



**MONACO EXPLORATIONS**  
*Reconnecting Humanity and the Sea*



## **INDIAN OCEAN EXPEDITION 1 OCTOBER - 1 DECEMBER 2022 CRUISE NARRATIVE**

6 February 2023

## 1. Summary

Monaco Explorations "Indian Ocean Expedition" is the first element of the "Monaco Explorations" project endorsed by the United Nations Decade of Ocean Sciences for Sustainable Development 2021-2030. The Expedition itself was endorsed by the 2<sup>nd</sup> International Indian Ocean Expedition. It took place between Reunion, Mauritius, and Seychelles onboard the South African oceanographic research and supply ship *S.A. Agulhas II*. It involved more than 150 participants, from about 20 different nationalities, including scientists, young researchers and students of an onboard school, filmmakers and photographers, divers, artists, communicators, and the vessel crew.

The Expedition involved a journey of approximately 10,000 nautical miles (18,500 km) from Cape Town and back and four stopovers in Mauritius, Reunion, Mahe (Seychelles) and back to Mauritius. The two months of navigation were dedicated to various research and field operations. The activities took place underway during the transits, around the Aldabra Atoll (Seychelles), on the Saya de Malha Bank, to which 15 days of investigations were devoted, and finally around the island of Saint Brandon (Mauritius).

Guided by an Advisory Committee of fourteen international experts, the Expedition implemented a holistic approach based on a multidisciplinary programme including natural and social sciences.

The scientific programme carried out by international teams was guided by the four main themes of Monaco Explorations: coral protection, megafauna protection, marine protected areas and new exploration techniques.

The Expedition's purpose was also to promote the contents, knowledge and resources resulting from the operations by encouraging the exchange and transmission of knowledge to as wide an audience as possible through a varied outreach programme. Its various components were aimed at a broad public: schools, civil society, and decision-makers. The Expedition is expected to result in the production of a documentary film for international distribution and other educational and artistic content.

In terms of diplomacy, the Expedition was coordinated with an official visit to the region by HSH Prince Albert II of Monaco from 24 to 26 October 2022.

## 2. Background

Over the last one hundred and fifty years, Prince Albert I<sup>st</sup> (1848-1922) and then Prince Rainier III (1923-2005) have forged a strong link between the Principality of Monaco and the marine environment through their commitment and strong actions in favour of the Ocean. Since His accession to the throne in 2005, HSH Prince Albert II of Monaco has not only strengthened this powerful link but has also increased Monaco's influence and action internationally.

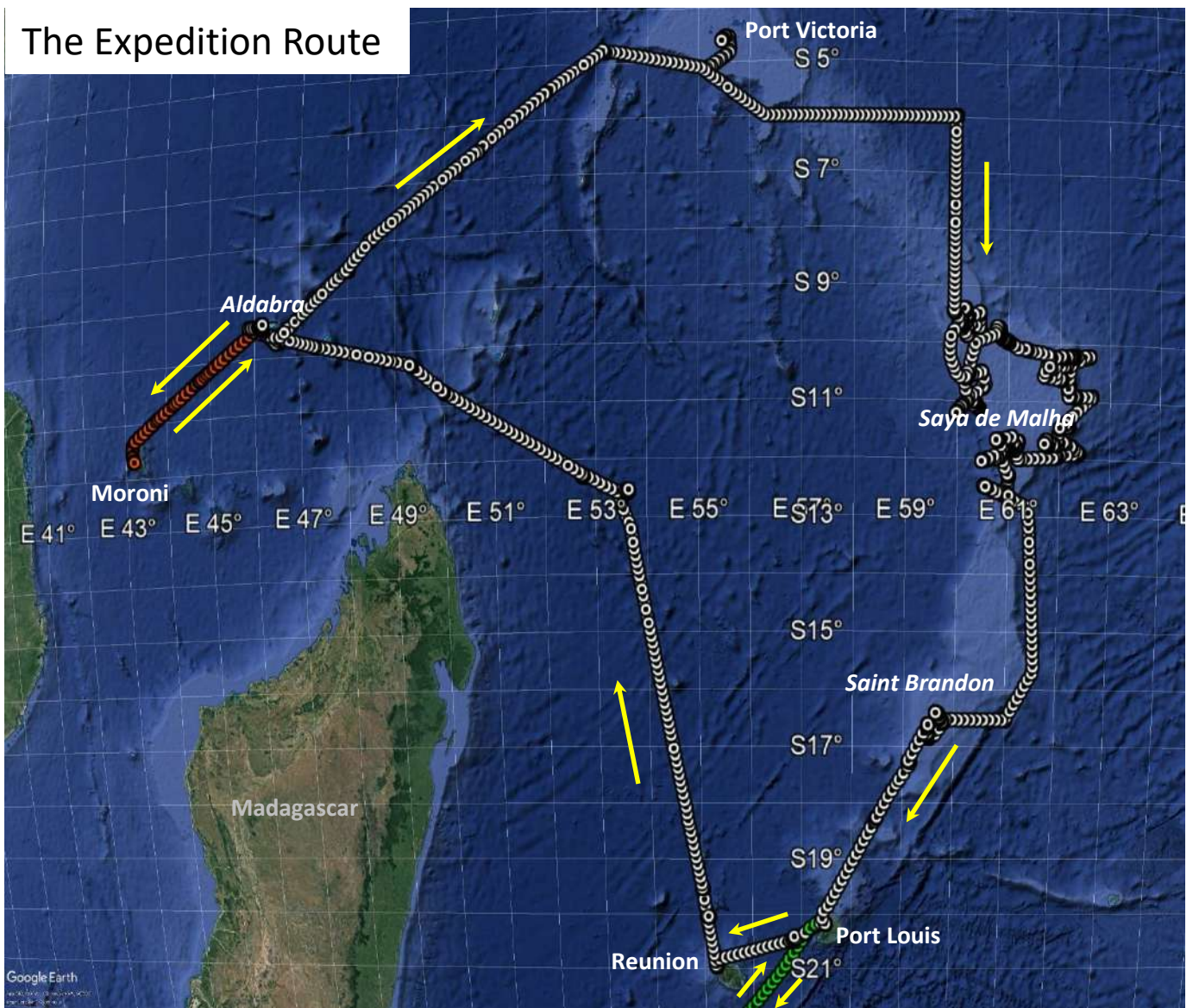
This commitment resulted in the relaunch of the Principality's exploration expeditions, with the creation of Monaco Explorations in 2017. Since then, this collaborative platform serving the commitment of HSH Prince Albert II of Monaco to the knowledge, sustainable management and protection of the Ocean has conducted numerous multidisciplinary expeditions throughout the world.

Following previous discussions with the French Research Institute for Sustainable Development (IRD), the French Institute for Exploitation of the Sea (Ifremer) and the Bertarelli Programme in Marine Sciences, the preparation of the Indian Ocean Expedition was initiated in 2019 through preliminary contacts with the representatives of the Government of Seychelles participating in the 2019 Monaco Ocean Week. A call for proposals was issued in January 2020 on the assumption that the Expedition would be conducted on board a research vessel of the French oceanographic fleet operating from Reunion in the first semester of 2021. Following the outbreak of the Covid-19 pandemic, it was decided to postpone the Expedition. Due to the lack of prospects for the availability of a French oceanographic research vessel in 2022-2023, alternative solutions were investigated. The possibility of chartering the South African oceanographic research and supply vessel *S.A. Agulhas II* in October and November 2022 was identified, and a letter of intent to charter the vessel was signed on 28 May 2021.

The programme of the Expedition was developed in liaison with the authorities of Mauritius and Seychelles, based on the responses to the call for proposals and guided by an Advisory Committee of fourteen international experts, which was established in February 2021.

The Indian Ocean Expedition was presented as the first element of the Decade Action submitted by Monaco Explorations in response to the first Call for Decade Actions of the UN Decade of Ocean Science for Sustainable Development launched on 15 October 2020. The Monaco Explorations programme was endorsed as a Decade Action in June 2021. The Expedition itself was endorsed by the 2<sup>nd</sup> Indian Ocean International Expedition in October 2022.

### 3. Map



### 4. Cruise Summary Information

Expedition Designation	Monaco Explorations Indian Ocean Expedition Monaco Explorations V055	
Expedition Leader	Gilles Bessero	
Dates	1 October - 1 December 2022	
Ship	<i>Name</i>	S.A. Agulhas II
	<i>Flag</i>	South Africa
	<i>Port of Registry</i>	Cape Town
	<i>IMO Number</i>	9577135
	<i>Call Sign</i>	ZSNO
	<i>MMSI</i>	601986000
	<i>Master</i>	Knowledge Bengu

Ports of Call	Cape Town, South Africa Port Louis, Mauritius Le Port, Reunion, France Port Victoria, Seychelles Port Louis, Mauritius Cape Town, South Africa
Project Leaders	4SEA: Sylvain Bonhommeau, Ifremer, France GECOS: Jérôme Bourjea, Ifremer, France BGC Argo: Hervé Claustre, IMEV, France Sea Surface Drifters: Nick D'Adamo, UWA, Australia Coral Connect: Heather Koldewey, ZSL, United Kingdom Onboard School: Fabien Lombard, IMEV, France Saya de Malha: Francis Marsac, IRD, France MADCAPS : Margot Thibault, University of Reunion, France World Coral Conservatory: Didier Zoccola, CSM, Monaco Marine Mammal Observation: Bernard Rota, GLOBICE Reunion, France

## 5. Resources

The Expedition was carried out through a time charter party onboard the supply and oceanographic research vessel *S.A. Agulhas II* owned by the Government of South Africa (Department of Forestry, Fisheries and the Environment - DFFE) and operated by African Marine Solutions (Pty) Ltd (AMSOL).

In addition to her standard crew and equipment, the additional resources were mobilized with the vessel (see Annex A):

- Through the time charter party:
  - Two Hydro-Bios 25kg bottom samplers;
  - Two C-Worker 880 SRP dive support boats;
  - One ABS - SL containerized A1500 dive chamber;
  - One dive chamber supervisor and two coxswains, one of whom qualified as a dive chamber operator;
  - A 24/7 telemedicine service specialized in hyperbaric medicine activated during the diving periods.
- Through a separate service agreement between Monaco Explorations and Marine Solutions (Pty) Ltd:
  - One Saab Seaeye Cougar XT ROV;
  - the ROV Launch and Recovery System (LARS) with 700 m main lift cable;
  - the positioning service based on two Veripos DGPS position systems and one iXblue GAPS M5 USBL system with 6 mini beacons;
  - One Sound Velocity Profiler (SVP) Valeport MIDAS SVX2
  - One ROV supervisor, two ROV pilot technicians and one surveyor.
- Through the partnership agreements with the scientific partners of the Expedition:
  - Three types of towed gears for bottom sampling: two dredges, one beam trawl and one epibenthic sledge;
  - Multinet and Bongo plankton nets;
  - Manta net;
  - Diving tanks and compressor;
  - Argo floats, sea surface drifters and buoys;
  - XBT probes;

- Tanks and accessories for the conservation of live coral samples;
- Laboratory equipment for the analysis and conditioning of samples.

The list of participants is in Annex B.

## 6. Cruise Summary

*S.A. Agulhas II* was mobilized in Cape Town, South Africa, from 26 September to 1 October 2022. She left Cape Town on 3 October.

During the cruise, routine underway observations were recorded through the onboard scientific data system whenever possible, as indicated in Table 1.

**Table 1**  
**Routine underway observations**

Parameter	Equipment	Comment
Current	Drop-keel mounted 75 kHz Teledyne RDI Acoustic Doppler Current Profiler (ADCP) system	The recording is stopped when the vessel steams above 14 knots
Sea surface temperature (SST) and conductivity	Seabird SBE45 MicroTSG ThermoSalinoGraph flowthrough system	Several interruptions due to plumbing issues
Depth	Single beam Simrad EK60 scientific echosounder (38, 120 & 200 kHz) Single beam Simrad EA600 hydrographic echosounder (18 kHz)	
Sub-bottom profile	Kongsberg TOPAS PS 18 parametric sub-bottom profiler (18 kHz)	System failure from 9 to 12 October

*S.A. Agulhas II* called successively in Port Louis, Mauritius (10-12 October) and Le Port, Reunion (13-14 October). The small expedition team that had signed on in Cape Town was completed to 80 participants altogether. The additional scientific equipment from France was loaded on board in Reunion. They included Argo floats transported in a 20-ft container that was returned to the shipping company and diving equipment, towed gears, and tanks transported in a 40-ft container that was stowed on the helicopter deck. A test dive of the ROV had been conducted shortly after leaving Cape Town, and a possible seamount signature was investigated during a few hours between Mauritius and Reunion.

Besides routine underway observations, three scientific projects began during the transit from Reunion to Aldabra with the deployment of Argo floats in conjunction with CTD stations (BGC Argo Project), the deployment of sea-surface drifters (SSD Project), and Manta net transects to collect microplastics (MADCAPS Project). All scientific observations were suspended during the transit in the Exclusive Economic Zone (EEZ) of Tromelin, whose jurisdiction is claimed by France and Mauritius. After entering the EEZ of Seychelles, about 10 hours were devoted to investigating a possible seamount signature during the night from 16 to 17 October.

*S.A. Agulhas II* reached Aldabra at sunrise on 19 October. The sequence devoted to investigating the area around Aldabra started with an emergency response plan drill to check the arrangements in the event of a dive emergency. Then, three teams composed of nine scientists were transferred ashore to carry out their projects related respectively to:

- Monitoring marine turtles (GECOS Project);
- Assessing the coastal environment (4SEA Project);
- Monitoring plastic pollution (MADCAPS Project).

Later that day, the two dive teams operating from the vessel were deployed to start their investigations related to:

- Collecting coral samples (World Coral Conservatory Project);
- Assessing the connectivity of coral species and the associated invertebrate biodiversity (Coral Connect Project).

This was followed by the first ROV exploration dive off the west coast of Aldabra.

The next morning was disrupted by an accident while launching one of the two dive boats. Unfortunately, one diver was injured and required a medical evacuation. The operations from the vessel were suspended while she transited to Moroni, Comoros. A detailed review of the procedures related to the launch and recovery of the dive boats and to dive operations was conducted, and the associated safety protocols were adapted accordingly.

Two Argo floats and one SSD were opportunistically deployed during the transit back from Moroni to Aldabra on the evening of 21 October.

The operations off Aldabra resumed on 22 October and continued as planned until 25 October. In addition to the scientific teams working ashore, day visits on Aldabra were organized for other participants in liaison with the Seychelles Islands Foundation team on the island.

A high-level delegation led by HSH Prince Albert II of Monaco and Mr Jean-François Ferrari, Seychelles' Designated Minister and Minister for Fisheries and Blue Economy, visited Aldabra from 24 to 25 October and then embarked on *S.A. Agulhas II* in the late afternoon of 25 October. The delegation stayed on board until midday the next day for an intensive programme, including a tour of the ship, meetings with the crew and scientific teams, and a presentation of the investigations carried out during this first part of the Expedition.

After disembarking the delegation on Assomption Island, *S.A. Agulhas II* continued the scientific programme on the way to Port Victoria, Seychelles. The call at Port Victoria from 29 to 31 October marked the end of the first part of the Expedition with the changeover of many participants.

The second part of the Expedition was dedicated mainly to the multidisciplinary investigation of the Saya de Malha Bank and the continuation of the underway projects. In addition, a marine mammal observer joined the Expedition. The Saya de Malha Bank sequence took place from 2 to 17 November. It was followed by operations around Saint Brandon from 19 to 21 November. Then *S.A. Agulhas II* called again in Port Louis, Mauritius, from 22 to 24 November, where most participants disembarked. An overview of the Expedition was presented to HE Mr Eddy Boissézon, Vice-President of the Republic of Mauritius and Mr Sudheer Maudhoo, Minister of Blue Economy, Marine Resources, Fisheries and Shipping and other officials from Mauritius.

The small team that remained on board carried out the last three stations of the BGC Argo Project between Port Louis and Cape Town. The scientific equipment to be returned to France and the samples conditioned for further laboratory analysis were stored back in the 40-ft container.

*S.A. Agulhas II* returned to Cape Town on the night of 30 November to 1 December. 1 and 2 December were devoted to the final demobilization operations, including disembarking the 40-ft container that was stored ashore until it could be loaded onto a container ship bound for Europe.

The detailed timeline is in Annex C.

## **7. Communication and Outreach**

Communication and outreach were important components of the Expedition.

Two artists and a film crew participated in the Expedition from Mauritius to Mauritius. A cameraman covered the leg from Mauritius to Seychelles, and a couple of photographers joined him from Reunion to Seychelles. A reporter and a photographer covered the subsequent leg from Seychelles to Mauritius. A third artist also joined this leg.

An onboard school was organized between Reunion and Seychelles. It was run by three teachers from the Oceanography Laboratory of Villefranche-sur-Mer (France) and was attended by twelve students from the Sorbonne University Master of Marine Sciences, eight students from the European International Master of Science in Marine Biological Resources (IMBRSea), five students or young researchers from Seychelles, and five students or young researchers from Mauritius.

During the leg from Seychelles to Mauritius, the participants from Mauritius and Seychelles benefited from training sessions led by IRD experts on processing and analysis of CTD data, use of NetCDF files for handling multidimensional scientific data, and international law of the sea and its relations with marine science. In relation to the third theme, a network of researchers working on “national or international seamounts, banks, and submarine structures” was established.

Press tours, animations and visits for officials, school and civil society groups were organized during each stopover, involving about 500 visitors. In addition, eight interactive sessions were set up to discuss the scientific and artistic activities onboard with schools in France (Paris, Reunion), Monaco and Seychelles.

Regular news of the Expedition were posted in the dedicated section of the Monaco Explorations website and on social networks. More than 150 articles were published by different media during the Expedition.

The resources resulting from the Expedition are available here:

<https://www.monacoexplorations.org/en/ressources-mission-ocean-indien/>

## **8. List of Annexes**

Annex A: Specifications of *S.A. Agulhas II*

Annex B: List of participants

Annex C: Detailed timeline



**ANNEX A**  
**SPECIFICATIONS OF S.A. AGULHAS II**



**‘S.A. AGULHAS II’**  
**Steel Hulled, Ice strengthened**  
**Antarctic Supply /**  
**Oceanographic**  
**Research Vessel**

**SPECIFICATIONS**

Classification 1A1 Passenger ship BIS Clean  
(Design) COMF (C-2, V-2) DAT (-35°C)  
C DEICE DYNPOS(AUT) E0 HELDK  
(S, H, F) LFL (\*) NAUT(AW) PC (5)  
RP TMON Winterized (Basic)

Built 2011 STX Finland Oy, Rauma, Finland

Flag South Africa

Port of Registry Cape Town

IMO Number 9577135

Call Sign ZSNO

MMSI 601986000

Cruising speed 14.0 knots

Maximum speed 18.0 knots

Range 15,000 nautical miles

Endurance 90 days

Complement 144 comprising 44 crew and 100 scientific/other staff

Affiliation Manned and managed by African Marine Solutions (AMSOL)  
on behalf of Department of Forestry, Fisheries & the Environment (DFFE)  
Directorate Antarctica and Islands  
Republic of South Africa

**MAIN DIMENSIONS**

Length OA 134.0m

Breadth 22.0m

Maximum Draft 7.70m

GRT 12897T

NRT 3870T

Main Engines 4 x 3,000kW

Power 9,000kW shafts

Prop. Motors 2 x 4,500kW

**PROPULSION**

- Four uni-directional Wartsila 6L32 turbo-charged and intercooled 6 cylinder 4 stroke diesel engines directly coupled to four Converteam B128P8 Generators.
- Total power MCR 12,000kW, service power at 85% MCR 10,200kW
- Two Converteam N3HXCH2LL8CH Propulsion motors, Total power 9,000kW
- Two 750kW Rolls-Royce TT2000 DPN FP Bow thrusters, Total power 1,500kW
- One 1,200kW Rolls-Royce TT2400 DPN FP Stern thruster, Total power 1,200kW
- Bunker oil capacity: Maximum 3,009 tonnes, at 95% 2,858 tonnes.

**ELECTRICAL POWER**

- Generated for propulsion at 3.3kVA, 3 phase, 50Hz, by the Wartsila/Converteam combination mentioned above. From the above Hotel Services are supplied at 3 phase, 50 Hz, 400V
- Harbour Generator: Mitsubishi S12R-Z3MPTAW-4 diesel engine, developing 1351kVA, 3 phase, 50Hz, 400 v. Generator Stamford PM734CZ
- Emergency Generator: Volvo-Penta D 16MG diesel engine, developing 490kVA, 3 phase, 50Hz, 400V. Generator Stamford HCM534E-1
- 220v AC, 50Hz domestic supply
- 220v AC, 50Hz stabilized domestic supply.

African Marine Solutions Group (Pty) Ltd  
31 Carlisle Street, Paarden Eiland, 7405  
P.O. Box 1339, Cape Town, 8000  
+27 21 507 5777 [amsol@amsol.co.za](mailto:amsol@amsol.co.za)  
[www.amsol.co.za](http://www.amsol.co.za)

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## NAVIGATION EQUIPMENT

- Integrated Navigation System by Raytheon Anschutz, GMBH, Kiel, Germany
- Gyrocompass 2 x Anschutz Type 22 Digital
- Autopilot Anschutz NautoPilot 2025
- Radars 1 x Raytheon Anschutz S-Band 30kW ARPA Chartradar Blackbox System  
2 x Raytheon Anschutz X-Band 25kW ARPA Chartradar Blackbox Systems.  
One fitted with a high-speed scanner.  
1 x Sigma S6 Integrated Radar Processing System, for ice navigation
- GPS 2 x Saab R4 DGPS Receivers
- ECDIS 2 x (Main + Secondary) Raytheon Anschutz ECDIS Blackbox Version with overlay  
(Ref appendice A1 – ENC Service Provider Certificate)
- Speed log Skipper DL850 2 Axis Doppler Log
- Echo Sounder Raytheon Anschutz GDS101 50/200kHz
- Conning Screen The ship's operating parameters such as position, speed, propeller pitch, rudder angle, wind direction, wind speed, etc. are displayed either in graphic or alpha numeric form on the bridge and in the Captain's cabin.

## METEOROLOGICAL EQUIPMENT

- 2 x Lambrecht Weather Sensors, indicating wind speed and direction, air temperature, barometric pressure and relative humidity.
- Sea temperature given by the Skipper Log

## DYNAMIC POSITIONING SYSTEM (LEVEL 1)

- 1 x Navis 4001 DP System
- 1 x Navis 4011 Joystick Control System
- 1 x Model LID3-G1 DGPS Receiver for the DP system
- FMEA trials not conducted
- Vessel not classed as a DP vessel

## COMMUNICATIONS

- Radio and Satellite Equipment, to GMDSS Sea Area 4

### BRIDGE Communication Console

- 2 x Raytheon Anschutz MF/HF DSC Radio Controllers CU 5100
- 1 x Raytheon Anschutz VHF DSC Controller RT 5022
- 1 x Sailor Inmarsat C Message Terminal TT3606E
- 3 x Raytheon Anschutz printers H1252B/TT-3608A for above
- 1 x Raytheon Anschutz GMDSS Alarm Panel AP 5042
- 3 x Sailor GMDSS VHF Portable Radios, SP 3520
- 1 x ICOM Air band Portable VHF Radio (With headset and microphone)

### Bridge Main Console

- 1 x Raytheon Anschutz VHF DSC Duplex Controller RT 5020
- 1 x Motorola GM 360 UHF radio
- 1 x Raytheon Anschutz GMDSS Alarm Panel AP 5065

#### **Bridge Helicopter Console**

- 1 x Raytheon Anschutz VHF Radio Controller CU 5000
- 1 x Becker Air band VHF Radio
- 1 x Motorola VHF Radio DM 3600

#### **Bridge Starboard Console**

- 1 x Sailor VHF Radio 6210

#### **Bridge Port Console**

- 1 x Sailor VHF Radio 6210

#### **Bridge, After Bulkhead**

- 1 x SARTs, Sailor 6913A-SART (1 Port, 1 Starboard)
- 1 x EPIRB, TRON 40S Mk II 406 Mhz

#### **Monkey Island (Deck 10)**

- 1 x EPIRB (Float Free), TRON 40S Mk II 406 Mhz
- 1 x VDR Capsule

#### **Bridge, Office**

- 22 x UHF Radios, Motorola
- Navtex Receiver, NCR-333
- Weather Facsimile Receiver, Raytheon Anschutz Blackbox FAX-30

#### **SCIENTIFIC WINCHES**

- 1 x Rapp Hydema HW 2300 E CTD Winch, 6,000m x 11.73mm conductor cable (usable cable 5850m)
- 1 x Rapp Hydema HW 2300 E CTD Winch, 6,000m x 12mm Kevlar cable (usable cable 5190m)
- 1 x Rapp Hydema HW 200 E Vertical Plankton Winch, 1,650m x 6.35mm conductor cable (usable cable 538m)
- 1 x Rapp Hydema DSW-4006 E Deep-water Coring Winch, 5,000m x 14mm SWR (usable cable 4100m)
- 1 x Rapp Hydema HW 500 E Plankton Towing Winch, 2,500 x 11.73mm SWR (usable cable 1980m)
- 1 x Rapp Hydema HW 500 E General Purpose Towing Winch, 2,500m x 12mm SWR (usable cable 1900m)
- 1 x Rapp Hydema HW 500 E Undulating Vehicle Winch, 760m x 8.41mm SWR (100m faired) (usable cable 580m)

#### **MOORING WINCHES**

- 1 x Hatlapa Electric Windlass with 2 x 160kN @ 5/15m/min.  
Cable Lifters and 2 x 150kN @ 15/30m/min. Warping Drums
- 2 x Hatlapa Electric Capstans, 100kN @ 15/30m/min
- 1 x Rapp Hydema CF 600 E General Purpose Capstan, 3.0T @ 12m/min

#### **LABORATORIES**

- Meteorological laboratory
- Operations Room
- Underway Sampling Laboratory
- Wet Biological Laboratory
- Dry Biological Laboratory
- Wet Geological Laboratory
- Liquid Scintillation Counter Laboratory
- General Chemistry Laboratory.
- Provision made for 6 "Own-User" Container Laboratories on deck aft.

## SCIENTIFIC WORKING AREAS

- Helicopter flight deck and hangar, when available
- Enclosed poop deck space of 400m<sup>2</sup> with a 50m<sup>2</sup> wooden working deck served by a hydraulic A-frame with 6 loadingpoints and a vertical sliding stern gate.
- AFT deck 4T SWL Deep Corer Davit by Triplex, with a 1T SWL Deep Corer handling Frameattached.
- The Environmental Hangar boasts a Triplex A-Frame for CTD deployment, with a SWL of 7T

## ON BOARD SCIENTIFIC SYSTEMS

A Network Data System acquires data from selected navigational, meteorological and scientific instrumentation. The data is sent to a dedicated server once per second and mean values logged once per minute. The real time data is transmitted continuously over the LAN and the logged data is made available in a shared folder on the network.

- Seabird 911 CTD and Rosette Sampling System
- Seabird S38 Remote Temperature Probe
- Seabird SBE 45 Thermosalinograph and De-Bubbler
- Kongsberg Topaz P18 Sub-bottom Profiler
- A Moon Pool, dimensions 2.4 x 2.4m, for CTD deployment in ice covered waters

A Drop Keel, extending to a depth of 3.0m, containing:

- Scientific Echo Sounder, Simrad EK 60, 38/120/200kHz
- Scientific Deep-Water Echo Sounder, Simrad EA 600
- Acoustic Doppler Current Profiler, RDI Instruments Ocean Surveyor II, 75kHz

## ADDITIONAL SCIENTIFIC & LABORATORY EQUIPMENT

- Grab Sampler + Backup unit
- Seabird 911 CTD and Rosette Sampling System (Back up unit)
- Milli-Q water generator
- Microbiological Safety cabinet with vertical laminar flow hood

### Available to Charterer

- Cold storage
  - Blast Freezer (-20) – scientific store. 1.85 m3
  - Freezer (-20) – scientific store. 7.14 m3
  - Scientific cold store (+5) DK3 aft 19.15 m3
  - Cargo freezer (-20) DK 3 fwd 21.71 m3
  - Cargo freezer (-20) DK 3 fwd 26.32 m3
  - Mini freezers (-20) Port aft lab 0.12 m3 x 3 units
- 2 x -80c Freezers (one for chemistry + one for biological samples)
  - Upright freezer (-80) Port lab aft 0.83 m3 x 3 draws
  - Chest freezer(-80) Port aft lab 0.29m3

### Not Available to Charterer

- Cargo fridge (+5) DK 3 fwd 10.84m3 (used for ship stores)

## HABITABILITY - ACCOMMODATION

All officers and crew are housed in single quarters. Vessel is air conditioned as well as heated for Antarctic conditions.

Passenger accommodation:

- 2 VIP suites
- 16 single berth cabins,
- 15 two berth cabins
- 13 four berth cabins
- Upper and lower passenger lounges
- Library
- Live TV, via satellite, streamed to all cabins
- Full laundry facilities
- Fresh water capacity is 290T supplemented by a 28T/day fresh water generation capability when at sea
- Hospital with surgery facilities
- Doctor
- Small gymnasium, with sauna, shower and change room facilities
- Baggage Room

## LIFE SAVING APPLIANCES

- 2 x FRC's
- 254 x Life Jackets
- 150 x immersion Suites
- 19 x Lifebuoys
- 6 x (25 Man) Life Rafts
- 2 x (75 Man) Life Boats

## CARGO CAPACITIES AND CARGO HANDLING EQUIPMENT

- Three cargo hatches, all with tween deck and lower hold.  
Total dry cargo capacity:
 

Bale	3801m <sup>3</sup>
Grain	4602m <sup>3</sup>
Refrigerated space	79.4m <sup>3</sup>
Cargo oil capacity	510m <sup>3</sup> /408T
- 1 x TTS 35T @ 27.5m at 17m knuckle boom cargo crane on forecastle head
- 2 x TTS 10T @ 10m knuckle boom cargo cranes forward
- 1 x TTS 5T @ 18m knuckle boom stores crane aft
- Two large 10m inflatable rafts with a working capacity of 15T per paired rafts
- One 2-ton Electric Forklift Truck.

## HELICOPTER SUPPORT AND FACILITIES

- Enclosed hangar facilities for two PUMA size helicopters Manual sprinkler system for hangar
- 113T JetA1 bunker capacity
- Helicopters fitted with flotation gear, winches and cargo slings Long range tanks available
- Skid fittings
- Radar and GPS receivers fitted

## RADIOS

- 1 HF SSB transceiver
- 2 VHF (AM) aeronautical transceiver, and
- 1 VHF (FM) marine band transceiver

## OTHER FEATURES

- Roll damping tank
- Ice breaking heeling tank/pump system
- Closed circuit television available to points around the ship
- 2 x 200hp 10-man SOLAS Fast Rescue Craft
- 1 x 230hp Weedo 710 Tug/Workboat, Bollard Pull 2.2T
- 1 x 40hp 4-man inflatable dinghy for inshore scientific work
- CO2 flooding system for machinery spaces and cargo holds
- Automatic water sprinkler system for accommodation spaces
- Inert gas system for JetA1 pump room/tank space
- Foam monitor cannons for flight deck and cargo deck helicopter operations
- Remote control fire retarding doors for accommodation space
- Cross flooding system for damage stability
- CATHELCO impressed current, cathodic protection, system

## VSAT FACILITIES

- Bandwidth Speed: 16 384/4096 (MIR)– 8192/2048 (CIR) (2:1 ratio) specifically enhanced for this charter only. Unlimited data, but this is subject to the number of Users on the system, location strength, and the controls put in place.

## OFFICE & WORKSHOP FACILITIES

- Office spaces – Business Center with 8 Computer desks, incl Meeting room for 6 persons.
- Conference Room – 1 by 120 Person possible to split into 2 rooms.
- Video Conferencing System - Blackmagic Atem Mini pro video mixer with Rode dual wireless microphone & transmitter kit, Canon XA 11 video cameras, Rode Interview Go video handle & POP filter handheld audience microphone, Sirui K-10II Ball Head for roof mount & wall mount, streaming PC and 2 x video monitors.
- Workshops – DEFF Electronics workshop, Operations Room in Environmental hanger,
- various lab areas.
- Helicopter Briefing room

## MEDICAL EQUIPMENT

- Anesthetic Machine
- Ventilator
- Mobile X-Ray unit
- ECG & blood pressure function of LifePak defibrillator
- Infusion pump for IV fluid infusion
- Monitor in ward: Blood pressure, saturations, pulse
- Hyfercator
- Theatre Light

The supplies, consumables and other items as listed in Annex C.

## DIVING EQUIPMENT

- Diving Chamber
- DMAC Medical Kit
- Medical Oxygen
- 2 x RIB

**NOTE : This specification sheet is EXCLUSIVE to the Monaco Expedition Charter Oct – Nov 2022**

**ANNEX B  
LIST OF PARTICIPANTS**

Project	Last Name	First Name	Affiliation	Unit	Nationality	Function	Category	Embarkation Port	Disembarkation Port
Saya de Malha	Theresine	Patsy	Seychelles Parks and Gardens Authority (SPGA)		Seychelles	Marine Biologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Bonne	Rodney	Seychelles Parks and Gardens Authority (SPGA)		Seychelles	Marine Biologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Manigroo	Rosabella	Seychelles Fishing Authority (SFA)	Research Section	Seychelles	Environmental Scientist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Vidot	Amie	Seychelles Fishing Authority (SFA)	Research Section	Seychelles	Marine Biologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Barreau	Estelle	Seychelles Fishing Authority (SFA)	Research Section	Seychelles	Marine Biologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Dine	Mariette	Ministry of Fisheries and the Blue Economy		Seychelles	Entrepreneur	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Gordon	Nuette	University of Seychelles	Blue Economy Research Institute	South Africa	Marine Biologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Sorry	Abel	Ministry of Fisheries and the Blue Economy	Department of the Blue Economy	Seychelles	Environmental Scientist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Talma	Sheena	Talma Consultancy		Seychelles	Marine Biologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Maria	Joshua	University of Seychelles		Seychelles	Student	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Marzochi	Bianca	University of Seychelles		Seychelles	Student	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Labonte	Gamilla	University of Seychelles		Seychelles	Student	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Jeanne	Terry	Fisherman		Seychelles	Observer	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Sauba	Keshav	Department for Continental Shelf, Maritime Zones Administration and Exploration, Prime Minister's Office		Mauritius	Geoscientist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Oozeeraully	Yuneeda	Department for Continental Shelf, Maritime Zones Administration and Exploration, Prime Minister's Office		Mauritius	Physical Oceanographer	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Bisessur	Dass	Department for Continental Shelf, Maritime Zones Administration and Exploration, Prime Minister's Office		Mauritius	Geoscientist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Rawat	Arshad	Department for Continental Shelf, Maritime Zones Administration and Exploration, Prime Minister's Office		Mauritius	Physical Oceanographer	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Roy	Prema	Mauritius Oceanography Institute (MOI)		Mauritius	Chemical Oceanographer	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Oogarah	Preeti Nisha	Mauritius Oceanography Institute (MOI)		Mauritius	Chemical Oceanographer	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Bhagooli	Ranjeet	University of Mauritius	Department of Biosciences and Ocean Studies	Mauritius	Marine Biologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Kaulysing	Deepeeka	University of Mauritius	Department of Biosciences and Ocean Studies	Mauritius	Taxonomist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Ramah	Sundy	Ministry of Blue Economy, Marine resources, Fisheries and Shipping	Fisheries Training & Extension Centre	Mauritius	Marine Ecophysicologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Mumboothie	Vikash	Ministry of Blue Economy, Marine resources, Fisheries and Shipping		Mauritius	Chemical Oceanographer	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Marsac	Francis	French Research Institute for Sustainable Development (IRD)	IRD Sète / UMR Marbec	France	Oceanographer/Project Leader	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Ménard	Frédéric	French Research Institute for Sustainable Development (IRD)	IRD Marseille / UMR MOI	France	Marine Ecologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Ternon	Jean-François	French Research Institute for Sustainable Development (IRD)	IRD Sète / UMR Marbec	France	Physical Oceanographer	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Galletti	Florence	French Research Institute for Sustainable Development (IRD)	IRD Sète / UMR Marbec	France	Marine Lawyer and Biologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Noyon	Margaux	Nelson Mandela University	Ocean Science Campus	France	Marine Biologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Corbati	Laure	French National Museum of Natural History (MNHN)	UMR ISYEB	France	Marine Biologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Bouchet	Philippe	French National Museum of Natural History (MNHN)	UMR ISYEB	France	Marine Biologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Frutos	Inma cula da	University of Lodz	Department of Zoology and Marine Invertebrates	Spain	Biologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Le Gall	Line	French National Museum of Natural History (MNHN)	UMR ISYEB	France	Taxonomist/Diver	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Vassard	Emmanuel	French National Museum of Natural History (MNHN)	UMR ISYEB	France	Diver	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Moutardier	Grégoire	French National Museum of Natural History (MNHN)		France	Diver	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Gouilleux	Benoit	University of Bordeaux	UMR EPOC	France	Diver	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Saya de Malha	Houdez	Stéphane	French National Centre for Scientific Research	UMR LECOBS / Oceanology Observatory of Banyuls-sur-Mer	France	Diver	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Coral Connect	Koldewey	Heather	Zoological Society of London		United Kingdom	Marine Biologist/Project Leader	Science	Le Port, Reunion	Port Victoria, Seychelles
Coral Connect	Burt	April	Seychelles Islands Foundation		United Kingdom	Marine Biologist	Science	Le Port, Reunion	Aldabra, Seychelles
Coral Connect	Wilson	Bryan	University of Oxford	Department of Zoology - John Krebs Field Station	Ireland	Marine Biologist	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Coral Connect	Landers	Damaris	University of Oxford		United Kingdom	PhD Student/Diver	Science	Le Port, Reunion	Port Louis, Mauritius
Coral Connect	Mogg	Andy	Tritonia Scientific Ltd		United Kingdom	Diver	Science	Le Port, Reunion	Moroni, Comoros
MADCAPS	Fustenberg	Gwenais	University of Reunion	UMR Entropy-BEST RUN	France	Marine Biologist	Science	Le Port, Reunion	Port Louis, Mauritius
MADCAPS	Fernandes Da Costa	Victoria Marillac	University of Reunion	UMR Entropy-BEST RUN	Brazil	Marine Biologist	Science	Le Port, Reunion	Port Louis, Mauritius
MADCAPS	Vanderlynden /Thibault	Chloé	BEST RUN	BEST RUN	France	Artist	Artist	Port Victoria, Seychelles	Port Louis, Mauritius

Project	Last Name	First Name	Affiliation	Unit	Nationality	Function	Category	Embarkation Port	Disembarkation Port
GEOS	Bourjea	Jérôme	French Institute for Exploitation of the Sea (Ifremer)	Ifremer Sète / UMR MARBEC	France	Marine Biologist/Project Leader	Science	Le Port, Reunion	Port Victoria, Seychelles
GEOS	Schull	Quentin	French Institute for Exploitation of the Sea (Ifremer)	Ifremer Sète / UMR MARBEC	France	Marine Biologist	Science	Le Port, Reunion	Port Victoria, Seychelles
GEOS	Ciccione	Stéphane	Kelonia		France	Outreach Specialist	Communication	Le Port, Reunion	Port Victoria, Seychelles
4SEA	Contini	Matteo	French Institute for Exploitation of the Sea (Ifremer)	Ifremer/Indian Ocean Delegation	Italie	Drone Operator/Data Manager	Science	Le Port, Reunion	Port Louis, Mauritius
4SEA	Ravichandran	Mervyn	French Institute for Exploitation of the Sea (Ifremer)	Ifremer/Indian Ocean Delegation	France	Drone Operator	Science	Le Port, Reunion	Port Louis, Mauritius
4SEA	Julien	Mohan	French National Centre for Scientific Research	CNRS/URMM	France	Drone Operator/Data Manager	Science	Le Port, Reunion	Port Victoria, Seychelles
4SEA	Poulain	Sylvain	French Research Institute for Sustainable Development (IRD)	IRD Sète / UMR Marbec	France	Drone Operator/Data Manager	Science	Le Port, Reunion	Port Victoria, Seychelles
BGC Argo	Claustre	Hervé	Sea Institute of Villefranche-sur-Mer (IMEV)	Oceanography Laboratory of Villefranche-sur-Mer (LOV)	France	Oceanographer/Project Leader	Science	Le Port, Reunion	Port Louis, Mauritius
BGC Argo	d'Ortenzio	Fabrizio	Sea Institute of Villefranche-sur-Mer (IMEV)	Oceanography Laboratory of Villefranche-sur-Mer (LOV)	France	Physical Oceanographer	Science	Le Port, Reunion	Port Louis, Mauritius
BGC Argo	Dimier	Céline	Sea Institute of Villefranche-sur-Mer (IMEV)	Oceanography Laboratory of Villefranche-sur-Mer (LOV)	France	Engineer	Science	Cape Town, South Africa	Cape Town, South Africa
BGC Argo	Jessin	Thomas	Sea Institute of Villefranche-sur-Mer (IMEV)	Oceanography Laboratory of Villefranche-sur-Mer (LOV)	France	Webdesigner	Science	Le Port, Reunion	Port Louis, Mauritius
BGC Argo/Saya de Malha	Traillandier	Vincent	Sea Institute of Villefranche-sur-Mer (IMEV)	Oceanography Laboratory of Villefranche-sur-Mer (LOV)	France	CTD Specialist	Science	Le Port, Reunion	Cape Town, South Africa
World Coral Conservatory	Vimercati	Silvia	King Abdullah Scientific Centre and Technology		Italy	Taxonomist/Diver	Science	Le Port, Reunion	Port Victoria, Seychelles
World Coral Conservatory	Zoccola	Didier	Monaco Scientific Centre (CSM)		France	Biologist/Diver/Project	Science	Le Port, Reunion	Port Victoria, Seychelles
World Coral Conservatory	Piquet	Bruno	Monaco Oceanographic Institute	Oceanographic Museum	France	Aquarologist/Diver	Science	Le Port, Reunion	Port Victoria, Seychelles
World Coral Conservatory	Midol	Maureen	Oceanopolis		France	Aquarologist/Diver	Science	Le Port, Reunion	Port Victoria, Seychelles
World Coral Conservatory	Quéméré	Katia	Oceanopolis		France	Cameraman/Diver	Communication	Le Port, Reunion	Port Victoria, Seychelles
Marine Mammal Observation	Rota	Bernard	GLOBCE Reunion		France	Marine Mammal Observer	Science	Port Victoria, Seychelles	Port Louis, Mauritius
Onboard School	Lombard	Fabien	Sea Institute of Villefranche-sur-Mer (IMEV)	Oceanography Laboratory of Villefranche-sur-Mer (LOV)	France	Teacher/Project Leader	Science	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Irisson	Jean Olivier	Sea Institute of Villefranche-sur-Mer (IMEV)	Oceanography Laboratory of Villefranche-sur-Mer (LOV)	France	Teacher	Science	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Mousseau	Laure	Sea Institute of Villefranche-sur-Mer (IMEV)	Oceanography Laboratory of Villefranche-sur-Mer (LOV)	France	Teacher	Science	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Oh	Jun	IMBRSea		Belgium	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Quevedo Zabala	Juliana	IMBRSea		Colombia	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Bates	Elliott	IMBRSea		USA	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	van Langen Rosón	Andrea	IMBRSea		Netherlands	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Chung	Wing Yi	IMBRSea		China (Hong kong)	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Pohl	Lotte	IMBRSea		Germany	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Tupper	Emiliana	IMBRSea		Chile	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Dulkan	Nergiz	IMBRSea		Turkey	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Finet	Thomas	Sorbonne University		France	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Momjal-Delphine	Axel	Sorbonne University		France	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Acardio	Alexandre	Sorbonne University		France	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Prater	Laura	Sorbonne University		France	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Garmirian	Zoé	Sorbonne University		France	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Lemoiné	Julie	Sorbonne University		France	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Rugard	Antoine	Sorbonne University		France	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Zaccomer	Hugo	Sorbonne University		France	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Vignerot	Mathilde	Sorbonne University		France	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Ozanam	Baptiste	Sorbonne University		France	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Camps	Rebecca	Sorbonne University		Peru	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Barale	Ilaria	Sorbonne University		Italy	Student	Student	Le Port, Reunion	Port Victoria, Seychelles
Onboard School	Munnaro	Sivanee	Department for Continental Shelf, Maritime Zones Administration and Exploration, Prime Minister's Office		Mauritius	Student	ECOP	Port Louis, Mauritius	Port Victoria, Seychelles
Onboard School	Bhunjun	Devin	Department for Continental Shelf, Maritime Zones Administration and Exploration, Prime Minister's Office		Mauritius	Student	ECOP	Port Louis, Mauritius	Port Victoria, Seychelles



Project	Last Name	First Name	Affiliation	Unit	Nationality	Function	Category	Embarkation Port	Disembarkation Port
Onboard School/Saya de Malha	Coopen	Priscilla	Department for Continental Shelf, Maritime Zones Administration and Exploration, Prime Minister's Office		Mauritius	Student	ECOP	Port Louis, Mauritius	Port Louis, Mauritius
Onboard School	Jeetun	Sruti	Department for Continental Shelf, Maritime Zones Administration and Exploration, Prime Minister's Office		Mauritius	Student	ECOP	Port Louis, Mauritius	Port Victoria, Seychelles
Onboard School	Sadien	Murughen	Department for Continental Shelf, Maritime Zones Administration and Exploration, Prime Minister's Office		Mauritius	Student	ECOP	Port Louis, Mauritius	Port Victoria, Seychelles
Onboard School	Banane	Véronique Mireille	Seychelles Islands Foundation		Seychelles	Student	ECOP	Port Louis, Mauritius	Port Victoria, Seychelles
Onboard School	Sarathia	Maggali	University of Seychelles		Seychelles	Student	ECOP	Port Louis, Mauritius	Port Victoria, Seychelles
Onboard School	Roccamora Solé	Ella	University of Seychelles		Seychelles	Student	ECOP	Port Louis, Mauritius	Port Victoria, Seychelles
Onboard School	Nancy	Corlianna Lauren	Seychelles Islands Foundation		Seychelles	Student	ECOP	Port Louis, Mauritius	Port Victoria, Seychelles
Communication	Bender	Sven	Authentic		Germany	Cameraman/Diver	Communication	Port Louis, Mauritius	Port Louis, Mauritius
Communication	Treichmann	Tim	Authentic		Germany	Film Assistant	Communication	Port Louis, Mauritius	Port Louis, Mauritius
Communication	Poklesner	Harald	Authentic		Austria	Film Director	Communication	Port Louis, Mauritius	Port Louis, Mauritius
ROV	Laaser	Egon	Marine Solutions		Namibia	ROV Supervisor	Support	Cape Town, South Africa	Cape Town, South Africa
ROV	Laaser	Robert	Marine Solutions		Namibia	ROV Pilot	Support	Port Victoria, Seychelles	Port Louis, Mauritius
ROV	Arlowe	Dominique	Marine Solutions		Namibia	ROV Pilot	Support	Cape Town, South Africa	Port Victoria, Seychelles
ROV	Karremann	Jeanre	Marine Solutions		South Africa	ROV Pilot	Support	Port Victoria, Seychelles	Port Louis, Mauritius
ROV	Matthew	Andrew	Underwater Surveys		South Africa	Senior Surveyor	Support	Cape Town, South Africa	Cape Town, South Africa
Dive support	Jacobs	Mervyn	AMSOL		South Africa	Hyperbaric Chamber Operator/Dive Support Boat Coxswain	Support	Cape Town, South Africa	Port Louis, Mauritius
Dive support	Frankland	Derek	AMSOL		South Africa	Dive Control	Support	Cape Town, South Africa	Cape Town, South Africa
Dive support	Mladorp	Travis	AMSOL		South Africa	Dive Support Boat Coxswain	Support	Cape Town, South Africa	Port Louis, Mauritius
Equipment support	Jacobs	Leon	Department of Forestry, Fisheries and the Environment (DPFE)		South Africa	Scientific Technician	Support	Cape Town, South Africa	Cape Town, South Africa
Equipment support	Lombi	Mfundo	Department of Forestry, Fisheries and the Environment (DPFE)		South Africa	Engineer Technician	Support	Cape Town, South Africa	Port Louis, Mauritius
Equipment support	Anders	Darrel	Department of Forestry, Fisheries and the Environment (DPFE)		South Africa	Scientific Technician	Support	Port Victoria, Seychelles	Cape Town, South Africa
Medical support	Quinn	Brendan	AMSOL		South Africa	Doctor	Support	Cape Town, South Africa	Cape Town, South Africa
Organization	Bessero	Gilles	Monaco Explorations		France	Expedition Leader	Organization	Cape Town, South Africa	Cape Town, South Africa
Organization	Théron	Didier	Monaco Explorations		France	Outreach Manager	Organization	Cape Town, South Africa	Cape Town, South Africa
Organization	Gasquy	Océane	Monaco Explorations		France	Communication Officer	Organization	Port Louis, Mauritius	Cape Town, South Africa
Organization	Habbas	Mélissa	Monaco Explorations		France	Coordination Assistant	Organization	Cape Town, South Africa	Cape Town, South Africa
Organization	Gnocchio	Flora	Monaco Explorations		Monaco	Administration Manager	Organization	Port Louis, Mauritius	Le Port, Reunion
Communication	Péroumal	Sylvain	Terre M'air Production		France	Cameraman	Communication	Le Port, Reunion	Assomption, Seychelles
Communication	Dujast	Stéphane	Agence Zeppelin		France	Reporter	Communication	Port Victoria, Seychelles	Port Louis, Mauritius
Communication	Mathys	Nicolas	Agence Zeppelin		France	Photographer	Communication	Port Victoria, Seychelles	Port Louis, Mauritius
Communication	Kulisev	Filip	Amazing Planet		France	Photographer	Communication	Le Port, Reunion	Port Victoria, Seychelles
Communication	Mateļusová	Zuzana	Amazing Planet		Slovakia	Photographer	Communication	Le Port, Reunion	Port Victoria, Seychelles
Artist in residence	Rigot	Elise	Monaco Explorations		France	Artist	Communication	Port Louis, Mauritius	Port Louis, Mauritius
Artist in residence	Leroy	Rémi	Monaco Explorations		France	Artist	Communication	Le Port, Reunion	Port Louis, Mauritius
Advisory Committee	Hempson	Tessa	&Beyond	Oceans without Borders	South Africa	Observer	Organization	Port Louis, Mauritius	Port Victoria, Seychelles
Advisory Committee	Lundin	Carl Gustaf	Mission Blue		Sweden	Observer	Organization	Port Louis, Mauritius	Port Victoria, Seychelles
Advisory Committee/SSD	D'Adamo	Nick	University of Western Australia (UWA)		Australia	Observer/Project Leader	Organization	Port Louis, Mauritius	Port Victoria, Seychelles
Advisory Committee	Laroussinle	Olivier	Mobility and Urban Planning (CEREMA)		France	Observer	Organization	Cape Town, South Africa	Port Louis, Mauritius (1st stop)
Advisory Committee	Smird	François	Consultant		France	Observer	Organization	Port Victoria, Seychelles	Port Louis, Mauritius
Advisory Committee	Benzaken	Dominique	Consultant		France	Observer	Organization	Port Victoria, Seychelles	Port Louis, Mauritius
Observer	Fleischer-Dogley	Frauke	Seychelles Islands Foundation		Australia	Observer	Organization	Port Victoria, Seychelles	Port Victoria, Seychelles
Observer	Appoo	Jennifer	Seychelles Islands Foundation		Seychelles	Observer	Science	Aldabra	Port Victoria, Seychelles
Observer	Jeremie	Shemilla	Ministry of Agriculture, Climate Change and Environment		Seychelles	PHD Student	Student	Le Port, Reunion	Aldabra, Seychelles
Observer	Ricot	Mélanie	Environment		Seychelles	Observer	Science	Port Louis, Mauritius	Port Victoria, Seychelles
Observer	Jogee	Shakeel	University of Mauritius		Mauritius	Observer	Science	Port Louis, Mauritius	Le Port, Reunion
Observer	Soobugh	Ritesh	University of Mauritius		Mauritius	Student	Student	Port Louis, Mauritius	Le Port, Reunion

NO TEXT

**ANNEX C**  
**DETAILED TIMELINE**

Date - Time (UTC)	Activities	Lon (E)	Lat (S)	Marine Scientific Research Jurisdiction	Comment
26/09/2022 06:00	Mobilization in Cape Town (South Africa)				
01/10/2022 06:00	Delivery of <i>S.A. Agulhas II</i> in Cape Town				
01/10/2022 07:00	Press briefing and VIP visit				
03/10/2022 14:00	ATD Cape Town				Start phase 1 - leg 1
03/10/2022 16:00	Inmarsat-C test and loch calibration	018°14.6'	33°51.3'		
04/10/2022 15:20	ROV trial dive	022°53.0'	35°10.9'		
04/10/2022 21:35	ROV recovery	022°52.4'	35°11.1'		
09/10/2022 11:47	Entering Reunion EEZ	052°55.1'	23°45.7'		
10/10/2022 04:37	Exit from Reunion EEZ Entering Mauritius EEZ	056°38.8'	20°56.5'		
10/10/2022 11:00	ATA Port Louis (Mauritius) Additional mobilization				
11/10/2022 05:00	Press briefing				
11/10/2022 10:00	VIP visit				
12/10/2022 10:00	ATD Port-Louis				Start phase 1 - leg 2
12/10/2022 13:30	Investigation of possible seamount	056°51.5'	20°26.4'	Mauritius EEZ	
12/10/2022 19:30	End of investigation of possible seamount	056°51.9'	20°27.4'	Mauritius EEZ	
12/10/2022 21:25	Exit from Mauritius EEZ Entering Reunion EEZ	056°26.5'	20°32.2'		
13/10/2022 04:00	ATA Le Port (Reunion) Additional mobilization				
13/10/2022 08:00	Press briefing				
13/10/2022 09:30	Group visits				
13/10/2022 13:00	VIP visit				
14/10/2022 14:00	ATD Le Port				Start phase 1 - leg 3
14/10/2022 19:00	Deployment of SSD01 B8-1: 3 Manta transects	055°04.9'	20°00.3'	Reunion EEZ	MP1-3
15/10/2022 00:20	B5-4: CTD1000m+Multinet+3 Argo floats (Arvor+BGC-Canada+GO-BGC)	055°00.0'	19°30.0'	Reunion EEZ	IO_001
15/10/2022 09:50	Deployment of SSD02 Exit from Reunion EEZ	054°44.8'	18°19.1'	Reunion EEZ	
16/10/2022 10:20	Entering Seychelles EEZ	053°30.0'	12°40.9'		
16/10/2022 10:35	B5-5: CTD2000m+Multinet+4 Argo floats (Arvor+BGC-NAOS+BGC-REFINE+Deep)	053°30.0'	12°40.0'	Seychelles EEZ	IO_002
16/10/2022 15:00	Live outreach session with French Science Festival (Villefranche-sur-Mer) Oceanography Laboratory				
16/10/2022 15:00	Investigation of possible seamount	053°37.5'	12°36.0'	Seychelles EEZ	
17/10/2022 02:35	End of investigation of possible seamount	053°32.1'	12°35.9'	Seychelles EEZ	
17/10/2022 06:15	B8-2: 3 Manta transects	052°45.0'	12°15.0'	Seychelles EEZ	MP4-6
17/10/2022 13:05	Deployment of SSD03	052°00.0'	11°47.8'	Seychelles EEZ	
17/10/2022 22:10	B5-6: CTD1000m+Multinet+2 Argo floats (Arvor-02+BGC-Canada)	050°00.0'	10°45.0'	Seychelles EEZ	IO_003

Date - Time (UTC)	Activities	Lon (E)	Lat (S)	Marine Scientific Research Jurisdiction	Comment
18/10/2022 05:50	B8-3: 3 Manta transects	049°20.2'	10°15.2'	Seychelles EEZ	MP7-9
18/10/2022 17:00	B8-4: 3 Manta transects	047°20.3'	09°50.1'	Seychelles EEZ	MP10-12
19/10/2022 02:00	ATA Aldabra (Seychelles)	046°08.9'	09°24.3'		Start of Aldabra sequence
19/10/2022 05:00	Dive emergency response plan drill	046°11.8'	09°23.3'		
	Disembarkation of B3, B4, and B8 teams for onshore activities				
19/10/2022 08:00	Deployment of dive teams (WWC, CC) for check dives at ARM06	046°11.8'	09°23.3'	Seychelles territorial sea	
19/10/2022 14:00	ROV check dive at ARM06	046°12.0'	09°22.3'	Seychelles territorial sea	
20/10/2022 04:10	Dive boat incident	046°12.3'	09°22.5'		
20/10/2022 12:20	ROV dive to recover equipment	046°12.4'	09°22.5'		
20/10/2022 14:35	ATD Aldabra				
	Medical evacuation				
21/10/2022 04:50	ATA Moroni (Comoros)				
21/10/2022 06:30	Disembarkation of injured person				
21/10/2022 06:45	ATD Moroni				
21/10/2022 16:05	B5-6b: CTD1000m+Multinet+2 Argo floats (Arvor+BGC-NAOS)	044°47.8'	10°18.4'	Seychelles EEZ	IO_004
21/10/2022 17:45	Deployment of SSD65	044°47.8'	10°18.4'	Seychelles EEZ	
22/10/2022 01:00	ATA Aldabra	046°11.8'	09°22.5'		
22/10/2022 04:00	Deployment of WCC dive team at ARM06			Seychelles territorial sea	
22/10/2022 09:00	Re-embarkation of B8 team				
22/10/2022 10:00	Deployment of WCC and CC dive teams at ARM01			Seychelles territorial sea	
22/10/2022 12:00	ROV dive (shallow bottom survey)	046°12.3'	09°22.4'	Seychelles territorial sea	
22/10/2022 16:00	ROV recovery	046°12.5'	09°22.4'	Seychelles territorial sea	
22/10/2022 17:00	ROV dive (deep bottom survey)	046°11.6'	09°22.5'	Seychelles territorial sea	
22/10/2022 19:15	ROV recovery	046°12.5'	09°22.4'	Seychelles territorial sea	
23/10/2022 04:00	Deployment of WCC and CC dive teams at ARM07	046°13.0'	09°27.8'	Seychelles territorial sea	
23/10/2022 10:00	Deployment of WCC and CC dive teams at ARM01	046°11.9'	09°24.1'	Seychelles territorial sea	
23/10/2022 12:30	ROV dive (shallow bottom survey)	046°11.8'	09°24.0'	Seychelles territorial sea	
23/10/2022 12:50	Deployment of SSD04, 05, 07, 08 off the mouth of Grande Passe by CC dive team	046°13.5'	09°22.0'	Seychelles territorial sea	
23/10/2022 16:10	ROV recovery	046°11.9'	09°24.1'	Seychelles territorial sea	
23/10/2022 19:00	CTD1000m and deployment of SSD06	045°55.0'	09°25.5'	Seychelles EEZ	IO_005
24/10/2022 04:00	Deployment of WCC and CC dive teams at ARM01	046°11.8'	09°24.1'	Seychelles territorial sea	
24/10/2022 10:00	Deployment of WCC and CC dive teams at ARM07	046°11.8'	09°24.1'	Seychelles territorial sea	
24/10/2022 15:20	ROV dive	046°13.0'	09°27.8'	Seychelles territorial sea	
24/10/2022 22:25	ROV recovery	046°12.4'	09°28.2'	Seychelles territorial sea	
25/10/2022 02:30	Deployment of CC dive team at Main Channel and ARM02	046°11.9'	09°24.5'	Seychelles territorial sea	
25/10/2022 03:30	Deployment of WCC snorkel team at Main Channel and ARM02			Seychelles territorial sea	
25/10/2022 05:00	Deployment of FRC for B8 Manta transects along 20m contour line from West Channel to Main Channel			Seychelles territorial sea	MP13-15
25/10/2022 12:00	Re-embarkation of B3 and B4 teams				

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25/10/2022 14:00	Embarkation of HSH Prince Albert II of Monaco and Monaco and Seychelles delegations				
25/10/2022 16:10	ROV dive	046°11.5'	09°24.2'	Seychelles territorial sea	
25/10/2022 21:30	ROV recovery	046°11.3'	09°24.2'	Seychelles territorial sea	
26/10/2022 05:40	ATA Assumption	046°29.9'	09°43.5'		
26/10/2022 07:00	Disembarkation of HSH Prince Albert II of Monaco and Monaco and Seychelles delegations				End of Aldabra sequence
26/10/2022 17:30	B8-5: 3 Manta transects	048°00.0'	08°30.0'	Seychelles EEZ	MP16-18
26/10/2022 22:50	B5-7: CTD2000m+Multinet+2 Argo floats (Deep+GO-BGC)	048°30.0'	08°00.0'	Seychelles EEZ	IO_006
27/10/2022 14:50	B8-6: 3 Manta transects	050°40.0'	06°30.2'	Seychelles EEZ	MP19-21
28/10/2022 02:50	B5-8: CTD2000m+Multinet+3 Argo floats (Arvor-O2+BGC-REFINE+GO-BGC)	052°00.0'	05°30.1'	Seychelles EEZ	IO_007
28/10/2022 11:00	B8-7: 3 Manta transects	053°08.8'	04°45.5'	Seychelles EEZ	MP22-24
28/10/2022 12:00	Live outreach session with Monaco Oceanographic Museum				
29/10/2022 04:50	ATA Port Victoria (Seychelles)				
29/10/2022 07:00	University of Seychelles visit				
29/10/2022 07:30	VIP visit				
31/10/2022 05:30	School outreach activities				
	Press briefing				
31/10/2022 09:30	School visits				
31/10/2022 16:00	ATD Port Victoria				Start phase 2 - leg 1
01/11/2022 18:32	Exit from Seychelles EEZ	059°24.9'	06°00.0'		Start of JMA sequence
	Entering JMA				
01/11/2022 22:30	B5-9: CTD2000m+3 Argo floats (BGC-NAOS+BGC-REFINE+GO-BGC)	060°01.1'	05°59.4'	JMA	IO_008
02/11/2022 15:40	Deployment of SVP1	059°57.0'	09°20.3'	JMA	
02/11/2022 16:20	ST1: CTD500m+Bongo net	059°57.0'	09°27.0'	JMA	Start of investigation of box 1 IO_009
02/11/2022 19:50	ST2: CTD750m+Bongo net	060°06.0'	09°37.8'	JMA	IO_010
02/11/2022 23:35	ST3: CTD1000m+Bongo net	060°26.4'	09°43.0'	JMA	IO_011
03/11/2022 02:30	Dive emergency response plan drill				
03/11/2022 03:30	Deployment of dive teams at SD1	060°10.0'	09°34.0'	JMA	Dive cancelled due to sea state
03/11/2022 11:00	TG1: deployment of towed gears 3 dredge transects	060°09.8'	09°24.4'	JMA	
03/11/2022 14:55	End of TG1	060°11.0'	09°25.7'	JMA	
03/11/2022 17:30	ROV dive at ROV1	060°12.9'	09°49.6'	JMA	1 transect at 30/60/120/250/700m
03/11/2022 23:35	ROV recovery	060°12.9'	09°51.0'	JMA	
04/11/2022 03:00	Deployment of dive teams at SD2	060°12.0'	09°52.0'	JMA	
04/11/2022 10:35	TG2: deployment of towed gears 2 beam trawl transects	060°01.9'	09°39.3'	JMA	Bathymetric reconnaissance (S-track) prior to the deployment of the gear
04/11/2022 15:00	End of TG2	060°04.4'	09°42.1'	JMA	
04/11/2022 15:25	B8-8: 3 Manta transects	060°04.5'	09°42.2'	JMA	MP25-27

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04/11/2022 17:49	Exit from JMA Entering Mauritius EEZ	059°59.8'	09°46.4'		Transit towards box 2
04/11/2022 22:05	Exit from Mauritius EEZ Entering JMA	060°04.6'	10°35.3'		
05/11/2022 03:00	Deployment of the dive teams at SD3	060°11.4'	10°35.4'	JMA	
05/11/2022 09:55	ST4: CTD60m+Bongo net	060°28.8'	10°30.0'	JMA	Start of investigation of box 2 IO_012
05/11/2022 12:50	TG3: deployment of towed gears 2 dredge transects	060°30.1'	10°45.5'	JMA	Bathymetric reconnaissance (S-track) prior to the deployment of the gear
05/11/2022 14:10	End of TG3	060°31.2'	10°45.8'	JMA	
05/11/2022 17:40	ST6: CTD1500m+Multinet	060°00.0'	11°13.2'	JMA	IO_013
05/11/2022 20:55	Deployment of SVP2	060°00.7'	11°12.3'	JMA	
05/11/2022 21:45	ST7: CTD1000m+Bongo net	060°06.0'	11°06.0'	JMA	IO_014
06/11/2022 00:45	ST8: CTD1000m+Bongo net	060°11.6'	10°59.8'	JMA	IO_015
06/11/2022 04:00	Deployment of the dive teams at SD4	060°26.3'	11°08.0'	JMA	
06/11/2022 09:05	TG4: deployment of towed gears Dredge/dredge/dredge/beam trawl	060°18.7'	10°59.2'	JMA	
06/11/2022 14:25	End of TG4	060°22.0'	11°03.0'	JMA	
06/11/2022 19:15	B8-9: 3 Manta transects	060°12.0'	10°30.6'	JMA	MP28-30
07/11/2022 01:45	SG1: Reconnaissance survey along Nansen transect towards SG2	060°46.0'	09°50.5'	JMA	Start of seagrass survey
07/11/2022 04:20	SG2: ROV survey backwards along Nansen transect towards NW	061°01.3'	09°59.0'	JMA	Seagrass survey at 30m
07/11/2022 09:00	ROV recovery	060°56.6'	09°56.7'	JMA	
07/11/2022 10:00	Live outreach session with French school (Reunion)				
07/11/2022 10:00	Deployment of dive teams at SD5	060°54.0'	09°55.0'	JMA	
07/11/2022 13:00	Recovery of dive teams			JMA	
07/11/2022 14:35	TG5a: deployment of towed gears 1 dredge transect	060°45.3'	09°49.9'	JMA	
07/11/2022 17:33	TG5b: Deployment of towed gears Beam trawl/dredge	060°46.9'	09°43.0'	JMA	
08/11/2022 00:50	End of TG5b	060°50.6'	09°45.4'	JMA	
08/11/2022 02:00	Deployment of dive teams at SD6	060°51.0'	09°50.0'	JMA	
08/11/2022 05:00	Recovery of dive teams			JMA	
08/11/2022 06:20	ROV3: survey along Nansen transect towards NW	060°51.0'	09°50.0'	JMA	Seagrass survey at 30m
08/11/2022 08:15	Interruption of the ROV survey due to a fault in the A-frame pump				
08/11/2022 11:20	B8-10: 3 Manta transects	061°19.8'	10°05.5'	JMA	MP31-33
08/11/2022 15:20	ST16R: CTD100m+Bongo net	061°48.6'	10°12.0'	JMA	Start of investigation of box 3 IO_016
08/11/2022 18:05	ST15R: CTD100m+Bongo net	061°42.0'	10°33.6'	JMA	IO_017
09/11/2022 02:00	Deployment of dive teams at SD7	062°02.6'	10°36.85'	JMA	
09/11/2022 05:30	Recovery of dive teams			JMA	

Date - Time (UTC)	Activities	Lon (E)	Lat (S)	Marine Scientific Research Jurisdiction	Comment
09/11/2022 06:55	TG6: deployment of towed gears beam trawl/sledge	061°48.4'	10°23.3'	JMA	First deployment of the suprabenthic sledge
09/11/2022 08:40	End of TG6	061°49.0'	10°23.3'	JMA	
09/11/2022 09:30	Deployment of dive teams at SD8	062°05.8'	10°22.7'	JMA	
09/11/2022 11:30	Recovery of dive teams			JMA	
09/11/2022 13:30	Transit towards ST17				
09/11/2022 15:50	Deployment of SSD09	062°34.9'	10°12.2'	JMA	
09/11/2022 16:10	ST17: CTD2000m+Multinet	062°36.0'	10°12.0'	JMA	IO_018
09/11/2022 19:30	Transit towards ST18R				
09/11/2022 20:00	XBT1	062°29.9'	10°12.0'	JMA	
09/11/2022 20:20	XBT2	062°25.7'	10°12.0'	JMA	
09/11/2022 20:30	XBT3	062°21.6'	10°12.0'	JMA	
09/11/2022 20:55	ST18R: CTD1500m+Bongo net	062°17.4'	10°12.0'	JMA	IO_019
09/11/2022 23:00	ST19R: CTD750m+Bongo net	062°15.0'	10°12.0'	JMA	IO_020
10/11/2022 02:00	Deployment of dive and B4 teams at SD9	062°09.6'	10°12.6'	JMA	
10/11/2022 05:30	Recovery of dive and B4 teams			JMA	
10/11/2022 07:15	TG7: deployment of towed gears	061°48.6'	10°13.8'	JMA	
	Beam trawl/sledge/sledge/beam trawl				
10/11/2022 11:45	End of TG7	061°47.3'	10°16.0'	JMA	
10/11/2022 13:00	B8-11: 3 Manta transects	062°03.1'	10°12.0'	JMA	MP34-36
10/11/2022 18:10	ROV dive at ROV4	062°13.8'	10°12.3'	JMA	3 transects at 30/60/120/250m
11/11/2022 01:00	ROV recovery and transit to SD10	062°15.1'	10°14.5'	JMA	
11/11/2022 03:00	Deployment of dive and B4 teams at SD10	062°11.0'	10°43.0'	JMA	
11/11/2022 06:00	Recovery of dive and B4 teams			JMA	
11/11/2022 06:20	B8-12: 3 Manta transects	062°12.3'	10°43.9'	JMA	MP37-39
11/11/2022 09:00	Live outreach session with Monaco school				
11/11/2022 10:00	Deployment of dive and B4 teams at SD11	062°00.0'	10°54.0'	JMA	
11/11/2022 13:00	Recovery of dive and B4 teams			JMA	
11/11/2022 14:10	ST22R: CTD750m+Bongo net	062°18.0'	10°54.0'	JMA	IO_021
11/11/2022 16:30	ST21R: CTD1500m+Bongo net	062°20.4'	10°54.0'	JMA	IO_022
11/11/2022 19:00	Transit to ST20R				
11/11/2022 19:20	XBT4	062°24.6'	10°54.0'	JMA	
11/11/2022 19:40	XBT5	062°28.8'	10°54.0'	JMA	
11/11/2022 20:00	XBT6	062°33.0'	10°54.0'	JMA	
11/11/2022 20:35	ST20R: CTD1500m+Multinet	062°39.0'	10°54.0'	JMA	IO_023
12/11/2022 00:20	Deployment of SSD10	062°38.8'	10°54.1'	JMA	
12/11/2022 03:25	ST23: CTD200m+Bongo net	062°07.8'	11°22.2'	JMA	Start of investigation of box 4
					IO_024
12/11/2022 05:30	TG8: deployment of towed gears Dredge/beam trawl/sledge/ dredge/dredge	062°09.9'	11°25.0'	JMA	

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12/11/2022 13:10	End of TG8	062°00.5'	11°28.3'	JMA	
12/11/2022 15:30	ROV dive at ROV5	061°57.6'	11°44.4'	JMA	3 transects at 60/120/250m
12/11/2022 23:25	ROV recovery	061°58.2'	11°45.3'	JMA	
13/11/2022 02:00	Deployment of dive and B4 teams at SD12	061°54.0'	11°44.4'	JMA	
13/11/2022 05:30	Recovery of dive and B4 teams			JMA	
13/11/2022 06:50	ST24R: CTD200m+Bongo net	061°45.0'	11°40.2'	JMA	IO_025
13/11/2022 08:45	TG9: deployment of towed gears Dredge/beam trawl/sledge	061°42.5'	11°43.4'	JMA	
13/11/2022 12:25	End of TG9	061°44.6'	11°43.6'	JMA	
13/11/2022 12:45	B8-13: 3 Manta transects	061°45.4'	11°43.8'	JMA	MP40-42
13/11/2022 16:35	ST31: CTD900m+Bongo net	062°06.6'	11°41.4'	JMA	IO_026
13/11/2022 19:15	ST30: CTD2000m+Multinet	062°14.4'	11°46.2'	JMA	IO_027
13/11/2022 23:00	ST29R: CTD900m+Bongo net	062°21.6'	11°51.0'	JMA	IO_028
14/11/2022 01:30	ROV dive at ROV6 (seamount)	062°22.5'	11°53.2'	JMA	Exploratory survey from 200 to 500m
14/11/2022 10:20	ROV recovery	062°21.4'	11°54.1'	JMA	
14/11/2022 10:40	TG10: deployment of towed gears 2 dredge transects	062°21.6'	11°53.9'	JMA	
14/11/2022 14:30	End of TG10	062°22.7'	11°52.2'	JMA	
14/11/2022 14:45	Deployment of SSD11	062°20.1'	11°53.3'	JMA	
14/11/2022 16:45	B8-14: 3 Manta transects	061°55.3'	11°56.4'	JMA	MP43-45
14/11/2022 22:05	ST32: CTD200m+Bongo net	061°12.0'	12°00.0'	JMA	Start of investigation of box 5 IO_029
15/11/2022 01:40	TG11: deployment of towed gears Dredge/beam trawl/sledge/beam trawl/dredge	061°08.9'	11°46.7'	JMA	
15/11/2022 10:35	End of TG11	061°05.6'	11°47.4'	JMA	
15/11/2022 11:45	ST33: CTD300m+Bongo net	061°04.2'	11°37.2'	JMA	IO_030
15/11/2022 16:30	ROV dive at ROV7	060°47.7'	11°40.3'	JMA	3 transects at 250/500m
15/11/2022 23:50	ROV recovery	060°47.3'	11°40.6'	JMA	
16/11/2022 01:30	TG12: deployment of towed gears Dredge/beam trawl/2 dredges/ beam trawl/dredge	060°54.7'	11°50.0'	JMA	Along the slope
16/11/2022 12:10	End of TG12	061°02.0'	11°50.6'	JMA	
16/11/2022 12:15	Live outreach session with French school (Paris)				
16/11/2022 14:30	Deployment of SVP3	060°30.2'	12°01.7'	JMA	
16/11/2022 14:50	ST37R: CTD2000m+Multinet	060°29.4'	12°02.4'	JMA	IO_031
16/11/2022 18:50	XBT7	060°35.4'	12°01.2'	JMA	
16/11/2022 19:15	XBT8	060°41.4'	12°00.0'	JMA	
16/11/2022 19:50	ST38R: CTD1500m+Bongo net	060°47.4'	11°58.8'	JMA	IO_032
16/11/2022 22:30	XBT9	060°50.4'	11°55.2'	JMA	
16/11/2022 23:00	ST39R: CTD1000m+Bongo net	060°53.4'	11°51.6'	JMA	IO_033



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17/11/2022 02:30	TG13: deployment of towed gears Dredge/2 beam trawls/sledge/dredge	061°00.4'	12°16.0'	JMA	
17/11/2022 10:00	Live outreach session with Monaco Oceanographic Museum				
17/11/2022 16:00	End of TG13	060°55.1'	12°35.7'	JMA	
17/11/2022 18:00	B5-10: CTD2000m+2 Argo floats (GO-BGC+Arvor)	060°32.0'	12°28.0'	JMA	
17/11/2022 20:15	B8-15: 3 Manta transects	060°32.5'	12°28.2'	JMA	MP46-48
17/11/2022 22:30	XBT10	060°40.0'	12°31.4'	JMA	
17/11/2022 22:50	XBT11	060°44.1'	12°33.3'	JMA	
17/11/2022 23:10	XBT12	060°49.3'	12°35.4'	JMA	
17/11/2022 23:40	XBT13	060°56.3'	12°38.3'	JMA	
18/11/2022 00:05	XBT14	061°02.3'	12°40.9'	JMA	
18/11/2022 00:35	XBT15	061°09.4'	12°44.1'	JMA	
18/11/2022 01:05	XBT16	061°16.5'	12°47.0'	JMA	
18/11/2022 01:20	Deployment of SSD12	061°20.5'	12°48.6'	JMA	
18/11/2022 01:30	Deployment of SSD13	061°22.5'	12°49.5'	JMA	
18/11/2022 01:40	Deployment of SSD14	061°24.4'	12°50.4'	JMA	
18/11/2022 04:01	Exit from JMA Entering Mauritius EEZ	061°26.6'	13°26.2'		End of JMA sequence
18/11/2022 12:55	Deployment of SSD15	063°33.6'	15°40.7'	Mauritius EEZ	
18/11/2022 15:45	Screening of the film "Alick and Albert"				
18/11/2022 17:10	CTD1: CTD2000m	061°01.9'	16°31.5'	Mauritius EEZ	IO_034
18/11/2022 19:00	Transit to North Island (Saint-Brandon)				
18/11/2022 20:35	XBT17	060°42.4'	16°31.1'	Mauritius EEZ	
18/11/2022 21:50	XBT18	060°23.4'	16°31.3'	Mauritius EEZ	
18/11/2022 22:35	XBT19	060°12.3'	16°31.2'	Mauritius EEZ	
19/11/2022 02:00	Deployment of dive and B4 teams to SD1R	059°38.5'	16°23.1'	Mauritius territorial sea	Start of Saint Brandon sequence
19/11/2022 06:00	Recovery of dive and B4 teams			Mauritius territorial sea	
19/11/2022 06:15	B8-16: 3 Manta transects	059°39.5'	16°23.7'	Mauritius territorial sea	MP49-51
19/11/2022 10:00	Deployment of dive and B4 teams at SD2	059°43.4'	16°29.1'	Mauritius territorial sea	
19/11/2022 13:00	Recovery of dive and B4 teams			Mauritius territorial sea	
19/11/2022 14:15	ROV dive at ROV1	059°43.9'	16°29.1'	Mauritius territorial sea	3 transects at 30/60/120m
19/11/2022 22:40	ROV recovery	059°48.4'	16°33.9'	Mauritius territorial sea	
20/11/2022 02:00	Deployment of dive and B4 teams to SD3	059°31.3'	16°50.0'	Mauritius territorial sea	
20/11/2022 04:00	CTD deployment for film shooting			Mauritius territorial sea	
20/11/2022 06:00	Recovery of dive and B4 teams			Mauritius territorial sea	
20/11/2022 07:30	Deployment of FRC for B8 Manta transects along the coast			Mauritius territorial sea	MP52-54
20/11/2022 10:00	Deployment of dive and B4 teams to SD4	059°29.8'	16°48.5'	Mauritius territorial sea	
20/11/2022 11:00	Deployment of FRC with towed underwater camera team			Mauritius territorial sea	
20/11/2022 13:00	Recovery of dive and B4 teams			Mauritius territorial sea	
20/11/2022 14:15	ROV dive at ROV3	059°29.5'	16°47.0'	Mauritius territorial sea	Exploratory survey at 30-40m

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20/11/2022 19:10	ROV recovery	059°30.3'	16°46.9'	Mauritius territorial sea	
20/11/2022 20:10	B8-17: 3 Manta transects	059°28.2'	16°45.8'	Mauritius territorial sea	MP55-57
21/11/2022 02:00	Deployment of dive and B4 teams to SD5	059°30.4'	16°36.1'	Mauritius territorial sea	
21/11/2022 05:30	ROV deployment for film shooting			Mauritius territorial sea	
21/11/2022 06:00	Recovery of dive and B4 teams			Mauritius territorial sea	End of Saint Brandon sequence
21/11/2022 07:00	Transit to Mauritius				
21/11/2022 08:30	Live outreach session with Seychelles schools				
21/11/2022 10:00	Expedition debrief				
21/11/2022 11:10	XBT20	059°10.5'	17°09.3'	Mauritius EEZ	
21/11/2022 11:50	B8-18: 3 Manta transects	059°07.0'	17°15.2'	Mauritius EEZ	MP58-60
21/11/2022 12:00	Live outreach session with French school (Paris)				
21/11/2022 12:35	XBT21	059°08.5'	17°15.5'	Mauritius EEZ	
21/11/2022 15:20	XBT22	058°55.4'	17°36.7'	Mauritius EEZ	
21/11/2022 18:00	Deployment of SSD16 & SVP4	058°30.8'	18°13.8'	Mauritius EEZ	
21/11/2022 18:15	B5-11: CTD1000m+Multinet+2 Argo floats (BGC-Canada+Arvor)	058°30.0'	18°15.0'	Mauritius EEZ	
21/11/2022 20:45	Transit to Mauritius				
22/11/2022 00:10	Deployment of SSD17 and XBT23	058°01.0'	19°02.9'	Mauritius EEZ	
22/11/2022 04:20	Deployment of SSD18	057°26.2'	20°00.4'	Mauritius EEZ	No signal from the buoy
22/11/2022 06:00	ATA Port Louis (Mauritius)				
22/11/2022 07:00	"Adopt a float" outreach program + visit of the vessel for a group of kids representing seven different school classes from Mauritius				
22/11/2022 09:00	School visits				
22/11/2022 14:00	VIP visit and reception				
24/11/2022 12:20	ATD Port Louis				Start phase 2 - leg 2
24/11/2022 17:11	Exit from Mauritius EEZ Entering Reunion EEZ	056°39.0'	20°57.3'		
25/11/2022 08:39	Exit from Reunion EEZ	053°40.8'	24°15.4'		
25/11/2022 12:35	B5-2: CTD1000m+2 Argo floats (BGC-NAOS+Deep)	053°00.5'	24°59.6'	High Sea	
26/11/2022 04:50	B5-1b: CTD1000m+2 Argo floats (Arvor+GO-BGC)	050°00.0'	27°20.0'	High Sea	
27/11/2022 19:20	B5-1: CTD1000m+2 Argo floats (BGC-NAOS+Deep)	039°59.8'	32°00.1'	High Sea	
30/11/2022 20:06	ATA Commercial Port Cape Town				
30/11/2022 23:30	ATA East Pier Cape Town				
01/12/2022 10:00	VIP visit				
01/12/2022 22:00	Redelivery of S.A. <i>Agulhas II</i> in Cape Town				
02/12/2022 06:30	Washup meeting AMSOL-Monaco Explorations				
02/12/2022 15:00	Removal of the 40-ft container from S.A. <i>Agulhas II</i>				