



D6.3 Exploitation strategies and follow-up recommendations

Report

Final version

(Confidential)

Project Acronym: EDU-ARCTIC

Project Title:

“Edu-Arctic – Innovative educational program attracting young people to natural sciences and polar research”

NUMBER — 710240 — EDU-ARCTIC

Document information summary

Date:	22 July 2019 (3 rd update)
Leader Partner:	IGF PAS
Main Author(s):	Agata Goździk
Reviewed by:	Alain Sarkissian, Sebastian Mackiewicz
Target audience:	Consortium members
Delivery date:	M30, update in M40
Version:	3.

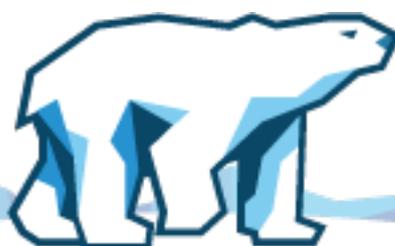


This project (EDU-ARCTIC) has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 710240.

The content of the document is the sole responsibility of the organizer and it does not represent the opinion of the European Commission, and the Commission is not responsible for any use that might be made of information contained.

Table of Contents:

Executive summary	3
1. Scope and structure of the document	3
2. Project's outcomes.....	4
Target audience.....	8
3. Engagement of users and stakeholders	9
4. Networking activities.....	11
5. Measures of exploitation activities	12
6. Exploitation plan for each Consortium Beneficiary.....	14
7.1 Instytut Geofizyki Polskiej Akademii Nauk (IGF PAS)	14
7.2 AMERICAN SYSTEMS SP. ZOO (AS)	15
7.3 Norwegian institute of Bioeconomy Research – NIBIO (NIBIO)	16
7.4 JARDFEINGI (FINI)	16
7.5 UNIVERSITÉ DE VERSAILLES SAINT-QUENTIN-EN-YVELINES (UVSQ)	17
6.6 NORDURSLODAGATTIN EHF (AP)	18
7. Sustainability of project's results after its closure	19
8. Exploitation activities planned or executed.....	20
9. Follow-up recommendations	24
Appendix no. 1 Template for reporting on events.....	26
Appendix no. 2 Information about projects and initiatives for networking purposes.....	27
Appendix no. 3 Information about organisations and institutions for networking purposes	29
Appendix no. 4 Networking database template	32
Appendix no. 5 Template for reporting on networking activities.....	33



Executive summary

The current report pertains to the Deliverable D6.3 *Exploitation strategies and follow-up recommendations*. It is the updated version of the deliverable with a few follow-up recommendations. The report concerns Task 6.3 Exploitation strategies, described in the Annex 1 PART A of the EC/REA GA, within WP6 COMMUNICATION, REPLICATION & EXPLOITATION. The first version of the report, which was submitted to the Participant Portal in the month 8, enabled the EDU-ARCTIC Consortium to achieve Milestone MS9 Exploitation strategy. The second version was submitted on 30 October 2018. **The current version (v.3) was prepared due to release of new outcomes, which should be included in the strategy.**

The objective of the exploitation strategy is to ensure that the EDU-ARCTIC products are widely used by end-users and that all relevant stakeholders at all levels (European, national, regional and local) are informed about the project results.

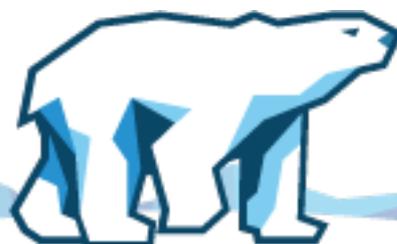
This report contains the updated list of the project final products/outcomes, the main target groups and means of engagement of users and stakeholders. The documents defines a range of events and conferences, where EDU-ARCTIC was planned to be promoted within the last months of implementation, as well as the activities that each beneficiary is committed to carry out. The means to be adopted and the expected results of the exploitation strategy are described. It is also dedicated to networking activities in the project. Moreover, exploitation plans for each Consortium Beneficiary are presented.

The second version of the exploitation strategy (updated in October 2018) focuses mainly on providing recommendations regarding the potential project's follow-ups. Additional recommendations and guidelines for the continuous use of the project's results after the projects' closure will be provided in the deliverable D6.4 *Replication strategy*.

In the current version of the strategy new outcomes were added: **monitoring system mobile app, "Games and quizzes" section of Polarpedia; Recordings from the online lessons; Series of short videos explaining polar phenomena; The mobile application "Arctic Explorer Game"; 5 scientific publications**. Moreover, exploitation activities planned or executed and possible barriers to exploitation activities are described in detail.

1. Scope and structure of the document

The report provides guidelines concerning:



Final products/outcomes – Identification of the final products and outcomes of the EDU-ARCTIC project with clear indication of their users.

Target audience – Identification of the crucial groups of end-users and stakeholders which may be interested in the usage of various project's outcomes.

Engagement of users and stakeholders – Information on various communication actions and means dedicated to informing and engaging end-users and stakeholders in active participation in activities proposed within the project. Recruitment plan is presented here.

Networking activities – this part is dedicated to networking activities in the Project. It contains the list of identified (for the time being) projects or groups, with which the Consortium may cooperate and network. The list will be updated. The templates for new contacts and for reports on networking activities are provided.

Measures of exploitation activities – this section provides information on quantitative and qualitative indicators, which may be applied in order to prove that the exploitation activities are effective.

Exploitation plan for each Consortium Beneficiary – in this section individual exploitation plans for each of the consortium beneficiaries are presented.

Exploitation activities planned or executed – this section presents the activities planned or executed in relation to each of the project's main outcomes. It describes also potential barriers to exploitation activities identified at the moment of project's closure.

Sustainability of project's results after its closure and follow-up recommendation – this section presents the ideas of the Consortium on how to fulfil the obligation to exploit the project's results, resulting from the EC GA – Article 28.

2. Project's outcomes

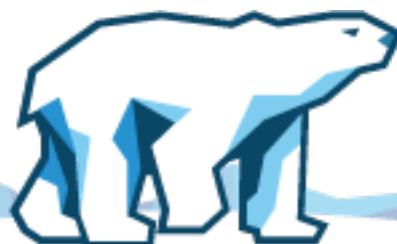
The main project's products, which may be exploited are:

- 1) **EDU-ARCTIC website** – EDU-ARCTIC's website is the project's main gateway to external stakeholders and serve to disseminate the latest information about the EDU-ARCTIC Program. The website is regularly updated with news about the project as well as the latest results and information on interesting events related to the project. The site also features popular scientific articles concerning Arctic and polar research. The website can be found at: <http://edu-arctic.eu/>. Analytics show that even though the domain

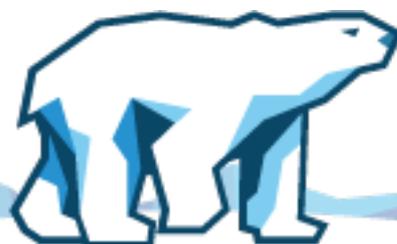


has been introduced widely, up to 90 % of visits are derived through online search of term, content or project.

- 2) **EDU-ARCTIC portal** – The EDU-ARCTIC portal has been implemented within the project website (www.edu-artic.eu) and therefore its layout (top and bottom of a page) is the same. The portal is accessible by clicking the program section of the website or directly at: program.edu-artic.eu. The portal provides access to all of the main activities within the EDU-ARCTIC project, including: Online lessons, link to Polarpedia, Monitoring system, Arctic competitions and Teacher workshops and Training sessions. It contains also sections useful for users in form of Frequently asked questions (FAQ), EDU-GAME, EDU-FORUM, Registration/Log in, Profile.
- 3) **Polarpedia** – is a free online encyclopedia on polar research. It is a tool accessible without registration, and an extensive knowledge base of the Arctic, with ca. 500 terms in English and many of them translated to 16 additional national European languages (Polish, Danish, Norwegian, French, Romanian, Bulgarian, Italian, Greek, Russian, Albanian, Croatian, Serbian, Macedonian, German, Icelandic and Spanish). Polarpedia contains photos, graphics and animations or videos. It is divided into nine categories. The objective of Polarpedia – an Internet encyclopedia of polar science – is to provide teachers and pupils with an educational support that can facilitate their work on scientific issues and expressions in English. It serves also to general audience as a reliable source of knowledge about polar regions.
- 4) **"Games and quizzes" section of Polarpedia** – It contains 121 educational resources for teachers and students in the form of online games, quizzes, worksheets, experiments, teamwork proposals and others.
- 5) **Monitoring system** – a "citizen science" environmental monitoring programme to be carried out at each participating school. The monitoring system is an important part of the activities offered to schools and students. A system for reporting measurements and observations of meteorological conditions and natural phenomena connected with the natural sciences has been built. All schools in Europe and beyond are encouraged to participate in this monitoring program. Accumulated information gathered by schools are freely available on the portal and thus available for all portal users. These data can be used widely in multidisciplinary teaching, e.g. biology, chemistry, physics and mathematics classes. It can be combined and thus contribute to a heightened awareness and understanding of complex phenomena. The monitoring system can be found at: <http://eduarctic.dev.american-systems.pl/program/#measurements>.



- 6) **Monitoring system mobile app** - Monitoring system mobile app was developed in order to make it freely available without registration to the portal. Thanks to this tool the monitoring system is no longer limited to registered teachers and one location (school coordinates) per reporting user. Instead, it allowed Monitoring System to be open to users from all over the world, providing measurements from various locations (e.g. summer holidays, trips etc.). The app is available for two most popular systems (Android and IOS) for free and its functionalities were designed to be as simple as possible. However, in order to deliver real value and provide a high quality of data, measurements by non-registered users are marked distinctly from those provided by registered teachers (grey vs blue marks on the map with measurement results).
- 7) **Recordings from the online lessons** – videos with recordings from the online lessons are available on the EDU-ARCTIC YouTube channel and in the video gallery on the project website. **222 videos** from online lessons were published. They are divided into thematic categories. Majority of videos are in English. Some are also available in national languages (PL, RU, FO, NO, IT)
- 8) **Series of short videos explaining polar phenomena** - 20 short videos on interesting facts connected with natural sciences, the Arctic and polar research (ca. 1-2 min. long). Available at: https://www.youtube.com/playlist?list=PL9K_ZVeKK-W1pz5AI4dtNoFG8hm0-XxcG
- 9) **The mobile application "Arctic Explorer Game"** – online quiz in the form of mobile application (available free of charge, currently on Android), which was created based on the idea of a student, project participant. The author of the idea is 13-year-old Yngva from the Faroe Islands, who submitted in the competition the idea of creating a virtual journey through the Arctic, which, thanks to the form of a quiz, allows to broaden knowledge about this region. The virtual journey through the Arctic begins in Svalbard – a place where Poland, under the Spitsbergen Treaty, conducts scientific research, among others in the Polish Polar Station Hornsund. We can choose questions from various domains: biology, geography, geology and science in general, on three different levels of difficulty. If we answer correctly, we collect "coins" that allow to reach in other parts of the Arctic - Iceland, Greenland, Faroe Islands, Scandinavia or North American polar areas. The answers are accompanied by explanations, photos, links to additional materials - for example to POLARPEDIA, a multilingual encyclopedia of terms related to polar research. The most important element is the ability to co-create the application by its users - that is, to add questions and answers, which is also awarded with virtual "coins".



10) **5 scientific publications** – 5 scientific papers published in peer-reviewed conference materials and dedicated to the project's main tools and impact. The publication "**How to conduct inspiring webinars for STEM classes in secondary schools: Experiences from EDU-ARCTIC program on the Arctic and polar research,**" was presented during a session at the 11th annual International Technology, Education and Development Conference (INTED2017) in Valencia (Spain). The publication, written by Agata Goździk, highlighted various aspects of conducting webinars. The author gave explanation, why the Arctic and polar research may be used as interesting and engaging topic for webinars for schools. Some advantages of this method were presented, but also potential barriers and problems, which may occur while proposing and conducting webinars, were discussed. The results of requirement analysis survey conducted among STEM teachers from secondary schools were presented. In the discussion various initiatives (EDUSCIENCE, ERIS, Scientix) were also indicated as a useful source of experience. The paper ends with a set of recommendations concerning preparatory of webinars, conducting a webinar and some technical aspects. The publication "**The Arctic and Polar Research as a Vehicle to Inspire Interest in Science and Research: Ideas from the EDU-ARCTIC Program**" was presented during a conference session at the 8th International Conference "Education, Research & Development" in Elenite, Bulgaria. The publication, written by Agata Goździk, presented main educational tools of the EDU-ARCTIC program. Moreover, the results of the entry assessment survey with information from 146 teachers concerning 12310 pupils from 26 countries were presented and discussed. This survey contains information on pupils' interest in scientific careers, their knowledge about conditions of work of professional scientists and interest and knowledge about Arctic issues. Moreover, first results of evaluation studies on online lessons and Arctic competition conducted from January till June 2017 were described and their impact on pupils interest in STEM was discussed. The publication "**THE EDU-ARCTIC PROJECT: INTERACTING FOR STEM ACROSS COUNTRIES AND CURRICULA**" was presented during a conference session at the 13th INTED conference "Exploring new frontiers in education" in Valencia, Spain. The publication is a novel collaboration by several EDU-ARCTIC consortium members and one teacher from our 2018 edition of the Arctic Competition, Dr. F.J. (Paco) Gómez Senent. It shows how the educational tools of the EDU-ARCTIC program can be used for interdisciplinary teaching, and create inspiration for teachers. It raises the important point that everything in nature is connected, and to raise awareness about this important premise for STEM education, it should be taught also interdisciplinary across normal school curricula, not only within single subjects. In Valencia, the ideas were presented



on stage by both Dr. Gómez Senent, and on behalf of the EDU-ARCTIC consortium Mr. Paul E. Aspholm. The fourth publication entitled “**CITIZEN SCIENCE INITIATIVE FOR SCHOOLS: EDU-ARCTIC MONITORING OF METEOROLOGICAL AND PHENOLOGICAL PARAMETERS**” was prepared by A. Goździk, P.E. Aspholm, H.K. Wam, T. Wawrzyniak, and A. Wielgopolan and presented at the 11th EDU-LEARN2019 Conference in Spain. The paper presents general assumptions and results of evaluation of the monitoring system’s impact on students’ performance and interest as well as the mobile app developed in order to widen the group of users. The fifth publication entitled “**EDU-ARCTIC COMPETITIONS AS AN EFFECTIVE WAY TO INCREASE STUDENTS' INTEREST IN STEM**” was written by A. Goździk, L. Mortensen and T. Juńczyk and presented at the 11th EDU-LEARN2019 Conference in Spain. In this paper we presented information on organisation of the EDU-ARCTIC Competitions, winning projects from three editions and evaluation studies on the contest’s impact on participating students. We also demonstrated how the EDU-ARCTIC contest and polar expeditions are related to one of empirically verified models of effective teaching (so-called PERMA).

Target audience

The main sectors of interest for the EDU-ARCTIC project are: education, research, policy makers, industry and general public.

Within these sectors **target groups of project activities** were identified:

EDUCATION:

- teachers, educators and specialists of didactics
- headmasters, schools officials
- young schoolboys and schoolgirls (aged 13 to 20)
- youth organisations and associations
- teachers associations and organisations
- NGOs acting on STEM education
- project managers and representatives of various educational initiatives

RESEARCH

- polar stations
- universities and other research institutions acting in the field of Arctic research
- scientists
- scientific organisations and associations



POLICY MAKERS

- ministries of education
- ministries of science
- public authorities acting on STEM education

INDUSTRY

- industry partners providing services and goods for STEM education

GENERAL PUBLIC

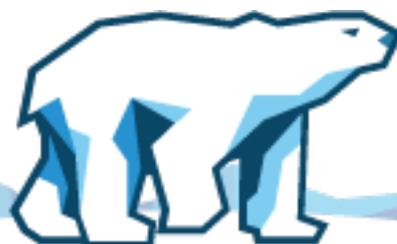
- all citizens
- media

3. Engagement of users and stakeholders

The main channels of engagement of users and stakeholders in the EDU-ARCTIC program are:

- 1) a user-friendly **project website** – the project’s main gateway to the external stakeholders who will be regularly updated by means of a newsletter, containing news on latest results and information on interesting events;
- 2) promotion tools: **leaflets, poster/roll-up, project video, newsletter** towards stakeholder organisations, teachers and their pupils;
- 3) strong social media presence, including **Facebook page, Instagram** and a thematic LinkedIn, as well as a video on **YouTube channel** group to allow dissemination to a wider public. The goal of this social media strategy is to optimize the outreach of project content in terms of generating traffic and awareness of the existing website and its resources. Social media are expected to cooperate closely with the website of EDU-ARCTIC and other promotion and communication tools of the project;
- 4) **events and publications** – EDU-ARCTIC’s program will be visible through paper submission, publication, presentations or poster display – at least **30 such incidents within the project’s life cycle**;
- 5) **networking activities** – real and virtual meetings with various groups and representatives of projects, educational initiatives, polar-oriented institutions and organisations, collaboration on organization joint activities for STEM teachers and students, etc.

Information on the project website, promotion tools and social media are provided in separate deliverable D7.1 Dissemination strategy and plan. Dissemination events and publications are



presented in the deliverable D7.8 List of events and publications presenting the project. Networking activities are described in the deliverable D6.2 Report on networking activities.

For the purpose of the first version of this document a detailed list of events and actions, when EDU-ARCTIC could have been promoted to various groups of stakeholders was prepared and significantly expanded in relation to the description of the action in Annex 1 to the EC/REA GA. The EDU-ARCTIC Consortium exceeded the promised number of presentations of the project at various events (30) already in the first reporting period. Information on the events was provided in the periodic report. The dissemination events realized in the second reporting period were presented in the abovementioned deliverable D7.8.

For the project's proper exploitation, it was absolutely crucial to recruit and engage STEM teachers from Europe in the EDU-ARCTIC program. Through their engagement we may reach the most important target group – students. Therefore, a plan for recruitment activities was prepared by Université de Versailles Saint-Quentin-en-Yvelines (UVSQ), the leader of WP6 COMMUNICATION, REPLICATION & EXPLOITATION.

Recruitment of schools was recommended to be carried out in three phases:

- 1) first phase: until the end of February 2017 (target: 100 schools, 10-15 schools per partner country) – **we successfully recruited 306 teachers and educators;**
- 2) second phase: until February 2018 (target: a minimum of 500 schools) – **we successfully recruited 890 teachers and educators;**
- 3) third phase: until July 2019 (target: a minimum of 3500 schools interested in the program).

In the first version of the document we focused mainly on the first phase of recruitment. Details regarding the second phase were described in the D3.6 *Implementation strategy* (submitted by the Consortium in month 8 – December 2016), whereas the third phase is described below.

The third phase of recruitment was subject to the following rules:

- Beneficiaries from countries with relatively low numbers of registered teachers (France and Iceland) should focus on recruitment of national schools;
- The Consortium should continue trips to schools (very successful in the Faroe Islands and Norway);
- The Consortium should organize workshops for teachers during various events organized by other entities;



- During various events (conferences, workshops) presentation on the EDU-ARCTIC program should be delivered (if possible), project's poster should be displayed and leaflets distributed;
- The Scientix Ambassadors network was contacted (especially the newcomers of the third edition of the course) and requested to disseminate information on the EDU-ARCTIC program among schools;
- The Consortium was very active in social media;
- The website was re-shaped in 2018 in order to better promote program's components, news and recordings of webinars. Special video gallery was prepared in order to enhance navigation and searching for videos.
- Beneficiaries were encouraged to contact professional associations, like regional or national federations of teachers, headmasters, as well as parents' organisations, regional and national school and ministerial authorities in partner countries.

All the dissemination measures foreseen in the proposal were effectively used. The number of schools, that registered to the program, is already much higher than the indicators in the proposal. However, the Consortium made every effort to increase the number of end-users even more.

4. Networking activities

During the project, some scientific and educational connections with other institutions and projects were established, in order to spread the EDU-ARCTIC program, results and replication guidelines at European level. Information about the EDU-ARCTIC portal was spread within INTERACT project focusing on more than 80 polar stations in the Arctic and Sub-Arctic, by means of the EU Arctic Information Centre, EDUSCIENCE portal and partners, ALLEA, ECSITE, EUSEA and SIOS Project members, as well as the SCIENTIX3 community. There are also other projects dealing with the Arctic, which were contacted by the Consortium beneficiaries and provided with information on the project and invited to cooperate. Networking was also possible by cooperation with the EDUSCIENCE project partners. The consortium sought cooperation with other initiatives, including, but not limited to: ALLEA, ECSITE, EUSEA and SIOS, ACCESS, PAGE21, EU NGO Forum, Polar Educators International which was established as a consequence of the International Polar Year for younger people and science awareness, as well as the work of APECS.

General communication activities involved establishing links to stakeholder associations and other projects, participation to different events, creating a database of stakeholders, direct



meetings with stakeholders from the database (via Skype, EDU-ARCTIC collaborative work portal, face-to-face).

Information on the projects and initiatives, which were identified by the consortium, as interesting for networking purposes in EDU-ARCTIC is presented in the Appendix no. 2. Whereas information on organisations and institutions important for EDU-ARCTIC's implementation and dissemination is presented in Appendix no. 3.

Throughout the project the list of networking institutions or projects was expanding. Each new organisation or initiative should be included in the networking database. The template for new contacts is provided in the Appendix no. 4.

Moreover, each networking activity (face-to-face meeting, phone call, Skype meeting, etc.) should be reported, and information on benefits and potential joint activities should be included in the report. The template for reporting on networking activities is presented in Appendix no. 5. In case that any institution expresses its willingness to cooperate and exploit or further develop the EDU-ARCTIC products, it was recommended to sign a letter of understanding with such entity. In such letter all important arrangements, especially dedicated to IPR issues, should be precisely described. NORDURSLODAGATTIN EHF (AP) declared that they may prepare a template for such letter.

Additionally, Institute of Geophysics PAS prepared an official letter, which may be used as a template for sending to various official institutions in Europe (Embassies, Ministries of Education, Ministries of Science, international associations of polar researchers etc.). Moreover, a detailed instruction on how to conduct an online lesson for the EDU-ARCTIC program was prepared in two languages (EN, PL) and was widely distributed to all parties showing interest in disseminating research results via the EDU-ARCTIC network.

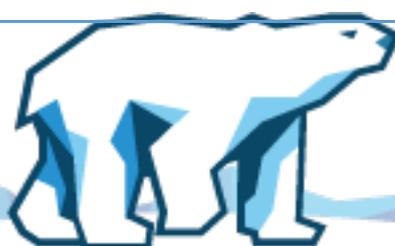
A detailed description of all networking activities conducted within the project as well as the main achievements in this field are presented in the deliverable D6.2 *Report on networking activities*.

5. Measures of exploitation activities

In this report, measures of exploitation activities: events and publications, networking activities, and recruitment activities are described. Indicators of the success of exploitation activities are presented in the table below.



Type of activities	Indicator description	Indicator value	Measurement
Events and publications	Number of events and publications, including presentation of the project on scientific and educational conferences, assemblies, teachers workshops and trainings and open-public events	30	Reports from each event (template provided in Appendix no. 1) or copies of publications
Networking activities	Number of strong links with stakeholder groups, associations, other EU projects or research institutions	25	Reports on networking activities (template provided in Appendix no. 5)
Recruitment activities – phase 1	Number of schools registered in the EDU-ARCTIC portal till the end of February 2017	100	Report from the EDU-ARCTIC portal with the names of schools registered
Recruitment activities – phase 2	Number of schools registered in the EDU-ARCTIC portal till the end of February 2018	500	Report from the EDU-ARCTIC portal with the names of schools registered
Recruitment activities – phase 3	Number of schools showing interest in using EDU-ARCTIC products and tools	3500	Update: The number will be measured as the sum of the number of teachers, who participated in the EDU-ARCTIC presentations (information from dissemination reports from events) and the number of IP of individual users of the EDU-ARCTIC program (this information has been gathered since September 2018)



6. Exploitation plan for each Consortium Beneficiary

Each beneficiary has been requested to update its exploitation plan. In the subsections below, the versions provided in October 2018 are presented.

7.1 Instytut Geofizyki Polskiej Akademii Nauk (IGF PAS)

The Institute has a big network of contacts with schools and STEM teachers, thanks to EDUSCIENCE project. Realisation of EDU-ARCTIC program is an opportunity to prolong the cooperation with teachers and propose them new, attractive activities. It also contributes to building up of the Institute's position as an expert in education and outreach. Thanks to the realisation of EDU-ARCTIC, IGF PAS is seen as a reliable and well experienced partner for EU projects in the field of polar research, education and outreach. This increases the chance of future implementation of various activities within proposals submitted to EC calls. Thanks to the significant role in the EDU-ARCTIC Program, IGF PAS has been already invited to a few various educational proposals for European calls. We were also invited by the National Contact Point for EC funds in Poland to conduct a presentation on the successful coordination of the SWAFS project during the brokerage event in Brussels (January 2018).

Implementation of the EDU-ARCTIC program is also an opportunity for scientists working in or collaborating with the Institute, as well as for PhD students to disseminate their research results, which is obligatory in case of public funded research project. EDU-ARCTIC provides IT infrastructure built in the project, as well as technical help and methodological advisory provided by the project's team, which are necessary for proper performance of webinars for schools. Therefore, this educational program is a quite easy and effective way of dissemination of scientific results. Moreover, thanks to a potentially great number of participants of webinars (up to 500 students during one lesson), it may help to get to wide public. In 2018 a big part of "Science communication" classes for PhD students at the Institute were based on the experience from EDU-ARCTIC. PhD students were conducted webinars for EDU-ARCTIC as a part of their exam for the classes.

The other important aspect is a promotion of IGF PAS at ministerial level and among policy makers. This contributes to raising awareness of importance of Hornsund Polish Polar Station and may result in helping to get sufficient funds for its year-round operation. The EDU-ARCTIC program was presented on the high-level meeting: White House Arctic Science Ministerial in Washington in 2016 by the Under Secretary of the Polish Ministry of Science and Higher Education. It will be also presented at the second Arctic Science ministerial in Berlin. IGF PAS



has been cooperating closely with the ministry on preparation of the deliverables and statement of the ministry for both events.

In longer perspective, raising interest of students in natural sciences, especially polar research may contribute to increasing the number of PhD students. Institute is a co-organiser of Centre of Polar Studies, which offers young researchers from Poland and abroad a high quality PhD programme, which is conducted primarily in English.

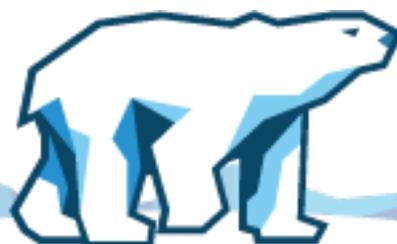
7.2 AMERICAN SYSTEMS SP. ZOO (AS)

The main goal of exploitation strategy and plan for American Systems is to ensure that the project results are properly used during implementation and after. The most important in terms of project results is to provide with complete ICT tool - portal that is fully consistent with the objectives of the project but also intuitive, easy to use and built according to the software development process and methodology. Another aim of exploitation strategy and plan is to provide the stakeholders and various target groups, audiences with information about the EDU-ARCTIC project. Therefore well prepared communication activities are needed in order to reach out to the all stakeholders and target groups to increase the awareness about the project results and deliverables.

The exploitation strategy of the EDU-ARCTIC project is built on direct involvement of teachers and educators – end users. The better the usability of EDU-ARCTIC portal, the more awareness will be raised on the value of the enhancement of the use of ICT and modern communication tools in schools, also of the attractiveness of science education and future scientific careers. The enhancement of the use of ICT tools and well implemented portal definitely will increase company recognition and potentially may lead to a company's expansion into new territories or countries. Project outcomes might be beneficial in recognition of the IT qualifications of professionals in American Systems.

American Systems will place EDU-ARCTIC banner/billboard on its already implemented platforms and applications, especially nSzkola – tool for schools and especially for teachers with electronic grade book and interactive panels. This application has been successfully implemented in more than 800 schools in Poland.

American System will also seek cooperation with the FINE (Fundacja Instytut Nowoczesnej Edukacji) - non-profit educational organization, established to create modern conditions for education in Poland. Also, American Systems will also endeavor to cooperate with Edukacja



Pro Futuro – that runs schools and non-public institutions (with public school rights) as well as propagates and implements numerous modern educational projects.

7.3 Norwegian institute of Bioeconomy Research – NIBIO (NIBIO)

NIBIO has important experience with STEM education that will be useful in the EDU-ARCTIC project. NIBIO as a research institution focuses on applied research. It therefore has multiple projects and staff to engage EDU-ARCTIC students with hands-on research through the webinars, Arctic competition and the monitoring system. The two main NIBIO researchers in the project both have extensive involvement with teaching and public dissemination. Paul E. Aspholm has been working as a nature educator since the 1990s, and Hilde K. Wam has 10 years of teaching nature management to university students. Being an institution with international outreach, NIBIO has research networks all around the globe, including both polar regions. Especially the two northernmost NIBIO research stations, Svanhovd (Pasvik) and Holt (Tromsø), has researchers engaged in polar research networks.

One major NIBIO project of high relevance to EDU-ARCTIC is the PNC-project (Phenology of the North Calotte). The PNC-project has been running since 2001 in northern Norway, North-West Russia, and lately in northern Finland. It is a well-established network with recognized dissemination activities related to education in these regions (local community and upper school level). Through this project, NIBIO has experience with citizen science, which will be particularly useful for developing the EDU-ARCTIC monitoring system.

7.4 JARÐFEINGI (FINI)

Jarðfeingi is the geological survey of the Faroe Islands, the hydrocarbon directorate as well as the national geological museum for the Faroe Islands. The areas of responsibility of Jarðfeingi include administration of hydrocarbon exploration of the Faroese area and the responsibility of national geological repository. In this context Jarðfeingi has a large network of contacts with researchers, collaborators, institutions and companies, who conduct research and data collection in the region. Much of this knowledge and material is stored at the archives and databanks of Jarðfeingi.

Jarðfeingi is an active disseminator of knowledge about the geoscientific environment of the Faroe Islands. The institution works in the spirit of the first director and geologist of the geological museum, Jóannes Rasmussen: “Knowledge in itself has no value. The value of knowledge lies in how it is used and how you pass it on to others, so it can remain alive and active.” Jarðfeingi therefore participates in a long range of dissemination activities with focus on school children and the general public. These activities include building up and maintaining geological exhibitions at the geological museum as part of the national museum exhibitions. The institution participates in activities such as museum festival in October as well as



European researchers night in September and others. The institution offers geoscientific courses and excursions for school teachers as well as participates in building up educational material for secondary schools.

The Faroe Islands are usually labelled with a temperate climate, although the upper 70% of the area is within the arctic climate zone. Jarðfeingi works to raise awareness of the complexity of the region with challenges of the arctic parts of the landscapes with frost weathering, unstable slopes and geohazards characteristic for this region.

With the EDU-ARCTIC partnership and material for secondary schools, Jarðfeingi is able to raise more awareness within Faroese youth and the general public about the Arctic environment on the Faroe Islands and about the Arctic environments in other areas. This is important in order to understand how the Faroe Islands fit into the Arctic context and in order to understand future challenges. This will be done with activities at the exhibitions, school visits, lectures, excursions and preparation of information material to the teachers.

7.5 UNIVERSITÉ DE VERSAILLES SAINT-QUENTIN-EN-YVELINES (UVSQ)

UVSQ (top 500 Shanghai ranking, 401-500 group, in 2016) is one of the mostly actively engaged higher education institution in France and at European level in Arctic research. The research laboratories LATMOS and LSCE, both affiliated with Institute Pierre-Simon Laplace, and members of the Observatory of Versailles-Saint-Quentin, as well as CEARC at OVSQ and DYPAC at the Institute of Cultural and International Studies of UVSQ, are either leaders or partners in many French-National, Agency for Research-financed or European research projects (FP7 and H2020), several of which are directly Arctic-focused. In 2010, UVSQ opened an international and interdisciplinary Masters2 programme in Arctic Studies, entirely taught in English, drawing in students from many countries worldwide including, among the Arctic Council group, the USA, Norway, Greenland and Russia, as well as students having come from countries like Armenia, Latvia, Macedonia, India, Ghana, Kenya etc. UVSQ is therefore seen as a reliable and well-experienced partner for EU projects both in the fields of research and teaching, connected with many partners in Arctic research and studies across the world. Since 2015, the Masters is offered within the excellence cluster “Université de Paris-Saclay”.

The implementation of the EDU-ARCTIC’s program is an excellent opportunity for scientists working at UVSQ and their Phd students to disseminate their research results to large audiences while familiarizing themselves with innovative pedagogical tools like webinars and to experience the challenge of “popularizing” scientific knowledge in secondary education and making it more accessible to the general public. The ability to disseminate knowledge in an attractive and comprehensive ways a highly-appreciated competence for academic staff. EDU-



ARCTIC will encourage pupils to pursue their studies and possibly their career in science. UVSQ is an attractive institution in this respect and hopes to draw more French and international students to their science and Arctic studies programs (both at undergraduate and postgraduate level), enhancing highly expected UVSQ's lead role in the field within the excellence cluster "Université Paris-Saclay" and beyond.

UVSQ's EDU-ARCTIC team is interdisciplinary with colleagues from the sciences (environment science and climatology) and the humanities (English Studies and History) working closely together. Their experience will serve as precious encouragement to other consortia and partnerships within UVSQ, "Université Paris-Saclay" and elsewhere to construct resolutely interdisciplinary programs and research projects together, one of the key challenges in education and research to produce significant new results.

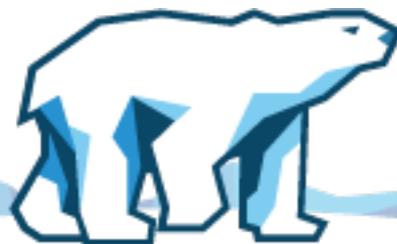
6.6 NORDURSLODAGATTIN EHF (AP)

The Arctic Portal, www.arcticportal.org, is the Arctic Gateway, providing comprehensive gateway access to Arctic related information and data. AP provides access to Arctic data, information and organizations across the Arctic, facilitating information sharing and cooperation between public and private parties.

As the Gateway to Arctic the Arctic Portal information includes features such as: news from around the Arctic; information on the Arctic Council and other Arctic stakeholders; topic related portals; document and project database; virtual library; up-coming events; collection of relevant links; multimedia material including web casts, virtual conferences and videos; interactive mapping portal; webcams and weather in the Arctic; acronyms interpretation all of which support the EDU-Arctic website.

The Arctic Portal is one of the most-established organizations in carrying out Arctic-related outreach and communication. It is strongly involved in organizing and providing communication on Arctic issues of relevance to the EDU-Arctic project not least the Polarpedia. We provide web-hosting, outreach services and technical and content support to over 60 international organisations, institutions and projects of high Arctic relevance including: IPY, IASC, PAG, APECS, SAON, ADC, IPS, ICR, Northern Forum, ICARC, CNARC, AMATII, AREA, PPS, APPLICAE, ARICE, NUNATARYUK, **EDU-ARCTIC**, IPA, Arctic-Iceland, Arctic Yearbook and many more.

The Arctic Portal is an active participant in international organizations and projects of EDU-Arctic projects importance and relevance including European Polar Board, Northern Forum, Sustaining Arctic Observation Networks - SAON, China-Nordic Arctic Research Centre, China-Iceland Arctic Science Observatory, Global Terrestrial Network of Permafrost, International



Permafrost Association, University of the Arctic, Arctic Renewable Energy Atlas, PAGE21, ARICE, NUNATARYUK, APPLICATE, EU PolarNet, INTERACT and more providing important opportunities for cooperation and dissemination.

Of further importance to the EDU-ARCTIC the Arctic Portal is active in organizing events, workshops and conferences incl. At The Arctic Circle, Arctic Energy Summit co-hosts 2013 and 2015 and upcoming 2019, the EU in the Arctic, stakeholders consultations for the EU Arctic Information Centre in 2013 and 2014, and Arctic dialogue seminars for the EEAS as well as project and stakeholder meetings such as of the projects PAGE21, APPLICATE, China–Iceland Arctic Cooperation and more.

The Arctic Portal is involved in organizing active stakeholder engagement at local, regional and international levels including through a contract for the EU EEAS in cooperation with the Arctic Centre and the AWI on Arctic policy assessment, the Northern Forum and as WP7 leader in the large EU project APPLICATE www.applycate.eu. These give further opportunities for involving and developing the EDU-ARCTIC project at an high EU and international level.

The Arctic Portal has extensive media channels, including www.arcticportal.org and associated social media channels with very high relevant following. The Arctic Portal has impressive networks of Media partners and associates both of which it will utilize for the benefit of the dissemination of news on the EDU-Arctic project as appropriate.

7. Sustainability of project's results after its closure

The Consortium is fully aware of the obligation to exploit the project's results up to four years after the project closure, which results from the Article 28.1 of the EC/REA GA. During the General Assembly meeting on the Faroe Islands it was emphasized that efforts will be made not to limit it to availability of project's results, but the consortium will also explore opportunities to implement the program into national educational initiatives, seek further partners, even outside Europe. From the early stage of project's implementation, some beneficiaries entered negotiations with important institutions regarding further cooperation, and this continues with the progress of the project. The main aim of such cooperation is to further develop project's content and involve more organisations in dissemination of polar research results.

Moreover, the consortium made additional efforts to guarantee the sustainability of the project's educational materials by uploading them to open-access repository. They were submitted to the **Scientix repository** and are being reviewed at the moment. Once accepted, they are published in the repository and promoted within the Scientix network. The resources



are available at: <http://www.scientix.eu/projects/project-detail?articleId=577260>. There is also a description of the project and its component and the link to the project's website. Each resource is displayed under the EDU-ARCTIC page in Scientix repository, but also is available as a single material in the Scientix database. Publishing the EDU-ARCTIC educational resources in the Scientix repository is crucial for their exploitation after the project's closure. It helps also to disseminate them wider, not only among the EDU-ARCTIC users, as Scientix regularly promotes new resources via portal and via **Scientix Digest**, which is being sent out to more than **2450** online subscribers worldwide. The Digest is available in English, German, French, Italian, Spanish, Polish, Dutch and Romanian.

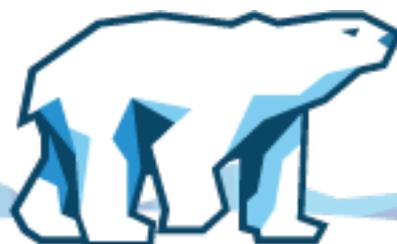
8. Exploitation activities planned or executed

In this section the exploitation and dissemination activities planned and/or executed for each of the identified project's outcomes are presented.

1) The project website

The website was promoted during all dissemination events, where EDU-ARCTIC was presented (184 events in total), via social media, during the Final Conference, partner websites and 3 Educators' Fora. The website will be kept online by the Arctic Portal indefinitely or for a minimum of 4 years after the end of the project. This provides ongoing visibility to all project components, including Polarpedia, recorded lessons, library and news section, and maintains their search ability on the Internet as proven the main way for visitors to access them during the project. The core components as well as news, future reports and/or research papers and other relevant material, the project partners aim to maintain directly or through associated websites and projects as the partners intend to seek further funding to sustain the valuable cooperation and material developed during the project.

After the project closure the frequency of new material will be lower, therefore a decrease in visits of the website is expected. The project material will however stay online and be searchable. Analytics show a 100% increase in visits over the last year of the project to dedicated existing material. The continued uptime and online availability will counteract the barriers as more hits improve the search results and consequently increase the visits.



2) The EDU-ARCTIC portal

The portal was promoted during most of dissemination events, where EDU-ARCTIC was presented (184 events in total), via social media, during the Final Conference and 3 Educators' Fora. The portal will be kept online by American Systems and stored on servers of IGF PAS for a minimum of 4 years after the end of the project. This provides ongoing visibility to all project components and maintains their search ability on the Internet. The project partners aim to provide some additional extensive activities (e.g. online lessons) and intend to seek further funding to sustain the valuable cooperation and material developed during the project. Moreover, two partners (IGF PAS and NIBIO) are included in some educational tasks in the proposal of INTERACT 3, proposed in the call of Horizon2020. If the proposal is successful to be granted, additional online lessons will be organised with participation of various Arctic stations involved in the INTERACT network.

After the project closure the number of offered activities will be lower, therefore a decrease in visits of the website is expected. The portal will however stay online and be searchable. The continued effort to propose some additional activities (e.g. online lessons) will help to counteract the barriers.

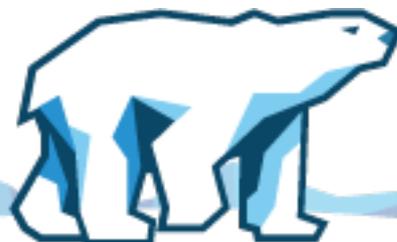
3) Polarpedia

Polarpedia was promoted during all dissemination events, where EDU-ARCTIC was presented (184 events in total), via social media, during the Final Conference and 3 Educators' Fora. Another channel of information are online lessons. Polarpedia is also highly positioned by google search engines, therefore it is currently widely used by people not participating directly in project activities. The website will be kept online by American Systems and stored on servers of IGF PAS for a minimum of 4 years after the end of the project. This provides ongoing visibility and maintains its search ability on the Internet as proven the main way for visitors to access the terms during the project.

Lack of new terms and new translations may cause a decrease in interest of using Polarpedia. The project material will however stay online and be searchable. The continued uptime and online availability will counteract the barriers as more hits improve the search results and consequently increase the visits.

4) Games and quizzes

Particular games and quizzes were promoted mainly via social media. Information on this section was included in one of newsletters sent to ca. 1000 users. Moreover, it was promoted



during various trainings for teachers organised by IGF PAS. The resources will be kept online on Polarpedia portal for a minimum of 4 years after the end of the project. Moreover, the Consortium intends to seek opportunities to promote these resources in various repositories, e.g. in Scientix repository. It will help to provide ongoing promotion and long-lasting visibility of these resources. Additionally, some of the resources may be used in collaboration with INTERACT project, which offers educational resources on the Arctic to schools of all levels.

Some of games are based on external engines (eg. Kahoot quizzes, crosswords etc.). Their usage may be limited in case of closure of these engines. Moreover, lower promotion may cause a decrease of interest in using them.

5) Monitoring system

The monitoring system was promoted during many dissemination events, where EDU-ARCTIC was presented, via social media, during the Final Conference and 3 Educators' Fora. Information on the monitoring system was provided in newsletters sent to all EDU-ARCTIC users. Moreover, a scientific paper dedicated to the monitoring system and its impact on students was prepared and presented during the EDU-LEARN2019 international conference and published in the conference proceedings.

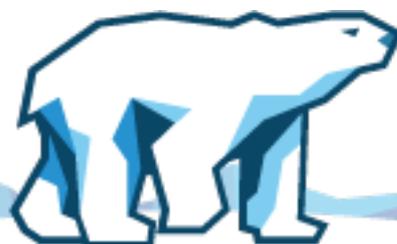
The system will be kept online by American Systems and stored on servers of IGF PAS for a minimum of 4 years after the end of the project. New measurements can be added and all registered users will have access to all gathered data.

The monitoring system and the whole datasets of observations will be still available online. Lower promotion may cause a decrease of interest in using it. The updates of the system cannot be guaranteed after the project closure.

6) Monitoring system mobile app

The mobile app was promoted during the trainings for teachers, on the project website (including constant slider) and via social media. Moreover, hundreds of newsletter receivers got information on this tool via e-mail. The mobile app will be available in Google Store for a minimum of 4 years after the end of the project. Moreover, the Consortium intends to seek opportunities to promote it in various repositories, e.g. in Scientix repository. It will help to provide ongoing promotion and long-lasting visibility of the app.

The mobile app will be still available online. Lower promotion may cause a decrease of interest in using it. Unfortunately, the updates of the app cannot be guaranteed after the project closure.



7) Recordings from the online lessons

Recordings were promoted via social media (mainly the EDU-ARCTIC Facebook channel) and during online lessons. Moreover, during teachers trainings information on availability of these videos were also given. Additionally, the Consortium intends to seek opportunities to provide new online lessons, which may be recorded and made available online. An option for researchers from various institutes, who would like to disseminate their research results will be also open and Consortium will offer both technical help and IT infrastructure to conduct additional online lessons.

Recordings will be still available online. Lower promotion may cause a decrease of interest in displaying them. The project material will however stay online and be searchable. The continued uptime and online availability will counteract the barriers as more hits improve the search results and consequently increase the visits.

8) **20 short videos** on interesting facts connected with natural sciences, the Arctic and polar research

Short videos were promoted via social media (mainly the EDU-ARCTIC Facebook channel) and during online lessons. The videos will be kept online on dedicated YouTube channel and additionally stored on servers of IGF PAS for a minimum of 4 years after the end of the project. Moreover, the Consortium intends to seek opportunities to promote these resources in various repositories, e.g. in Scientix repository. It will help to provide ongoing promotion and long-lasting visibility of these resources.

Videos will be still available online. Lower promotion may cause a decrease of interest in displaying them. The project material will however stay online and be searchable.

9) The mobile application "Arctic Explorer Game"

The app was promoted during the Final Conference on 23-24 May 2019. It will be further promoted on the project website (including the slider) and in social media. Information in newsletter was distributed to 1200+ users. News in national languages were published on institutional websites. They were also published on national portals (e.g. by Polish Press Agency naukawpolsce.pap.pl). The mobile app will be available in Google Store for a minimum of 4 years after the end of the project. Moreover, the Consortium intends to seek opportunities to promote it in various repositories, e.g. in Scientix repository. It will help to provide ongoing promotion and long-lasting visibility of the app.



The mobile app will be still available online. Lower promotion may cause a decrease of interest in using it. Unfortunately, the updates of the app cannot be guaranteed after the project closure.

10) 5 scientific publications

This scientific papers are available at the project website and in the open-access repository of the Institute of Geophysics PAS (<https://dspace.igf.edu.pl/xmlui/>). They were promoted during the Conferences, where they were presented and as parts of Proceedings distributed to all participants of the conferences.

9. Follow-up recommendations

The EDU-ARCTIC Consortium makes every effort to find the best way of providing a follow-up for the project and make sure that its outcomes will be further exploited and used by end-users.

The Coordinator examined the offer of the Horizon 2020 forthcoming calls in the Science with and for Society Programme. However, no calls suitable for the EDU-ARCTIC follow-ups were announced. During the project review in Autumn 2017 in Brussels, the Consortium asked for the possibility to receive additional grant for follow-up of the project, as it proved to be a big success with the growing number of end-users, who also ask for its extension. The suggestion of the reviewer was to seek for national funds, as the REA is not planning the calls for follow-ups of SWAFS project. Moreover, in the next frame programme of the EC, no programme supporting Science education is foreseen.

During the 6th General Assembly meeting in September 2018, the Consortium was discussing various possibilities and suggestions of follow-up of the project. All Consortium Beneficiaries confirmed that they are interested in continuing some kind of collaboration for the project's follow-up.

The Norwegian funds were mentioned as a funding opportunity for Poland, Norway and probably Iceland, which could include 4 Beneficiaries. At the moment no details are published and the rules of applying are still unknown. This option will be further explored by the project Coordinator.

The other option, which was discussed, is applying for a small grant for strategic partnerships in ERASMUS+ programme in School education component. Such a project could offer budget for travel to transnational meetings and some dissemination activities. However, no budget

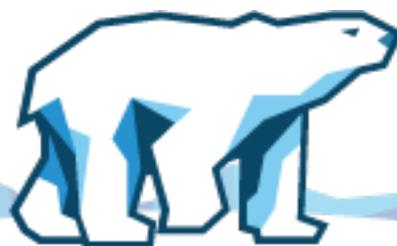


for continuation of the activities for schools (mainly online lessons and Arctic competitions) would be obtained.

National funds for the follow-up are not convenient, as in many national projects, the outputs should be in national language and activities should be limited to national end-users. However, if no other option is available, this could also be a solution for teachers and schools from partner countries. Some additional institutions, which may offer grants for arctic science education program, were mentioned (eg. NORA, the Faroese Research Council, Dialog – program of the Polish Ministry of Science and Higher Education). The funding opportunities of those will be checked by beneficiaries and discussed during next meetings.

Moreover, during the last General Assembly meeting in France in May 2019, the Consortium decided to continue the successful collaboration after the project's closure. The proposal of signing memorandum of understanding among all consortium beneficiaries was willingly accepted. It is expected that the MoU would be signed by the end of the year.

Additional information regarding the follow-up activities is provided in the deliverable D6.2 Report on networking activities, whereas suggestions on replication opportunities will be provided in the deliverable D6.4 Replication strategies and roadmap.

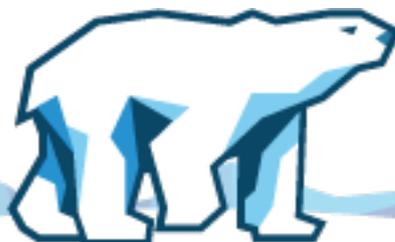


Appendix no. 1 Template for reporting on events

DISSEMINATION ACTIVITIES CHART

Main author(s)	
Partner	
Date	

Name of event		
Type of event (if you choose “other”, explain)		Choose one
Link to event’s website (if available)		
General topic		
Date	From	Click to insert date
	To	Click to insert date
Location (country, place)		
Hosting entity		
Short description of the event		
Frequency of the event (if you choose “other”, explain)		Choose one
Audience (if you choose other, explain; choose all audience groups)		Choose one.
		Choose one.
		Choose one.
Estimated attendance (number of participants), if available		
Type of activities carried out		
General reception/result		



Appendix no. 2 Information about projects and initiatives for networking purposes

	Name of the project	Source of funding (agreement no, if known)	Core activities	Useful information (including website)
REGIONAL	PNC	governmental	School project in Norway, Russia and Finland	www.sustain.no
	Regional forum for headmasters (initiative)	local	School organization	n.a.
EUROPEAN	Scientix3	H2020 (730009)	Promoting STEM project among teachers, project managers and policy makers	www.scientix.eu we proposed hosting one of Scientix workshops for European teachers in Warsaw
	ERIS	Erasmus+	Preparation of educational packages (including polar measurements) for secondary schools	www.eris-project.eu
	STEM4YOUTH	H2020 (710577)	Preparation of school courses in 7 STEM subjects and a teacher toolkit	www.stemforyouth.eu
	BRITEC	Erasmus+	Bringing Research into the Classroom – good practices on citizen science tools for schools	www.britec.igf.edu.pl



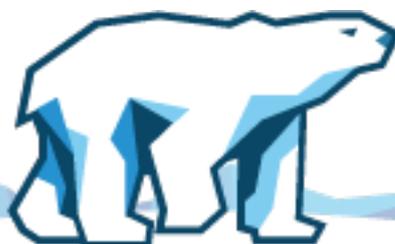
WORLDWIDE	INTAROS	H2020 (727890)	Project on Integrated Arctic Observing system, small edu-comp.	http://www.intaros.eu/
	INTERACT (along with upcoming continuation-INTERACT II)	H2020 (730938)	Consortium of polar arctic and alpine monitoring stations	www.eu-interact.org/
	POLARIS	FP7 (318974)	An international and interdisciplinary research project dedicated to the theme of cultural and natural heritage in Arctic and Sub-Antarctic Regions	www.polaris.cearc.fr



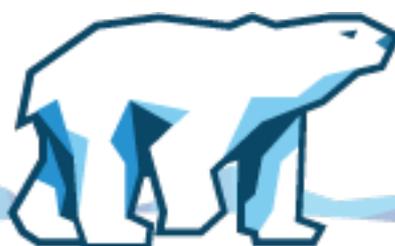
Appendix no. 3 Information about organisations and institutions for networking purposes

Type of organisation/institution			
University/school	NGO	Public/Governmental body	Other - Collaboration network, scientific institute
Home countries/headquarters:			
Norway, Poland, Faroe Islands, Germany, Denmark, Belgium			

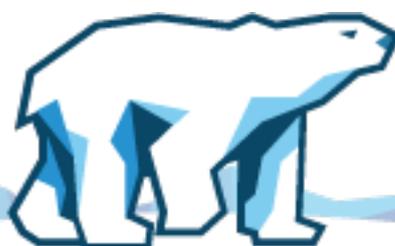
	Name of the institution	Core activities	Website
LOCAL	Miljøagentene I Sør-Varanger + national head organization Norway	NGO for environmental youth	
	OELiZK (Warsaw) Poland	Organising teachers workshops concerning IT competences , provides good venue for teacher trainings, well IT equipped	www.oeiizk.waw.pl
NATIONAL	Nám Faroe Islands	Provides school books	nam.fo
	Glásir Faroe Islands	Secondary school	Glásir.fo
	Fiskivinnuskúlin Faroe Islands	Secondary school	Fiskvest.fo
	UVMR Faroe Islands	Governmental body	Uvmr.fo
	MMR Faroe Islands	Governmental body	Mmr.fo



	Fróðskaparsetur Føroya Faroe Islands	University	
	REKLIM, Helmholtz-Verbund Regionale Klimaänderungen Germany	Federation of climate- related research institutions in Germany	Reklm.de
EUROPEAN	European Schoolnet Belgium	Promoting STEM project among teachers, project managers and policy makers. They cooperate with 31 ministries of education in Europe	www.eun.org
	Institute of Biochemistry and Biophysics, PAS Poland	Scientific institute, conducting research also in the Antarctic Station. We organized together a series of webinars from Antarctic Station	www.ibb.waw.pl
	University of Aarhus Denmark	University, conducting research at NORD station (NE Greenland)	www.envs.au.dk
WORLDWIDE	Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research, Bremerhaven, Germany	Conducting research in the Arctic (Svalbard, Arctic Siberia);	www.awi.de
	Akvaplan-niva AS, High North Research Centre, Tromsø Norway	High North Research Centre	www.akvaplan.niva.no
	Adam Mickiewicz University Poland	Cryosphere Research Department, Running AMUPS Station in Spitsbergen	www.amu.edu.pl
	Norwegian Meteorological Institute Norway	MET Norway is the meteorological service for both The Military and the Civil Services in Norway	www.met.no
	Nansen Environmental and Remote Sensing Center Norway	independent non-profit research foundation affiliated with the University of Bergen,	Stefan Muckenhuber stefan.muckenhuber@nersc.no admin@nersc.no Stein Sandven stein.sandven@nersc.no



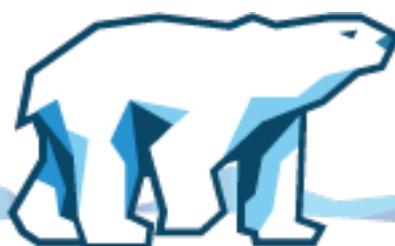
University of Silesia Poland	University with huge experience in Research in Svalbard	Polarknow.edu.pl
APECS Poland Poland	Organisation for Young Polar Scientists in Poland	
Norsk Polar Institute Norway	Norway's central governmental institution for scientific research, mapping and environmental monitoring in the Arctic and the Antarctic.	www.npolar.no
UNIS University Centre in Svalbard Norway	The world's northernmost institution for higher education and research, located in Longyearbyen, Spitsbergen	www.unis.no
ARCUS Arctic Research Consortium of the United States USA	Creating synergy of human and facilities resources if the Arctic research community	https://www.arcus.org
The PoLAR Partnership The Polar Learning and Responding Climate Change Education Partnership USA	Developing a suite of interactive and game-like tools that capitalize on the iconic imagery of the Arctic and Antarctic	http://climate.columbia.edu/projects/polar/
PEI Polar Educators International USA	International network of educators and researchers, developing national and international collaborations, resources and activities. PEI develops local networks and strong web presence.	http://www.polareducator.org/polareducators@gmail.com
University of the Arctic	Federation of Vocational and Higher Education Institutions, Research Organisms	www.uarctic.org



Appendix no. 4 Networking database template

Data collection model

Name of the organisation	Organisation no. 1	Organisation no. 2	...
Address			
Contact person			
e-mail of contact person			
Office phone number			
Link to organisation's website			
Type of organisation			
Core activities			
Range of activities			
General description of the activities			
Other useful comments			



Appendix no. 5 Template for reporting on networking activities

NETWORKING ACTIVITY REPORT

Main author(s)	
Partner	
Date	

Date of meeting	
Location (country, place)	
Hosting entity	
Name of the organisation 1	
Link to organisation's website	
Type of organisation	
Core activities	
Name of the organisation 2	
Link to organisation's website	
Type of organisation	
Core activities	
General topic of the meeting	
Short description of the meeting	
Number of participants	
General reception/result	
Future joint activities planned (if any)	
Distributed materials (if any)	

