreed with Yvan Griboval's idea which was then just the desire to "be useful" while sailing in the Southern Hemisphere. After numerous feasibility studies, the *OceanoScientific® Programme* was presented on 7 March 2007 by Yvan Griboval and Fabienne Gaillard (IFREMER) in the main lecture theatre of the Institut Océanographique (Oceanographical Institute) in Paris. Then for two years (2007 and 2008), the financial help of Veolia Environmental Services allowed the necessary investment to create softwares and probes developed and produced for the *SolOceans One-design*. Thus, the *OceanoScientific® Kit* has been properly working onboard since 16 October 2009. It is a world first in terms of onboard scientific research. Moreover the *SolOceans One-design* is the very first scientific vessel series produced.

Scientists around the world model the evolution of the climate in order to precisely determine the causes and consequences of this warming. But those models sometimes need more support, as there is a real lack of scientific data efficiently validated. Nevertheless, satellite observation is very useful as it allows Scientists to monitor all the oceans nearly continuously.

In order to validate the accuracy of those satellite systems, the satellite data have to be compared with in situ data. And yet, those in situ information are at the moment: either unevenly collected around the Planet, with for example few data from the Southern Hemisphere (40% of the *SolOceans* course), or too few, or their quality is irregular and they are not collected frequently enough. As a summary, usable data is a major problem for Scientists around the world.

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Since 2006, in collaboration with IFREMER (Institut Français de Recherche pour l'Exploitation de la MER), INSU-CNRS (Institut National des Sciences de l'Univers - Centre National de la Recherche Scientifique) and METEO FRANCE, SailingOne's *OceanoScientific*<sup>®</sup> Programme team has defined its observation campaign of the atmosphere and of the ocean. Eight types of data, identified by Scientists who are specialised in the evaluation of the Climate Change factors and who are partners of the *OceanoScientific*<sup>®</sup> Programme, are collected onboard the *SolOceans One-designs*:

**True Wind Direction - True Wind Speed**

**Air Humidity - Air Temperature**

**Atmospheric Pressure**

**Sea Surface temperature - Sea Surface Salinity**

**Partial Pressure of Carbon Dioxide in Sea Surface Water (pCO<sub>2</sub>)**

"*The climate change has now been established*", explained Fabienne Gaillard, IFREMER's researcher at the LPO (Oceans Physics Laboratory) and in charge of the GLOSCAL project (Global Ocean Sea Surface Salinity: Calibration and Validation) for SMOS (Soil Moisture & Ocean Salinity).

Fabienne Gaillard manages the *OceanoScientific*<sup>®</sup> Programme set up by SailingOne: "*In order to carry out realistic forecasts concerning the evolution of the climatic system and to precisely evaluate its impacts, we (Scientists) need to be able to describe each of its aspects and to understand its mechanism. The ocean is one component of this system. Its surface plays a key role in the climatic system. To identify and qualify the variableness, we combine observation at long range thanks to satellites and in situ measures collected from different means: ships, drifting buoys, fixed stations and autonomous device. In those circumstances, the OceanoScientific*<sup>®</sup> Campaigns are a real opportunity for us researchers."

"*The OceanoScientific*<sup>®</sup> Kit gives access to high-quality sea surface salinity measures. Those measures are not accessible to standard scientific vessels or commercial vessels doing similar measures ", Fabienne Gaillard explained at the end of the first series of tests by the *OceanoScientific*<sup>®</sup> Kit in the Iroise Sea in October 2009.

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The *SolOceans One-designs'* fleet, sailing every year round little explored areas south of the three continental capes (Good Hope - Leeuwin - Horn), will indeed help to better understand our planet and thereby protect it, to serve Humanity. It is the first time in the history of oceanic racing that a series of high-tech yacht has a scientific vocation.

The data acquisition is fully automated. There is no need for the solo-sailor to intervene on onboard equipment during the race. The acquired scientific data are digitized and transmitted automatically by satellite to METEO FRANCE and to the data base CORIOLIS - a European project with several organization with the participation of the CNES (Centre National d'Etudes Spatiales), IFREMER, INSU-CNRS, IPEV (Institut Polaire Français Paul-Emile Victor), IRD (Institut de Recherche pour le Développement), METEO FRANCE and SHOM (Service Hydrographique et Océanographique de la Marine). All together, they form one of the elements of the European operational system to forecast oceanic currents as well as the climatic variations on the scale of the Globe.

*"The rate of acquisition of those data will vary between every minute to every hour depending on the variable and our scientific needs", clarified Fabienne Gaillard. "An automatic transmission between the sea and the shore will be scheduled and sent to the operational centres for an immediate use: short and middle term forecasts, seasonal forecasts, validation of the satellites measures. The other part of information collected at sea will be passed on to data banks for the long term study of the climatic system behaviour."*

CORIOLIS and METEO FRANCE will guarantee a worldwide visibility of the data collected by each *OceanoScientific® Campaign*. They will distribute the data from the *OceanoScientific® Campaigns* to all scientific programmes requesting such information, to world forecasting models of oceanic circulation as well as to the calibration and validation centres of the European SMOS satellite (Soil Moisture & Ocean Salinity) that was placed in orbit on November 2, 2009.

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The *OceanoScientific® Programme* will start by an *Around-the-world Reference Tour* on the racecourse of the *SolOceans* (November 2009 - March 2010). The start of the *OceanoScientific® Programme* coincides with the start of the satellite SMOS mission. The European Spatial Agency (ESA) developed this mission and the Centre National d'Etudes Spatiales (CNES) is one of its key partners. It will return first-of-a-kind data on salinity. The results will have to be calibrated with in situ measures and will have to go through a long and complex validation process. SMOS will map ocean salinity and soil moisture on a planetary scale.

Through ocean salinity and its changes one can monitor the main fronts associated with the largest sailing currents. They mainly provide access to the fresh water balance, which plays an essential role in the exchanges occurring between the ocean and the atmosphere. These are the exchanges that govern the Climate Change of our Planet. As it will be collecting atmospheric and oceanic data at the same time, the *OceanoScientific® Programme* becomes more important in the eye of Scientists around the world, who are working on such an important theme for the future of Humanity.

Jacqueline Boutin, researcher at LOCEAN (Laboratoire d'Océanographie et du Climat) and Fabienne Gaillard together confirm the following: "*The scientific data collected by SolOceans One-designs from the OceanoScientific® Campaigns represent a significant contribution to the already existing observation network. This approach will open the path to the participation of new communities in the observation of our Earth*".

Since the very beginning, IFREMER, INSU-CNRS and METEO FRANCE have been partners of the *OceanoScientific® Programme* imagined by Yvan Griboval, CEO of SailingOne and designer of the *SolOceans* and of its one-design. Veolia Propreté (Veolia Environmental Services Group) enabled the start of this huge campaign in 2007 and 2008. Other major international organizations are joining the work team created in France in 2006 around SailingOne. Those organizations are European, like the University of Kiel (IFM-GEOMAR / CONTROS) as well as New Zealander, such as METSERVICE, as the *SolOceans* is strongly linked to its port-of-call Wellington, the Capital of New Zealand.

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\* The ***SoloOceans - Pure Emotion*** is the first single-handed around-the-world sailing race where all the sailors - men and women- will be on equal footing on high-tech 16-metre monohulls (52.5-foot) all identical: the *SoloOceans One-designs*. They are fitted out with an *OceanoScientific® Kit* enabling them to collect the scientific information (atmospheric and oceanic) in connection with the Climate Change on maritime routes not often taken and in unexplored areas of our Planet. Those data are available for Scientists all around the world. It is the first time in the history of oceanic racing that the concept behind a series of yacht racing includes scientific equipments. The first edition of this circumnavigation will leave Caen la mer (Normandy - France) on October 23, 2011 after the prologue at Cherbourg (Normandy - France). The solo-sailors will stopover at Wellington, the Capital of New Zealand in mid-December and will then resume their voyage towards Lower Normandy around January 10 with the arrival line off Cherbourg (Normandy - France) at the beginning of March. This around-the-world race is composed of two legs and rounds the three Capes: Good Hope in South Africa and Leeuwin in Australia during the first leg and Horn in South America during the second leg. Each leg will last between 50 to 55 days for a total 26,000 nautical miles (48,000 Kilometres) sailed around the Planet. The *SoloOceans* will be raced every two years (biennale periodicity) outside the four-year cycles of the *Vendée Globe*, the *Route du Rhum* and *The Artemis Transat*.