

Report for the year 2015 and future activities

SOLAS POLAND

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Please note that this report has two parts!

Part 1: reporting of activities in the period of January 2015 – December 2015

Part 2: reporting on planned activities for 2016 to 2018/19.

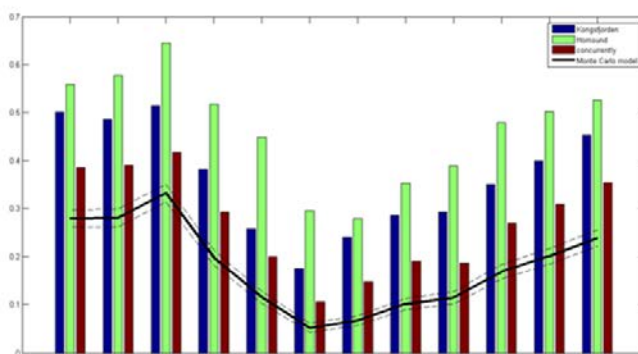
The information provided will be used for reporting, fundraising, networking and strategic development. In particular, **in 2016 SOLAS will develop its Implementation Plan, which will be largely based on the information from part 2 of the national reports, as well as input from international SOLAS initiatives and activities.** This info will be crucial in order to draft a realistic Implementation Plan representative of SOLAS, internationally.

IMPORTANT: May we remind you that this report should reflect the efforts of the SOLAS community in the entire country you are representing (all universities, institutes, lab, units, groups)!

PART 1 - Activities from January 2015 to December 2015

1. Scientific highlight

The authors analyzed data series (1992-2013) of wind measurements from meteorological stations in Ny-Ålesund and Hornsund in Svalbard and compared them to surface layer winds from the NCEP/NCAR reanalysis. They showed large discrepancies between the local wind directions and directions of wind compatible with analyses of the pressure fields. They argue that one of the most important factors controlling wind directions in the Svalbard fjords is the temperature difference between the neighboring glaciers and surface sea temperatures of open waters warmed by the West Spitsbergen current. This creates atmospheric circulation patterns similar to night breeze in temperate climates.



Probability of breeze occurrence in Kongsfjorden (blue), Hornsund (green) and for both fjords simultaneously (red). The black lines (solid and dashed) represent probability of simultaneous breeze occurrence and its standard deviation, calculated from a Monte Carlo model.

Work submitted to a scientific journal as: Influence of breeze circulation on local wind climatology in Svalbard fjords: Kongsfjorden and Hornsund; Małgorzata Cisek, Dorota Gutowska, Przemysław Makuch, Marion Maturilli, Tomasz Petelski, Jacek Piskozub.

2. Activities/main accomplishments in 2015 (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, etc.)

1. Organization of a discussion session on the Baltic Sea as a special case of a shelf sea during the SOLAS 2015 Conference.
2. Membership in the Board of Directors of the Centre for Polar Studies.
3. Organization of a national symposium called the Sopot Forum for Young Scientists.
4. Co-ordination of the public consultations within the Sea for Society project.
5. Lessons on sea and marine impact on climate changes for students of all ages within the EDUSCIENCE project.
6. Organization and running of a number of meetings with various stakeholders within the 7 FP project Sea for Society.
7. Leaders in the POLAND-AOD network.
8. Polish coordination in the NASA Maritime Aerosol Network.
9. Membership in the Scientific Council of the Climate Forum – Science on Climate.
10. Coordination of the Sopot Association for the Advanced Sciences activities.
11. Organization of a number of public events, promoting science.
12. PIs in the iAREA Polish-Norwegian project.

3. Top 5 publications in 2015 (only PUBLISHED articles) and if any weblinks to models, datasets, products, etc.

1. Aerosol remote sensing in polar regions, Earth Science Reviews, 140, 108-157, C. Tomasi, A. Kokhanovsky, A. Lupi, Ch. Ritter, A. Smirnov, N. T. O'Neill, R. Stone, B. N. Holben, S. Nyeki, Ch. Wehrli, A. Stohl, M. Mazzola, Ch. Lanconelli, V. Vitale, K. Stebel, V. Aaltonen, G. de Leeuw, E. Rodriguez, A. B. Herber, V. Radionov, T. Zielinski, T. Petelski, S. Sakerin, D. Kabanov, Y. Xue, L. Mei, L. Istomina, R. Wagener, B. McArthur, P. Sobolewski, R. Kivi, Y. Courcoux, P. Larouche, S. Broccardo, S. Piketh, 2015.
2. Impact of climate changes on marine environments; Springer Series: GeoPlanet: Earth and Planetary Sciences; ISBN 978-3-319-14282-1; T. Zielinski, M. Weslawski, K. Kulinski, 2015.
3. Impact of breaking waves on sea salt production and local change of aerosol optical properties; Springer Series: GeoPlanet: Earth and Planetary Sciences; ISBN 978-3-319-14282-1, pp. 7-23; A. Strzalkowska, T. Zielinski, P. Makuch, P. Pakszys, T. Petelski, 2015.
4. Annual changes of aerosol optical depth and Ångström exponent over Spitsbergen; Springer Series: GeoPlanet: Earth and Planetary Sciences; ISBN 978-3-319-14282-1, pp. 23-37; P. Pakszys, T. Zielinski, K. Markowicz, T. Petelski, P. Makuch, J. Lisok, M. Chilinski, A. Rozwadowska, Ch. Ritter, R. Neuber, R. Udisti, M. Mazzola, 2015.

PART 2 - Planned activities from 2016 to 2018/19

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, spring 2016 international campaign.
2. NASA AERONET, ongoing activities.
3. POLAND-AOD, ongoing activities.

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

1. Organization and chairing of an international aerosol workshop, which was a contribution to the Ny-Aalesund Atmosphere Flagship Programme (28-29 January 2016).
2. Co-organization of a winter aerosol school (6-13 March 2016).
3. Organization of school competition (theatre plays) entitled: I live by the sea. Sea stories (19 May 2016. Activity within the framework of the European Marine Days).
4. Organization of an international conference for young scientists entitled: Where the World is Heading (20 May 2016).
5. Continuation of work within the POLAND-AOD network.
6. Polish coordination in the NASA Maritime Aerosol Network (agreement until 2019).

7. Membership in the Scientific Council of the Climate Forum – Science on Climate.
8. Coordination of the Sopot Association for the Advanced Sciences activities.

3. Funded national and international projects / activities underway (if possible please list in order of importance and indicate to which part(s) of the SOLAS 2015-2025 science plan the activity topics relate – including the themes on ‘SOLAS science and society’ and ‘Geoengineering’)

None at the moment. A number of projects to be submitted during 2016.

4. Plans / ideas for future projects, programmes, proposals national or international etc. (please precise to which funding agencies and a timing for submission is any)

A number of projects to be submitted during 2016. We will seek funding on both national and international levels.

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

1. NASA AERONET (agreement until 2019).
2. Ny-Alesund Flagship programs, spring 2016 international campaign.
3. Bilateral agreement with the Alfred Wegener Institute (until September 2016, to be extended).

Comments