

UXO Marine Survey and Clearance



Geomines provides Unexploded Ordnance (UXO) clearance services in any marine environment – offshore, inshore and nearshore for cable operators, oil and gas companies, public and private companies managing marine infrastructures.

Why is there marine pollution ?

Wars have left the waters littered with various types of explosive devices.

Past air and naval bombing campaigns, former mine laying operations, the dumping of ammunition at sea as well as the presence of ship and aircraft wrecks all now pose a tremendous challenge for port and dock expansions, the laying of pipelines, or cables and wind turbines implementation at sea.

Underwater clearance operations apply to explosive ordnance immersed in inland waters such as lakes, rivers, harbours, ponds and canals, territorial and international waters.

UXO geophysical survey

Underwater operations are more complex than land-based operations due to the dynamic nature of the marine environment.

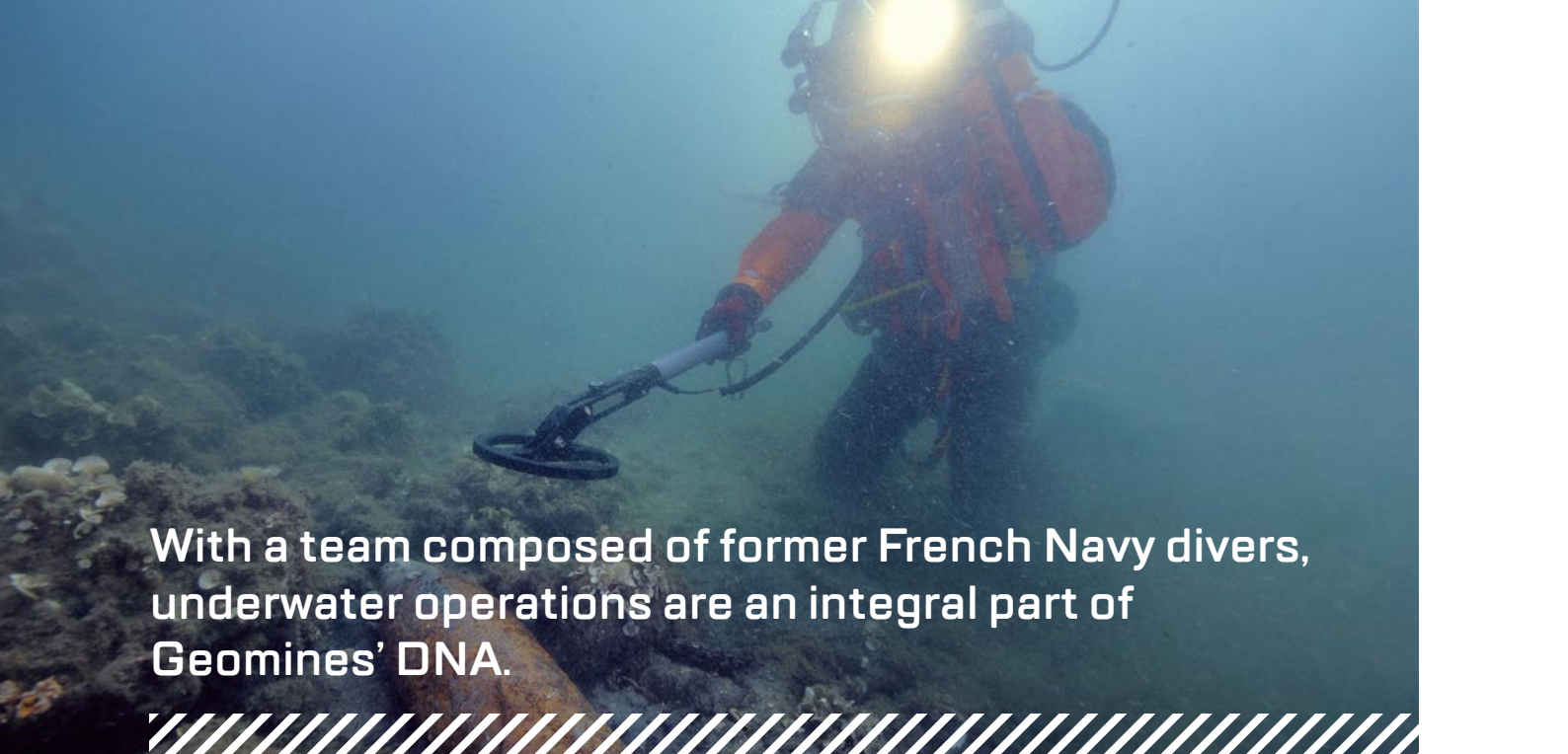
The detection of UXO in an underwater environment is a technical challenge which requires qualified and experienced staff with proven equipment.

Geomines divers use advanced software and equipment with geophysical techniques such as marine magnetometer, coupled with a side-scan sonar and a sediment sounder to establish a geophysical picture of the entire right-of-way, in 2D or 3D, on a map or in section.

Geomines provides three underwater UXO/UXB services:

- ▶ UXO geophysical survey
- ▶ Clearance
- ▶ Other services at sea





With a team composed of former French Navy divers, underwater operations are an integral part of Geomines' DNA.

UXO | UXB marine clearance

Once the targets are detected and discriminated by our UXO geophysical surveys, Geomines will use the appropriate method - which is dependent upon the ordnance type, its location and depth, to relocate explosive remnants of war found in the area so they can be safely managed.

When permitted by regulation, Geomines has the capability to conduct subsea explosive demolition and destruction with a strict and safe methodology.

Geomines has over 20 years' experience in explosive ordnance disposal in the marine environment and will overcome all challenges to ensure the requirements of clients and local governing bodies are met.

Other services at sea

Geomines' teams can intervene for various types of missions: destruction at sea in compliance with local regulations, impact studies at sea following the use of explosives or means that disturb the underwater environment, hull inspection, underwater environment protection with bubble curtains, etc.

Operations and works carried out by our teams of divers are conducted with full respect of the environment.

Our added value in underwater remediation

- ▶ Our teams of divers (former Navy clearance divers) and scuba divers hold all the certifications of aptitude to conduct deep pyrotechnic sounding operations.
- ▶ The company holds the Hyperbaric Aptitude Certification (CAH) class II mention A, which is decree n°2011-45 mandatory regulation in France since January 1st, 2020 for any worker carrying out hyperbaric work operations.
- ▶ BOSIET (Basic Offshore Safety Induction and Emergency Training) qualification.
- ▶ Certificate of Firing Officer (CPT) Option 2 for the use of explosives in underwater environments.



GEOMINES

Founded in 2002, Geomines is a french mine-clearance company specialized in geophysical survey and UXO clearance. We support our customers for the full range of UXO clearance-related needs, in France and abroad: land and underwater survey, land clearance, underwater clearance, excavation and drilling security, ammunitions stockpile management.

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