

# Occupational Scientific Diving in the Marine Stations World

Jean-Pierre Féral

Station Marine d'Endoume, France

*ESDP chairman*

[www.esdpanel.eu](http://www.esdpanel.eu)



World Congress of Marine Stations 17-19 November 2021 Moscow

# What is “occupational” Scientific Diving (SD):

**The purpose of SD is** the undertaking and delivery of underwater **science**.

It is needed:

- to support research and education;
- for the protection and conservation of the natural and cultural environment.

It is neither recreational nor commercial diving

It differs from citizen science underwater activities,

conducted on a voluntary basis by nonprofessional scientists

Confusion would be deleterious

Scientific Diving exists in a health and safety framework that involves certified scientific divers, diving officers, hyperbaric physicians, scientific project leaders, heads of laboratories, administrators and legislators.



# SD today

## investigative tool

acting as a cost-effective and versatile vehicular platform that can deliver **sustainable collection**, **quantitative observation** and **in situ measurement**, both for biotic and abiotic targets, supporting especially complex experimental work, sometimes in restrictive environments (**under ice, in caves, overhangs, drop-offs**)

## indispensable tool

for research in coastal water bodies which are the most vulnerable marine environments.

**“intelligent monitoring systems”** can be achieved much more efficiently and cost effectively by combining scientific skills and capabilities under water with technologies such as ROVs, AUVs, glyders or landers.

- **Biology** (*limnology, coastal oceanography*)
  - Exploration
  - Observation
  - Experiments
  - Restoration
  - Monitoring (*species, habitats, seascapes, ...*)
- **Archaeology**
- **Geology** (*including paleoclimatology*)
- **Physics** (*hydrology*)
- **Underwater engineering**
  - Maritime underwater electronics (*ship- & sensor technology*)
  - Artificial reefs
- **Environmental management**
  - Parks and natural reserves
  - IMCZ (Integrated Coastal Zone Management)
  - Resource management (harvesting, aquaculture)



## Why a European organization was needed ? ⇔ ESDP

The absence of unified recognized standards for SD made difficult or impossible:

- to **assure the mobility** of fully trained scientific divers
- to allow member states **assessing the training level of a migrant applicant**
- to **provide a more effective use of diving techniques in science** (enabling specialized courses and optional training to be developed on a European basis ⇔ **involvement of marine stations**)

⇒ **development of 2 European scientific diving standards in 2000**: European Scientific Diver (ESD) and Advanced European Scientific Diver (AESD).

⇒ **already adopted** within the health and safety legislation of some EU countries



# ESDP contribution to the European marine stations network activity

- **Creates awareness of marine stations** as an important part of Europe's scientific patrimony
- Contributes to contact, and lobby, with science managers in Europe
- Identifies relevant science priorities and strategic themes in science policy, and stimulates international interdisciplinary marine science programmes
- **Contributes to the creation of a critical mass and focus for European and Global marine activities**
- **Promotes collaboration** in spin-off projects (*using SD among other approaches*)
- Communicates the products with stakeholders
- Contributes to the organisation of symposia, workshops, capacity building and **specific trainings**



# Towards a global scale

Like the fruitful contacts between MARS and NAML, ESDP and AAUS already interact.



A worldwide organization of marine stations would undoubtedly benefit and be beneficial to a global organization of essential techniques operable in diving, **particularly at the land-sea interface**, the most complex part of the ocean and also **location of marine stations**.

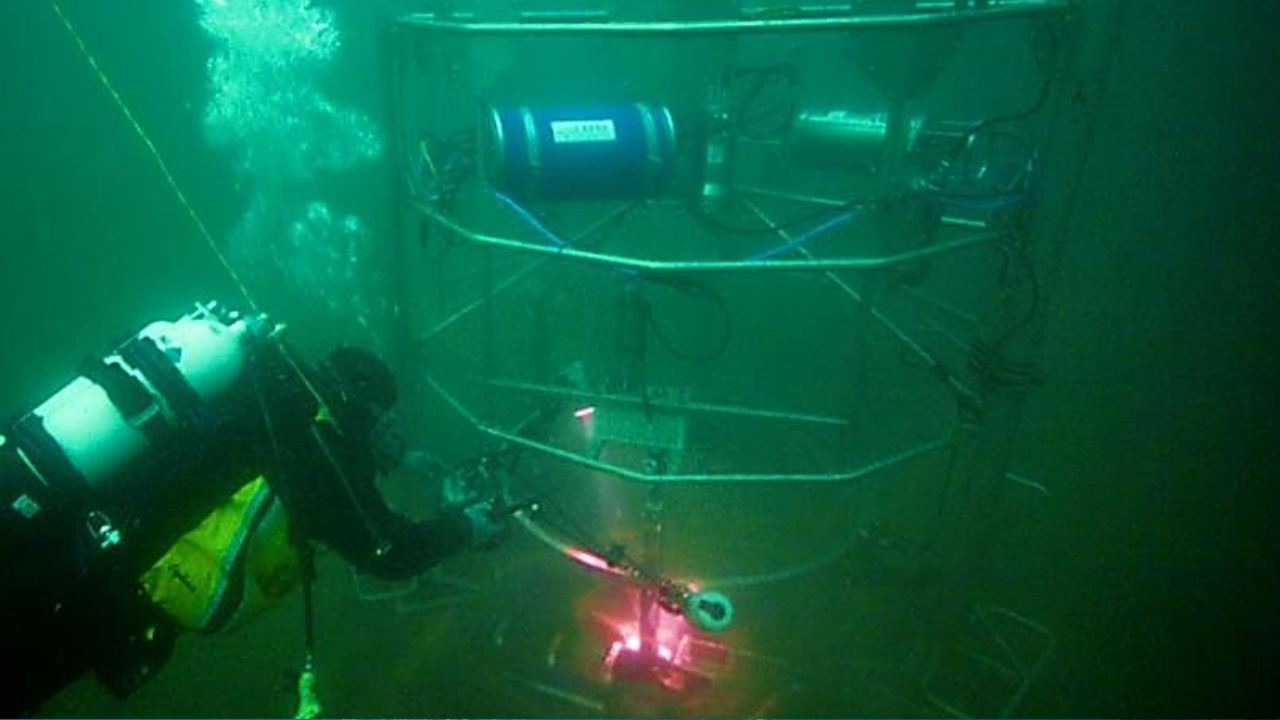
*Already today, large marine stations are also important scientific diving centers*

**WAMS** can help to create and organize a **“world scientific diving body”** by clearly including scientific diving in its structuring work and by guaranteeing the level and quality of initial training standards





Thank you for your attention



<https://www.esdpanel.eu/esdp-contact-form/>



World Congress of Marine Stations 17-19 November 2021 Moscow

