

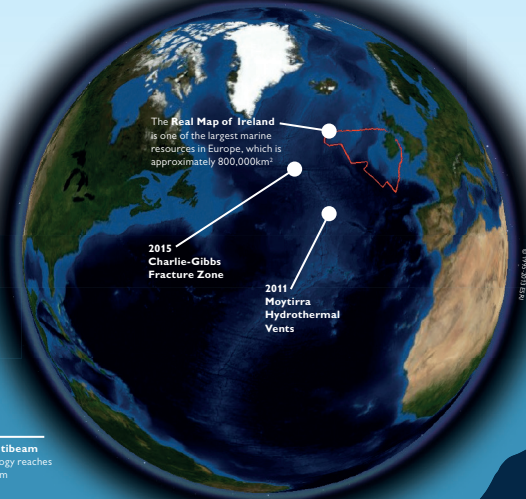
OUR OCEAN DEPTH

RV Celtic Explorer

The 65m RV Celtic Explorer is a low noise multi-purpose vessel suited for deep sea research

RV Celtic Voyager

The 31.4m RV Celtic Voyager is a multi-purpose research vessel suited for off shore surveys

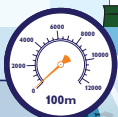


SUNLIGHT ZONE

EPIPELAGIC ZONE (0-200m)

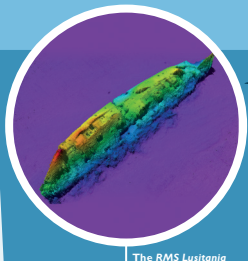
Most of the life in the ocean occurs in the warmer surface waters. Approx temp: 12-20°C

DEPTH 100m PRESSURE 11 (atmospheres)



40-50m

Limit that recreational scuba divers can swim



600m

EM2040 Multibeam sonar technology reaches depths of 600m

TWILIGHT ZONE

MESOPELAGIC ZONE (200-1000m)

At this depth, sunlight fades to pitch-darkness and temperatures plunge. Approx temp: 4-13°C.

DEPTH 850m PRESSURE 85 (atmospheres)



1000m

Maximum depth sunlight penetrates

The RMS Lusitania lies in 92m water depth in the North Atlantic Ocean near Old Head of Kinsale, Cork

2000m



Cold Water Corals are found between 400-1500m off Ireland's Continental Shelf

3000m

The Remotely Operated Vehicle ROV Holland I can reach depths of 3000m capturing high resolution film and samples from the deep seabed



MIDNIGHT ZONE

BATHYPELAGIC ZONE (1000-4000m)

Bioluminescence produced by some of the animals here is the only light. Approx temp: 4°C

DEPTH 3705m PRESSURE 368 (atmospheres)



3600m

The EM2040 multibeam sonar technology obtains data from landscapes beneath the ocean



2095m

In 2011 Irish scientists were involved in discovering Moytirra Hydrothermal Vents north of the Azores, Portugal on the RV Celtic Explorer

LOWER MIDNIGHT

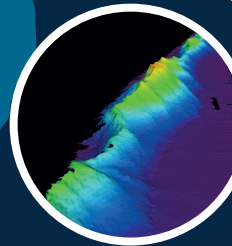
ABYSSOPELAGIC ZONE (4000-6000m)

Most of the ocean floor is found in this range. Approx temp: Near freezing

DEPTH 4306m PRESSURE 428 (atmospheres)



5000m



4500m

2015 - The first trans-Atlantic multibeam mapping of the Charlie-Gibbs Fracture Zone on the Mid-Atlantic Ridge, recorded the ridge plunging down to depths of 4500m along the valley's sea floor

6000m

THE TRENCHES

HADALPELAGIC ZONE (6000-11,000m)

Food is scarce, but new life is still found in this harsh environment. Approx temp: Just above freezing

DEPTH 10994m PRESSURE 1091 (atmospheres)



7000m

8000m

8000m

EM302 Multibeam sonar technology reaches depths of 8000m

7235m

South Sandwich Trench Southern Ocean's deepest point

8047m

Diamantina Trench Indian Ocean's deepest point

8400m

Puerto Rico Trench Deepest point in the Atlantic Ocean

9000m

10000m



10994m

Jacques Piccard and Don Walsh were the first to reach the ocean's darkest depths in 1960

10994m

Challenger Deep in the Mariana Trench, located in the Pacific Ocean is the deepest point in Earth's ocean



10898m

Depth reached by film director James Cameron

The deepest point beneath the ocean dwarfs Mt Everest which is the highest point above the sea (8488m)

The ocean covers 71% of the Earth's surface and contains 97% of the planet's water

Over 50% of the oxygen we breathe comes from phytoplankton in the ocean



75% of the world's volcanoes are lined along the Pacific rim, known as the Ring of Fire