

The RV Mário Ruivo is a multidisciplinary oceanographic and fisheries research vessel. She is 75.6 m in length, 4.5 m in maximum draught and weighs in at 2290 T, the equivalent of 13 blue whales. Built in 1986, and refitted in 2013, the ship was acquired by IPMA with support from the EEA Grants. The ship has been designed to support mainly research activities on the Atlantic Ocean.

Oceanography is a science that is highly dependent on observations and measurements. Research vessels are the primary method of oceanographic observation, through direct observation and supporting the operation of underwater vehicles. Autonomous underwater vehicles (AUVs) can be deployed from the ship. AUVs are self-propelled, unmanned, untethered underwater vehicles capable of carrying out simple activities with little or no human supervision.

RV Mário Ruivo is a multidisciplinary platform devoted to research mainly on the Atlantic Ocean. The ship has 15 berths for crew members and 30 for researchers and technicians. She is capable of spending more than 30 days at sea without refuelling, allowing her to embark on long voyages.

Ship's hold: this area opens up to the main hold of the ship, where large equipment and samples can be stored during the cruise.

Space on deck:
Available space on deck can house 6 ship containers. Containers are an easy way to bring onboard scientific equipment and consumables for a specific type of research cruise.

A vertical hole ($\sim 1 \times 1$ m) in the hull of the ship down to the water allowing to lower equipment into the sea under fully-controlled conditions.

Maximum speed 10 knots

Autonomous Underwater Vehicle

Biological laboratory

The laboratories are equipped with walk-in refrigerators and freezers (-86°C), as well as ample space to work on biological and geological samples. It's also possible to 'plug-in' portable containerized laboratories.

For many activities it is important to keep a vessel steady, namely, in ROV's operations and for diving support. One tunnel thruster (stern thruster), one azimuth (360°) thruster (bow thruster), the propeller and the rudder, together with a GPS system are available for Dynamic Positioning control.

It's important scientists and crew stay fit and have recreation time during weeks out at sea. There's a 11-seater cinema, lounge, small gym and sauna onboard.

Auxilliary boat

___Cargo crane (8 Ton)

Survey Room:
This room is dedicated to processing data collected onboard the vessel and hosts computer monitors and the main server.

Ferrybox is a pack of sensors (conductivity, temperature, turbidity pH, Chlorophyll-a and dissolved oxygen) attached to the hull of the ship. Data is delivered in real-time to a cloud platform and downloaded in several formats.

Remotely operated vehicles (ROVs), such as the ROV LUSO, can be deployed from the ship. These vehicles allow scientists to explore the ocean landscape and can carry instruments, take samples and conduct surveys, while allowing scientists to follow their progress from the safety of a ship.

