

## **SCIENTIFIC DIVING IN POLAND AND INVITATION TO THE POLISH COMMITTEE ON SCIENTIFIC DIVING**

Piotr Bałazy<sup>1</sup>, Bartosz Kontny<sup>2</sup>, Janusz Różycki<sup>3</sup>, Michał Saniewski<sup>4</sup>, Dariusz Puczko<sup>5</sup>, Andrzej Pydyn<sup>6</sup>

<sup>1</sup> Institute of Oceanology of the Polish Academy of Sciences, Powstańców Warszawy 55, 81-712, Sopot, Poland, balazy@iopan.pl, ORCID 0000-0002-1126-3151

<sup>2</sup> University of Warsaw (Faculty of Archeology), ul. Krakowskie Przedmieście 26/28, 00-927 Warsaw, ORCID 0000-0003-3627-046X

<sup>3</sup> National Maritime Museum in Gdańsk, Ołowianka 9-13, 80-751 Gdańsk, ORCID 0000-0002-8335-4386

<sup>4</sup> Institute of Meteorology and Water Management National Research Institute, Podleśna 61, 01-673 Warsaw, ORCID 0000-0002-2347-1660

<sup>5</sup> Institute of Biochemistry and Biophysics of the Polish Academy of Sciences, ul. Adolfa Pawińskiego 5a, 02-106 Warsaw, Poland

<sup>6</sup> Nicolaus Copernicus University in Toruń, 87-100 Toruń, ul. Gagarina 11, Center for Underwater Archeology, ORCID 0000-0001-9478-9863

### **ABSTRACT**

Scientific diving (i.e. diving for research purposes organised by universities and research institutes) was excluded from the Act on the performance of underwater works in 2014. With the exception of the introduction of internal regulations at several academic institutions involved in underwater research, to date it remains unregulated at national level. In May this year, an initiative group consisting of six scientific institutions established the Polish Scientific Diving Committee - PKNN. Its aim is to unite Polish institutions using scientific diving in their activities, to represent their interests in the national and international arena, to co-operate and exchange experience, to adopt and develop appropriate standards and procedures, including those relating to safety, and to achieve the future introduction in Poland of regulations fully regulating scientific diving, as well as to support the development of this field of underwater research in Poland.

**Key words:** research diving, underwater research, underwater works.

---

### **ARTICLE INFO**

PoIHypRes 2021 Vol. 76 Issue 3 pp. 77 – 83

**ISSN:** 1734-7009 **eISSN:** 2084-0535

**DOI:** 10.2478/phr-2021-0018

Pages: 7, figures: 1, tables: 0

**page www of the periodical:** www.phr.net.pl

**Informative article**

**Submission date:** 23.04.2021 r.

**Acceptance for print:** 15.05.2021 r.

### **Publisher**

Polish Hyperbaric Medicine and Technology Society



## INTRODUCTION

Scientific diving or more precisely occupational scientific diving is defined in Europe as diving carried out for the purposes of professional research, education, conservation and monitoring of the natural and cultural heritage, carried out by professionals, i.e. scientists representing a specific discipline, working in their profession. As an efficient and effective 'in situ' research tool, it supports and advances scientific research in domains such as hydrobiology, marine biology and geology, physical oceanography, marine chemistry, underwater archaeology and others (Fig. 1abc). It provides established as well as innovative, targeted techniques for selective sampling and complex underwater experimental work such as quantitative surveys, quantitative observations, conducting in-situ measurements, performing impact studies, carrying out ecological analyses, evaluating new techniques, mapping underwater areas, geological and geochemical profiling, and precise deployment/extraction of underwater instruments) [1, 2]. In the area of archaeology, mention should be made of the increasingly improved methods of site search, exploration and documentation, sampling and analysis as well as the excavation and conservation of archaeological sources. In light of the above, scientific diving is neither recreational nor commercial diving. Despite some similarities, it should also not be confused with the application of diving in citizen science, which is carried out entirely, or in part, on a voluntary basis by amateurs or hobbyists. Nor does it have much in common with the training of recreational divers by recreational diving agencies for specialisations such as 'ecologist/archaeologist diver'. Such training undoubtedly broadens the public's understanding of the underwater world and raises awareness of the need to protect it, as well as is extremely valuable for various citizen science projects, however it does not qualify the holders of such a certificate for contract and employment as a scientific diver, as defined above [2].

In Poland, scientific diving is defined by the Act of 9 May 2014 on Facilitating Access to Certain Regulated Professions (Journal of Laws 2014, item 768) as the only legal provision to date. This Act excludes 'diving for research purposes organised by universities and research institutes' from the Underwater Works Act (i.e. the Act of 17 October 2003 on the Underwater Works, Journal of Laws. No. 199, item 1936, as amended). This date would serve as the moment when scientific diving (i.e. diving for research purposes organised by universities and research institutes, further on in the article treated as identical terms) should be recognised by Polish law.

Naturally, scientific diving in Poland has a much longer tradition, dating back to 1935 [3]. Unfortunately, despite its intensive development, in various fields of underwater scientific activity [e.g. 4,5,6,7,8,9,10], with the exception of the introduction of internal regulations after 2014 to only a handful of institutions, it has remained unregulated at the national level to this day. The situation of the absence of regulation consists, inter alia, of: - the lack of clarification of the necessary qualifications of the scientific divers themselves, - their qualifications and the type of work they perform, - medical examinations to qualify them for scientific diving, - adequate insurance, or finally - the liability of the employer for their actions underwater, not to mention the possible complications

that may arise in the framework of ongoing international cooperation concerning the mobility of scientists. In the absence of legal regulations at the national level, and thus lack of recognition abroad, the possibility for Polish scientific divers to engage in foreign projects may be limited.

The problem of harmonising the rules and procedures for scientific diving in Europe was recognised much earlier, i.e. in the 1980s. In 2000, the early European Scientific Diving Committee developed two European standards for scientific diving: European Scientific Diver (ESD) and Advanced European Scientific Diver (AESD). However, it is important to stress that these standards do not contain any provisions concerning insurance, medical examinations, employment rules, safety, employer requirements, diving limits, rules for the acknowledgement of national scientific diving schools, etc. All the elements mentioned above should be covered by national law and relevant European directives. The ESD and AESD standards simply establish the minimum basic training of a scientific diver required for their mobility across Europe [11].

In 2007, leading scientists employing diving techniques in their research, from eight European countries (UK, France, Sweden, Finland, Poland, Italy, Belgium and Germany; this group included three diving scientists from Poland (Prof. Piotr Kukliński - Institute of Oceanology PAS, Barbara Papińska-Swerpel, PhD - Institute of Hydroengineering PAS, Cmdr Lt. Stanisław Poleszak, PhD, Eng - Polish Naval Academy), launched a pan-European initiative to promote and enhance scientific excellence in dive-supported underwater research (also by establishing harmonised rules and guidelines) under the banner of the European Scientific Diving Committee (ESDC), transformed a year later into the European Scientific Diving Panel (ESDP) [3]. As we believe, this meeting was a contribution to a series of smaller and larger meetings of the Polish community of scientists using diving in their research over the past years. One such meeting was also the fifth in the series of the European Conference on Scientific Diving, the first conference of its kind in Poland, which took place in 2019 at the Institute of Oceanology PAS in Sopot. The conference programme also included workshops to integrate the Polish scientific diving community [12].

The initiative group, which met in May of this year established the Polish Committee on Scientific Diving (PKNN), following the example of other European countries such as France, Belgium, the United Kingdom, Sweden, Norway, Finland, Italy or Germany, which created such national committees several or more years ago.

In Poland, six institutions have joined the agreement to date: 1) the Institute of Oceanology of the Polish Academy of Sciences in Sopot, 2) the University of Warsaw (Faculty of Archaeology), 3) the National Maritime Museum 4) Institute of Meteorology and Water Management National Research Institute in Warsaw, 5) Institute of Biochemistry and Biophysics of the Polish Academy of Sciences, 6) Nicolaus Copernicus University in Toruń - Centre for Underwater Archaeology, operating at the Faculty of Historical Sciences of the Nicolaus Copernicus University in Toruń; dealing with a wide range of underwater research both inland and at sea, as well as beyond the borders of the Baltic Sea. The objective of the Polish Scientific Diving Committee is to unite Polish

institutions involved in research and scientific diving organised by Polish universities, scientific and research institutes and museums (i.e. scientific diving), to represent the interests of the parties both nationally and internationally, to co-operate and exchange experience, to adopt and develop appropriate standards and procedures, including leading to the introduction in the future of regulations in Poland fully regulating scientific diving, as well as to support the development of this field of underwater research in Poland. The tasks of the Polish Committee on Scientific Diving include: facilitating communication between Polish research organisations engaged in activities utilising scientific diving; developing and adopting appropriate procedures and regulations in the field of scientific diving; stimulating the development and use of scientific diving in research in Poland; preparing expert opinions, analyses, reports in the field of scientific diving in accordance with the requirements of

PKNN Member Organisations and other governmental or non-governmental organisations. [13].

The present composition of the Committee does not include all Polish institutions involved in scientific diving, therefore the authors would like to extend an invitation on the pages of the journal Polish Hyperbaric Research for the readers to acquaint themselves with the idea behind the PKNN. We believe that it will find their understanding and acceptance. We would like to promote the PKNN's activity as widely as possible, to ensure proper representation of various scientific institutions and that the voice of Polish scientific divers be heard. We would like to warmly encourage everyone to cooperate with and contribute to the PKNN.

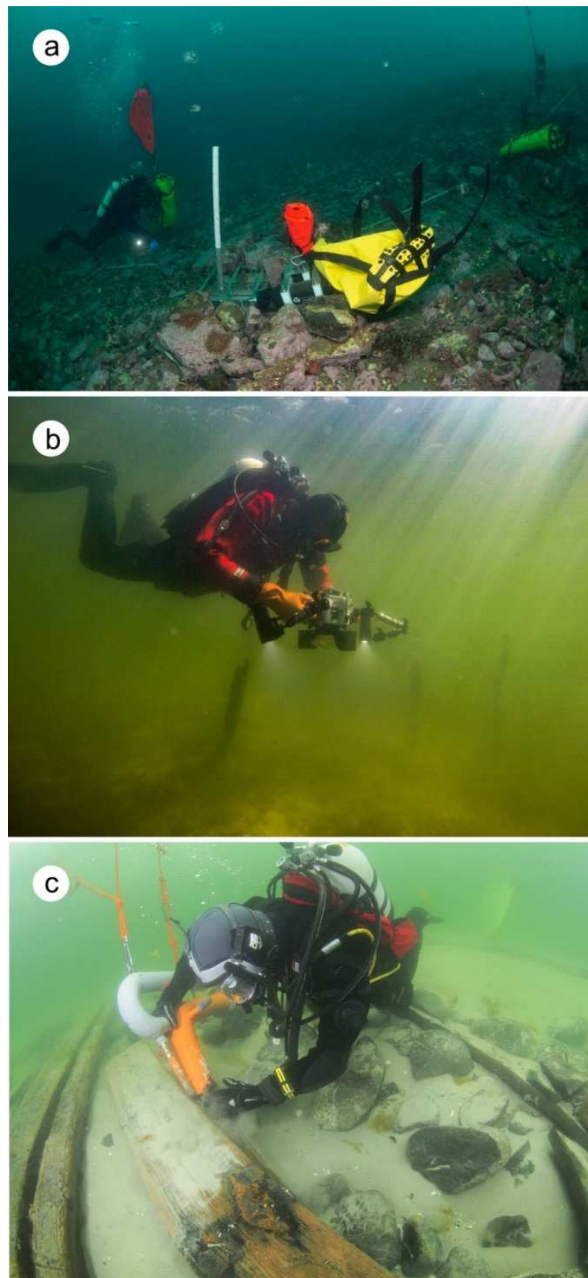


Fig. 1 A marine biologist taking samples in Isfjord (Spitsbergen), in the foreground a panel with environmental sensors and an underwater fluorimeter (a, photo Piotr Bazy); an underwater archaeologist making photogrammetric documentation (b, photo Mateusz Popek); and exploring a wreck using an ejector in the Bay of Puck (c, photo Robert Domżał).

## REFERENCES

1. European Scientific Diving Panel – Terms of Reference. Version of the 20<sup>th</sup> May 2022;
2. Scientific Diving purpose (Operational definition). European Scientific Diving Panel for Occupational Scientific Diving, <http://www.esdpanel.eu/scientific-diving-purpose/> [cytowano 2022-06-19];
3. Bałazy P, Kukliński P, Chelchowski M, Włodarska-Kowalczyk M, Ronowicz M. Nurkowanie w czasie pracy - nurkowania realizowane w Instytucie Oceanologii PAN w Sopocie/ Diving at work - dives carried out at the Institute of Oceanology PAS in Sopot. *DIVERS* 24 2020/2021; 16:74-84;
4. Bałazy P, Kukliński P, Włodarska-Kowalczyk M. Scientific diving in polar regions - the example of ecological studies at the Institute of Oceanology, Polish Academy of Sciences. *Polish Hyperbaric Research* 2013; 46(1), 65-84, DOI [HTTP://DX.DOI.ORG/10.13006/PHR.46.4](http://DX.DOI.ORG/10.13006/PHR.46.4);
5. Kur J, Mioduchowska M. Scientific Diving in Natural Sciences. *Polish Hyperbaric Research* 2018; 65(4), 55-62, DOI 10.2478/phr-2018-0024;
6. Ossowski W (ed.), *The General Carleton Shipwreck, 1785*, Polish Maritime Museum Monograph 1, Gdańsk 2008;
7. Ossowski W (ed.), *The Copper Ship. A medieval shipwreck and its cargo / Miedziowiec. Wrak średniowiecznego statku i jego ładunek*, Archaeological Research of the National Maritime Museum in Gdańsk 2, Gdańsk 2014;
8. Popek M, Pydyn A. The Most Recent Five Years of Underwater Research in the Department of Underwater Archaeology at Nicolaus Copernicus University in Toruń, In Choluż A, Mileszczyk M, Nowakowska M (eds.), *Archaeology: Just Add Water II*, Warszawa 2019, 245-258;
9. Kontny B., Underwater Archaeology at the University of Warsaw, In Choluż A, Mileszczyk M, Trusz K (eds.), *Archaeology: Just Add Water I*, Warszawa 2018, 11-22;
10. Nowakiewicz T (ed.) *Starożytne miejsce ofiarne w jeziorze w Lubanowie (d. Herrn-See) na Pomorzu Zachodnim / Ancient Sacrificial Place in the Lake in Lubanowo (former Herrn-See) in West Pomerania*, Warszawa 2016;
11. Brief history of the ESDP. European Scientific Diving Panel for Occupational Scientific Diving, <http://www.esdpanel.eu/brief-history-of-the-esdp/> [cytowano 2022-06-19];
12. Bałazy P (ed.) *ECSD5 2019 Book of Abstracts*. Institute of Oceanology Polish Academy of Sciences 2019; 3;
13. Porozumienie w sprawie utworzenia Polskiego Komitetu Nurkowania Naukowego – PKNN/ Agreement on the establishment of the Polish Scientific Diving Committee - PKNN. Maj 2022.

Conflict of interest: The authors of this text are representatives of the member organisations of the Polish Committee on Scientific Diving.