

Report for the year 2017 and future activities

SOLAS

Poland

compiled by:

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This report has two parts:

- **Part 1:** reporting of activities in the period of January 2017 – Jan-Feb 2018
- **Part 2:** reporting on planned activities for 2018/2019 and 2020.

The information provided will be used for reporting, fundraising, networking, strategic development and updating of the live web-based implementation plan. As much as possible, please indicate the specific SOLAS 2015-2025 Science Plan Themes addressed by each activity or specify an overlap between Themes or Cross-Cutting Themes.

- 1 Greenhouse gases and the oceans;
 - 2 Air-sea interfaces and fluxes of mass and energy;
 - 3 Atmospheric deposition and ocean biogeochemistry;
 - 4 Interconnections between aerosols, clouds, and marine ecosystems;
 - 5 Ocean biogeochemical control on atmospheric chemistry;
- Integrated studies;
Environmental impacts of geoengineering;
Science and society.

IMPORTANT: *This report should reflect the efforts of the SOLAS community in the entire country you are representing (all universities, institutes, lab, units, groups, cities).*

PART 1 - Activities from January 2017 to Jan/Feb 2018

1. Scientific highlight

As part of IOCCP with headquarters at IOPAN in Sopot, Maciej Telszewski (Director) and Artur Palacz (Project Officer) have continued to fulfil IOCCP's mission to promote the development of a global network of ocean carbon and biogeochemistry observations, through a number of successfully completed coordination and communication activities reported on regularly via website (www.ioccp.org) and the IOCCP quarterly newsletter, the Conveyor.

By taking part in the SOLAS-IMBER-IOCCP-GCP-CLIVAR-WCRP meeting on future ocean carbon cycle research, IOCCP has engaged with scientific partners to develop and implement a science-based strategy related to marine carbon cycle.

As coordinators of the Biogeochemistry Expert Panel of the Global Ocean Observing System (GOOS), we have published the revised version of Biogeochemistry Essential Ocean Variable Specification Sheets and coordinated their implementation on a global and regional scale, with specific focus on the Atlantic Ocean through the EU Horizon 2020 AtlantOS (<https://www.atlantosh2020.eu/>) project.

Tasked with furthering the implementation of a multidisciplinary GOOS, we co-organized the workshop on Implementation of Multi-disciplinary Sustained Ocean Observations (IMSOO), and

together with members of SOLAS SSC, coordinated the follow-on conceptualization and gradual realization of the Variability in the Oxycline and Its Impacts on the Ecosystem (VOICE) project. By ensuring a tight collaboration between VOICE and the Global Ocean Oxygen Network (GO2NE), IOCCP has laid grounds for an effective coordination of oxygen-related ocean observation, research and dissemination efforts. The latter have recently been demonstrated through a publication in Science on “Declining oxygen in the global ocean and coastal waters” by Breitburg et al. (2018).

2. Activities/main accomplishments in 2017 (projects, field campaigns, events, model and data intercomparisons, capacity building, international collaborations, contributions to int. assessments such as IPCC, interactions with policy makers or socio-economics circles, social sciences, and media).

1. Membership in the Board of Directors of the Centre for Polar Studies.
2. Organization of an international symposium called the Sopot Forum for Young Scientists.
3. Leaders in the POLAND-AOD network.
4. Polish coordination in the NASA Maritime Aerosol Network.
5. Membership in the Scientific Council of the Climate Forum – Science on Climate.
6. Coordination of the Sopot Association for the Advanced Sciences activities.
7. Organization of a number of public events, promoting science.
8. 12th Session of the International Ocean Carbon Coordination Project Scientific Steering Group, 6-7 February 2017, Miami, FL, USA.
9. Implementation of Multi-disciplinary Sustained Ocean Observations (IMSOO) workshop, 8-10 February 2017, Miami, FL, USA.
10. 3rd Meeting of the GOOS Steering Committee Executive, 11 February 2017, Miami, FL, USA.
11. 4th Integrated Carbon Observation System (ICOS) Monitoring Stations Assembly (MSA) and Ocean Thematic Centre (OTC) meeting, 1-3 March 2017, Bergen, Norway.
12. 9th Session of the Ship Observations Team (JCOMM SOT-9), 27-31 March 2017, London, UK.
13. Global Ocean Acidification Observing Network (GOA-ON) Executive Meeting, 25-27 April 2017, Paris, France.
14. 8th Session of the WMO-IOC Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM)'s Observation Coordination Group (OCG)
15. Global Ocean Oxygen NETwork (GO2NE) annual workshop, 11-13 September 2017, Monterey, CA, USA
16. Variability in the Oxycline and Its Impacts on the Ecosystem (VOICE) Science Plan Workshop, 13-15 September 2017, Monterey, CA, USA
17. 10th International Carbon Dioxide Conference (ICDC10), 22-25 August 2017, Interlaken, Switzerland
18. EU Horizon2020 AtlantOS 3rd General Assembly, 20-24 November 2017, Las Palmas, Spain.

3. Top 5 publications in 2017 (only PUBLISHED articles) and if any, weblinks to models, datasets, products, etc.

1. Breitburg, D., Levin, L. A., Oschlies, A., Grégoire, M., Chavez, F. P., Conley, D. J., ..., Telszewski, M., ..., & Jacinto, G. S. (2018). Declining oxygen in the global ocean and coastal waters. *Science*, 359(6371), eaam7240.
2. Nielsen JR, Thunberg E, Holland DS, ..., Palacz AP, et al. Integrated ecological–economic fisheries models—Evaluation, review and challenges for implementation. *Fish & Fisheries*. 2017;00:1–29. <https://doi.org/10.1111/faf.12232>.
3. Ruwa R., A. Simcock, M. J. Bebianno, H. P. Calumpong, S. Chiba, K. Evans, O. K.

Kamara, E. Marschoff, M. McClure, E. Y. Mohammed, Ch. Park, L. Y. Randrianarisoa, M. E. Sanchez, A. Strati, J. Tuhumwire, T. Ca Vu, J. Wang, T. Zielinski; The Impacts of Climate Change and Related Changes in the Atmosphere on the Oceans; A Technical Abstract of the First Global Integrated Marine Assessment, United Nations; eISBN 978-92-1-361372-6; 28 pp.; 2017.

4. *Drozdowska V., Wrobel I., Markuszewski P., Makuch P., Raczowska A., Kowalczyk P.; Study on organic matter fractions in the surface microlayer in the Baltic Sea by spectrophotometric and spectrofluorometric methods; Ocean Sci., 13, 633-647, 2017.*
5. *Kulinski K., Schneider B., Szymczycha B., Stokowski M.; Structure and functioning of the acid-base system in the Baltic Sea; Earth Syst. Dynam., 8, 1107-1120, 2017.*

4. Did you engage any stakeholders/societal partners/external research users in order to co-produce knowledge in 2017? If yes, who? How did you engage?

We run workshops and science fairs, open lectures and projects with kids related to marine environment.

PART 2 - Planned activities for 2018/2019 and 2020

1. Planned major field studies and collaborative laboratory and modelling studies, national and international (incl. all information possible, dates, locations, teams, work, etc.).

1. Ny-Alesund Flagship programs, ongoing activities.
2. Summer Arctic campaign using the r/v Oceania and in cooperation with an international team of researchers.
3. NASA AERONET, ongoing activities.
4. POLAND-AOD, ongoing activities.

2. Events like conferences, workshops, meetings, schools, capacity building etc. (incl. all information possible).

Activities and meetings to be organized in 2018:

1. Global Observing Network for Reference Surface Water pCO₂ Observations - Kick-off Meeting, 11 February 2018, Portland, OR, USA.
2. Global Ocean Observing System (GOOS) Cross-Panel Meeting, 28 February – 1 March 2018, Hobart, Australia.
3. Global Ocean Acidification Observing Network (GOA-ON) Executive Council Meeting – 26-27 May 2018, Sopot, Poland.
4. 2nd Science Plan Workshop of the Variability in the Oxycline and Its Impacts on the Ecosystem (VOICE) project, 7-8 September 2018, Kiel, Germany.
5. Organization of an international conference for young scientists entitled: Where the World is Heading (25 May 2018).
6. Continuation of work within the POLAND-AOD network.

3. Funded national and international projects / activities underway.

A number of projects to be submitted during 2018/19.

4. Plans / ideas for future projects, programmes, proposals national or international etc. (please indicate the funding agencies and potential submission dates).

A number of projects to be submitted during 2018. We will seek funding on national and international levels.

5. Engagements with other international projects, organisations, programmes etc.

1. IOCCP.
2. NASA AERONET (agreement until 2019).
2. Ny-Alesund Flagship programs.
3. Bilateral agreement with the Alfred Wegener Institute.
4. Global Observing Network for Reference Surface Water pCO₂ Observations.
5. Global Ocean Observing System (GOOS).
6. Global Ocean Acidification Observing Network (GOA-ON).

Comments