



A French company devoted to high-resolution deep seabed exploration using Autonomous Underwater Vehicles (AUVs)

Our mission

ABYSSA's mission is to explore the deep ocean (up to 6000m) using Autonomous Underwater Vehicles (AUVs), to carry out high-resolution seabed mapping.

Mapping missions realized for private or public clients will provide technical and environmental data (bathymetry, nature of the seabed, currents, habitats and sensitivity of the environment, geodiversity and biodiversity, etc.) for different kind of projects (industrial projects, heritage inventory projects, etc.).

Viewing the lack of knowledge, such data are necessary to make informed decisions about sanctuarization or exploitation conditions of these highly sensitive environments.

World-class expertise and references

ABYSSA was created in January 2019. The team is made up of the 4 founding members, associate directors, each having more than 20 years of experience in the field of oceanography (geosciences and environments) all over the world.

The origin of ABYSSA is a technical project (MESSIDOR/MELODI project carried out between 2014 and 2018), supported by Bpifrance within the framework of the "World Innovation Challenge" and which aimed to propose the deployment of a fleet of AUVs for the detection of Seafloor Massive Sulfides (one of the 3 deep sea mineral resources).

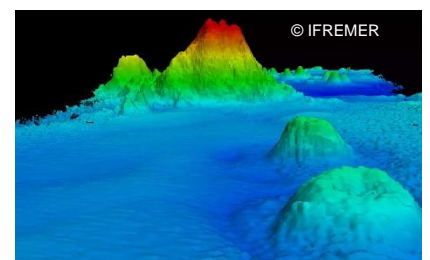
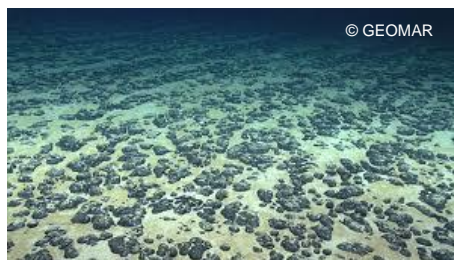
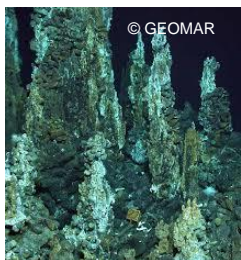
ABYSSA has already carried out (2019-2020) a study for French Polynesia on Cobalt-Rich Ferromanganese Crust (another mineral resource present in the deep sea). In addition, ABYSSA is part of the "Innovative Territory of New Caledonia" project for the development of an exploration base operational in the South West Pacific.

ABYSSA benefits from the support of several institutions and organizations since its creation: *French Maritime Cluster, Vice-Presidency of French Polynesia, Government of New Caledonia, General Secretariat for the Sea (SG Mer), Ministry of Foreign Affairs, French Marine Industry Group (GICAN), TechnipFMC, Deep Sea Mining Alliance (DSMA), Ifremer, Institut de Physique du Globe de Paris (IPGP), Région Nouvelle Aquitaine, Bpifrance.*

Solutions, services and products

Exploration missions through AUVs deployment are therefore at the heart of ABYSSA's activity. In addition to this operational component, ABYSSA also provides an advice and data analysis component. Upstream work prior to missions, ABYSSA helps to define the need and the content of the exploration campaign. ABYSSA also carries out analysis and interpretation of the collected data with its scientific team.

By deploying non-intrusive sensors (acoustic, physical, chemical, optical) installed on AUVs, ABYSSA carries out extensive mapping of the deep sea as a decision support tool (sanctuarizing or exploiting deep sea resources) and also a dimensioning tool for industrial projects (submarine cables, deep infrastructures, resources exploitation, etc.).



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