

# The Superyacht Captains Report

A REPORT WORTH READING

202/203

07/2020

INCLUDING THE SUPERYACHT TENDERS REPORT



The former captains  
who mastered  
shoreside business.

The true utility of  
the support vessel/  
mothership configuration.

Current infrastructural  
developments in  
mainland Spain.

Captains and senior crew  
on shipyard performance  
and tender operation.



# Crowdsourcing passage soundings

“What on earth is that?  
And how can this possibly  
help sustainability?”, asks  
Andrew Schofield, captain,  
M/Y *White Rose of Drachs*.

ABOUT ANDREW SCHOFIELD

**MASTER**

WHITE ROSE OF DRACHS

**PRESIDENT**

PROFESSIONAL  
YACHTING ASSOCIATION

**AWARDED**

THE MCA MERCHANT NAVY  
MEDAL SEPTEMBER 2018

**MARRIED**

WITH TWO CHILDREN, A DOG  
AND A MORTGAGE

Before any meaningful attempt can be made at ocean resource management we need a map of the sea floor. Despite the efforts of the 85 countries that belong to the International Hydrographic Organisation (IHO) and a combined fleet of about 400 hydrographic survey vessels, with additional hydrographic launches, plus aircraft, satellites, helicopters and drones, less than 10 per cent of the world's seas, oceans and navigable waterways are surveyed to modern standards. There are higher-resolution maps of the moon, Mars and Venus than for most of the world's sea and ocean areas.

It is estimated, at the current rate of progress, the remaining survey effort would take about 600 ship years to complete. Clearly, no policy in Ocean Resource Management can have any hope of success without accurate up-to-date depth data.

Seabed 2030 aims to map the ocean. Governments and foundations are mobilising but, the task remains gargantuan. Mapping the deep seafloor is not easy. Technically, it is fraught with difficulties. However, mapping shallow water (0 to 200m) is less complicated.

Focusing on shallow water, IHO figures indicate that:

1. At least 50 per cent of the world's coastal waters are unsurveyed or are inadequately surveyed.
2. 65 per cent of the Greek coastline is not surveyed to modern standards.
3. The majority of all US charts are based on pre 1940 survey data.
4. America has a budget of \$100 M/Y for survey; at the current rate it will take 166 years to survey the navigationally significant parts for the coast, meaning only 48 per cent of the East and West coasts.

I could go on ... Given that context, yachting can be front and centre in this effort. How?

Imagine a black box that:

1. is connected to the ship's echo sounder and
2. has its own GPS antenna
3. is connected to the internet

Inside the black box the depth data is collected, time-stamped, combined with accurate position, compressed and then relayed to a data centre via the ship's internet. Then imagine all near-coastal vessels having one of these units and having them all relay data. It does not take very long before a very accurate image of the near coastal seafloor is generated.

The pilot project to prove this concept was initiated by the IHO back in 2014. After learning of the initiative and not insubstantial technical challenge, with the blessing and financial support of the man I work for, I got together with a friend and we decided to have a go. Thanks to the good nature, not to mention blind trust, of fellow captains we were granted permission to install data loggers. This involved going into multi-million bridge consoles, finding NMEA sentences, connecting the echo sounder and GPS to the logger and, in turn, connecting the logger to the ship's network.

I am forever grateful for their trust. The result was startling: 34 million soundings were received at the data centre. They were collected by six yachts in five months, through passive data collection with no input required from the mariner

This led to the formation of the 'Crowd Sourced Bathymetry' working group at the IHO. Hydrographers from all over the world participated: UKHO (UK), German HO (DE), NOAA (USA), UNH (USA), Difesa (IT), SHOM (FR), to name a few.

We have spent the past three years developing the technology to allow

survey grade data to be collected by all near coastal vessels. This technology was submitted to independent academic review. The University of New Hampshire (USA) carried out exhaustive comparative testing and concluded that the system is 'fit for purpose'.

Given that, while operational, yachts are near coastal for the majority of the time and they have connectivity 24/7, the fleet is ideally placed to make a significant contribution to the Seabed 2030 initiative. Even when vessels are tied up the data being collected is useful too, in effect, the yacht becomes a tide gauge, meaning that tidal models can be improved and updated. Indeed, the uses of this kind of data go far beyond navigational charts.

The data logger we have developed even excludes observer bias, meaning, multiple passages over the same region by different vessels are no longer needed to become reliable data, which is significant: as you all know it's a large planet and we have but small ships. This puts yachts front and centre in this imperative acquisition of data.

Consider this a call to action. If you are in a position to authorise an installation – do so. Start today, rather than tomorrow. If only 10 per cent of the yachts currently moored in the South of France would sign up, we would have a truly significant impact on charts in a single season. Imagine if we were all contributing?

The Water Revolution Foundation is a collaborative platform that allows various initiatives to be communicated in a non-commercial context. None of these initiatives are quick fixes and requires collaboration. The issue of the sustainability of sustainability will become a problem if we stop listening. Participation is the key. **AS**