

Annual Report

October 2013 – September 2014

submitted by

APECS Executive Committee 2013-2014

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Special thanks to the APECS Annual Report 2013-2014 editor team: Gerlis Fugmann, Laura Ferguson, Pedro Echeveste, Ellyn Enderlin, Yulia Zaika

**APECS International Directorate
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Executive Summary

During the 2013-2014 term APECS has had another year full of exciting activities. Our membership continues to grow, with more than 4700 members from more than 80 countries. APECS has most of its members in Europe and North America, but we continue to diversify with our membership in Latin and South America, Asia, Australia and New Zealand constantly growing. Now Brazil, India and Australia are within the top 10 countries with the highest number of members!

APECS and our national committees held more than 15 major workshops and events in conjunction with major polar conferences and meetings around the world. Some highlights were the “Connecting Early Career Researchers and Community Driven research in the North” workshop at the Arctic Science Summit Week (ASSW) 2014 and the APECS – PEI (Polar Educators International) Science Communications Workshop at the 2014 SCAR Open Science Conference. In addition, APECS members and national committees organized many education and outreach events as part of the International Polar Weeks 2014 and Antarctica Day 2013.

The APECS International Directorate in Tromsø, Norway had received renewed funding in summer 2013 from the Research Council of Norway, the UiT The Arctic University of Norway and the Norwegian Polar Institute. Our APECS presence in Norway has allowed us to contribute to the career development of Norwegian students, enhance recruitment, promote Norwegian excellence in Polar Research and further establish international collaborations. APECS was again a major contributor to the Young Scientist Forum Events of Arctic Frontiers 2014 including a joint reception with the Fram Centre in Tromsø (“Arctic Games”), a Science Communications and Media Training Workshop, the organisation of outstanding poster awards for early career poster presenters. A new contribution was the co-organisation of the “Science for Schools” event together with the Nordnorsk Vitensenteret and Arctic Frontiers for schools in Tromsø.

During 2013-2014, APECS also continued to work closely with our many international partner organizations to create new opportunities for our members to participate in international polar research meetings where they can meet and discuss their research with leaders in their field e.g. with the International Arctic Science Committee (IASC), the Scientific Committee on Antarctic Research (SCAR), the Arctic Monitoring and Assessment Programme (AMAP), the Conservation of the Arctic Flora and Fauna (CAFF) and the Climate and Cryosphere (CliC) Project of the World Climate Research Programme. APECS is also involved in the International Polar Partnership Initiative (IPPI) and is a partner to the Polar Prediction Projects and its activities for the Year of Polar Predictions (YOPP).

The last year, also brought some particularly unique opportunities for our members. We teamed up with Canada Goose® to give our early career polar researchers an opportunity to share their research with a broader audience and receive Canada Goose® expedition jackets. The participants will be writing blog entries throughout the year, highlighting their polar research, which will be posted along with photographs from the field on the Canada Goose® and APECS websites (and other relevant social media). Furthermore, one of our members had the amazing opportunity this year to go to the North Pole to participate in the Sochi 2014 Olympic Torch Relay. The 8 arctic council states each sent one representative and Sweden wanted to send an early career polar scientist and chose the coordinator of APECS Sweden, Ylva Sjöberg.

In 2013-2014, APECS launched its APECS Nordic project “Bridging Early Career Researchers and Indigenous People in Nordic Countries” funded by the Nordic Council of Ministers. The project will identify ways to enhance engagement between early career researchers (ECRs) and Indigenous peoples and Northern community members in Nordic regions. Results will be published in 2014. In addition, APECS also began co-coordinating several projects as part of the International Conference on Arctic Research Planning (ICARP III) “Integrating Arctic Research – a Roadmap for the Future” process organized by the International Arctic Science Committee (IASC). APECS and the Climate and Cryosphere (CliC) Project have teamed up with IASC to work with ICARP III participants to create

FrostBytes showcasing their contribution to ICARP III. APECS and CliC are also collaborating on the project "Where are they now?" which is investigating the career paths of early career researchers (ECRs) that received funding from IASC since the start of the most recent IPY (2007-2008). The goal of this project is to assess the impact of IASC support on their careers and to find ways to further enhance the support and training of ECRs.

All of these activities would not be possible without all of our dedicated members and mentors which continue to help us shape the future of polar research. We want to thank everyone for their continuous support over the past year and are looking forward to continue working with all of you in the future. Also, we want to thank all of our partners for making these opportunities possible and for helping to train the next generation of polar scientists. Without your enthusiasm, opportunities for young researchers to get involved would not be possible.

Last, all of the activities organized by APECS would not be possible without the support by various sponsors. A special thank you goes to our Directorate sponsors (the Research Council of Norway, UiT The Arctic University of Norway and the Norwegian Polar Institute) but also to all other organizations that contributed to our activities over the last year.

To learn more about our past and upcoming highlights and all APECS' amazing activities, please read the full report or visit our website at www.apecs.is.

Sincerely,

Christie Logvinova

Past-APECS President 2013 - 2014

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1.1. APECS Leadership 2013-2014

APECS Executive Committee

The term of the APECS Executive Committee 2013-2014 was from 1 October 2013 to 30 September 2014. The APECS Executive Committee is comprised of five members, one of which serves as President and the others as Vice-President for the term. In addition, the committee was supported by past-APECS Presidents and long-term past-Executive Committee members who continue to serve as advisors and ex-officio members of the committee.

APECS President 2013-2014

Christie Logvinova
Clark University, USA

APECS Vice-Presidents 2013-2014:

Dr. Frigga Kruse
University of Groningen, Netherlands

Dr. Russell Fielding
Sewanee: The University of the South, USA

Dr. Jean-Sébastien Moore
Laval University, Canada

Iglika Trifonova
Bulgarian Antarctic Institute, Bulgaria

APECS Executive Committee ex-officios

Jennifer Provencher
Carleton University, Canada

Yulia Zaika
Khibiny educational and scientific base of the Faculty of Geography M.V. Lomonosov Moscow State University, Russia



APECS Council

The APECS Council is a large leadership body within APECS that is comprised of active APECS members, representatives of the APECS National Committees and of APECS partner organisations. Its members actively support and steer many of the activities and programmes provided by APECS. The Council has several sub-committees: Research Activities Committee (RAC), Membership and Involvement Committee (MIC) and the Education and Outreach Committee (EOC). The APECS Council is supported by several previous Council and Executive Committee members that stay on as ex-officios and serve as advisors to the Council.

APECS Council Chairs 2013-2014

Michael Laiho
Durham University, UK

Dr. Heather Mariash
McGill University, Canada

APECS Research Activities Committee (RAC) Chairs

Laura Fleming-Sharp
Arctic Studies Centre, National Museum of Natural History, Smithsonian Institution, USA

Dr. Ruth Hindshaw
University of St. Andrews, UK

APECS Membership and Involvement Committee (MIC) Chair

Ines Tavernier
Ghent University, Belgium

APECS Education and Outreach Committee (EOC) Chairs

Erli Costa
Universidade Federal do Rio de Janeiro, Brazil

Kristen Shake
Clark University, USA

APECS Council Members-at-Large:

Dr. Cristian Aldea
GAIA-Antarctica Programme, University of Magallanes, Chile

Dr. Elaine Alves dos Santos
Universidade do Estado do Rio de Janeiro, Brazil

Sarah Bartholow
(Liaison with Polar Educators International – PEI)
Arctic Research Consortium of the United States, USA

Roxanne Beltran
University of Alaska, Anchorage, USA

Vincent Carrier
Laval University/UNIS, Canada/Norway

Eleanor Darlington
Loughborough University, UK

Archana Dayal
National Centre for Antarctic and Ocean Research (NCAOR), India

Pedro Echeveste
University of Balearic Islands, Spain

Francyne Elias-Piera
Univeritat Autònoma de Barcelona, Spain

Dr. Ellyn Enderlin
Climate Change Institute, University of Maine, USA

Dr. Laura Ferguson
Heriot-Watt University, UK

Patricia Johnston
University of British Columbia, Canada

Laura Elena Kelvin
University of Western Ontario, Canada

Alia Khan
University of Colorado – Boulder, Institute of Arctic and Alpine Research, USA

Minkyung Kim
Pohang University of Science and Technology, South Korea

Maja Lisowska
Jagiellonian University, Poland

Silvia Lourenco
Department of Sea and Marine Resources, Instituto Português do Mar e da Atmosfera - IPMA, Portugal

Sanna Majaneva
University of Helsinki and Finnish
Environmental Institute, Finland

Adam Naito
Texas A&M University, USA

Karolina Paquin
University of Tromsø, Norway

Hugo Romero
Instituto de la Patagonia, Chile

Sara Strey
University of Illinois, USA

Dr. Astrid Surmatz
University of Amsterdam, Netherlands

Zuzanna Swirad
Scott Polar Research Institute, UK

Alexandre Trindade Nieuwendam
(Liason with Permafrost Young Researcher
Network – PYRN)
Universidade de Lisboa, Portugal

Tristy Vick-Majors
Montana State University, USA

Bianca Zhang (partial term)
The Arctic Institute, Iceland

APECS Council ex-officios

Tosca Ballerini
Mediterranean Institute of Oceanography, France

Silje-Kristin Jensen
St. Andrews University, United Kingdom /
Institute of Marine Research, Tromsø, Norway

Kim Jochum
University of Alaska Fairbanks & Anchorage,
USA

Dr. Alexey Pavlov
Norwegian Polar Institute, Norway

Dr. Allen Pope
National Snow and Ice Data Center, USA

Penelope Wagner
Norway

Mariette Wheeler
Department of Environmental Affairs: Oceans
and Coasts/Bird's-Eye View Productions South
Africa

APECS International Directorate

The APECS International Directorate and Executive Director are funded by the generous support of the Research Council of Norway, UiT The Arctic University of Norway and the Norwegian Polar Institute. The office is housed at UiT at the Faculty of Biosciences, Fisheries and Economics in Tromsø, Norway. The APECS Executive Director is the essential coordinator without which the organization and running of the various APECS activities and programmes would hardly be possible and APECS is grateful for the continued support provided by its Directorate sponsors.

APECS Executive Director

Dr. Gerlis Fugmann

Executive Director – Association of Polar Early Career Scientists

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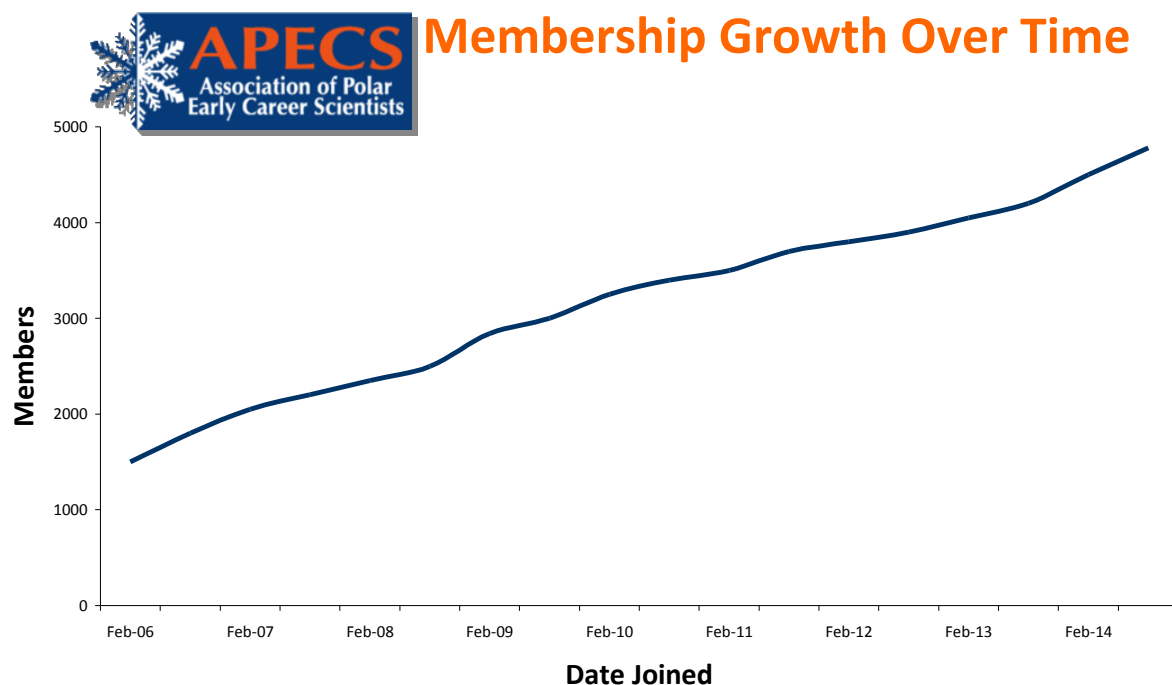
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1.2. APECS Membership in 2013-2014

Another year has passed and our organization continues to be an example of enthusiasm and energy. It is really amazing to see how the growth of APECS worldwide is infectious! We are happy to report that as of September 2014, APECS is made up of more than 4700 members from more than 80 countries all over the world.



So, who exactly is APECS in 2014? Continuing recent trends, APECS has most of its members in Europe and North America (combined about 70 percent). But our membership in Latin and South America, Asia and Australia and New Zealand are constantly growing. Brazil, India and Australia are within the top 10 countries in membership numbers! About 29 percent of all European members are located in Scandinavia with Norway making up the largest portion with more than 200 members. Nationally, the top 5 countries – United States, Canada, United Kingdom, Norway and Brazil make up about 55 percent of the total APECS membership. Russia, Germany and India also have each more than 100 members and these numbers keep growing. There is increasing engagement on the national level within APECS. We are also happy that our Asian membership is growing. We are very much looking forward to new national and international activities and a growing membership in all our APECS countries.

One of the major aims of APECS is to facilitate opportunities for early career scientists in polar sciences. As you know, different educational and professional levels may open more and new exciting opportunities. Thus, it is very important for APECS to keep track of all those stages that young scientists pass through their career. More than half of APECS members are graduate students (Master and PhD students) and about 22 percent are postdoctoral researchers, research scientists, senior researchers and early faculty members. The rest are undergraduate students, teachers, research assistants, laboratory technicians, program coordinators, administrators and other early career scientists who greatly contribute to Polar research.

To keep in balance the great variety of Polar sciences and to ensure the better research perspective, APECS has grown as a multi- and interdisciplinary organization with members engaged in Arctic and Antarctic science as well as cryospheric research. We have young specialists in Ecology (including Biodiversity, Fisheries, Forestry, Plant Sciences, Toxicology, Microbiology, Aquatic and Zoology) and

Environmental Science, Geosciences (including geology, soils, permafrost, hydrology, water resources, remote sensing and Palaeontology), Glaciology, Atmospheric Sciences, Oceanography, and Social Sciences (including anthropology, international relations, law, urban studies, human health, medicine and economics)

This section has been all about the early career scientists of APECS, but beyond these facts and figures is much more. APECS is an amazing community of partners, mentors, teachers, young scientists and friends from all over the world, and we look forward to continued growth and collaboration in the years to come.

All membership statistics are correct as of September 2014

The 2013-2014 term was again busy and APECS was involved in many projects and activities around the world and collaborated with many international partners. Here are some of the news highlights from 1 October 2013 to 30 September 2014:

More news can be found on the APECS website in our Feature news <http://www.apecs.is/en/news-feeds/features>, our APECS news <http://www.apecs.is/en/news-feeds/apecs-news>, Partner news <http://www.apecs.is/en/news-feeds/partner-news> and Polar news <http://www.apecs.is/en/news-feeds/polar-news>.

APECS at the ICARP III Planning Group meeting (9-10 September 2013, Potsdam, Germany)

September 2013

ICARP III (3rd International Conference on Arctic Research Planning) will be held in conjunction with the International Arctic Science Committee (IASC) 25th anniversary and Arctic Science Summit Week (ASSW) in 2015 in Japan. ICARP III will provide a framework to identify Arctic science priorities for the next decade, to coordinate Arctic research agendas, and to inform policy makers, people who live in or near the Arctic and the global community who have growing concerns about the changing Arctic environment and its impact on the planet. APECS has been invited to contribute to the initiative and to participate in the planning process. The APECS representative in the Planning Group is Sanna Majaneva.



Photo: by IASC

During the meeting on 9-10 September, held in Potsdam, Germany, representatives of the member institutions of the Planning Group discussed about the shape and outcome of ICARP III, and planned the possible contributions of various partners. The contribution of APECS, which was proposed

and warmly accepted during the meeting, will include: (1) workshops and webinars aimed at informing early career researchers about ICARP III and the contributions of IASC and ICARP III partners, and (2) project "Where are they now?" which will work to follow up what has happened to the ECRs that have gotten support and funding from IASC during the IPY and beyond with the goal to find ways to further enhance the engagement of APECS and IASC in the support and training of ECRs.

APECS helping to shape the AMAP AACAA project

October 2013

The Adaption Actions for a Changing Arctic (AACAA) is an Arctic Monitoring and Assessment Program (AMAP; an Arctic Council working group) project. The project is currently taking shape with numerous Arctic organisations, including APECS represented by Jennifer Provencher, taking part in formulating ideas that will help shape the project.

The AMAP secretariat brought together those involved with the AACAA project in Quebec City, Canada for a 2-day meeting (October 8-9, 2013). Working from the AACAA goals and objectives that group discussed how to move the project forward, outlined what the assessment will include.

From the AACAA guidelines:

The overarching goal of the Adaptation Actions for a Changing Arctic (AACAA) is to enable more informed, timely and responsive policy- and

decision-making related to adaptation actions in a rapidly changing Arctic. Specifically, to consider Arctic-focused climate and integrated environmental frameworks or models that can improve predictions of climate change and other relevant drivers of Arctic change

This goal of AACAC will be achieved by:

- ❖ Working with relevant, recognized scientific organizations and other Arctic Council working groups;
- ❖ Arranging regional workshops for each of the three pilot regions to identify specific work within each region;
- ❖ Identifying the linkages between the environment, socio-economics and ecosystem services of the region;
- ❖ Identifying the drivers of change in the Arctic, and predicting how these drivers on a short-term and long-term basis may change the Arctic environment, ecosystem services, livelihoods of local and indigenous peoples and industrial development;
- ❖ Assessing the changes based on projected futures using acknowledged projections and models;
- ❖ Assessing changes in the short term (2030) and long term (2080);
- ❖ Identifying the changes that may occur in response to interactions among some of the most significant drivers;
- ❖ Identifying possible measures and actions for how to adapt to the identified changes;
- ❖ Providing useful and reliable information to the governments, organizations and peoples of the Arctic region in order to support policy-making processes for adaptation to the identified changes;
- ❖ Consulting stakeholders to document the key issues and questions that stakeholders would want to see addressed for policy relevance and decision-making purposes.

The work will include environmental, human health, industrial and socio-economic impacts and inform potential adaptation actions to cope with anticipated effects of the changes identified. APECS is expected to participate further in this project, and keep an eye out for

more calls for APECS representative participation.

APECS Sweden's chair Olympic Torch Bearer at the North Pole

October 2013



(Above) Ylva receives the flame from Canadian Torch Bearer Steven Podborski. *Photo: Valery Vasilevskiy*

The coordinator of [APECS Sweden](#), Ylva Sjöberg, got the amazing opportunity to go to the North Pole to participate in the Sochi 2014 Olympic Torch Relay. Each of the 8 arctic council states were invited to send one representative for the relay. Sweden decided that they wanted to send an early career polar scientist and contacted Ylva. The expedition participants left Murmansk on the nuclear icebreaker 50 let Pobedy on 15 October and reached the North Pole a record 91 hours later, as the first expedition to reach the pole during the polar night. Onboard were polar scientists from 6 different countries, 3 Olympic medalists and members of the media to cover the journey. During the trip the participants presented their work on the arctic and Ylva worked to make sure that no one missed the important role that the next generation of polar scientists will play and the importance of supporting them.

On the ice, Arthur Chilingarov, the last torch bearer in the relay, lit the flame at the pole while Ylva and the other torch bearers gathered around waving their flags. The ceremony was meant to show the international cooperation that exists in the Arctic and the sensitivity of the Arctic environment.



Group photo of Torch Bearers. From left: Steve Podborski (Canada), Ylva Sjöberg (Sweden), Lassi Heininen (Finland), Jan-Gunnar Winther (Norway), Elena Kudryashova (Russia), Pat Pitney (USA), Steingrímur Jónsson (Iceland), Christian Marcussen (Denmark). *Photo: Valery Vasilevskiy*

Workshop Report – the Cryosphere in a Changing Climate

October 2013



The WCRP (World Climate Research Program) set forth a series of grand challenges to address highly specific and highly focused topics that are critical to improving our progress in understanding the climate system. One of these challenges was the “Cryosphere in a Changing Climate”. To move the discussion of this concept forward, a workshop was held in Tromsø, Norway on 16-18 October 2013. The Climate and the Cryosphere Program (CliC), through APECS, provided support for a few early career scientists to participate in this workshop.

As one of these ECR participants, I assisted in managing the webcast as well as sharing workshop content on Twitter. I participated in the glaciology breakout sessions, shared two posters of my research work, and created a Frostbyte (vimeo.com/allenpope/landsat8). My participation in both sharing my work as well as helping with a minor part of the online sharing of the meeting gave me the opportunity to develop many helpful skills.



Additionally, I benefitted from the networking opportunities that the workshop provided. I connected with new colleagues with whom I might work in the future both scientifically and organizationally, re-connected with senior colleagues within glaciology, and benefitted from conversations with other early career researchers from around the world. Much of the group discussions benefitted from a collegial and a collaborative atmosphere, and the workshop was an interesting opportunity to observe and learn from where it very clearly worked.

I am very much looking forward to participating in some of the action points suggested by the workshop. A workshop report as well as recorded talks from the workshop will be available shortly on climate-cryosphere.org. Be sure to watch out for future opportunities available from APECS and CliC. Thanks again to WCRP, CliC, and APECS for making this opportunity happen for me.

AllenPope about.me/allenpope

Photo courtesy of Rob Massom

APECS at the Canadian Science Policy Conference

November 2013

This week APECS had the opportunity to take part in the Canadian Science Policy Conference. The Canadian Science Policy Conference (CSPC) brought together approximately 300 people, including researchers, students, science administrators, science policy analysts and elected officials from all three levels of

government. Several themes permeated the conference workshops, panels and discussions.

The most prevalent topic at the CPSC this year was the relationship between science and industry. Several panels focused on how science and industry need to be more integrated, both when it comes to training graduate students, and in fostering research together. What to do with 'big data' was a large and popular session that many people took part in. Large data sets and how to store them and keep them safe is a problem across disciplines and departments.

Another theme that several sessions touched upon was science communication. Science within classrooms, and general science communication was discussed. The general consensus focused around the need for more communication on all levels to increase public science literacy and support for evidence based decision making. Several successful programs were highlighted, and a new Canadian network of science blogs (Science borealis; scienceborealis.ca) was unveiled during the meeting.

Both the state of the PhD (and the glut of post-docs) in Canada and how we can move towards more diversity within the realm of research were both allotted their own sessions, and were themes discussed throughout the conference. Most discussions within these two realms resulted in how high level policy changes may be needed to balance and manage 1) how academia prepares PhDs for a more broad set of jobs after completing their degree, and 2) how increased diversity in research is still very much needed, specifically in regards to women.

Lastly, I had the opportunity to represent both APECS and the APECS Canada National Committee on a panel discussing "Is Canada able to meet its needs for research and innovation on northern issues, given that it does not have graduate programs situated in the three Canadian territories?" (<http://www.cspc2013.ca/p20-canada-able-meet-its-needs-research-and-innovation-northern-issues-given-it-does-not-have>). This session included representatives the Yukon Government, the Northwest Territories government, the Nunavut Arctic College, the Yukon College, ArcticNet, the Association of

Universities of Northern Studies (ACUNS), and the Association of Polar Early Career Representatives (APECS). Our panel discussed the needs of early career researchers in the north, how these needs were being met, and how the creation of graduate programs in the north may help facilitate the development of skilled workers in the north that are in great demand.

To learn more about the discussion, you can hear from of the panelists viewpoints here at the conference website (<http://www.cspc2013.ca/>).

Ruth Hindshaw: Representing APECS on the INTERACT TA Board

December 2013



Earlier in the year I was given the amazing opportunity to sit on the INTERACT Transnational Access (TA) Board as an APECS representative. Transnational Access is an EU (FP7) funded program which enables researchers to get their travel and accommodation costs covered for visits to Arctic research stations and have free use of the station facilities for the duration of their stay. This allows groups to conduct fieldwork that might not otherwise have been able to afford it.

The job of the TA board is to make a scientific evaluation of all the applications and then make a list of projects recommended for TA. The research stations then decide which projects to fund based on the recommendations and practical considerations such as the number of beds free. I quickly realized that all the projects sounded very exciting and in an ideal world all would have been funded. Unfortunately INTERACT, like any funding body, has a limited amount of money. How to compare projects across such a wide variety of disciplines? How to compare projects written by a master's student versus a professor? Answer: by reading, grading, and then discussing them all. A lot of work, but it meant that the recommendations were based on a collective decision.

Now I have a much better appreciation of the tough job reviewers have when faced with lots of high-quality applications. Based on what I

learned at this meeting, these are the three things that I recommend everyone should keep in mind when writing a funding application:

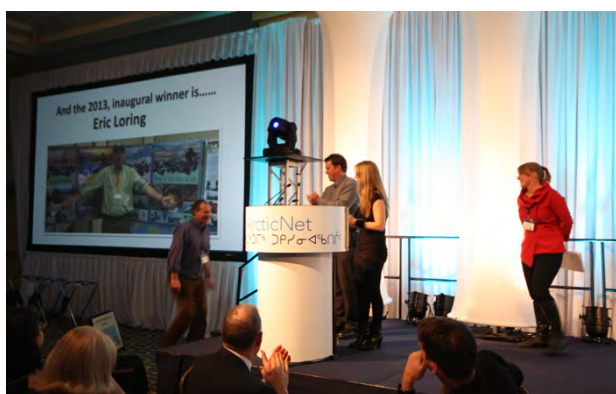
- ❖ **Abstract:** These are *the* most important sentences in the whole proposal. As such, you need to give reader/reviewer an idea of the wider relevance *and* the specific aims of the project.
- ❖ **Methods:** Need to be sufficiently detailed to convince someone not in your field that it'll work.

Do literature homework: one of the big issues was people not being aware of others' work.

APECS Canada and ASA Mentor Award

December 2013

The APECS Canada National Committee and the ArcticNet Student Association (ASA) have joined forces to create the APECS Canada and ASA mentor award. Nominations for this award is done through an open nomination process each year and will be presented annually at the ArcticNet Annual General Meeting. The purpose of the APECS Canada and ASA mentor award is to recognize and honor the efforts of their mentors within the polar science community of Canada. This award has been created to acknowledge the time and energy that mentors dedicate to early career researchers each year, and their efforts in building a supportive community.



The inaugural APECS Canada - ArcticNet Student Association Award was awarded to Eric Loring from Inuit Tapiriit Kanatami (ITK) during the ArcticNet Annual Science meeting banquet on 12 December 2013. Jennifer Provencher, representing both APECS Canada and the ASA

introduced the award to the crowd. The award was presented by two long-term APECS and ASA mentors (Lisa Loseto and Nikolaus Gantner) whom Eric has supported and inspired over the years. As a token of appreciation Eric was given a book made from collected images and messages from students and colleagues he has worked with throughout his career. Nominations are now open for the 2014 mentor award.

APECS Brazil at Future Earth seminar

January 2014

On 9-10 January 2014, Fernanda Quaglio from APECS Brazil attended the Seminar on Future Earth sponsored by the ICSU ROLAC (International Council for Science, Regional Office of Latin America and Caribbean) Meeting in Varadero, Cuba. ICSU is a non-governmental organization with a global membership of national scientific bodies and International Scientific Unions (www.icsu.org). Its main vision is to encourage international science for the benefit of society. The event was attended by members of the ICSU ROLAC, as well as other international representatives not yet associated with ICSU from 18 countries, including APECS-Brazil.

The meeting addressed especially how to attract the associate institutions to develop scientific projects in the context of the ICSU program "Future Earth" (<http://www.futureearth.info/>). This is a decadal initiative of international research to study several scientific branches related to global environmental change and thus provide information on global sustainability for the next decades. The program involves many scientific fields, such as medicine, humanities, chemistry, nutrition, ecology and conservation, engineering, physics, astronomy, paleontology, etc.

Industrious APECS Executive Committee In-Person Meeting, January 17 – 18, 2014

January 2014

The APECS Excom in-person meeting (Tromsø, Norway; January 17-18, 2014) did more than it said on the tin: it not only provided the five of

us with a chance to finally meet in person; we were also joined by our Director and our three ex-officio members!



After having spent a first industrious day at the University of Tromsø, we were kindly hosted by the Director of the Climate and Cryosphere (CliC) Project Jenny Baeseman and her family on the second day. Add any number of visitors, and it was a full-house indeed. Thank you, Jenny!

True to form, our agenda was equally packed. We carefully evaluated various ongoing APECS activities: what was going well and what was in need of adjustments. A look at our Council, our sub-committees, and our working groups showed that we are on top of our priorities for 2013/14. Thanks to the hard work of the previous ExCom to secure funding for the directorate, we even dared to say that our workload was overseeable – even enjoyable!

Pressing matters that are now being tackled are the APECS Strategic Plan 2014-17 as well as the relationship of APECS International with its National Committees and their respective partners. Such matters serve to remind us that as we grow as an organisation, new and exciting situations continuously arise. We are proud of our National Committees and we hope that long-lasting and fruitful partnerships will come out of it.

On that note, our ExCom meeting also provided the chance for several side-meetings with some of our APECS partner organisations: Jenny Baeseman of said Climate and Cryosphere (CliC) Project discussed which direction our cooperation could take; and Charles Fierz, President of the International Association of Cryospheric Sciences (IACS) is very much

looking forward to a collaboration that will motivate more early-career alpine scientists to join APECS and benefit from the membership. Furthermore, we met with representatives from the University of the Arctic (UArctic), with whom we share our field schools and graduate programs catalogue and whose student ambassadors very much look forward to some joint events in the near future.

Thanks to the in-person meeting, your APECS Excom feels confident and invigorated and cannot wait to engage on the tasks of a 'cool' 2014.

APECS representatives at the Arctic Frontiers 2014 Science Committees

January 2014



For the Arctic Frontiers 2014 conference in Tromsø, Norway (19 – 26 January), four APECS members were selected to serve as early career researcher representatives on the Science Committees of the conference: Marney Paradis was member of the Live, Work, and Stay Healthy in the Arctic session, and her graduate studies on leadership within Indigenous education played a role in establishing strong professional connections with other session members. Dr. Frigga Kruse was chosen as member to the Health and Environment session, and her arctic archaeological knowledge base provided important historical context to the committee. Mia Bennett drew upon her familiarity with arctic geopolitics to assist in the abstract review and selection in the Shipping and Offshore committee. Piotr Graczyk assisted as member of the Arctic Search and Rescue committee, in which he utilized his studies of international relations and arctic cooperation in the selection criteria.

We would like to take this opportunity to extend our appreciation to the Arctic Frontiers and APECS committees. Serving as Science Committee members and as Early Career Research Representatives has been tremendously enriching and highly rewarding. Assisting in this process was a welcomed task, as it provided us all the opportunity to liaise with committee chairs and immerse ourselves

into the world of international science management. Further, the auspicious role of helping shape the messages and delivery of the conference itself is a learned task that will doubtlessly benefit us in the future.

Serving as an APECS representative is a process we would recommend to all. Bridging early career polar researchers with established and highly knowledgeable arctic authorities is certainly a worthwhile objective, and is one in which the Arctic Frontiers Conference is known to provide. Networking, exchanging ideas, and strategizing developed into tangible plans of action. In other words, seemingly informal interactions transformed into professional international relationships. As APECS representatives, we have secured rapport amongst our circumpolar colleagues, and this is something that we are truly grateful for. Again, a huge thank you to both the Arctic Frontiers and the Association of Polar Early Career Scientists. You have helped us in many ways, and we have nothing but gratitude for this!

Marney Paradis, Frigga Kruse, Mia Bennett, Piotr Graczyk

APECS contributes to new International Polar Partnership Initiative Draft

February 2014

On 10 and 11 February 2014, a meeting of the extended Steering Group on a Long-Term Cooperative International Initiative took place in Paris. It was kindly hosted by the IOC of UNESCO in Paris, France. WMO supported travel of 4 participants in the meeting, including APECS representative Allen Pope. Other organizations represented included AMAP, IASC, IASSA, IHO, GRID-Arendal, UNESCO, ICSU/Future Earth, EPB, MRI, and more. The meeting was chaired by David Hik and the secretary was Vladimir Ryabinin.

The meeting reviewed polar interests and objectives of participating organizations and made a strong attempt to identify commonalities between them, in the process defining a concept document for an International Polar Partnership Initiative (IPPI). APECS has been a part of the IPPI discussion since it began, and the IPPI is committed to making the voices of

early career researchers of all polar disciplines heard now and into the future.



Personal perspective on the steering group meeting from ex-officio Allen Pope:

My role was not only to present about APECS and what APECS does, but also use my early career perspective to feed in to discussions. As an early career scientist, I have just as many opinions as senior scientists on, for example, international and interdisciplinary research in a climate with reduced research funding. It is also my role to advocate for training and capacity building aspects to be integrated into any long-term polar initiative. After all, as the future is being planned, it is important to have the future in the room.

In addition, the group's secretary also gave me more responsibility and opportunity by appointing me to lead one of the breakout groups and put together the concept document draft! It was a bit daunting but also quite rewarding. Finally, I was able to connect with other committee members about ways they can work with APECS, as well as how we might collaborate on future research. The meeting was only two days, but it was an invaluable opportunity that I wouldn't have had without APECS.

If you're interested in being an APECS rep on committee like this one, get involved as soon as possible! Keep your eyes open for future opportunities on the APECS email list, and also

contact info@apecs.is with questions about what you can do now and how APECS can help you shape the future of polar research.

Climate and Cryosphere project is creating unrivalled opportunities for APECS members

February 2014

The annual Climate and Cryosphere Project (CliC) scientific steering group meeting was hosted by the WMO, Geneva from 17th – 20th February 2014. CliC sponsored APECS representative, Eleanor Darlington, to attend the meeting. She joined 23 established researchers who all play leading roles in cryospheric research. The meeting was led by CliC chair, Greg Flato (Environment Canada) and organised by Jenny Baesman (CliC Director).

The aim of the meeting was to review the current standing of cryospheric research and to highlight areas that need special focus, or interdisciplinary collaboration. This was achieved by participation from many other organizations such as WCRP/Future Earth, SCAR and CLIVAR. The outcomes of the meeting include several workshops, to bring together researchers to collaborate on research areas such as the West Antarctic Ice Sheet, sea ice modeling and a snow inter-comparison project.

Personal perspective on the steering group meeting from APECS representative Eleanor Darlington:

As the APECS representative I gave a short presentation on APECS activities over the last year, and what's planned for the coming year. I received many questions, especially regarding activities taking place at a national level. CliC is a strong supporter of early career researchers, having contributed 200,000 Nkr to APECS, which has supported the travel of early career researchers to workshops and meetings. There were many proposals of events to support early career researchers, particularly in ice-sheet and climate modeling. An exciting project is emerging, which will see the creation of science co-ordination positions for early career researchers, to take a leading role in steering forward a targeted research activity. Opportunities such as these are invaluable for

young scientists, and will greatly assist in their career development.



I was also taking the meeting notes and will help in compiling the meeting report. This responsibility has given me insight regarding the administrative side of a science planning meeting and also proved to be a unique networking opportunity. I met and had discussions with researchers from six continents!

APECS Canada attends the inaugural THAW in Quebec city!

March 2014

In the snowy and picturesque city of Quebec, a multidisciplinary group of international researchers came together on March 12th to 15th for the Thermokarst and Aquatic

Ecosystems Workshop (THAW). Thermokarst lakes, formed by thawing of permafrost, are shallow polar oases that provide important habitat for a plethora of animal and waterfowl populations. In recent years, these dynamic freshwater ecosystems have been subject to intensive hydrologic, biochemical and geomorphological investigation as researchers work to assess their vulnerability to climatic change. This inaugural workshop took place at the Centre d'Études Nordiques (CEN) at Laval University. Several members of APECS attended the meeting, including APECS Canada board members Ann Balasubramaniam (University of Waterloo) and Daniel Lamhonwah (Queen's University).



A major goal of the meeting was to provide a forum to house discussions that furthered the understanding of freshwater ecosystems in changing permafrost landscapes. Researchers from more than a dozen countries spanning the globe travelled to Quebec to share their expertise in a variety of natural and physical science disciplines – biology, chemistry, geomorphology, geology, hydrology, and modelling. Many international universities and organizations were represented at THAW, including ADAPT, CliC, PAGE21 and the Alfred Wagner Institute.

"THAW has been a tremendously enjoyable success, drawing attention to the vital importance of freshwater systems on permafrost landscapes, and setting out the major priorities for research on this theme throughout the Polar Regions," says Warwick Vincent of Laval University, and co-organizer of THAW. "Isabelle Laurion (co-organizer) and I are especially grateful to the high-energy participation by so many APECS members, and their superb networking across disciplines. In the final plenary of the workshop it was

unanimously declared: Let's keep this amazing THAW network active and ongoing!"

APECS Portugal in the national workshop "From polar science to the classroom"

March 2014



The role of the polar scientists in the classroom was the motto for the national workshop Education & Science organized by IMAR-CMA (University of Coimbra) and Education and Citizenship Institute. The early career researchers of APECS Portugal were present in the scientific and international network sessions. The early career representatives showed their work in several research areas and how those themes can be introduced in the classroom. The discussion and sharing of experience and expertise between the scientists and the teachers was intense and fruitful during all day. At the end of the day, two main ideas emerged: (1) taking scientists into the classroom and bringing students into scientific laboratories effectively increases the interest of the younger generations in science and (2) the introduction of scientific work in the classroom setting greatly enhances the scientific observational skills of the students and the scientific interest of the entire school community.

APECS representative during SCAR Horizon Scan meeting

April 2014

Four early career scientists participated in the [Scientific Committee on Antarctic Research \(SCAR\)](#) Horizon Scan Retreat, held in Queenstown, New Zealand from April 20 to 23.

Since the retreat was on invitation only, it was a great honor for the four early career scientists to attend this event where several of the world's leading Antarctic scientists and policy-makers gathered. Fifty-five scientists from 24 countries convened for the Antarctic and Southern Ocean Horizon Scan initiative, with an aim to identify the most important scientific questions that should be addressed by Antarctic research over the next two decades. From over 800 questions, 80 questions were retained and developed during the three days of the retreat. All attendees actively participated in voting sessions and discussions.



The four early career scientists present were: Charlotte Havermans (BE) working on Antarctic benthos and molecular methods and associated with APECS-Belgium, Erli S. Costa (BR) working on seabird ecology, council member of APECS and APECS-Brazil president, Polina Morozova (RU), PhD student in climate modeling and meteorology and Xichen Li (USA), student in atmosphere-ocean-sea-ice modeling. Jenny Baeseman, the founding Director of APECS and current Climate and Cryosphere Project (CLIC) Directory and José Carlos Caetano Xavier, leader of APECS-Portugal also participated in the SCAR retreat, showing the importance of APECS in the training of leaders in polar science.

APECS and the CHARS Management Committee Meeting

April 2014



APECS was happy to participate in the inaugural Canadian High Arctic Research Station (CHARS) management committee meeting at the

end of April 2014 with Jennifer Provencher representing APECS Canada as the current chair of the APECS Canada board. The CHARS management committee consists of representatives from northern stakeholders including aboriginal groups, territorial governments, federal departments working in the north, industry, and APECS. The meeting laid out both the long term and short term (2014-2019) objectives for CHARS. Considerable discussion centered around these objectives with many groups feeling that the short term objectives need to be expanded in order to better reflect the priorities identified during the consultation process, specifically around healthy communities. Two task forces were set up by the committee to move projects along. One task force will be reviewing and approving the work plans for the coming year. A second task force was established to outline the terms of reference and rules of procedure structures for the large management committee moving forward.

Scientific Journey: Brazil and the Antarctic Treaty

April / May 2014

Erli Schneider Costa, Sandra Freiburger Affonso and Larissa Castro

The XXXVII Antarctic Treaty Consultative Meeting (ATCM) took place in Brasilia, Brazil, from April 28th and May 7th. It was attended by over 300 delegates from 41 countries. The Antarctic Treaty was signed on 1 December 1959 in Washington as a result of the International Geophysical Year (IGY) of 1957-58. The Treaty aims to ensure that Antarctica would be used for peaceful purposes only, international cooperation and freedom scientific investigation, and that scientific observations and results from Antarctica shall be exchanged and made freely available.

APECS-Brazil, supported by SECIRM through the Programa de Mentalidade Marítima (PROMAR), organized all over Brazil the I Scientific Journey: Brazil and the Antarctic Treaty, aiming to promote in Brazilian schools and community discussions related to the importance of the Antarctic for the planet. The previously

registered schools received some materials from SECIRM / PROMAR and used them in classes. At least 20 activities were taken, including conferences, workshops, reading and creating texts, practical activities, from north to south of Brazil involving institutions from Rio de Janeiro (Universidade Federal do Rio de Janeiro, Escola Pedro II Campus Niterói, Campus São Cristóvão e Campus Tijuca, Colégio de Aplicação da UERJ); from São Paulo (May, 30, Colégio Mobile), from Rio Grande do Sul (Escola Estadual Érico Veríssimo, Caxias do Sul; Colégio Estadual Tereza Francescutti, Canoas, Fundação Escola Técnica Liberato Salzano Vieira da Cunha, Novo Hamburgo, Escola Estadual de Ensino Fundamental e Médio and Escola Municipal Sete de Setembro, Erval Grande, Instituto de Educação de Ivoti), from Paraná (Colégio Estadual Professor Júlio de Mesquita em Curitiba) and from Rondônia (Escola Profissionalizante Delta, Rolim de Moura; Escola Municipal Professora Lairce Santiago Maina, Pimenta Bueno and (in June, 05) in SENAC also from Pimenta Bueno). More than 60 professors, researchers and about 3000 students have participated in the activities.

Several information were posted on Facebook's event page and at least 2000 additional people were informed about the scientific meeting and its discussions. These informations and pictures of all activities on Brazil are available in the webpage:

<https://www.facebook.com/events/543761875736485/>.

APECS and Canada Goose Team Up!

May 2014



APECS and the manufacturer of extreme-weather outerwear, Canada Goose®, are teaming up to highlight the work done by polar early career researchers and to keep them warm during the *Where does your Goose take you?* program. APECS and Canada Goose® are looking for APECS members who will be actively doing field work in the Arctic or the Antarctic during 2014/15. Early career researchers working in either polar region and

in any discipline were able to apply to the program.

Each selected *Where does your Goose take you?* participant were given a Canada Goose® Expedition Jacket. They will work with the project coordinators (from the APECS leadership) to write two blog entries throughout the year, highlighting their polar research (science program, field sites, travel, workshops, field courses etc.), which will be posted along with photographs from the field on the Canada Goose® and APECS websites as well as relevant social media sites (Facebook, Twitter, Instagram etc.). Participants will also work with the project coordinators to select photos from all participants that will be used to highlight their research locations on an interactive map.

APECS and Canada Goose are kicking off our partnership together by featuring six polar early career researchers from around the globe. In total APECS received 56 applicants for the 'Where does your goose take you' program. The three person selection committee had a tough job of reviewing all the great applications for the program.

Congratulations to:

- ❖ Lydie Lescarmontie (Australia)
- ❖ Marc Oliva (Spain)
- ❖ Pierre Dutrieux (UK)
- ❖ Pamela Wong (Canada)
- ❖ Andrian Vlkakhov (Russia)
- ❖ Emily Stevenson (USA)

Join us in following these Arctic and Antarctic early career researchers! Keep an eye open in the coming months to learn more about what these APECS members are doing.

APECS representative at the CAFF Board Meeting in Cambridge Bay, Nunavut

August 2014



The 2014 board meeting of the Conservation of Arctic Flora and Fauna (CAFF) working group for the Arctic Council took place August 25-28 in Cambridge Bay, Nunavut. APECS was once

again invited to participate, and APECS Vice-President Jean-Sébastien Moore was able to attend the meeting as a representative. Much of the first day of the meeting was spent agreeing on realistic deliverables deriving from a series of 17 policy recommendations made following the recently completed Arctic Biodiversity Assessment. This is obviously extremely important in terms of translating the knowledge generated during this landmark assessment into actions that will make a difference for endangered biodiversity in the Arctic regions. Details of the upcoming Arctic Biodiversity Congress in Trondheim in December were also discussed. APECS will be present at the congress and will be organizing social events and a session on education and outreach, so if you have an interest in biodiversity, you should definitely consider attending! Finally, recent progress and future efforts on the Circumpolar Biodiversity Monitoring Program (CBMP) were detailed. There might be exciting opportunities for APECS members to get involved, so stay tuned! It was also a lot of fun to see the small Northern community of Cambridge Bay come together to welcome the international delegates who all seemed to be enjoying themselves tremendously!

APECS at the SCAR Delegates Meeting 2014

September 2014



APECS Council Member Alia Khan and APECS Director Gerlis Fugmann attended as observers the SCAR Delegates Meeting 2014 from 1 – 3 September 2014 in Auckland, New Zealand. The Scientific Committee on Antarctic Research (SCAR – www.scar.org) is one of APECS major partners and holds its Delegates Meetings every two years to conduct its administrative business. For APECS attending this meeting provided an excellent opportunity not only to gain a better understanding of the SCAR structure but more importantly to learn about current and planned SCAR activities and promote early career researcher involvement in them. More information about the SCAR Delegates Meeting

is available here:
<http://www.scar.org/scarmeetings/meetings>

APECS at the AMAP Working Group Meeting

September 2014

The 28th Working Group meeting of the Arctic Monitoring and Assessment Program under the Arctic Council took place in Whitehorse, Yukon September 15-18. Canada chairs the Arctic Council in 2013-2015, and is this hosting a variety of Working Group meetings across Canada's North. In Whitehorse, the AMAP working group meeting was held in conjunction with a meeting of the Working Group on the Protection of the Arctic Marine Environment (PAME). The two groups held a joint session, which was attended by both group's delegates. APECS was once again invited to participate and APECS member Nikolaus Gantner was able to attend the meeting as a representative. This is what he reported back from the meeting:



"Right off the bat, I can say that I was genuinely impressed by the high level of the meeting and its formal process. For example, heads of delegates refer to each other by the Country's

name, much like at a UN meeting. I myself was addressed as 'APECS'.

Much of the first day of the AMAP meeting was spent agreeing on realistic deliverables derived from a series of policy recommendations made following the recently completed Persistent Organic Pollution (POPs) Assessment. This step is important, as it ensures knowledge generated during this recently completed assessment into actions that will make a difference for contamination with POPs in the Arctic regions. The POPs Assessment report triggered much debate. The very interesting prospect of the use of Unmanned Aircraft Systems (UAS) in the Arctic led to a lively discussion as well. Interesting from an APECS-perspective is the 'Adaptation Actions for a Changing Arctic' (AACA) project, which already provided some opportunities for direct involvement of APECS members.

Over the second and third day, recent progress and future efforts on the AMAP secretariat were detailed. Details of and contributions to the upcoming Arctic Biodiversity Congress (Trondheim, December 2014) and Arctic Change 2014 Meeting (Ottawa, December 2014) were also discussed. APECS will be present at both meetings and will be organizing social event, sessions and career panels at them. Much of the efforts to determining follow-up from this AMAP meeting and timelines thereof were driven by the nearing Task Force meetings and the Arctic Council meeting in Iqaluit in April of 2015. Canada will then hand the chairmanship to the United States for 2015-2017.

Near the end of the meeting, I was able to give a brief presentation behalf of APECS membership (of ~4800) on APECS outreach activities and highlight recent publications by APECS Canada members. The AMAP Secretariat and meeting Chair commended APECS on its outreach efforts, a compliment that I am happy to pass on to you all! Moreover, there might be exciting opportunities for APECS members to get involved in AMAP, so stay tuned! Whitehorse was an excellent location for this meeting, and welcomed the international delegates who all seemed to be enjoying themselves!"

APECS aims to provide opportunities for young researchers to connect with senior researchers and leaders in the international polar science community. Aside from our online activities, we also plan events, such as career development workshops and mentor panels in connection with larger scientific conferences where polar researchers will be present. This maximizes the number of mentors that can participate and at the same time minimizes the need for additional travel support for early career researchers to attend these events.



Conference organizers often provide the use of the conference venues as an in-kind support. Besides providing practical career development skills which early career researchers need for a successful career in polar science, these events also help early career researchers to “break the ice” and help generate communication between the next generation of researchers and those experienced scientists that know the field through years of research experience.

The term 2013-2014 was again filled with APECS events around the world organized by many of our members on a voluntary basis. APECS wants to especially thank all those that were involved in organizing these and spent to many hours of their free time in making these a success. Without your help and tireless effort these would not be possible! A special thank you also to all the sponsors that provided funding support for some of these events.

Here you find a selection of the most important events that happened between 1 October 2013 and 30 September 2014 and at which conference they were organized. In addition to these, there is a multitude of smaller events that our members and National Committees are organizing in their home countries and cities.

3.1 Major Workshops, Panels and Networking Events during 2013-2014

1st APECS Brazil Workshop on Career Development

17 – 20 September 2013, Rio de Janeiro, Brazil

The X International Polar Week and the 1 Workshop on Career Development occurred between 17 and 20 September 2013 at the Federal University of Rio de Janeiro, UFRJ, Rio de Janeiro, and RJ, BRAZIL. There were two round tables, 5 lectures, 6 oral presentations and 14 short courses with an average of 12 participants per course.

We rely on presence by over 100 people in the four-day event all together with 80 teachers and 6000 students that could virtually participated via live streaming. We also found that more than 7300 people have been reached by APECS-Brazil website (www.apecsbrasil.com) and fan-page on Facebook (<https://www.facebook.com/APECSBrasil>) where we posted pictures of the activities performed during the event. It means that an average of 1,800 people per event day followed the information published by the website and Facebook, which was used as a mean support for dissemination the activities. We had over 20 schools throughout Brazil (from the Amazon to the Rio Grande do Sul) involved in these activities. The recorded lectures during the X SPI

and I WDC will be edited and distributed to participating schools and for schools that did not access the virtual activities due to technical problems. The abstract book is available on <http://www.apecsbrasil.com/news/lrxspi-iwdc/>.

On the last day of the event the Association of Ocean and Pole Early Career Researchers and Educators (APECS-Brazil) was made official with the presentation of the Foundation Act and the Statute of the Association.

As additional products a lecture on the Graduate Program in Education, management and science divulgation was made by Ma Ines Tavernier from Belgium, two additional virtual lectures by prof. Dr Jose Xavier to schools in Rio Grande do Sul, five lectures in schools in São Paulo (Dr Jose Xavier, Dr Sandra Freiburger, Ma Francyne Piera) and a lecture attendance in school in Rio de Janeiro (Dr Jose Xavier, Dr. Schneider Erli Costa, Ma Elaine Alves). Dr Jose Xavier also presented two lectures during the Brazilian Symposium on Antarctic Research in São Paulo, Dr Fernanda Quaglio presented APECS-Brazil during this event. The work during the Polar Week activities in the Amazon has been presented by Ma Francyne Elias Piera. Because of all those information's, all the objectives and proposals set out by the event were fully achieved.

UKPolar Network - Software and Polar Science Workshop

17 September 2013, Scott Polar Research Institute, University of Cambridge, UK

On the 17th September 2013, the UK Polar Network hosted a Software and Polar Science workshop at the Scott Polar Research Institute, Cambridge. Preceding the UK Arctic Sciences 2013 conference, this one day event was designed to introduce new software to early career Polar Scientists whilst also discussing how software already used can be developed to increase its possibilities. The workshop was sponsored by the Software Sustainability Institute (<http://www.software.ac.uk>), in which Aleksandra Pawlik was their representative for the day.

Keynote speakers at the workshop included Dr. Gareth Rees who introduced the use of free software – and more importantly, is it any good?

(The answer? Yes!), Dr. Roisin Moriarty and Dr. Ian Rutt who shared their experiences of sharing information within the scientific community, data and coding respectively, and the benefits it can lead to. Additionally, Dr Jon Blower presented on the visualization of environmental data (with some very imaginative methods) and Dr Doug McNeall on the presentation of data (for some great tips on the use of colour in graphs and the use of stretching in axis to make the data most appropriate, see www.betterfigures.org). From the participants' end, "lightning presentations" introduced the varied software that was used for polar sciences, from Microsoft Excel to custom-designed software such as Avopolot in Python.

The one-day workshop was a fantastic success, due to the hard work from TJ Young, Allen Pope, and Nick Toberg in organising the event. And of course, massive thanks to all our speakers and the Software and Sustainability Institute.

2nd APECS BeNeLux (Belgium – Netherlands – Luxembourg) Symposium

31 October 2013, The Hague, Netherlands

After the first edition in Ghent, Belgium last year, the APECS BeNeLux (Belgium-Netherlands-Luxembourg) symposium is becoming a tradition. On October 31st, the 2nd edition took place in the Hague, Netherlands and was organized by our colleagues Frigga Krusse and Libby Jones.

The general impression of our Belgian delegation: what a success! The extremely varied programme was received well by the 40 participants. This symposium had it all: a diverse group of speakers, as not only scientists were represented but also a conservator of a museum, policy makers, a high school teacher and even a high school student. Presentations by (keynote) speakers were followed by pitch poster presentations, Frostbytes and workshops on outreach and polar policy. Sufficient time for networking was available during breaks, lunch with milk, as Dutch tradition prescribes and the reception after the symposium.

Several people who were present at this symposium also attended the Dutch National

Polar Symposium on the next day in The Hague, as this was all perfectly timed.

After this successful second edition, we look forward to the third edition, in 2014 in Luxembourg.

IV APECS Portugal Workshop – “How to be a Polar Scientist for Dummies”

31 October 2013, Faro, Portugal



APECS Portugal organized its fourth annual workshop last week in the University of Algarve in Faro, Portugal. Dedicated to “How to be a Polar Scientist”, we had with us 13 Portuguese earlier career scientists, 3 APECS Portugal mentors and 4 international guests. During the day we discussed science, communication and opportunities to do research in the Arctic and in the Antarctic regions. We counted with the presence and communications of Alexandre Nieuwendam, president of PYRN, Iglika Trifonova vice president of APECS and APECS Bulgaria, Ylva Sjöberg from APECS Sweden, Dr. Mark Mallory Canada Research Chair in Coastal Wetland Ecosystems of Acadia University, and Dr. Hans-Otto Pörtner researcher in the Alfred Wegener Institute for Polar and Marine Research, Germany (AWI).



With main focus of the workshop being dedicated to how to communicate polar science to the society we had two brilliant talks about how to make our message pass through visually with Bruno Cruz that is a graphic designer and taught us how to do good poster. And another talk presented by José Xavier that presented the Educational projects that are being conducted by the scientists of Portuguese Polar program and APECS Portugal.

The APECS Portugal workshop was a very successful. During a full day program, the young scientists present in the room have the change to know about the work of each other, discuss, create networking bonds, learned ways of improve their communication skills and plane future research future steps. Once again the APECS Portugal workshop was a success.

APECS Canada Networking Event at ArcticNet

December 2013, Halifax, Canada

APECS Canada had a very successful networking event at ArcticNet Annual Science Meeting in 2013. The event was held at the Economy Sho Shop in Halifax, just down the road from the conference centre. Mentors and mentees played polar bingo, and all finished cards were entered into a draw to win a prize. David Scott from the Canadian Polar Commission was called upon to help organisers JS Moore, Ann Balasubramaniam and Jennifer Provencher pull the winning cards.



Each winning card was given a prize! A chocolate animal from the north pole! These prizes also showed how much work we still have to do in educating people about polar animals! A bear, a walrus and a penguin?



As a special treat the group was treated to some throat singing by Beckie Mearns and Kerri. Throat singing Inuit style was new to many in

the crowd. The spontaneous performance ended with a group song that had everyone in the venue helping out. What a treat!

A great night was had by all, and we hope to see again next year in Ottawa.

APECS – ESWIN (Earth Science Women's Network) "Getting out in the Field as a Skill" Workshop at AGU 2013

11 December 2013, San Francisco, USA

Fieldwork is an essential component for many in the geosciences, and it provides opportunity for gaining skills in everything from temporal and spatial reasoning to organization, planning and preparation. There are many challenges associated with fieldwork, including physical, economical, managerial, and legal concerns. This workshop provided a panel discussion on the challenges, benefits, and strategies to being successful at planning, leading, and completing fieldwork in a variety of settings. Panelists were Dr. Bob Hawley (Dartmouth College), Dr. Fiamma Straneo (Woods Hole Oceanographic Institution), Dr. Julie Brigham-Grette (University of Massachusetts Amherst), Allen O'Bannon (CH2MHILL Polar Services). The panelists began the workshop by providing background information on how they became involved in field campaigns and key tips for successful field campaigns (listed below). The panelists then answered questions from the audience: the questions and answers are summarized below.

This workshop was made possible through a partnership of the Earth Science Women's Network (ESWN) and AGU Education and was co-organized by the ESWN and Association of Polar Early Career Scientists (APECS). We extend our thanks to the partner organizations and panelists: this event would not have been successful without your participation and support!

Key Tips:

Dr. Bob Hawley:

- ❖ Experience will lead you to even more field opportunities so take the opportunities you can get without over-selling yourself/exaggerating your current experience level.

- ❖ Even if you initially take a secondary role, you will likely end-up leading a field campaign at some point because you will know what to do through past observational experiences.
- ❖ Prepare in advance for a variety of scenarios and know what you are bringing, what you are trying to accomplish, and assign duties.
- ❖ Be persistent. Keep applying or volunteering for opportunities and when they are given to you, don't be afraid to take them! Persistence, Preparation, and Planning are key!

Dr. Fiamma Straneo:

- ❖ You'll make a lot of mistakes, and they may be costly, but you'll learn a lot from them and you'll get better at executing field research because of those mistakes.
- ❖ Don't be afraid to try something new or different. You may not start as an expert but you'll develop the right skills and knowledge.
- ❖ Have back-ups: redundancy in observations is key!
- ❖ Talk to experts. Don't be afraid to ask for help.

Dr. Julie Brigham-Grette:

- ❖ Doors of opportunity will open and you have to decide whether or not you should take the available opportunities.
- ❖ You learn that sometimes you have to take risks in remote places but always have plans B, C, D... so that you don't have to take costly risks and endanger yourself.
- ❖ Sometimes you need mental or physical help. Don't be afraid to ask for it.
- ❖ Get advice, listen carefully, and don't be afraid to admit when you're wrong.

Allen O'Bannon:

- ❖ Some skills can be self-taught but sometimes that may not be enough. Formal training can be incredibly valuable. Field safety courses will teach you a variety of skills but even participating in outdoor club adventures on a college campus can provide you with additional knowledge and skills.
- ❖ Experience/practice can teach you a lot so get out there.

Questions & Answers (summarized from all panelists):

Q: How do you transition to leading field campaigns?

A: Ideally your advisor/supervisor should gradually increase your responsibilities so it's a natural transition. Sometimes you need to ask to take-on more responsibilities and step-up to fulfill them because your supervisor had past experiences where someone was not capable of leading fieldwork and they are unsure whether to give you more responsibilities.

Q: How do you convince funding agencies to give you money for fieldwork when remote sensing techniques are much more efficient and cheaper?

A: All remote sensing techniques need to be validated with field observations, so weave validation into the proposed project. Tiered mentoring, where you teach a graduate student then they teach an undergraduate student, can also serve as a broader impact in a proposal.

Q: How do you obtain more experience while you're in a break between undergraduate and graduate degree programs?

A: Networking is key! Researchers may need to hire a technician that has basic science skills or is looking for an intern to complete work on a project. Everyone values initiative so it doesn't hurt to ask about opportunities.

Q: How do you deal with a lack of confidence in someone on your field team?

A: Work on getting a sense for your teammates knowledge and skills before going in the field then incrementally build trust. Ultimately, you need to listen to your instincts and not let ego get in the way because 'no data point is worth your life'.

Q: What do you have to consider when planning fieldwork if you are bringing an inexperienced teammate?

A: Define responsibilities, expectations, and a work schedule for each teammate before going into the field so that you can be proactive and make sure everyone does their part. At each step, make sure you identify any potential problems and look for a way out because you don't want to get trapped in a situation for which you are not well prepared. Similarly, make sure your teammates know the risks and

are comfortable telling you when they feel unsafe or unprepared. Also try to slowly build confidence in your teammates and let them know it's alright to take a break to add layers, get a drink of water, tend to a blister, etc. because otherwise these small problems can lead to much bigger issues. A good leader may sometimes need to lead by example, such as asking to stop and take a drink or eat a snack to show others that breaks are totally acceptable when necessary.

Q: How do you find good field assistants and how to you build their confidence?

A: If you can conduct interviews, present them with some worst-case scenarios in order to gauge their ability to handle difficult situations. Know what you need before trying to make any decisions on team members because you never want to be in the situation where you are the only person that can perform a specific task but you cannot complete it for some reason. Also, be sure that you pick people that are interested in the science, not just being outdoors because that will really help with motivation.

Q: Do you recommend survival training courses?

A: Yes! CH2MHILL Polar Services (CPS for short) offers survival courses that are really worth the initial financial investment. If you're going to Antarctica, you will be expected to complete the 'Happy Camper' course, which will provide you with some basic skills.

Q: How do you deal with gender inequality issues?

A: It doesn't hurt to ask to get the same opportunities as other teammates because sometimes bias is unconscious. If you still encounter problems or don't want to say anything while in the field, try your best to cope with the problems while in the field and present the issues after the field campaign. Be persistent and 'pleasantly' assertive and people will often realize your ideas are important and will eventually be more supportive. However, don't be afraid to admit your limits: you can get yourself into a dangerous situation if you are not physically capable but refuse to admit you need help.

Q: What do you do if you keep getting looked-over and you need some initial experience to get your foot in the door?

A: As the leader of a field campaign, you can include an inexperienced team member and give them some small/easy duties initially until they build the correct set of knowledge and skills needed for a more difficult role on the team. If the fieldwork will not be dangerous or life threatening, you can always find a simple task for someone that will give them the initial experience they need. Undergraduate students can also participate in a research experience for undergraduates (REU) program that will help develop basic field skills.

Cryosphere Career Development Mentor Panel (APECS partnership with AGU Cryosphere Focus Group) at AGU 2013

12 December 2013, San Francisco, USA

There are many challenges faced by early-career polar scientists as they transition from their graduate studies to private-sector, government, or academic jobs. This panel discussion addressed the exciting career opportunities and challenges faced by scientists who study various aspects of the Cryosphere through a question and answer session with four panelists at various stages of their careers both within and outside of academia.



The panelists included (from left to right in the photo) Dr. Jennifer Kay (National Center for Atmospheric Research), Lynn Yarmey (National Snow and Ice Data Center), Dr. Gwenn Flowers (Simon Fraser University), and Dr. Ryan Neely (National Center for Atmospheric Research).

This event was made possible through a partnership between the Association of Polar Early Career Scientists (APECS) and the AGU Cryosphere Focus Group. We extend our thanks to the partner organizations and panelists: this

event would not have been successful without your participation and support!

After the panel, the evening of discussion and networking was continued at the nearby John Colins pub. We thank the AGU Cryosphere Focus Group for providing pizza for the panel attendees during the pub networking event, which helped prolong the post-panel networking and provided the early-career panel attendees with an opportunity to interact with the panelists in a casual setting.

Key Tips/General Advice:

- ❖ Don't judge what you do and do not want to do for your career at the end of your PhD because you'll be exhausted and worn-out and you may need to take some time to recover. If you take time off, you can simply list years rather than months and years in your CV in order to fill the gap time.
- ❖ At the end of your PhD and/or while appointed as a post doctoral researcher, apply for all the jobs that you would actually want, even if they may seem like a bit of a stretch because the employee may think of you for a job in the future.
- ❖ Have something to say to each person that you meet with during an interview. It's totally acceptable to keep a 'cheat sheet' with talking points.

Questions & Answers (summarized):

Q: Did you consider working in the private sector/industry? Do you know of opportunities outside of academia?

A: The National Science Foundation hires consultants for polar field services that are engaged in the Arctic but are not necessarily carrying-out science. In general, IT and consulting companies will recruit people with transferrable skills (like remote sensing, programming, etc.) but may not otherwise have a background in the specific services that the company provides. If you have a background in instrument design, you can either start your own company or look for work at instrumentation corporations that value the scientific approach to problem solving.

Q: What about non-profit organizations? Do you know of anyone who works for one or of any organizations that are interested in polar scientists?

A: Although Arctic research needs to engage local communities, there are few non-profit organizations that fill that niche, leaving the door open for people interested in developing their own non-profit polar community outreach organization. Polar Bears International (<http://www.polarbearsinternational.org/>) works toward educating people about polar bears and climate change.

Q: How do you learn/develop data management and grant writing skills?

A: Seek mentorship from either your advisor or other successful scientists and ask to participate in writing a proposal (or part thereof). You want to gain proposal writing experience when it is low-stakes, meaning your job doesn't depend on the proposal getting funded. Reviewing other proposals can also be helpful so ask to review proposals written by your peers or volunteer to serve on a panel review for a funding agency. Data management skills can also be developed through training courses on data curation offered by university libraries or online tutorials.

Q: What is the current outlook on government funding?

A: There is a continued, growing interest in climate change and polar regions so funding opportunities will not totally disappear but you need to make the most out of the limited opportunities that are available. You can also apply to receive funding from private organizations that are invested in the environment and the impacts of climate change.

Q: How do you decide when to apply for a faculty position?

A: You should be confident that you will be able to conduct your own research, but if you really want a job, it doesn't hurt to apply for it even if you do not feel totally prepared because a forward-thinking place will give you extra time to develop (e.g., delay start time to complete a post doc appointment). It's important to keep in mind that the timing of job applications is different in the US (fall to winter) and Europe (spring) so make sure you are looking for opportunities at the right time.

Q: What goes into a job application in academia?

A: Put together research and teaching statements and your CV. Compile some

publications that highlight your work. Ask if people that can serve as good referees can write you letters of recommendation and fill them in on the details of each job so they can tailor the letters accordingly. Write a cover letter for each job that is specifically tailored to that job (i.e., how you meet their qualifications and needs). If you have to submit publications, include why you think they are important to the scientific community. If applying to a job in Europe, you may be asked to write a personal statement asking you to evaluate yourself (tip: initially write it in the third-person then go back and change all references to yourself to 'I's).

Q: Can you give some insight on the tenure process?

A: If you have been working hard, get funding, mentor students, teach, etc., you have already been preparing yourself for success. In this case, a large amount of stress is self-imposed and you really shouldn't worry too much in advance.

Q: How do you balance your responsibilities at a current position while looking for another job?

A: Be sure to clarify expectations with your current supervisor because each supervisor will have a different opinion regarding whether you can work on application materials at work. If you ask your boss for a letter of recommendation, they will know you are applying, so it is best to define expectations in advance.

Q: How do you handle reference letters? How much information should you tell your referees about the job? How many referees should you have lined-up?

A: Ask for letters from potential referees well in advance of deadlines. Once a referee has an initial letter prepared for you, it doesn't take them much work to modify the letter for each job. When you ask for them to write a letter for a specific job, include a draft of your CV (at the least) and other application materials as you feel fit. Ask for letters from numerous referees that will all write you strong letters. If you start a new job, you don't necessarily have to get a letter from your current supervisor because they may not know you and your work well enough to write a strong letter. Try to get letters from referees at multiple institutes, however, the strength of the letter is paramount so don't select someone just to add diversity.

Science Communications and Media Training Workshop at Arctic Frontiers 2014

19 January 2014, Tromsø, Norway

APECS organized a small Science Communications and Media Training Workshop at the Young Scientist Forum activities for the Arctic Frontiers 2014 Conferences. The workshop happened on 19 January 2014 and brought together a small group of early career researchers attending the conference to learn about ways how to use social media (especially Twitter) for your science communication as well as tips and tricks on how to work with the media and how journalists find their science stories.

Mentors for the workshop were Tom Fries (Arctic Council Secretariat, Norway), Patricia Azinhaga (University of Coimbra, Portugal), Jose Xavier (University of Coimbra, Portugal), Björn Lindahl (Svenska Dagbladet, Sweden), Malin Avenius (frilans, Sverige Radio), Tom Yulsman (University of Colorado, United States).

We want to thank the mentors for taking their time to join us for this event and providing advice to our participants and thank you also to the participants for a great and very interesting discussion.

APECS Nordic Workshop “Connecting Early Career Researchers and Community-Driven Research in the North” at the Arctic Science Summit Week 2014

7 – 8 April 2014, Helsinki, Finland



The APECS Norden Workshop in Helsinki, Finland was a success. From 7-8 April 2014, over 50 early career scientists, mentors and indigenous researchers gathered at the University of Helsinki and Finnish

Meteorological Institute to be a part of the APECS Nordic Workshop, “*Connecting Early Career Researchers and Community Driven Research in the North*”.

Over the course of two days, participants engaged with timely, thought provoking presentations by Gail Fondahl (UNBC, Canada), Heidi Eriksen (Utsjoki Health Center), Anna Afanasyeva (International Barents Secretariat), Arja Rautio (Thule Institute) and Roberto Delgado (USC/NSF), and offered valuable insights during themed breakout sessions. Sessions topics including existing research policies, stakeholder interests, communication and successful collaboration led to honest, and challenging discussions about the real challenges and concerns that indigenous researchers and non-indigenous researchers face when conducting research in the Arctic. While most agreed, for example, that successful collaborations needed to involve community members in the research process, this was not always taking place. One concern that was raised during the workshop was the scarce representation of Nordic indigenous people in the workshop itself. While every effort was made to advertise the workshop to all possible outlets, there was a higher representation of early career researchers in attendance. This and many other related questions were raised and thoroughly considered over the two days.



Workshop participants were informed that the results of these discussions, in addition to the results from the APECS Norden Survey, and the webinars, will be compiled and drafted into a summary guide or report, translated and shared amongst the participants and the APECS network. Participants will be given an opportunity to comment on the draft prior to

publication. Over the coming year, the APECS Norden project team expect to continue to disseminate the project at relevant conferences, workshops and meetings.

The APECS Norden project team extends a warm, sincere thanks to all the workshop participants and workshop speakers.

APECS Finland Sauna during ASSW 2014

7 April 2014, Helsinki, Finland

The [Arctic Science Summit Week \(ASSW\)](#) took place in Helsinki from the 5-11th of April 2014. As part of that conference, APECS organized a [workshop on 7 - 8 April](#) on the interaction between scientist and indigenous people in the Arctic.

The APECS Finland National Committee organized a social event for workshop participants, mentors and other interested ASSW participants in the evening of the 7 April. And being in Finland...what else could it be than something related to Sauna. After the official ASSW welcome and reception in the City Hall of Helsinki, about 40 people went cross town to experience this nice side of Finland's culture.

At nine in the evening the sauna was heated up and the music playing. The first people arrived and went pretty much directly in the sauna. Though a map was handed out, some other participants ended up on grave yard before finding the right way to our location. Some refreshments and snacks were served and a nice atmosphere quickly established.



Running around in a towel made it a bit unhandy to take a camera, but thanks to Alexey Maslakov we fortunately found some nice pictures to share. At about 1 a.m. most people

had disappeared to their hotels to get some sleep for the next day of the conference.

APECS Finland wants to thank the ASSW and Geysire for supporting this event.

APECS – PYRN Panel Discussion on Fieldwork at EGU 2014

April 2014, Vienna, Austria

During EGU, APECS and PYRN hosted a fieldwork panel discussion. Our four invited speakers (Andreas Richter, John Connelly, Marc Oliva and Bryn Hubbard) each gave a short presentation full of tips, anecdotes and inspiration.



Here are some of their top tips:

- ❖ Keep equipment simple and take things that can be repaired easily.
- ❖ Test all your equipment (in representative conditions) and make necessary adjustments *before* you go.
- ❖ Don't rely on other people to supply critical equipment e.g. generators.
- ❖ Take spare tools and parts.
- ❖ Budget logistics into funding proposals – freight is expensive!
- ❖ Prioritise your research plan and keep it flexible.
- ❖ Keep an organized field notebook and back it up (take a picture of each page).
- ❖ Connect to local people and researchers: they know the area best.
- ❖ Read local regulations (e.g. Antarctic Treaty) before you go.
- ❖ Sleep and food are vital!
- ❖ Be prepared for bad weather days.
- ❖ Be prepared to miss home.

- ❖ Well worth asking to join other groups.
 - ❖ Lastly, remember that everything is possible!
- Thankyou again to our speakers and to the audience!

UK Polar Network “Science and Society: do they have to be Poles apart?” Workshop

22 – 23 April 2014, Southampton, UK

On 22nd and 23rd April, the UK Polar Network held a workshop at the National Oceanography Centre, Southampton, with over 40 attendees from across the country. Funded under the Education and Outreach aims of the British Antarctic Territory (Foreign Commonwealth Office), the workshop was entitled “Science and Society: do they have to be Poles apart?” The entire focus was to look at ways early career researchers could engage with the public more successfully, and to give our attendees the skills and confidence to make their science more accessible to the wider audience.

Keynotes by Dr. Sian Henley, Dr. Matt Donnelly, David Derbyshire, and Dr. Helen Czerski explored the importance of scientific communication from multiple angles: Sian on the continuous reward of public engagement, Matt on the accessibility of science for scientists, David on science within the popular press, and Helen on communicating error and simplifying without “dumbing it down”. Additionally, our very own Ella Darlington and Laura Hobbs gave a short presentation on their own experiences of social media, blogging from the field, school outreach, and making podcasts. Two interactive workshops by Dr. Jon Copley and Kim Marshall-Brown explored the benefits of working with media to highlight one’s own science. Jon firmly argued on how outreach makes one a better researcher, while Kim discussed the lack of science that is featured in daily news, and how to liaise with the press to help them help you. Additionally, Vijay Shah, of several Arctic expeditions, gave an excellent “crash course” in Polar film and photography, as well as Liz Pasteur from the International Polar Foundation who featured some interactive maps and hands-on experiments as model tools for future public outreach in polar science.

The workshop was a huge success, thanks to all of our supporters, including the National

Oceanography Centre, Southampton, the British Antarctic Territory, Loughborough University and the Software Sustainability Institute. Additionally, thanks to all of the facilities, reception, estates and catering staff at the NOC, Southampton, who put in a tremendous amount of effort to help the workshop run smoothly. Finally, a huge thanks to all of our speakers who gave their time and effort to contribute to the workshop, with special thanks to Kim Marshall-Brown at the NOC, who not only provided a session of her own, but assisted us with both time and finances extensively to help with finding and booking other aspects of the programme.

APECS Career Development Workshop at 8th International Congress of Arctic Social Sciences (ICASS VIII)

21 May 2014, Prince George, Canada



APECS held a 1-day career development workshop on 21 May 2014, prior to the International Congress on Arctic Social Sciences VIII in Prince George, Canada. The workshop brought together over 30 young scientists and senior scientists to participate in a series of plenary talks, breakout sessions, and discussions. The plenary speakers were animating and extremely informative. The talks were on managing research (Dr. Nikolaus Gantner) and successful proposal writing (Dr. Arthur Mason). The breakout sessions were fantastic as well, and it was hard to decide which to attend. Drs. Anna Kertulla de Echave, Kathrin Keil, and Roberto Delgado led a

conversation on Informing Policy and Policy Makers while Drs. Tristan Pearce and Ross Hoffman discussed Incorporating Traditional Knowledge into research. The workshop opened with a brief presentation by Dr. Gail Fondhal on the International Arctic Social Sciences Association (IASSA) and an introduction into Arctic-FROST, a new NSF funded project on sustainability science. We all enjoyed a pizza lunch together and swapped contact information on the coffee breaks. Due to a generous donation we were also able to host a drawing for 9 Arctic books. The evening after the workshop we met in the campus bar, the Thirsty Moose, for casual conversation. It was great to meet so many APECS members and see them throughout the conference.

I APECS Bulgaria Workshop

May, 23, 2014, Vitosha Mountain, Bulgaria



The first team building of APECS Bulgaria was organized in cooperation with the Bulgarian Antarctic Institute. The event was attended by the Ambassador of Mongolia Mr. Lhamsuren Dugorzhev, the first Mongolian Antarctic researcher. APECS Bulgaria recognizes the importance of providing opportunities for early career Antarctic researchers to meet and mingle with senior researchers in informal settings. The evening event was held at a hut in Vitosha Mountain and was a part of our 'mentorship programming,' which has been identified by members and mentors alike as a great way to get to know people within the research community.



Permafrost Young Researchers Workshop organized by PYRN – APECS – PAGE21 – ADAPT at the Fourth European Permafrost Conference (EUCOP4)

18 June 2014, Évora, Portugal

The Permafrost Young Researchers Network (PYRN) and Association of Polar Early Career Scientists (APECS), together with PAGE21 and ADAPT organized the Permafrost Young Researchers Workshop 2014 held in conjunction with the Fourth European Conference on Permafrost 2014 in Évora, Portugal (www.eucop4.org).

The workshop that took place on 18 June aimed at building interdisciplinary knowledge on how the Arctic and Antarctic permafrost regions play a key role in the Earth System and gave each participant a more overarching view on the regions beyond disciplinary research questions. To achieve this, the participants shared knowledge with each other in thematic break-out sessions and elaborated the future avenues of permafrost research together with mentors playing a key role in permafrost research either in large-scale international projects or science policy.

Structural workshop components were:

1. Forum to gather and structure the topics for future research avenues in permafrost science;
2. Inspirational talks by the key permafrost scientists;
3. Break-out sessions with assigned moderators dealing with several hot topics in our research community and beyond;
4. Moderated mentors panel gathering and discussing the future research avenues in permafrost science.

More

information: <http://www.eucop4.org/permafrost-young-researchers-workshop.html>

UK Polar Network – Polar Marine Workshop

29 – 31 July 2014, University of East Anglia, Norwich, UK

The UK Polar Network hosted a three day Polar Marine Workshop at the University of East Anglia, on the 29th-31st July 2014. Funded by the iStar project, the three days featured advice panels: “Emerging technologies in the Polar Regions”, “Finding and applying for fellowship funding”, and “Alternative careers out of academia”. Each day, there were also sessions of presentations from delegates - 13 in total, and a series of talks on data management, widening participation, and the BAS Polar Roadshow.

On the Tuesday evening, the workshop was delighted to host Antony Jinman as a keynote speaker, in an event open to the public. Antony has undertaken countless Polar expeditions, including to both the North and South geographic poles. His expedition success is matched by that of his business - Education Through Expeditions, an online-based outreach company that brings expeditions to life and into the classroom for the purpose of education.

There was excellent feedback from all attendees, and both the presentation and poster sessions had a real feel of support about them. Many of the speakers stayed around to offer advice to the early career presenters, and the entire workshop was very supportive towards presenting and sharing research, no matter what stage you are at. In this regard, many thanks and appreciation goes to Katrin Schmidt and Ben Webber, who were continually kept busy behind the scenes before and during the workshop!

APECS – PEI Science Communication Workshop at the 2014 SCAR Open Science Conference

24 August 2014, Auckland, New Zealand

APECS and the Polar Educators International (PEI) organised a full day workshop on science communication in the rooms of the University of Auckland. The workshop was well attended

with around 50 participants. Although early career scientists made up the majority of participants, some senior scientists and teachers joined in as well. Themes APECS and PEI had chosen to address in the workshop were purposely broad and diverse. In six different thematic sessions, the workshop aimed to work out, in an interactive manner, various ways how science can be communicated. After Sira Engelbertz welcomed everyone to the workshop, Gerlis Fugmann (APECS) and Sarah Bartholow (PEI) introduced the two host organisations. On behalf of PEI, Sarah Bartholow and Heidi Roop presented the *Art of Communicating in the Classroom*. Early career scientists Hanne Nielsen, Lorna Little and Kimberley Collins talked about *The Power of Social Media* and how to make use of podcasts, blogs or twitter. Lecturer Jenny Rock and her students Ellen Sima and Lydia McLean introduced *Multiple Methods for Creative Communication*. Artists and academics Megan Jenkinson and Ruth Watson shared their experience with the medium *Photography* and how it sometimes expresses more than words can. Dacia Herbulock and Peter Griffin from the Science Media Centre NZ gave an important lesson on *Media 101: The Do's and Don'ts When Interacting With the Media*. Rhian Salmon and Anton Van de Putte addressed the aspect of *In-Reach* (as opposed to outreach) in terms of better information exchange within and across disciplines. Overall, the workshop was very well perceived and a great success. This was also due to COMANP and Antarctica New Zealand, who sponsored the workshop as well to all volunteers including Tristy Vick-Majors, Megan Dewar and Holly Winton.

APECS – SCAR AntClim21 Cruise at the 2014 SCAR Open Science Conference

26 August 2014, Auckland, New Zealand

During the SCAR 2014 Open Science conference, the Antarctic Climate 2100 (Antclim21) Committee sponsored an evening harbor cruise for APECS members. The Antarctic Climate 2100 Committee is focused on understanding how the Antarctic Climate will change over the 21st century. The event was a great opportunity for APECS members to mingle with the Antclim21 Steering Committee,

as well as other Antarctic climate experts. The remaining spots for Antarctic climate experts were mostly comprised of speakers from the Antclim21 session at the open science conference, along with several other SCAR committee leaders. 30 minutes into the cruise there was an 'Antarctic Climate' themed pub quiz. APECS members were asked to break into groups of 4 and to find a senior scientist to join their group. Senior scientists were then asked to help facilitate dialogue amongst the group in discussing answers to the pub quiz questions.

Feedback from attendees stated that this was an effective way to encourage dialogue and help 'break the ice' between early career and senior scientists. The evening cruise was on the Ocean Eagle, a 72foot Swath Ocean catamaran, designed and built in 1987. Approximately 50 APECS members and 16 senior scientists attended the cruise and sailed out on the Auckland Harbour from 6:30 – 8:30pm Tuesday August 26th, 2014. The event was open to all APECS members, however, the 50 spots filled up very quick! Finger food was served and there was a cash bar.

Arctic Environments Portal & APECS Workshop at the 2014 SCAR Open Science Conference

28 August 2014, Auckland, New Zealand

The Antarctic Environments Portal – short: the Portal – is a promising project that aims to link Antarctic scientific research and knowledge with Antarctic policy-making through an online platform. Although a beta version this online platform of was already released earlier this year, the Portal is still under development. In this critical phase, the Portal-project team asked for feedback and ideas from early career scientists. For this purpose, Birgit Njåstad (Portal project manager) together with Sira Engelbertz (APECS) co-convended a workshop to discuss various issues around the Portal project. Ewan McIvor (CEP Chair) started off explaining why policy makers need access to scientific information, followed by Neil Gilbert's brief introduction to the Portal. Core of the workshop, however, were the group discussions. Our five invited mentors – Neil Gilbert, Fraser Morgan, Steven Chown, Jose

Xavier and David Walton – discussed each with small groups of 5-7 early career scientists following issues: technical design of the Portal, incentivising researchers to contribute to the Portal, how to ensure policy use, how to communicate complex science in a simple, yet comprehensive manner, and how to ensure an appropriate editing and review process. The workshop was perceived as a great success with a happy Portal project team about the information gained from the group discussion. 25 early career scientists and participants of the workshop received a NZ\$ 50 scholarship each, which was kindly provided by the Norwegian government.

II APECS Brazil Workshop

17 – 19 September 2014, Canoas, Brazil

The APECS-Brazil coordinated its third Symposium held in Arraial do Cabo, Rio de Janeiro, from 16 to 22 September 2014. The event was an ideal space to join early career, educators and seniors researches and we promoted five days knowledge exchange and integration among all attendees. The 2014 Symposium was dedicated mainly to scientific discussions between researches and educators, seniors and early carriers, who developed scientific or educational activities in Antarctica or in the Arctic, besides activities related to the marine environment. APECS-Brazil promoted opportunities for professional career development by talks (20) and short courses (19) to our audience. APECS-Brazil also promoted web cast of 4 talks during the event to schools and other public. The ECRs gave 11 oral and 12 poster presentations during the event. A great goal of APECS-Brazil symposium was include educators (20) from Basic Education to promote education and outreach activities as integral components of polar research and to stimulate future generations of polar researchers. We also organized a Picture context and a "Photograph Exhibition: Glimpses on a frozen continent" that will circulate around the country in Schools. The attendees (about 200 per day) were mainly undergraduate students, professional researchers, teachers (20) and military — especially the Brazilian Navy, which hosted the meeting in one of their facilities. We rely on presence by over 200 people during the event

and about 2000 people via live streaming and APECS-Brazil additional activities in the website (during the preceding week in Canoas, Rio Grande do Sul, more than 40000 people, mainly students, took part in the activities of our XII International Polar Week). The recorded lectures was available in APECS-Brazil Facebook page. The abstract book is available on APECS-Brazil website (<http://www.apecsbrasil.com/publica/>).



Science Communication and Media Training Workshop at Arctic Frontiers 2015

January 2015, Tromsø, Norway

APECS Workshop on “Goals of ICARP III – the future of Arctic research from the early career researchers’ point of view” at the Arctic Science Summit Week 2015

April 2014, Toyama, Japan

APECS World Summit and Data Workshop

June 2015, Sofia, Bulgaria

3.2 Upcoming Events in 2014-2015

Second Arctic in Rapid Transition (ART) Science Workshop “Integrating spatial and temporal scales in the changing Arctic System: towards future research priorities”

21 – 24 October 2014, Brest, France

APECS Netherlands Symposium

4 November 2014, The Hague, Netherlands

APECS Career Panel “Tailoring your CV for careers in international policy” at the Arctic Biodiversity Congress

December 2014, Trondheim, Norway

ArcticNet Student Association (ASA) and APECS – Student Day at Arctic Change 2014

8 – 9 December 2014, Ottawa, Canada

APECS Career Development Panel during AGU 2014

December 2014, San Francisco, USA



Since establishing its International Directorate Office in Tromsø., Norway, APECS has contributed to the career development of Norwegian Students, enhanced recruitment, promoted Norwegian excellence in Polar Research and facilities and helped establish new international collaborations. Our Norwegian membership numbers have increase constantly. Norway is today among the top five countries in membership numbers in APECS! This section highlights some of the major events and activities that APECS has successfully organized in 2013-2014.

4.1. Arctic Frontiers 2014

Industrious APECS Executive Committee In-Person Meeting, January 17 – 18, 2014

The APECS Excom in-person meeting (Tromsø, Norway; January 17-18, 2014) did more than it said on the tin: it not only provided the five of us with a chance to finally meet in person; we were also joined by our Director and our three ex-officio members!



After having spent a first industrious day at the University of Tromsø, we were kindly hosted by the Director of the Climate and Cryosphere (CliC) Project Jenny Baeseman and her family on the second day. Add any number of visitors, and it was a full-house indeed. Thank you, Jenny!

True to form, our agenda was equally packed. We carefully evaluated various ongoing APECS activities: what was going well and what was in need of adjustments. A look at our Council, our sub-committees, and our working groups showed that we are on top of our priorities for

2013/14. Thanks to the hard work of the previous ExCom to secure funding for the directorate, we even dared to say that our workload was overseeable – even enjoyable!

Pressing matters that are now being tackled are the APECS Strategic Plan 2014-17 as well as the relationship of APECS International with its National Committees and their respective partners. Such matters serve to remind us that as we grow as an organisation, new and exciting situations continuously arise. We are proud of our National Committees and we hope that long-lasting and fruitful partnerships will come out of it.

On that note, our ExCom meeting also provided the chance for several side-meetings with some of our APECS partner organisations: Jenny Baeseman of said Climate and Cryosphere (CliC) Project discussed which direction our cooperation could take; and Charles Fierz, President of the International Association of Cryospheric Sciences (IACS) is very much looking forward to a collaboration that will motivate more early-career alpine scientists to join APECS and benefit from the membership. Furthermore, we met with representatives from the University of the Arctic (UArctic), with whom we share our field schools and graduate programs catalogue and whose student ambassadors very much look forward to some joint events in the near future.

Thanks to the in-person meeting, your APECS Excom feels confident and invigorated and cannot wait to engage on the tasks of a 'cool' 2014.

Science Communications Workshop at Arctic Frontiers 2014



APECS organized a short Science Communications and Media Training Workshop at the Young Scientist Forum activities for the Arctic Frontiers 2014 Conferences. The workshop happened on 19 January 2014 and brought together a small group of early career researchers attending the conference to learn about ways how to use social media (especially Twitter) for your science communication as well as tips and tricks on how to work with the media and how journalists find their science stories.

Mentors for the workshop were Tom Fries (Arctic Council Secretariat, Norway), Patricia Azinhaga (University of Coimbra, Portugal), Jose Xavier (University of Coimbra, Portugal), Bjørn Lindahl (Svenska Dagbladet, Sweden), Malin Avenius (frilans, Sverige Radio), Tom Yulsman (University of Colorado, United States).

We want to thank the mentors for taking their time to join us for this event and providing advice to our participants and thank you also to the participants for a great and very interesting discussion.

Science for Schools Event During Arctic Frontiers 2014

APECS teamed up with **Arctic Frontiers** and the **Nordnorsk Vitensenter (Science Centre of Northern Norway)** during Arctic Frontiers 2014 to organise a "Arctic Frontiers Science for Schools" event. The goal of the event was to tell high school students from several schools in Tromsø about Arctic research and get them interested in a science career later on.

Two sessions were organised on 22 and 23 January 2014 in which early career researchers

attending the Arctic Frontiers 2014 conference as well as early career researchers from University of Tromsø presented about their research. Thank you to: Karolina Paquin (University of Tromsø, Norway), Jean-Sébastien Moore (Université Laval, Canada), Frigga Kruse (University of Groningen, Netherlands), Yulia Zaika (M.V. Lomonosov Moscow State University, Russia), Christie Logvinova (Clark University, United States), Pernilla Carlsson (AMAP, Norway), Jennifer Provencher (Carleton University, Canada) and Ida Helene (University of Tromsø, Norway) for some great presentations!



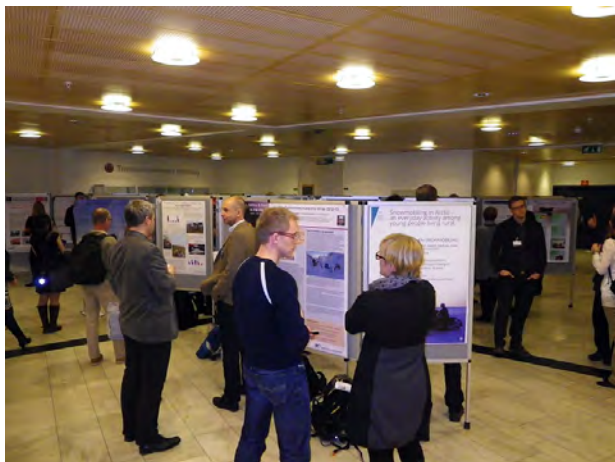
Besides the presentations, the Nordnorsk Vitensenter had also organised more activities regarding Arctic research for the students. A poster session was also organised by the high school students presenting about class projects. The posters were judged by three of the early career researchers attending the event (Jean-Sébastien Moore, Ida Helene and Gerlis Fugmann) and the winners received a prize and will be attending part of the science sessions during the Arctic Frontiers 2015 conference.

The event was a great success this year and plans are ongoing for a similar event for Arctic Frontiers 2015. A special thank you also to the organisers of the event Tove Marienborg (Nordnorsk Vitensenter) and her staff, Vibeke Tannvik (Arctic Frontiers) and Gerlis Fugmann (APECS).

Also check out the nice article published about the event by Irene Quaile (Deutsche Welle) <http://blogs.dw.de/ice/?m=20140124>

APECS and the Arctic Frontiers Poster Awards

Another year at the Arctic Frontiers Conference, and another great year of poster awards organized by APECS. The Arctic Frontiers Conference and APECS have teamed up for the last 4 years to recognize early career researchers for their efforts at the conference.



This year there were four fabulous winners. In Part 1 (Live, work and stay healthy in the Arctic) Morten Skandfer won for his poster titled “Improving the health protection of high Arctic Miners”. In Part 2 (Health and Environment in the Arctic) Ariadne Szczybelski won for her poster titled “Development of ARCTic Biological INDicators for the impact assessment of (new)human activities: the ARCIND project”. In Part 3 (Shipping and offshore in the Arctic) Caroline Coch won for her poster titled “Effects of cruise ship tourism on the remote island of Ísafjörður, Iceland”. Each of the section winners received a one-day free registration pass for the 2015 Arctic Frontiers conference, Climate and Energy. The overall poster winner was Laila Arensatter Hopstock for her poster “Arctic hearts – seasonal variation in cardiovascular disease risk factors in the Tromsø study 1979-2008”. The overall winner won a full complimentary registration for next year’s conference courtesy of the Arctic Frontiers Conference.

Thanks again to all those who submitted and presented posters at this year’s conference. Additionally, a special thanks to all our poster judges, and we hope to see you all next year!

APECS Representatives at the Arctic Frontiers 2014 Science Committees



For the Arctic Frontiers 2014 conference in Tromsø, Norway (19 – 26 January),

four APECS members were selected to serve as early career researcher representatives on the Science Committees of the conference: Marney Paradis was member of the Live, Work, and Stay Healthy in the Arctic session, and her graduate studies on leadership within Indigenous education played a role in establishing strong professional connections with other session members. Dr. Frigga Kruse was chosen as member to the Health and Environment session, and her arctic archaeological knowledge base provided important historical context to the committee. Mia Bennett drew upon her familiarity with arctic geopolitics to assist in the abstract review and selection in the Shipping and Offshore committee. Piotr Graczyk assisted as member of the Arctic Search and Rescue committee, in which he utilized his studies of international relations and arctic cooperation in the selection criteria.

Serving as Science Committee members was tremendously enriching and highly rewarding for the early career research representatives. Assisting in this process was a welcomed task and provided the representatives with the opportunity to liaise with committee chairs and immerse them in the world of international science management. Further, the auspicious role of helping shape the messages and delivery of the conference itself will doubtlessly benefit them in the future.

4.2. Arctic Frontiers 2015

APECS representatives in Arctic Frontiers 2015 Science Committees

APECS worked again this year with our partner Arctic Frontiers to create opportunities for early career researchers at the [Arctic Frontiers 2015 “Climate and Energy” conference](#) in Tromsø

from 18 - 23 January 2015. Three of our members were representatives for the science committees for the conference:

Part 1: Arctic climate change - global implications



Dr. Inga May (Alfred Wegener Institute, Germany): Inga studied physical Geography at the University of Munich. She rapidly realized her passion for the Polar Regions and hence started a PhD together with INRS in Quebec, Canada, about permafrost in the Arctic. During this time she was heavily involved in many International Permafrost Association (IPA), APECS and Permafrost Young Researcher Network (PYRN) activities. In 2011 she successfully finished her PhD and worked for 1 ½ a year as the Executive Director for the International Permafrost Association. She is now working as research assistant at the Alfred-Wegener Institution for Polar and Marine research and in the EU project dealing with the consequences of climate change in Arctic Regions.

Part 2: Ecological winners and losers in future Arctic marine ecosystems



Mar Fernandez Mendez (Alfred Wegener Institute, Germany): Mar is a biologist by training who has always been fascinated by the ocean. After her masters in Marine Microbiology at the Max Planck Institute in Bremen she decided to specialize on the group of marine microorganisms responsible for carbon fixation: phytoplankton. Now she is at the end of her PhD at the Alfred Wegener Institute in Bremerhaven trying to understand the biological carbon cycle in the rapidly changing Arctic Ocean. Her aim in the long term is to be able to predict how primary production in the Arctic will change due to global warming.

Part 3: The Arctic's role in the global energy supply and security

Coco Smits (Royal HaskoningDHV, The Netherlands): Coco is currently working as an

environmental & social policy consultant for the international engineering consultancy firm Royal HaskoningDHV. She has a Masters degree in Environmental Policy from the Wageningen University in The Netherlands, during which she studied the governance of oil, gas and mining development in Greenland and the wider Arctic. She continued working in the field of Arctic resources next to other projects in the oil and gas sector when she started working for Royal HaskoningDHV. Her work is focused on the interaction between societies and the environment, and she is interested in how developments in the Arctic fit in the global resource picture.

4.3. Other Norwegian Highlights

Workshop Report – the Cryosphere in a Changing Climate



The WCRP (World Climate Research Program) set forth a series of grand challenges to address highly specific and highly focused topics that are critical to improving our progress in understanding the climate system. One of these challenges was the "Cryosphere in a Changing Climate". To move the discussion of this concept forward, a workshop was held in Tromsø, Norway on 16-18 October 2013. The Climate and the Cryosphere Program (CliC), through APECS, provided support for a few early career scientists to participate in this workshop.

As one of these ECR participants, I assisted in managing the webcast as well as sharing workshop content on Twitter. I participated in the glaciology breakout sessions, shared two posters of my research work, and created a Frostbyte (vimeo.com/allenpope/landsat8). My participation in both sharing my work as well as helping with a minor part of the online sharing of the meeting gave me the opportunity to develop many helpful skills.



Additionally, I benefitted from the networking opportunities that the workshop provided. I connected with new colleagues with whom I might work in the future both scientifically and organizationally, re-connected with senior colleagues within glaciology, and benefitted from conversations with other early career researchers from around the world. Much of the group discussions benefitted from a collegial and a collaborative atmosphere, and the workshop was an interesting opportunity to observe and learn from where it very clearly worked.

I am very much looking forward to participating in some of the action points suggested by the workshop. A workshop report as well as recorded talks from the workshop will be available shortly on climate-cryosphere.org. Be sure to watch out for future opportunities available from APECS and CliC. Thanks again to WCRP, CliC, and APECS for making this opportunity happen for me.

Allen Pope: about.me/allenpope
Photo courtesy of Rob Massom

APECS Presentation at the Centre for Sami Studies at UiT

APECS Director Gerlis Fugmann met with students and faculty of the Centre for Sami Studies at the UiT The Arctic University of Norway on 4 December 2013 to give a presentation about APECS and talk with them about how they can get involved in the organisation and how to cooperate in the future. More information on the Centre for Sami Studies can be found [here](#)

5.1. APECS Nordic Project “Bridging Early Career Researchers and Indigenous Peoples in Nordic Countries”



One of APECS major projects during 2013-2014 was the APECS Nordic Project (Bridging Early Career

Researchers and Indigenous People in Nordic Countries” which received funding through the Nordic Council of Ministers (Norden). The project will identify ways to enhance engagement between early career researchers (ECRs) and Indigenous peoples and Northern community members in Nordic regions

Leveraging the collaborative, education and outreach experience of APECS, this research initiative seeks to address research collaboration challenges for early career researchers and indigenous peoples, particularly in a context of increasing climate change across the Nordic Polar regions. As stated during the Indigenous Peoples' Global Summit on Climate Change in Anchorage (2009) "Indigenous Peoples have an important role to play in addressing climate change through their knowledge, experience and rights over land and development ... however, this contribution has been largely ignored". This is often a result of the communication gap between researchers and Indigenous peoples. Better incorporation of this knowledge into Arctic research in Nordic countries as well as effective and meaningful communication between Indigenous and Northern residents with researchers is crucial.

The project has several components:

APECS Nordic website and database

The APECS Nordic Project website was built and is hosted on the APECS website (<http://apecs.is/research/apecs-norden>). In addition the APECS Nordic database was created in Fall 2013.

Underpinning all aspects of the APECS Nordic Project is an aim to facilitate cooperation, coordination and synergy between APECS branches, ECRs and Indigenous peoples on a regional level within Nordic countries including Norway, Sweden, Finland, Denmark and Russia. Fostering networks amongst Nordic researchers in the scientific community and with Indigenous peoples can help future collaborations in polar research and facilitate addressing complex challenges posed across the Nordic region.

The APECS Nordic Project works towards the development of a Nordic network through the development of a Nordic database hosted on the APECS website. Here, Indigenous peoples, non-indigenous Nordic community members and Early Career Researchers can input their contact information, research interests, research projects, region, and other information. The information will be added to a searchable Nordic database to identify possible research collaborations and foster a Nordic regional network.

The database can be found here: <http://www.apecs.is/en/research/apecs-norden/apecs-nordendatabase>

APECS Nordic Webinars

The APECS Nordic Project “Bridging Early Career Researchers and Indigenous Peoples in Nordic Countries” featured a series of 6 webinars. In this webinar series we tried to identify current research challenges from the perspective of early career researchers, experts and Indigenous peoples and define potential solutions to overcome these existing challenges to communication and other research issues. Speakers included leading experts, early career researchers, Indigenous youth and Indigenous researchers from Nordic regions as well as others. Themes covered by the series are broad but focused mainly on communication challenges and solutions on getting tight connections and open dialogue in between

indigenous communities and young scientists. More than 50 participants of the series were able to ask questions and discuss urgent issues during online sessions. All 6 webinars were recorded and posted to APECS website. The general information about APECS Nordic webinars can be found at <http://www.apecs.is/en/research/apecs-norden/apecs-nordic-webinars>

Bridging the Gap: Indigenous, Social and Natural Science Perspectives on Research Relationships in Nordic Countries

23 October 2013

❖ *Speakers:* Gail Fondahl (IASSA President, University of Northern British Columbia) and Gunhild Ninis Rosqvist (Stockholm University and Tarfala Research Station)

❖ *Content:* Every story has at least two sides. The story of climate change research in Nordic communities has three. This webinar is intended to highlight the main communication challenges faced by natural scientists, as well as social scientists, in their community-based research efforts. As well, it seeks to highlight Indigenous perspectives on how to open a successful dialogue and begin to overcome challenges. In this webinar, you will be introduced to the fundamental issues that can hinder cross-communication between social scientists, natural scientists and members of indigenous communities in Nordic regions. When communication is compromised, relevant knowledge and evidence from indigenous sources can be left out of scientific considerations, and the validity of findings can be compromised in turn. Climate change is a problem that impacts us all, so it is essential to start working together to find solutions we can share

❖ *Recording:* <http://vimeo.com/86993536>

Getting in touch with Nordic communities: Reaching out gently

30 October 2013

❖ *Speakers:* Svetlana Usenyuk (Aalto University School of Art, Design and Architecture, Finland), Heidi McCann, Colleen Strawhacker and Peter Pulsifer

(Exchange for Local Observations and Knowledge of the Arctic at the National Snow and Ice Data Centre, USA)

❖ *Content:* Approaching an unfamiliar community can be a challenge for a researcher, considering it takes time for a community to come to know and trust a new face. The process of building a trusting relationship between a community and a research group is delicate, and we must all tread lightly towards co-operative cohabitation during research efforts. This webinar is intended to highlight some difficulties faced by researchers and community members, even of a shared background, in introducing the prospect of collaborating in a shared space

❖ *Recording:* <http://vimeo.com/86993539>

Reflections on Sami research: being a researcher and being researched

6 November 2013

❖ *Speaker:* Else Grete Broderstad (Centre for Sami Studies at the University of Tromsø, Norway)

❖ *Content:* What does it mean to be a researcher, but also to be researched at the same time? In this webinar we will share Sami perspectives and thoughts on this very cutting-edge of community-based research

❖ *Recording:* <http://vimeo.com/86993541>

Youth indigenous peoples in education and outreach

13 November 2013

❖ *Speaker:* Dmitriy Berezhkov (University of Tromsø, Norway)

❖ *Content:* Engaging Indigenous youth in research that guides the development of their home communities is not a matter of simply giving them tools to think scientifically. Part of the purpose of education and outreach is to create a platform for different kinds of knowledge to merge, and to cultivate innovative solutions for a shared future. This webinar seeks to promote the indigenous youth voice and provide guidance for outreach planners in polar communities

❖ *Recording:* <http://vimeo.com/86993542>

Indigenous Knowledge management through Information and Communication Technologies

27 November 2013

- ❖ *Speakers:* Heidi McCann, Colleen Strawhacker and Peter Pulsifer (Exchange for Local Observations and Knowledge of the Arctic at the National Snow and Ice Data Centre, USA)
- ❖ *Content:* Community-based research by, with, and for Arctic Indigenous peoples has become recognized as a valuable source of data and often involves knowledge and observations of residents and local experts. These data frequently take the form of recordings or books, but recent development of Information Technologies of various kinds such as GIS, interactive mapping, and websites documenting oral histories allow for Indigenous Arctic research to be made available to communities, researchers, and other interested groups. In this webinar, we will present a review of various systems being developed through the Exchange for Local Observations and Knowledge in the Arctic (ELOKA) as well as discuss the opportunities to collect, manage and represent Indigenous knowledge through Information and Communication Technology. Throughout the presentation, we will discuss issues that must be considered and addressed throughout the project including practical challenges, appropriate representation, and ethical and legal issues.

❖ *Recording:* <http://vimeo.com/86993543>

Essential keys to successful research summarized: Building collegial relationships with Indigenous community

04 December 2013

- ❖ *Speakers:* Jocelyn Torma and Yulia Zaika
- ❖ *Content:* The sixth and final webinar in this series summarizes the key points made by the speakers featured in the previous five, and illuminates some practical takeaways that will be useful to researchers and indigenous community members alike. The insights shared in this series range from tips about initial contact to nurture lasting relationships after data collection needs have been met. The main relevant theme is

cultural inclusion, in a day to day sense, in gathering and disseminating knowledge through formal and informal avenues, and in recording and databasing a complete set of observations that can be interpreted and critiqued from many perspectives. This summary offers an overview of essential considerations that will enhance the field research experience for everyone involved and optimize the value of scientific conclusions by generally guiding the most well-informed analyses of data.

❖ *Recording:* <http://vimeo.com/86995257>

APECS Nordic Survey

The APECS Nordic Project conducted an Early Career Researchers and Nordic Indigenous peoples survey during 2013-2014.

The survey was launched on 15 February 2014 and made available in English, Northern Sami, Finnish, Danish, Swedish and Russian languages. It welcomed the input and responses from all early career researchers and indigenous people involved in northern research, particularly those from the Nordic countries. All APECS Nordic workshop participants also completed the survey. In total 134 responses were collected while the survey was open until 30 May 2014.

Results are compiled and summarized at the moment and will be used to help assess the status of communication, research partnerships and challenges in Nordic regions.

APECS Nordic Workshop



The APECS Nordic Workshop took place on 7 and 8 April 2014 as part of the Arctic Science Summit Week

(ASSW) and Arctic Observing Summit 2014 in Helsinki, Finland. The two-day workshop was a highly successful and productive gathering of approximately 60 polar scientists at various stages of academia, as well as mentors, APECS members and northern indigenous participants

from 11 countries. Many experts and senior scientists attending the ASSW dropped in for a session or break-out group and had very positive feedback to share with the workshop organizing committee about the quality and success of the workshop.



More information about the workshop program can be found on the APECS website: <http://apecs.is/research/apecs-norden/apecs-nordenworkshop>.

Keynote speakers and presentations:

- ❖ Aria Rautio (Centre for Arctic Medicine, Thule Institute, Finland): "Opportunities for Early Career Researchers"
- ❖ Roberto Delgado (Department of Biological Sciences, University of Southern California): "US Agency Policies on Consultation with Arctic Indigenous Communities"
- ❖ Heidi Eriksen (Utsjoki Health Centre, Finland): "Research Ethics for Working with Sámi Peoples – The Case of Finland"
- ❖ Anna Afanasyeva (International Barents Secretariat, Norway): "Research from the point of view of an indigenous community insider: Resettlement of Indigenous peoples in the Arctic – a case study of the Sámi people on the Kola Peninsula, Russia."
- ❖ Gail Fondahl (University of Northern British Columbia, Canada): "Working with Indigenous Peoples: Ideas for Successful Collaboration"
- ❖ Julie Bull (Executive Director for the Toronto Aboriginal Support Service Council): "Navigating the Research Ethics Review System for Research Involving Indigenous Peoples in Canada."

- ❖ Sandra Juutilainen (Thule Institute, University of Oulu, Finland): Ethics in Indigenous Research, Past Experiences - Future Challenges. Summary of International Workshop, Umeå Sweden March 3-5, 2014

Each speaker gave a 15 – 20 minute presentation followed by questions from the participants. Each presentation has been saved in PDF format, and uploaded to the workshop website. Thoughtful discussion and considerations resulted from these presentations and provided an excellent springboard for the daily breakout group discussions.

In addition, there were presentations held by several international organisations: National Geographic, the International Arctic Science Committee (IASC) (3rd International Conference on Arctic Research Planning – ICARP III), the Canadian Polar Commission and the Svalbard Science Forum.

Breakout sessions included discussions on:

- ❖ Guidelines/policies for working with indigenous groups;
- ❖ Effective communication skills;
- ❖ Successful collaboration efforts with indigenous groups;
- ❖ Broader Impacts – Communicating results and outreach.



Participants were asked to make use of a "Workshop Breakout Session Question & Response Booklet" in which they recorded their personal responses to the breakout group questions. These booklets served two purposes: 1) to provide participants with a secondary outlet and repository for their thoughts and responses to the breakout session discussion

format; 2) to provide the workshop organizing committee with thorough documentation of the breakout group discussions as well as supplementary data in addition to the group summaries.

In collaboration with the National Committee of APECS in Finland (APECS Finland), an evening social event was organized and supported through APECS, APECS Finland and the ASSW. The successful authentic Finnish sauna activity provided an opportunity for the APECS Workshop participants to take in a local cultural activity while meeting informally with other ASSW organizational representatives and attendees.



At the conclusion of the 2-day workshop, participants were asked to complete a workshop evaluation form. Over 30 forms were received and the overwhelming majority found that the workshop was successful or highly successful and met or exceeded expectations. In addition, over 75 per cent of participants thought that their participation in the workshop would (15 responses) or could (11 responses) have an impact in future research projects / research collaborations. Most also stated that they would make use of the APECS Nordic results publications when they become available. The one main critique of the workshop was the low turnout of Arctic indigenous, and especially Sámi, participants at the workshop itself. Also, some suggestions were provided to improve the break-out discussion format sessions to keep the level of engagement high. Overall, participants appeared to have a largely positive response to the workshop and its outcomes. The workshop organising committee committed to sharing the results with the workshop participants prior to

publishing to allow for final feedback, input as well as to provide an opportunity for fact checking and verification of results.

We especially want to thank the sponsors who made the workshop possible. Besides funding from the **Nordic Council of Ministers**, travel funding for workshop participants was received through the **US National Science Foundation**, the **International Arctic Science Committee** and the **Swedish Polar Research Secretariat**.

5.2. APECS and ICARP III



APECS is co-ordinating several projects as part of the International Conference on Arctic Research Planning (ICARP III) “Intergrating Arctic Research – a Roadmap for the Future” process organized by the International Arctic Science Committee (IASC) (<http://www.iasc.info/>). ICARP III has the objective to identify Arctic science priorities for the next decade; to coordinate various Arctic research agendas; to inform policy makers, people who live in or near the Arctic and the global community; and to build constructive relationships between producers and users of knowledge.

IASC is planning an outcome of this process a consensus statement identifying the most important Arctic research needs for the next decade and a roadmap for research priorities and partnerships. APECS is a partner to this process and APECS member Sanna Majaneva (Finland) is representing APECS currently on the ICARP III Steering Group. To find out more about ICARP III go to (<http://icarp.iasc.info/>).

ICARP III FrostBytes



APECS and the Climate and Cryosphere (CliC)

Project (<http://www.climate-cryosphere.org/>)

have teamed up with the International Arctic Science Committee (IASC) (<http://www.iasc.info/>) to work with ICARP III participants to create FrostBytes showcasing their contribution to this important process.

Frostbytes are 60 second, polar-related soundbytes, that are an attractive and effective way to easily share the latest findings of research and important moments of events with a broad audience, using a simple, guided framework. Frostbytes will be published on CliC webpage (<http://www.climate-cryosphere.org/albums/icarp3-frostbytes>), blog (<http://cryocasts.blogspot.co.nz>), and as a podcast channel on iTunes.

We strongly recommend creating Frostbytes of your ICARP III activities to share the information of FrostBytes for all the partners of ICARP III. Otherwise, we are happy to help you create a FrostByte, simply email frostbytes@climate-cryosphere.org, or visit the following link:

<http://www.climate-cryosphere.org/activities/outreach/frostbytes>

The project is supported by the Association of Polar Early Career Scientists, the WCRP Climate and Cryosphere Project and the International Arctic Science Committee.

APECS – CliC – Where are they now?



The project “Where are they now?” will investigate the subsequent career paths of early career researchers (ECRs) that received support and funding from the International Arctic Science Committee (IASC) (<http://www.iasc.info/>) since the start of the most recent IPY (2007-2008) and beyond.

The goal of this project is to assess how IASC support impacted careers and to find ways to further enhance the support and training of ECRs provided by the Association of Polar Early Career Scientists (APECS), the WCRP Climate and Cryosphere Project (<http://www.climate-cryosphere.org/>) and the IASC. The project will also highlight examples of successful careers of

ECRs and thus providing a legacy and making an interconnection between the generations. Practical steps of the project will include:

Following up with the ECRs who received funding during and after the most recent IPY (2007-2008) using the IASC database and yearly reports. Finding out whether they stayed in Arctic disciplines, either in academia, policy, education and outreach or management (questionnaire). If they have, what positions are they currently in? If they left the Arctic disciplines, what were the reasons? Did attending international conferences, especially the ones sponsored by IASC, help in their career? Did attending meetings of international organizations like IASC and working together with senior scientists help them to further their research careers?

A 4-day data analysis and writing camp will be held in Tromsø, Norway in fall 2014 to compile the results of the previously mentioned research and to do a preliminary evaluation of whether IASC support has encouraged ECRs to stay in Arctic disciplines and whether it has advanced their careers. Ways to further enhance the support of ECRs will also be discussed.

This project is one of several contributions to the Third International Conference on Arctic Research Planning (ICARP III) (<http://icarp.arcticportal.org/>). ICARP III seeks to establish priorities for Arctic science for the coming decade. Essential to any long term research goal, is the preparation and retention of ECRs to ensure that ICARP III research will be continued well into the future. The project “Where are they now?” will contribute to this goal by providing suggestions on how funding can best be used to support and enhance the careers of ECRs in the interdisciplinary field of Arctic science. In particular, these suggestions will focus on the best ways to prepare ECRs for (1) international and interdisciplinary Arctic research and (2) communicating this research to policy makers, people living in the Arctic and the broader global community.

This project will provide analysis of the impacts of prior funding for ECRs and suggestions for polar and cryosphere international organizations on how funds could be best used in the future. This work will be presented in the

form of a short peer-review article and a chapter in the ICARP III summary.

Project participants:

- ❄ Sanna Majaneva (lead contact), University of Helsinki, Helsinki, Finland
- ❄ Gerlis Fugmann, APECS, UiT – The Arctic University of Norway, Tromsø, Norway
- ❄ Christie Logvinova, Clark University, Worcester, MA, USA
- ❄ Maja Lisowska, Jagiellonian University, Kraków, Poland
- ❄ Jenny Baeseman, CLiC, Norwegian Polar Institute, Tromsø, Norway

For more information please visit the project webpage at <http://www.climate-cryosphere.org/activities/targeted/wherenow>

The project is supported by the Association of Polar Early Career Scientists, the WCRP Climate and Cryosphere Project and the International Arctic Science Committee.

To better respond to the needs of a specific country, APECS has several branches in different countries, national committees, which are linked to the international overarching organization. Some countries have well developed national committees, whereas others are just getting started. Here are some of their highlights from 2013-2014.



To find out more about the APECS national committees go to <http://www.apecs.is/en/get-involved/national-committees>

APECS Austria

In 2014, a small group of early career scientists decided to found an APECS National Committee for Austria. Since 2013 the 'Austrian Polar Research Institute' (APRI, www.polarresearch.at) exists and built the platform for the APECS-Austria initiative. Due to the manifold backgrounds of the founding members, interdisciplinarity as well as outreach are the main two foci of APECS-A.

In April 2014, APECS-A organized a photo- and poster-exhibition to present the different fields of Austrian polar research as well as to give the attendees a glimpse of their work. Due to the fact that the Kick-Off event was in the week of the annual European Geoscience Union in Vienna, many scientists followed the invitation and gathered in the rooms of the Social and Cultural Anthropology Department of the University of Vienna. The opening of the APECS-A exhibition featured interesting talks from Dr. Wolfgang Schöner (Central Institute for Meteorology and Geodynamics, Vienna) and Prof. Peter Schweitzer (Social and Cultural Anthropology Department, Vienna) about the importance of polar research. APECS-co-founder Prof. Hugues Lantuit (Alfred Wegener Institute, Potsdam) gave a spontaneous speech about the motivation of founding APECS and its impact on the future polar research. Before all the attendees spread in the hallways to look at the exhibition and enjoy a glass of wine, APECS-A co-founder Mag. Sigrid Schiesser (Social and Cultural Anthropology Department, Vienna) talked about the motivation to found

APECS-A and invited early career scientists to become a member.

The APECS-A Kick-Off was a successful event with about 70 attendees. The photo and poster exhibition was exhibited until June and made its contribution to spread the message that there is a small, but motivated group of Austrian polar early career scientists. The Kick-Off Event was presented in different media (newspapers, www,..) and could be realized thanks to the financial support of APRI, the Department of Social and Cultural Anthropology and the motivated APECS-A members.

APECS Belgium



APECS Belgium and the Belgian Science Policy Office organized a story contest for students from the 5th and 6th year of primary school (10-11 years old). As such, young polar scientists from Belgium wanted to get attention for the polar regions and scientific research and this in the context of 'Antarctica Day'. This day was created to celebrate that on December 1st 1959 the Antarctic Treaty was signed and that Antarctica can solely be used for peaceful purposes.

22 pictures served as inspiration. The students had to pick one picture, let their imagination run free, and write a short story about it. The submitted stories were judged and the 10 best

stories in Dutch were selected. Next school year, the competition will be repeated in the French-speaking part of the country, to finally publish a book containing 10 Dutch and 10 French stories. These will be distributed in primary schools in Belgium. The stories will not only be entertaining to read, they can also be used to support lessons on our polar regions and to learn Dutch or French.

Our 10 writing talents came from 6 different schools and received a visit from polar scientists in their class. By playing several games, they learned more about Antarctica, polar expeditions and what kind of research scientists perform here.

APECS Belgium Leadership Committee:

- ❖ Ines Tavernier (UGent Marine Sciences Center of Excellence, Ghent University)
- ❖ Dagmar Obbels (Protistology & Aquatic Ecology, Ghent University)
- ❖ Anton Van de Putte (OD Natural Environment, Royal Belgian Institute for Natural Sciences)
- ❖ Charlotte Havermans (OD Natural Environment, Royal Belgian Institute for Natural Sciences)
- ❖ Freija Hauquier (Marine Biology Research Group, Ghent University)
- ❖ Francesca Pasotti (Marine Biology Research Group, Ghent University)
- ❖ Sam De Ridder (Department of Physics and Astronomy, Ghent University)
- ❖ Matthias Vraeghe (Department of Physics and Astronomy, Ghent University)
- ❖ Denis Callens (Laboratoire de Glaciologie, Université libre de Bruxelles)
- ❖ Morgane Philippe (Laboratoire de Glaciologie, Université libre de Bruxelles)
- ❖ Dail Laughinghouse (Center for Protein Engineering, University of Liège)
- ❖ Igor Stelmach Pessi (Center for Protein Engineering, University of Liège, Belgium)

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❖ Facebook Page:
<https://www.facebook.com/apecs.belgium?fref=ts>

❖ Facebook Group:
<https://www.facebook.com/groups/321276997915390/?fref=ts>

APECS Brazil



The last year was exciting for the APECS-Brazil team! We promote several educational events such as the Polar Week, the Antarctic Day celebration, Scientifics journeys and others; the APECS-Brazil

members took part in international events as representatives of APECS-Brazil and APECS international; promote talks at schools, start news projects in Education & Outreach and science, among others. We teach and learn with amazing activities in our country and internationally! Come with us!

First International Polar Seminar in the Amazon

"The Amazon goes to the Arctic and Antarctica"



is a project idealized by Núbia Caramello (Coordinator of Education and Outreach of APECS-Brazil) that was

carried out in Rondonia state, North region of Brazil. The Project start in "Maria Comandoli Lira" School that contributed with the International Polar Week since September 2012. As part of this project, teleconferences with researchers from Rio de Janeiro (APECS-Brazil), APECS Portugal and APECS Spain have taken place, helping kids to understand the importance of local preservation to the conservation of our planet. As part of the Project in August 28th to September 1st, 2013, during

activities of the Second Symposium on Water Resources, APECS-Brazil promote the First International Polar Seminar in the Amazon held in Rondonia. This event had the participation of APECS-Spain (Francyne Elias-Piera) and Brazil (Elaine Alves). The event also have media activities including interviews for radio and TV. During the Polar Seminar, the President of APECS-Brazil (Erli S. Costa), members of APECS-Brazil council (Miriam Hebling Almeida) and APECS-Portugal researchers (Jose Xavier, João Canario and Sílvia Lourenço) also contributed actively giving presentations via teleconference. About 200 people, including researchers, political leaders, children, farmers and people of the community took part in this even.

First workshop on career development from APECS-Brazil

The X International Polar Week and the I Workshop on Career Development (17 to 20 September 2013) took place at the Federal University of Rio de Janeiro, UFRJ, Rio de Janeiro. More than 100 people attended the event during four days, besides more than 80 teachers and 6,000 students that could participated virtually via live streaming. In addition, more than 7,300 people had access to the event activities by the APECS-Brazil website (www.apecsbrasil.com) and the fan-page on Facebook

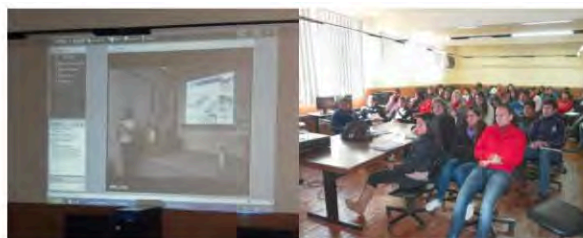
(<https://www.facebook.com/APECSBrasil>). More than 20 schools throughout Brazil (from the Amazon to the Rio Grande do Sul state) were involved in these activities. The book of abstract is available at <http://www.apecsbrasil.com/news/lrxspi-iwdc/>.



On the last day of the event the Association of Early Career Researchers and Educators for the Ocean and the Poles (APECS-Brazil) was made official with the presentation of the Foundation Act and the Statute of the Association.

As additional products, we can point:

- ❖ a lecture on the “Graduate Program in Education, Management and Science divulgation” (Rio de Janeiro, RJ), by Ma Ines Tavernier from Belgium;
- ❖ two virtual lectures by prof. Dr Jose Xavier to schools in Rio Grande do Sul state,
- ❖ five lectures in schools in São Paulo state by Dr Jose Xavier, Dr Sandra Freiberger and Ma Francyne Piera;
- ❖ a lecture in a Rio de Janeiro school by Dr Jose Xavier, Dr. Erli Costa, Ma Elaine Alves.



School “Odão Felipe Pippi” in Santo Ângelo, South of Brazil participating in the live streaming session. Available at:

<https://www.facebook.com/media/set/?set=a.539950299407306.1073741830.335036159898722&type=1>

Dr Jose Xavier also presented two lectures during the Brazilian Symposium on Antarctic Research at São Paulo University, in São Paulo, São Paulo state. In this event, Dr Fernanda Quaglio represented the APECS-Brazil. All the objectives proposed during the event were fully achieved.



State School “Maria Comandolli Lira” in Rolim de Moura, Amazon, participating in the live streaming session. Available at:

<https://www.facebook.com/media/set/?set=a.668068063204306.1073741836.496889996988781&type=1>

Antarctic Day, December 2013

The Antarctic Day, in the first of December, was celebrated by the APECS-Brazil in a collaboration with APECS international, Fundação Internacional para a Boa Governança dos Espaços (www.ourspace.org.uk), Polar Trec (www.polartrec.org), Fundação Polar Internacional (www.polarfoundation.org), Antarctic Gateway (www.anta.canterbury.ac.nz), Associação Internacional de Operações de Turismo Antártico (<http://iaato.org/home>), eBird

(<http://ebird.org/content/ebird>) e British Antarctic Survey (www.antarctic.ac.uk). We proposed several activities in more than 20 schools when children was proposed to draw Antarctica flags. Flags were taken to Antarctica by researchers and photographed. Authors of all draws received the photos.



Video conference with Dr. José Xavier to students from Instituto de Educação de Ivoti.



Books and other materials provided by SECIRM/PROMAR to schools in Brazil.

APECS-Brazil and the Future Earth Program

On January 9th and 10th, Fernanda Quaglio from APECS-Brazil attended the Seminar on Future Earth sponsored by the ICSU ROLAC (International Council for Science, Regional Office of Latin America and Caribbean) in Varadero, Cuba. The meeting addressed especially how to attract associate institutions to develop scientific projects in the context of the ICSU program "Future Earth" (<http://www.futureearth.info/>). This is a decadal initiative of international research to study several scientific branches related to global environmental changes and thus provided information on global sustainability for the next decades. The program involves most scientific fields, such as medicine, humanities, chemistry, nutrition, ecology and conservation, engineering, physics, astronomy, palaeontology, among others.

APECS-Brazil and the SCAR Horizon Scan Retreat

The Scientific Committee on Antarctic Research (SCAR) Horizon Scan Retreat, held in Queenstown, New Zealand from April 20 to 23 had the participation of four early career scientists and 55 senior scientists representing 24 countries. The four early career scientists present were: Charlotte Havermans (BE) working on Antarctic benthos and molecular methods who is associated with APECS-Belgium; Erli S. Costa (BR) working on seabird ecology, council member of APECS and APECS-Brazil president; Polina Morozova (RU), PhD student in climate modelling and meteorology;

and Xichen Li (USA), student in atmosphere-ocean-sea-ice modelling. It is important to mention also the participation of Jenny Baeseman (NO), the founding Director of APECS and José Carlos Caetano Xavier (PT, UK), leader of APECS-Portugal, showing the importance of APECS in the training of leaders in polar science!

Scientific Journey: Brazil and the Antarctic Treaty

The XXXVII Antarctic Treaty Consultative Meeting (ATCM) took place in Brasília, Brazil, from April 28th to May 7th. Over 300 delegates attended the event, representing 41 countries. The APECS-Brazil, supported by SECIRM through the "Programa de Mentalidade Marítima (PROMAR)", organized nationally the "I Scientific Journey: Brazil and the Antarctic Treaty", aiming to promote discussions related to the importance of the Antarctic for the planet in Brazilian schools and the general community. The previously registered schools received materials from SECIRM / PROMAR and used them in classes. At least 20 activities were carried out, including conferences, workshops, reading and creating texts and practical activities, from north to south of Brazil. Institutions were from Rio de Janeiro (Universidade Federal do Rio de Janeiro; Escola Pedro II - Campus Niterói, Campus São Cristóvão e Campus Tijuca; Colégio de Aplicação da UERJ), São Paulo (Colégio Mobile), Rio Grande do Sul (Escola Estadual Érico Veríssimo - Caxias do Sul; Colégio Estadual Tereza Francescutti - Canoas; Fundação Escola Técnica Liberato Salzano Vieira da Cunha - Novo Hamburgo; Escola Estadual de Ensino Fundamental e Médio; and Escola Municipal Sete de Setembro - Erval Grande; and Instituto de Educação - Ivoti), Paraná (Colégio Estadual Professor Júlio de Mesquita - Curitiba) and Rondônia (Escola Profissionalizante Delta - Rolim de Moura; Escola Municipal Professora Lairce Santiago Maina - Pimenta Bueno and SENAC - Pimenta Bueno). More than 60 teachers, researchers and more than 3000 students attended the events. Several information were posted on Facebook and at least 2,000 people have access to the scientific meeting and its discussions. These information are available in the webpage:

<https://www.facebook.com/events/543761875736485/>

And where do we go from here...



For September 2014, the APECS-Brazil committee is organizing four events that will include the participation of teachers, students for all educational levels since high school to PhD

students, senior professors and early career researchers, as well the media and the general community. The XII International Polar Week and the II Career Workshop Development will be held at “Colégio Maria Auxiliadora” in Canoas, Rio Grande do Sul state. During two days we are planning 12 short courses and nine talks about the importance and the conservation of poles and marine environments. Some of the activities will be transmitted on-line with the support of the “Universidade Aberta do Brasil”. Additional information (in Portuguese) is available

at: <http://www.apecsbrasil.com/eventos/wdc/ii-wdc/>

APECS Brazil Leadership Committee:

EXECUTIVE BOARD

- ❖ Erli Schneider Costa (President), Universidade Federal do Rio de Janeiro
- ❖ Rodrigo Kerr Duarte Pereira (Vice-President), Fundação Universidade de Rio Grande
- ❖ Roberta da Cruz Piuco (General Secretary), Colégio La Salle de Esteio
- ❖ Jaqueline Brummelhaus (1st Secretary), Fundação Escola Técnica Liberato Salzano Vieira da Cunha
- ❖ Elaine Alves dos Santos (1st Treasurer), Universidade do Estado do Rio de Janeiro
- ❖ Priscila Krebsbach (2nd Treasurer), Universidade Federal do Paraná
- ❖ Juliana Assunção Ivar do Sul (1st Scientific Coordinator), APECS-Brazil
- ❖ Fernanda Quaglio (2nd Scientific Coordinator), Universidade Estadual Paulista Júlio de Mesquita Filho

- ❖ Nubia Deborah Araújo Caramello (1st Communication and Education Coordinator), Universidade Autônoma de Barcelona
- ❖ Sandra Freiburger Affonso (2nd Communication and Education Coordinator), APECS-Brazil

Active members:

- ❖ Moacir Silva, Universidade Federal Fluminense
- ❖ Miriam Hebling Almeida, APECS-Brazil
- ❖ Juliana Silva Souza, Universidade Federal do Rio de Janeiro
- ❖ Maria Rosa Dmengeon Pedreiro, Universidade Federal do Paraná
- ❖ Adriana Rodrigues de Lira Pessoa, Universidade Federal do Rio de Janeiro
- ❖ Larissa Castro, APECS-Brazil
- ❖ Julia Victória Grohmann Finger, Universidade do Vale do Rio dos Sinos
- ❖ Carla Arruda, Secretaria Estadual de Educação de Rondônia
- ❖ Claudia Ximenes Cerqueira, Universidade Federal de Rondônia

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APECS Bulgaria



APECS BULGARIA is already a non-profit organisation. 2013-2014 is a lucky period for APECS Bulgaria – it has been formally registered, the number of members has increased and the organization has been very active over the last year.



In December 2013 APECS Bulgaria celebrated the International Antarctica Day for a second time. Children from several

schools in Sofia, Kardzhali and Kroumovgrad towns painted flags of Antarctica. Their paintings reached the White Continent, participated in an Antarctic exhibition and were recognized as one of the best in the competition contested over 1000 student drawings from 16 countries.

March: APECS Bulgaria was officially registered according to the Bulgarian law. It's already a non-profit organization with a Chair and Board from 3 persons elected for a 4-years term. The website www.apecs-bulgaria.com is working at the moment in Bulgarian language but the Facebook page is translated in English. The association started its formal work as an organizer and partner to various institutions and organizations in education and outreach activities during the next months.



During the March 2014 Polar week more than ten lectures were held in two schools in Sofia and Tserovo.

Denica Apostolova talked to second-grade students from the private school "Prof. Ivan Apostolov" and Milena Hristozova - to several age groups from 32 school "St. Kliment Ohridski". Iglia Trifonova and Eleonora Balkanska gave talks and prepared an Antarctic photo exhibition at Tserovo School.



Invited by the Bulgarian Ministry of Education and Science, APECS Bulgaria's team

participated also in the conference "Scientific Instruments" in Varna town, organized under the project "Science and Business" within the Operational Program "Human Resources Development".

April: APECS Bulgaria was a partner of the "Communitas" Foundation in their project "1000 Scholarships" during the eighth "Look!Fest 2014". The polar early-career scientists participated in the game "Pro for an hour" where professionals from different fields presented in an interesting way to the students moments of their scientific practice. Children in the "1000 Scholarships" come from 30 towns and villages in Bulgaria. Special attention was given to the children from small towns, with low family income and growing without parental care.



May: APECS Bulgaria teamed up with British Council to promote polar science communication during the four-day Sofia Science Festival. A variety of topics were covered by APECS Bulgaria members including everything from why science at the poles is necessary to interesting scientific experiments, lectures about polar explorers, funny polar games, quizzes and attractions for kids. Hundreds of smiling and inquisitive children and parents went through our stand and improved their knowledge about Arctic and Antarctic.



APECS Bulgaria participated also in the European Space Expo with a presentation named "Benefits of European Space initiatives Galileo and

Copernicus for the Bulgarian Polar research", given by the Vice Chair Asparuh Kamburov.

At the end of May a team from APECS Bulgaria participated in the 6th National scientific conference named „Engineering – Optics and Electronics“, held in Gabrovo. The event was organised by the Ministry of Education and Science as part of the „Science and Business“ project, funded by the European social fund.



June: APECS Bulgaria organized a workshop named "Polar Space Challenges" in the Center for Fun Maths, Sofia. The children constructed an International Space Station (ISS) paper model and tagged its real time orbit revolution around the Earth (90 minutes). Now they know that the ISS moves 2000 times faster than a BMW, it's big as the Maracana football stadium and people on it see penguins in Antarctica and polar bears in the North. Their photos participated and won in the monthly European Space Agency "Space Gallery Competition".

July: The early-career researchers from APECS Bulgaria Desislava Peneva, Denitsa Apostolova, Stefania Klayn, Nadia Paneva and Stefan Velez took a part in the Children's City Camp "Fun Mathematics and friends 2014." They presented to children in a funny and interactive way the differences between Arctic and Antarctic fauna and also science experiments for kids as making of Magnetic Ferro Fluid or volcano caldera.

August: Polar Day and photo exhibition at the National Museum of Natural History

APECS Bulgaria was very active also during the summer. On the occasion of the 125th anniversary National Museum of Natural History APECS Bulgaria presented charity photo exhibition "Antarctica - the cold South" of Igljika Trifonova.

The funds collected will be used for creating educational programs for students in the museum using interactive whiteboard that turns any surface into an interactive static environment. APECS Bulgaria's team participated also with Antarctic lecture program, Polar creative studio and "Scientific Casino" in the celebrations of the 125th anniversary. Visitors of the museum could play in the scientific casino "Crystal", dedicated to the International Year of crystallography, where a team of beautiful and smart dealers, cashiers and inspectors gave much knowledge of geography and geology. Participants played roulette science and periodically broadcast leaders were taking on a mission through the halls of the museum. All participants were awarded with certificates and unique fossils of brachiopods aged 180-190 million years. Along with all this, the children participated with enthusiasm unparalleled in polar creative studio is already a trademark of APECS.



In 2014 APECS Bulgaria keeps following its long-term educational and outreach program willing to spread its polar experience and knowledge in the Bulgarian schools, kindergartens and Universities around the country. Being a registered organization APECS Bulgaria is more ready for collaboration in education, outreach and scientific projects with another partner organizations.

APECS Bulgaria is supporting strongly the idea of networking and meeting people from the National Committees around the world. Therefore in our plans for the next term is to organize an APECS Workshop for the Balkan countries in November 2014. And even more:

APECS Bulgaria is proud to be a host of the first APECS World Summit which will be held in

Sofia, Bulgaria at the end of May 2015. Another great event for us as hosts will be the Education and Outreach Workshop during the Antarctic Treaty Consultative Meeting /ATCM/ in Sofia. So we warmly invite you: Welcome to Bulgaria!

APECS Bulgaria Leadership Committee:

APECS Bulgaria Board Members:

- ❖ Iglia Trifonova
- ❖ Denitsa Apostolova
- ❖ Asparuh Kamburov

Contact APECS Bulgaria

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- ❖ Facebook - <https://www.facebook.com/APECS Bulgaria>

APECS Canada



APECS Canada has been very active over the last year. APECS Canada,

in collaboration with the ArcticNet Student Association (ASA), awarded the inaugural APECS Canada/ASA Mentor Award. We were pleased and honoured to present Eric Loring, a senior environment researcher with Inuit Tapiriit Kanatami (ITK), with this award at the 2013 ArcticNet Annual Science Meeting in Halifax. We are now accepting applications for the 2014 award which will be given out during the Arctic Change meeting in December in Ottawa. More information about the Mentor Award is available here: <http://www.apecs.is/en/get-involved/national-committees/apecs-canada-sp-1927085779/apecs-asa-mentor-award>.

APECS Canada was also asked to participate in a panel discussing whether Canada is able to meet its needs for research and innovation on northern issues, given that it does not have graduate programs situated in the three Canadian territories at the Canadian Science Policy Conference in Toronto, Canada, in November 2013. Jennifer Provencher represented APECS Canada on the panel where

a group of representatives from a number of stakeholder groups, including ACUNS (Association of Canadian Universities for Northern Science), ArcticNet, the Yukon government, the Northwest Territories Government, Yukon College, and the Nunavut Arctic College, discussed the future of post-secondary education in northern Canada.

APECS Canada teamed up with Science Borealis to promote science communication during the March 2014 Polar Week. Guest posts on Science Borealis were posted during, before, and after Polar Week, and were written by APECS Canada members highlighting the Polar Regions. A variety of topics were covered by APECS Canada members including everything from why science at the poles is necessary to the details of what polar zooplankton can teach us about the marine environment. You can view the blogs here (<http://www.apecs.is/en/get-involved/national-committees/apecs-canada-sp-1927085779/news/6509-apecs-canada-takes-over-science-borealis-team-up-for-march-polar-week>).

APECS Canada continued to partner with the Canadian Polar Commission on several projects over the last year. In 2014 The Canadian Polar Commission (CPC) and APECS Canada launched a partnership to provide opportunities for keen APECS Canada members to accomplish important science-policy work by proactively reporting on significant monitoring results within Sustaining Arctic Observing Networks (SAON) Canada. In order to help promote the monitoring activities of SAON Canada to a wider audience, the CPC will facilitate the production of a Results Bulletin every 1-2 weeks that reports on policy-relevant progress made by the SAON networks and associated projects. The research and writing for the Bulletins will be conducted by APECS Canada members, contracted on a part-time basis for one academic term. The analysts are responsible for reporting regularly on results of SAON projects within their designated theme, and will be supported by a Policy Analyst as a mentor.

As part of the strategies to expand membership by mentors and early-career researchers, in addition to formal poster and seminar presentations, APECS Canada members frequently prepare brief overviews of APECS

activities in oral and written formats, facilitate communication to collaborate and invite new members, and hold informal events or Question-Answer sessions.

For example, APECS flyers and brief overviews have been distributed and presented at other non-polar-specific meetings including evolutionary biology conferences, ecology and wildlife meetings, environmental science and conservation events, and at the beginning of lectures in undergraduate and graduate classes. In addition, members working in other initiatives explore the incorporation and participation of APECS in local and international meetings and projects, such as initiatives associated with the Circumpolar Biodiversity Monitoring Program (CAFF, Arctic Council), the Arctic Observing Summit, and the Canadian Polar Commission.

APECS Canada Leadership Committee:

APECS Canada Board

- ❖ Ann Balasubramaniam
- ❖ Leah Beveridge
- ❖ Alexandre Bevington
- ❖ Kristina Brown
- ❖ Louise Chavarie
- ❖ Selena Raven Cordeau
- ❖ Mark Edwards
- ❖ Nikolaus Gantner
- ❖ Meagan Grabowski
- ❖ Lorelei Guery
- ❖ Adam Houben
- ❖ Gabriela Iburguchi
- ❖ Kimberley Keats
- ❖ Jennie Knopp
- ❖ Daniel Lamhonwah
- ❖ Jennifer Provencher
- ❖ Breanne Reinfort
- ❖ Vicki Sahanatien
- ❖ Heidi Swanson
- ❖ Laura Thomas

❖ Jana Tondu

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- ❖ Facebook
<https://www.facebook.com/APECS4Canada>
- APECS Canada
- ❖ Twitter - @ehPECS

APECS Finland

APECS Finland organized and was involved in different activities promoting interdisciplinary polar research and educational outreach during the year 2013-2014. For example, several APECS Finland early career scientists presented their work at international conferences and joined APECS workshops and by celebrating the "Antarctica Day".

APECS Finland was co-operating with APECS Sweden by hosting a social gathering with outdoor activities and sauna evening in conjunction with the International Glaciological Society (IGS) Nordic Branch Symposium at Lammi Field Station, Finland. We were very happy to share our evening with young nordic polar and glaciology scientists. APECS Finland members have also collaborated in the APECS Nordic Project "Bridging Polar Early Career Researchers and Indigenous Peoples in Nordic Countries" e.g. by translating the APECS Nordic Survey into Finnish to better be able to contact indigenous people in Finland.

APECS Finland members were deeply involved in the Arctic Science Summit Week 2014 in Helsinki, Finland. We had 'our people' in the organizing team and a very strong representation in the business meetings. In a traditional Finnish way, ASSW 2014 APECS get-together was held with a theme Arctic Science Summit Sauna, where our members taught the secrets of Sauna to our international guests.

In the meantime, we have encouraged our APECS Finland members to be active e.g. in the

APECS International council, to recruit new members and to participate in international APECS activities. We are also looking forward to working further with APECS Sweden and Norway, and hoping to get more ideas from our members and what they would like to see APECS Finland to do for them.

For further information, you are very welcome to get in touch with the committee by emailing to Sanna or Daniel. We look forward to hearing from you!

APECS Finland Leadership Committee:

- ✳ Sanna Majaneva, University of Helsinki, Finland
- ✳ Daniel Kramer, Finnish Meteorological Institute

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<https://www.facebook.com/groups/447533961966306/>

APECS France



After being officially created in June 2013, APECS-France has been registered as a non-profit organization in accordance with the French law ("association loi 1901") from 6.1.14. This has been done to allow the leadership committee to arrange fundraising, and use a bank account on the behalf of APECS-France. First funding (2000€) was awarded by Axelle Lemaire, a French Member of Parliament.

In 2013-2014, APECS-France has grown to 145 members, mostly early-career scientists from all fields of science, but also including older polar scientists who can act as mentors. About 1000 French students participated in two polar weeks and in the "Antarctica Day" proposed by OurSpaces. 13 webinars were hosted during the 2 polar weeks, offering students and APECS-France members to learn about various topics

dealing with polar science, polar geopolitics, or life in polar regions. Most webinars were recorded and uploaded on youtube (with private links).

The leadership committee, together with several eager early-career scientists, is working on different projects for the coming year. This includes the design of a website (planned to be released by the end of September 2014), the design and printing of a small leaflet to describe APECS-France and its activities, the organization of a workshop at the ISTAS conference in Brest in October 2014, the organization of a survival training course for early-career polar scientists in spring 2015, and a new Education & Outreach activity, during which students will follow Zoe, a young oceanographer who will spend several weeks on a small sail boat in the Antarctic peninsula.

APECS France Leadership Committee:

- ✳ Pascaline Bourgain, chair ("présidente")
- ✳ Anne-Mathilde Thierry, co-chair ("vice-présidente")
- ✳ Gaelle Lamarque, treasurer
- ✳ Celine Clement-Chastel, secretary

Contact APECS France:

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(pascaline.bourgain@gmail.com)
- ✳ Website: (from 25.09.14) www.apecs-france.org
- ✳ Facebook:
<https://www.facebook.com/Apecs.France>

Indian Polar Research Network (IPRN)



Membership: 139 members joined IPRN in the year 2013-14 through its mailing list service whereas the Facebook page was liked by 385 users.

IPRN Presentations: Five presentations are under preparation by the

executive committee members to be given in selected schools/colleges/universities within Aug-Oct 2014. Details will be provided in the next report.

IPRN Photography contest: The process has been initiated to conduct this contest by the end of August 2014.

Updating Website: IPRN website was streamlined by inclusion of profiles of the Excom members. Prospective members were provided with an online registration form to join IPRN.

IPRN Executive Committee Elections (2014-2015): 3rd Excom elections are underway now and the new executive committee will assume charge on 8th August.



Career Workshop: Polar Ocean Acidification for Early Career Scientists

Date: 20 September 2013

Location: Laboratory of Integrative Taxonomy and Microbial Ecology (LITME) and Indian Institute of Science Education and Research-Kolkata (IISER-K), India

Short summary: A career panel discussion themed on "Opportunities in Ocean Acidification Research" was organized as part of the International Workshop on Ocean Acidification by IPRN members. Dr. Bhadury (Assistant Professor, IISER-K) introduced IPRN to the participants and requested the panelists to share their views on opportunities in polar science for early career researchers. The panel members consisted of some of the leading marine scientists from Norway, UK, Australia and Hong Kong. They spoke on the critical issues that affect polar ecosystems and the importance of the role of young researchers as problem-solvers. The need for effective scientific communication and active

collaborations for career development of young researchers was also stressed on.

Name and Affiliation of Organizers: Dr. Punyasloke Bhadury, Advisor IPRN, Gitanjali Katlam, Member IPRN, Priyanka Chowdhury, Member IPRN, Anant Pande, Member IPRN

The news of this event was published online. Please click on the links to view:

- ✦ <http://www.niva.no/en/scar-supports-international-workshop-on-ocean-acidification>
- ✦ <http://www.collegeaffairs.in/general-news/biologists-urged-pursue-career-polar-research/#Bg534eC6l5Ds1F1d.99>
- ✦ <http://www.apnnews.com/2013/10/09/biologists-urged-for-pursuing-career-in-polar-research/>

APECS India Leadership Committee:

IPRN Executive Committee consists of 3 working groups:

Membership, Affiliations and Finance (MAF)

- ✦ Anant Pande: Vice-President
- ✦ Anish Kumar Warriar: Member
- ✦ Priyanka Chowdhury: Member
- ✦ Sonal Chaudhary: Member

Social Outreach and Website (SOW)

- ✦ Abhinav Srivastava: Vice-President
- ✦ Shridhar Jawak: Member
- ✦ Shivani Tripathi: Member
- ✦ Amit Kumar: Member

Research Education and Outreach (REO)

- ✦ Nuncio Murukesh: Vice-President
- ✦ Roseline C. Thakur: Member
- ✦ Gitanjali Katlam: Member
- ✦ Archana Dayal: Member

Advisors:

- ✦ Dr. Renuka Badhe, SCAR, UK
- ✦ Dr. Punyasloke Bhadury, IISER-K, India
- ✦ Dr. Thamban Meloth, NCAOR, India

Contact the Indian Polar Research Network (IPRN):

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- ❖ Facebook: <https://www.facebook.com/iprn.india>

APECS Italy

Update from Matteo Cattadori the coordinator of APECS Italy Education & Outreach and a member of the Executive Committee of Polar Education International (PEI):

During last year I participated and organised several APECS/PEI events, both in person and online.

All the following activities were carried out with the goal of increasing awareness, both on students and teachers, on the importance of polar regions.

In all the following events I had the chance to talk about APECS organization:

Glaciology camp for high school students

19-22 September 2013, Bolzano

- ❖ Organized by: School administration of the autonomous province of Bolzano
- ❖ Attended by: high school students (30pp)

La Scienza in centro

4th October 2013, L'Aquila

- ❖ Organized by: INGV National Institute of Geophysics
- ❖ Attended by: general public (30 pp)

Summer Polar School for science teachers

10-13 October 2013, Naples

- ❖ Organized by: MNA National Museum of Antarctica
- ❖ Attended by: Italian science teachers (15 pp)
- ❖ More info: www.mna.it/spes

Cansat-ESA Italy second edition – Spazio alla scuola. Antartide il cuore bianco del pianeta

30 November 2013, Modena

- ❖ Organized by: Liceo Scientifico Tassoni (High school)
- ❖ Attended by: students (250 pp)

The role of Polar sciences in the formal science education. Science teachers workshop

24 January 2014, Piacenza

- ❖ Organized by: Istituto comprensivo di Cadeo (Middle school)
- ❖ Attended by: Italian science teachers (12 pp)

Climate and polar regions

5 March 2014, Rimini

- ❖ Organized by: Liceo Albert Einstein (High school)
- ❖ Attended by: students (200 pp)

Il delicato equilibrio dell'Antartide. Teacher workshop + Showcase of works of involved classes

2-4 April 2014, San Miniato (FI)

- ❖ Organized by: Istituto Tecnico Cattaneo (High school)
- ❖ Attended by: students (200 pp) teachers (18)

Tra il dire e il fare: scienze polari e non solo per l'occupabilità, l'inclusione e la cittadinanza scientifica.

16-17 May 2014, Cremona

- ❖ Organized by: Liceo Aselli (High school)
- ❖ Attended by: Italian science teachers (12 pp) and students (50)

Contact APECS Italy:

- ❖ Tosca Ballerini (toscaballerini@gmail.com)

APECS Netherlands



APECS Netherlands provides a polar platform for early-career researchers originally from the Netherlands or currently residing there. We place strong emphasis on networking between our members and our mentors in science, policy-making, and education. We communicate via a monthly newsletter as well as a Facebook group, and we aim to meet in person at least once a year, preferably during an open-science symposium to showcase the varied Arctic and Antarctic research activities within the network. We also highlight and support individual outreach and education efforts. In 2013/14, APECS Netherlands was fortunate to have had

the support of the Netherlands Science Organisation (NWO), the Willem Barentsz Polar Institute (WBPI), the Canadian Embassy, and Pool tot Pool. Many thanks!

2nd APECS Benelux Symposium

October 31, 2013, Humanity House, The Hague, Netherlands

- ❖ There is a short article about this event on: <http://www.apecs.is/en/news-feeds/apecs-news/6352-2nd-apecs-benelux-symposium-belgian-impression>

25th Anniversary Symposium of the Centre for Canadian Studies

November 28, 2013, The University of Groningen, Groningen, Netherlands

- ❖ To mark the 25th anniversary of the Centre for Canadian Studies at the University of Groningen, the Arctic Centre and the Centre for Canadian Studies jointly organised a symposium session on the Canadian Arctic. Dr. Gerlis Fugman had been invited to speak about her PhD research, but having recently ascended to the role of director of our organisation, APECS was duly presented and promoted, and the foundations for further cooperation with said Centers as well as the Canadian Embassy were laid.

'Pool tot Pool'

March, 15, 2014, Rijksmuseum Volkenkunde, Leiden, Netherlands

- ❖ There is a short article about this event on: <http://www.apecs.is/en/news-feeds/apecs-news/6531-northern-lights-herald-dutch-polar-week>

APECS Netherland Leadership Committee:

- ❖ Dr. Frigga Kruse, Arctic Centre, University of Groningen, Netherlands
- ❖ Dr. Elizabeth 'Libby' Jones, University of Groningen, Netherlands, and Alfred Wegener Institute (AWI), Germany

Contact APECS Netherlands:

- ❖ Email: apecsnl@gmail.com
- ❖ APECS Netherlands communicates with its members via email: netherlands@apecs.is
- ❖ APECS Netherlands on Facebook: <https://www.facebook.com/groups/474617552664457/>

APECS Oceania



APECS Oceania has assisted with two APECS conferences this year including the International Symposium on Sea Ice in a Changing Environment Symposium held in Hobart, Tasmania and SCAR Open Science APECS and PEI

Workshop. In addition, Nita Smith is a member of the organising team for the IceFest event that will be held in New Zealand in August/September Below is some information of our involvement in these events.

APECS Workshop @ SCAR Open Science Conference

APECS Oceania is heavily involved in the organisation and implementation of both the joint APECS & PEI Science Communication Workshop and the Antarctic Environments Portal & APECS workshop. Meagan, Lorna and Sira are on the organising committee for the APECS & PEI workshop, and will be assisting on the day of the workshop. Sira is also a co-convenor of the Portal & APECS workshop.

International Symposium on Sea Ice in a Changing Environment Symposium

APECS members assisted ACE CRC and IGS local organising committee for the symposium planning and APECS volunteers provided logistic support during the symposium. We also assisted in planning and running the pre-symposium Polar Open Science Day.

The Polar Open Science Day

The polar open science day was designed for the public, and received more than 2,000 visitors on the day. Mana and other members also organised an APECS social event, which nicely welcomed symposium participants and helped build a very friendly atmosphere, which was essential for the success of the symposium.

APECS Oceania Leadership Committee:

- ❖ Molly Jia Zhongnan – IMAS/UTAS
- ❖ Julie Janssens – IMAS/UTAS
- ❖ Sira Engelbertz – University of Caterbury

- ❄ Meagan Dewar – Deakin University
- ❄ Lorna Little – Otago University
- ❄ Sarah Ugalde – IMAS/UTAS
- ❄ Mana Inoue – IMAS/UTAS
- ❄ Holly Winton – Curtin University
- ❄ Nita Smith – Christchurch City Council (IceFest)

Contact APECS Oceania:

- ❄ Molly Jia (myporpoise2009@gmail.com)
- ❄ Blog Site:
<http://apecsoceania.blogspot.com.au/>
- ❄ Facebook:
<https://www.facebook.com/ApecsOceania?ref=hl>
- ❄ Twitter: @APECSOceania

APECS Poland

The main activity of APECS Poland was involvement in organization of the 35th Polish Polar Symposium (Wrocław, Poland, 4-7.06.2014). The APECS Poland President was in the organizing committee; APECS members acted as session co-chairs, there was also a social APECS Poland meeting during the Symposium.

- ❄ Social event during the Polish Polar Symposium, Wrocław, Poland, 7.06.2014
- ❄ The meeting was held after the main part of the conference. Several 'old' members met together with some people who wanted to join APECS. We had a conversation about the idea behind APECS, potential benefits for the professional careers and ways of engagement. There was also some discussion concerning the 'revitalization' of the Polish APECS NC.

APECS Poland Leadership Committee:

- ❄ President: Małgorzata Korczak-Abshire; Department of Antarctic Biology, Institute of Biochemistry and Biophysics, Polish Academy of Sciences
- ❄ Contact person between the APECS Council and the Polish NC: Maja Lisowska

Contact APECS Poland

- ❄ Maja Lisowska
(maja.maslowska@gmail.com), Gosia Korczak-Abshire (korczakm@gmail.com)
- ❄ Facebook:
<https://www.facebook.com/apecs.polska>

APECS Portugal



APECS Pt Workshop

This year the APECS National Committee of Portugal (APECS Pt) organized its fourth annual Career Development Workshop entitled "How to be a Polar Scientist for Dummies". One of the changes of this workshop was the introduction of "flash" talks for early careers, which gave the opportunity to young scientist to present their work and to improve their communication skills.

We also counted with the presence and communications of Alexandre Nieuwendam, president of PYRN, Iglika Trifonova vice president of APECS and APECS Bulgaria, Ylva Sjöberg from APECS Sweden, Dr. Mark Mallory Canada Research Chair in Coastal Wetland Ecosystems of Acadia University, and Dr. Hans-Otto Pörtner researcher in the Alfred Wegener Institute for Polar and Marine Research, Germany (AWI).

Being the workshop dedicated to how to communicate polar science to the society two brilliant talks about how to make our message pass through visually by Bruno Cruz that is a graphic designer and taught us how to do a good poster. And another talk presented by José Xavier that presented the Educational projects that are being conducted by the Portuguese Polar program and APECS Portugal.

Polar Weeks

APECS Portugal takes a very important role in the Portuguese Polar weeks, being an active partner with Polar Educators International and Portuguese Polar Program (PROPOLAR) on the educational project "Profession: Polar Scientist". The main objectives of this program are enhancing the role of Polar Regions along

schools and general population; show the science produced and stimulate the early career scientist to improve the communications skills in collaboration with teachers and educators.

During the two polar weeks (2 to 9 of October 2013 and 15 to 21 March 2014) we reach to more than 20000 students from all ages with the participation of more than 36 scientists and 397 teachers and educators from Portugal, Argentina, Brazil, Bulgaria, Canada, Chile, France, Holland, Norway and United Kingdom.

The activities were mainly talks in schools and Universities.

Facebook page and website

APECS Portugal's facebook page was changed from a personal profile to a public page and had a little marketing campaign in the schools, during the polar weeks, to bust the number of "likes".

We created a new website for APECS Portugal. Our site is now more "fresh", clean and we have the objective to make it a library with some educational materials to early careers, teachers and educators.

Polar Act – Polar Message Contest

This contest was organized for APECS Portugal with the collaboration of the two educational projects "Education Propolar" and "Profession: Polar Scientist". This activity aims to develop an active civic awareness on students, sensitizing them to become active citizens and to have a role in the change in the global society dynamics.

We challenged the students to find and research about the issues that are affecting the Polar Regions, what causes these problems and what could be the changes in the society that could solve them and to produce a message about the issue researched. The polar message could be a video, a draw, a photo, a song...

Polar week October

2 to 9 of October 2013, Portugal

✳️ Penso que não será necessário por aqui visto que já está em cima certo?

IV APECS Portugal Workshop - "How to be a Polar Scientist for Dummies"

31 of October 2013, Faro

✳️ Summary: <http://www.apecs.is/en/news-feeds/apecs-news/6348-apecs-portugal-iv-career-development-workshop-in-the-university-of-algarve-portugal>

National Workshop – Education & Science – From polar research to the classroom

1 of March 2014, IEC, Mamarrosa

✳️ Summary: This Workshop was developed for teacher and educators with the main objectives of: Give them some basis about science; Show them our educational projects; give examples of educational activities that they can make easily in their schools; Let the most active teachers and educators share their experience.

✳️ Oral communication how APECS national committees help to engage international networking between schools and scientists.

✳️ José Seco, Sílvia Lourenço, A. Nieuwendam, A. Salomé, P. Azinhaga, S. Aparício & J. Xavier. 2014. APECS Portugal: Joining scientists and students all around the world. IN National Workshop – Education & Science – From polar research to the classroom. 1st Of March 2014. Aveiro, Portugal (communication)

News for the APECS newsletter

The role of the polar scientists in the classroom was the motto for the national workshop Education & Science organized by IMAR-CMA (University of Coimbra) and Education and Citizenship Institute. The earlier career researchers of APECS Portugal were present in the scientific and international network sessions. The earlier careers showed their work in several research areas and how those themes can be introduced in the classroom. The discussion, the networking and the sharing of experiences between the earlier careers and the teachers was intense and fruitful during all day. In the end of the day, two main ideas emerged. First of all, taking the scientists to the classroom and bringing the students to our laboratories increases effectively the interest of the younger generations in the scientific fields; And secondly, the introduction of scientific work to the classroom enhance greatly the critical sense in the students and all the school community.

APECS Portugal Leadership Committee:

- ❖ José Seco (IMAR – Centro do Mar e Ambiente, Departamento de Ciências da Vida, Universidade de Coimbra, 3001-401 Coimbra)
- ❖ Silvia Lourenço (Departamento do Mar e Recursos Marinhos, Instituto Português do Mar e da Atmosfera (IPMA), Av. Brasília 6 1449-006 Lisboa)
- ❖ Patricia Azinhaga (IMAR – Centro do Mar e Ambiente, Departamento de Ciências da Vida, Universidade de Coimbra, 3001-401 Coimbra)
- ❖ Sara Aparício (³Center for Environmental and Sustainability Research (CENSE), DCEA FCT-UNL)
- ❖ Alexandre Nieuwendam (Center of Geographical Studies-IGOT, University of Lisbon)
- ❖ Ana Salomé (Center of Geographical Studies-IGOT, University of Lisbon, Portugal)

Contact APECS Portugal:

- ❖ Website:
<http://apecsportugal.wix.com/apecsportugal>
- ❖ Facebook:
<https://www.facebook.com/apecs.portugal>

APECS Russia



**APECS
RUSSIA**

APECS Russia has been working hard during the last year. Since the end of 2013, APECS Russia was invited to find and select young Russian and international scholars to attend ASSW 2014, in particular the ISIRA (International Science Initiative in the Russian Arctic, Advisory Group of IASC) meeting. The meeting was held on the 7th of April during the ASSW 2014 in Helsinki and got together all the national members and 14 early career scientists to share information about on-going and planned international and bi-lateral research projects in the Russian Arctic. All 14 young scientists from all member countries had a chance to introduce themselves and their research projects to the

group. National members of ISIRA assisted by young scientists gave brief introductions to their countries ongoing research activities in the Russian Arctic. We assume that through the work within ISIRA Group young scientists from Russia and other countries have a great opportunity to get experience from our senior colleagues and work with science experts from all national countries of ISIRA. We are looking forward to continue our cooperation.

By the beginning of 2015 APECS Russia plans to form a Leadership Board and get more official relationships with APECS International. By all these moves we will be able to officially register APECS Russia within Russian Federation. It will give a lot of great opportunities to our members not only to communicate within Russia but also create joint projects and activities and apply for funding. We already have a great list of partners to implement some of our ideas.

This year APECS Russia has been invited to give presentations about opportunities for young scientists within Russia and internationally. In May 2014 we had a teleconferencing session with students from State Polar Academy, St. Petersburg. October 2014 is also marked with APECS Russia to be presented at Arctic conference in Arkhangelsk, where we will share our experiences on establishing tight connections with international science communities and how to move forward in science career and do not get stuck.

In cooperation with APECS Russia, an outreach resource “Popular Science” has been launched in December 2013, aiming at communication of polar science to general public. You can find out more at http://instagram.com/pop_nauka, https://twitter.com/pop_nauka, <https://www.facebook.com/popular.nauka>, and http://vk.com/pop_nauka.

For more news and updates from APECS Russia you can always check out our profiles at social media:

Facebook – <https://www.facebook.com/APECSRussia>
VKontakte – <http://vk.com/club9980378>
Twitter - https://twitter.com/apecs_russia

Want to know more? Don't hesitate to get in touch with us! You are always welcome!

APECS Slovenia



The researchers who work in Slovenia on the cryosphere topics started their networking in the year of 2012 and established in January 2013 officially the Section of Cryosphere in the frame of Slovenian Association of Geodesy and Geophysics (SZGG). Afterwards, also connections with IACS and APECS were launched.

Due to close collaborations among the researchers in the group and the same topics, this report basis on the report of Section of Cryosphere which was presented at the Annual meeting of the SZGG, Ljubljana, 30 January 2014 (http://www.fgg.uni-lj.si/sugg/porocila/2013/Porocilo_IACS_2013.pdf)

The activities of various research groups were focused on issuing of avalanche bulletins (project NH-WF Natural Hazards Without Frontiers <http://www.natural-hazards.eu>), research monitoring of the Triglav glacier (georadar measurements, continuous web camera monitoring, isotopic composition) and mt. Skuta and Kanin glaciers, meteorological monitoring and issuing of avalanche bulletins based on field observations, and monitoring of precipitation isotopic composition. There were also numerous activities of the Mountain Rescue Association of Slovenia. Activities on snow stratigraphy and its isotopic composition were in progress. The tests of new samplers for melting snow water and radiation shields as well as investigations on snow hydrology were carried out. Monitoring of cryogenic processes in caves is also active.

1st anniversary of the Section of Cryosphere Annual meeting of the Slovenian Association of Geodesy and Geophysics

30 January 2014, Faculty of Civil and Geodetic Engineering, University of Ljubljana. Ljubljana, SLO

- ❖ At the meeting a comprehensive work report about member's activities in the field of

cryosphere sciences during the year 2013 in Slovenia was presented. A good collaboration of 11 institutions has been confirmed again. <http://www.fgg.uni-lj.si/sugg/index.htm>

APECS Slovenia Leadership Committee:

- ❖ Iztok Sinjur, Slovenian Forestry Institute

Contact APECS Slovenia:

- ❖ Iztok Sinjur (iztok.sinjur@gozdis.si)

APECS Spain

Since October 2013, lots of amazing activities have been done by the APECS-Spain folks to share their knowledge and experience about polar ecosystems. Most of these activities have been performed around the Barcelona area (Catalonia, Spain), where the most active partners of APECS-Spain belong. Thus, these activities have included talks at museums for a broad public; talks, experiments and hands-on activities at schools; and follow-up connections during an Antarctic research



cruise.

Polar Week

2 October 2013, IES Els Gorgs, Cerdanyola del Vallès

- ❖ Summary: general talk about Antarctica (main features and differences from other polar regions), research and management (Antarctic Treaty) to high school students.
- ❖ Organizer: Rebeca Zapata (Institut de Ciències del Mar (ICM-CSIC))

Antarctic conferences

November 2013, Different museums and institutions around Barcelona, Spain. (Cosmocaixa, Museu Blau, Museu Marítim de Barcelona, Zoo de Barcelona)

- ❖ Summary: Cycle of Antarctic conferences including aspects in geology, biology and management.
- ❖ Media: http://barcelonacultura.bcn.cat/es/de-scubre/antartida.-la-vida-al-limite#.U-uBIFb8_px



Talk and hands-on activities

14 November 2013, Escola Sant Gregori, Barcelona

- ✳ Summary: Talk and hands-on activities for 4-year-kids (their class was named "Penguins"). Participation of this class in the NASA Name-the-Penguin contest. Looking with these kids at freshwater ice and seawater ice, and playing with it (coloring it and watching the behaviour of those substances when applied on the ice), and looking at sea ice diatoms under the microscope (with Begoña Vendrell).
- ✳ Organizers: Begoña Vendrell, Rebeca Zapata and Stefano Ambroso (Institut de Ciències del Mar (ICM-CSIC)).

Antarctica Day

26 November 2013, IES Els Gorgs, Cerdanyola del Vallès

- ✳ Summary: flags activity
- ✳ Organizer: Rebeca Zapata (Institut de Ciències del Mar (ICM-CSIC))
- ✳ Media:
<https://www.facebook.com/photo.php?fbid=383823055097102&set=a.167893373356739.59927.100004082335201&type=1&theater>

29 November 2013. Escola Sant Gregori, Barcelona

- ✳ Summary: flags activity
- ✳ Organizer: Begoña Vendrell (Institut de Ciències del Mar (ICM-CSIC)).
- ✳ Media:
<https://www.facebook.com/photo.php?fbid=385405731605501&set=a.167893373356739.59927.100004082335201&type=1&theater>

Pressure experiment

16 January 2014, Escola Sant Gregori, Barcelona, Spain and Filchner Outflow Trench, Antarctica

- ✳ Summary: Pressure experiment with 7-year-kids (technology class), sending different types of materials to Antarctica, to be tested there by scientists on board.
- ✳ Organizers: Begoña Vendrell, Rebeca Zapata and Stefano Ambroso (Institut de Ciències del Mar (ICM-CSIC)).



A modern Antarctic expedition

Feb-June 2014 (>84000 visits), Maritime Museum of Barcelona, Barcelona

- ✳ Summary: Exhibition about a modern Antarctic expedition, from applying for funding, to the equipment and scientific polar clothes needed, and the results obtained such as thesis, research papers and expedition reports.
- ✳ http://www.mmb.cat/exposicions.php?idm=1&pagina=21&codi_tipus_exp=37&codi_exp=713&estic=1
- ✳ Organizers: Begoña Vendrell, Rebeca Zapata and Stefano Ambroso (Institut de Ciències del Mar (ICM-CSIC)).

Antarctic Meeting for Students

13 May 2014, Museu Blau, Barcelona

- ✳ Summary: Guidance of several pieces of work from different fields (i.e. arts, biology, psychology) done by students in Barcelona from several schools.
 - The psychology of members of an Antarctic expedition
 - Comparison of Mediterranean and Antarctic ROV transects

- Design of an eco-sustainable Antarctic base
- Antarctic food web
- Bacteria in the ice
- Diet fitness in an Antarctic expedition
- Create and perform a dance based on Vangelis Antarctic Symphony

❖ Organizers: Begoña Vendrell, Rebeca Zapata and Stefano Ambroso (Institut de Ciències del Mar (ICM-CSIC)).



Gymkhana of the Seas and Oceans in Barcelona

22 May 2014 (International Day for Biological Diversity), city of Barcelona

- ❖ Summary: 74 activities about the oceans (including lots of hands-on ones) were designed for schools, with specific emphasis on the Antarctic (and the Arctic), and with a final performance of the Ocean Conveyor Belt.
- ❖ <https://www.elmarafondo.com/-/gymkhana-de-los-mares>
- ❖ Organizers: Begoña Vendrell, Rebeca Zapata and Stefano Ambroso (Institut de Ciències del Mar (ICM-CSIC)).

APECS Spain Leadership Committee:

- ❖ Rebeca Zapata (President) (Institut de Ciències del Mar (ICM-CSIC), Barcelona)
- ❖ Begoña Vendrell (Vice-President) (Institut de Ciències del Mar (ICM-CSIC), Barcelona)
- ❖ Stefano Ambroso (Institut de Ciències del Mar (ICM-CSIC), Barcelona)

❖ Francyne Elias-Piera (Secretary) (Universitat Autònoma de Barcelona, Barcelona)



Contact APECS Spain

- ❖ Pedro Echeveste (echevestepedro@gmail.com)
- ❖ Blog: <http://apecsspain.wordpress.com/>
- ❖ Facebook: <https://www.facebook.com/apecs.spain>
- ❖ Twitter: <https://twitter.com/APECSSpain>

APECS Sweden



We have launched a Facebook group for APECS Sweden, which at present has 40 members.

The intention is to facilitate communication between the National Committee and the members, as well as between individual members and thereby shape a sense of community among polar ECRs in Sweden.

Funding was provided for several ECRs to participate in ASSW in Helsinki.

The National Committee has developed a working relationship with National Geographic, which has its European office in Stockholm. Several members of the NC made a study visit to the office in May, which we consider the start of a longer-term relationship.

A project in the conceptual stage at this point is a gathering of APECS members from all the Nordic countries to take place in Tromsø, Norway, perhaps in 2015. The idea would be to make study visits to the various Arctic

institutions – scientific, political, and cultural – that are located there. And to foster greater cooperation among APECS groups in the Nordic countries.

Several newsletter-like emails on opportunities for ECRs were sent to members.

Some thought has been given to produce a podcast, of and for ECRs interested in polar science, history and politics.

An APECS Sweden ‘after work’ social event was arranged at the bar Babylon in Stockholm on June 4th.

Two activities are planned for September 2014:

- ❖ APECS Sweden is a partner for an episode of the web-TV program Crosstalks on 18 September at KTH Royal Institute of Technology. The episode is entitled ‘Adventurous field work in the name of science’. APECS Sweden will have a number of seats to give to its members to be in the live studio audience.

- ❖ On September 19, APECS Sweden will be host of the ‘Geopub’ social event at Stockholm University, arranged by the Geologklubben there. Our partners for this event are National Geographic, and the Swedish Polar Research Secretariat, each of which will make presentations on opportunities for ECRs. National Geographic explorer Lars Larsson will also make a presentation on his field work.

APECS Sweden is also evaluating the possibility of arranging a seminar during the Polar Forum on 5-6 November in Stockholm. The theme would be the nexus of science and politics in the Arctic. The French and Korean embassies have expressed interest in participating. Other guests and other activities in conjunction with this seminar are also being discussed. Another arranging partner for this event is the Foreign Affairs Association at Stockholm University.

APECS Sweden Leadership Committee:

- ❖ Ylva Sjöberg, Stockholm University
- ❖ Moa Hamré, Stockholm University
- ❖ Malin Johansson, Chalmers University
- ❖ Johanna Mård Karlsson, Stockholm University

- ❖ Elin Jantze, Stockholm University
- ❖ Cecilia Wesslén, Stockholm University
- ❖ Katrin Lindbäck, Stockholm University
- ❖ Eric Paglia, KTH Royal Institute of Technology. Executive Secretary

Contact APECS Sweden

- ❖ Website: www.apecssweden.se
- ❖ Facebook: <https://www.facebook.com/groups/577799805644041/>
- ❖ Twitter: @APECS_Sweden

APECS Turkey

APECS Turkey attended to the NASA club seminar with the topic of “Climate Change and Global Warming”. The seminar took place on Wednesday, November 20, 2013 at 3:00pm in Kurtkoy Doğa College Campus, Istanbul.

This seminar was about the Polar science of climate change. The talk gave information on changes in greenhouse gases and aerosols in the atmosphere with the extent of affecting climate. Talk included sensitive thresholds of Earth Climate System, how this system can jump quickly from one stable operating mode to a completely different one, and can create extreme weather events. The talk included the discussion of climate variations in the Polar Regions including the trip down to Antarctica in 2006- ODEN expedition.

Students learned how the climate system works; what factors cause climate to change across different time scales and how those factors interact; how climate has changed in the past; how scientists use models, observations and theory to make predictions about future climate; and the possible consequences of climate change for our planet. Via this presentation, students explored evidence of changes in ocean temperature, sea level due to global warming. Students learned about how satellites and other technologies are revealing the global signals of a changing climate.

Finally, the talk highlighted the connections between human activity and the current

warming trend which considers some of the potential social, economic and environmental consequences of climate change. Students learned about the human activities – particularly the increase in atmospheric carbon dioxide since the Industrial Revolution – are affecting the climate system today, leading to warming temperatures globally. Talk stated that the climate system is dynamic and has many interrelated components. Because of the fact that a change in any one component can influence the equilibrium of the system and result in climate changes.

APECS Turkey joined Turkish Arctic and Antarctic Research Program (TuArk) which aims at providing a stable and sustainable base for research and development dedicated to polar regions both Arctic and Antarctica.

APECS Turkey Leadership Committee

❄ Dr. Burcu Ozsoy-Cicek burcu@drcicek.com

❄ Dr. Noyan Yilmaz noyan@istanbul.edu.tr

Contact APECS Turkey:

❄ APECS-Turkey website:
<https://www.facebook.com/apecs.tr>

UK Polar Network (UKPN)



2013 - 2014 has been an exceedingly busy but rewarding year for the UK Polar Network, with a constant series of meetings, workshops, and outreach events that put us as a key centre of the UK's early career polar scientists, and that has also placed us as an influential organisation in the frontier of polar science within the nation and continent. Currently having over 500 members, we continue to reach a large audience, and continue to be well represented throughout the nation's polar-oriented community. In this light, we have fortunately been selected as one of 25 high-profile stakeholders in the new UK Polar Partnership Steering Committee, which will serve as the leading force of the UK's science strategy in the

polar regions and the face of UK polar science to the international community.

Over the past year, the UKPN hosted three successful workshops that explored the many varied aspects of polar sciences. In September 2013, our Software and Polar Sciences Workshop provided many insights on how new progress in computing capabilities can be integrated into personal research, while a Polar Marine Workshop hosted in July 2014 explored the new research in the high-latitude seas. In addition, we also organised a workshop specifically addressing the issue of Science and Society. Held in April 2014, the focus of the workshop was to investigate ways early career scientists can engage with the public to make our science more accessible to a wider audience. Similarly, we remain very active in education and outreach, having attended and will continue to attend many major and minor science festivals throughout the UK that reach all aspects of the general population.

We have already lined up a wide spread of events through 2015: numerous sessions and panels dedicated to early-career scientists at both the biennial UK Antarctic and Arctic Sciences meetings in September 2014 and 2015, respectively, as well as a series of public engagement events across the UK jointly organised with the International Polar Foundation, beginning in September 2014 in Dundee, Scotland. It is clear that we maintain a strong, leading presence within the polar science community, thereby providing you ample opportunity to attend one or several of our events (largely free and/or paid for!), or to help out at a couple outreach events. As always, we look forward to hearing from you in this, or in any regard!

Software and Polar Science Workshop

17th September 2013, Scott Polar Research Institute, University of Cambridge

On the 17th September 2013, the UK Polar Network hosted a Software and Polar Science workshop at the Scott Polar Research Institute, Cambridge. Preceding the UK Arctic Sciences 2013 conference, this one day event was designed to introduce new software to early career Polar Scientists whilst also discussing how software already used can be developed to

increase its possibilities. The workshop was sponsored by the Software Sustainability Institute (<http://www.software.ac.uk>), in which Aleksandra Pawlik was their representative for the day.

Keynote speakers at the workshop included Dr. Gareth Rees who introduced the use of free software – and more importantly, is it any good? (The answer? Yes!), Dr. Roisin Moriarty and Dr. Ian Rutt who shared their experiences of sharing information within the scientific community, data and coding respectively, and the benefits it can lead to. Additionally, Dr Jon Blower presented on the visualization of environmental data (with some very imaginative methods) and Dr Doug McNeall on the presentation of data (for some great tips on the use of colour in graphs and the use of stretching in axis to make the data most appropriate, see www.betterfigures.org). From the participants' end, "lightning presentations" introduced the varied software that was used for polar sciences, from Microsoft Excel to custom-designed software such as Avoplot in Python.

The one-day workshop was a fantastic success, due to the hard work from TJ Young, Allen Pope, and Nick Toberg in organising the event. And of course, massive thanks to all our speakers and the Software and Sustainability Institute.

Science and Society: Do They Have To Be Poles Apart?

22nd – 23rd April 2014, National Oceanography

On 22nd and 23rd April, the UK Polar Network held a workshop at the National Oceanography Centre, Southampton, with over 40 attendees from across the country. Funded under the Education and Outreach aims of the British Antarctic Territory (Foreign Commonwealth Office), the workshop was entitled "Science and Society: do they have to be Poles apart?" The entire focus was to look at ways early career researchers could engage with the public more successfully, and to give our attendees the skills and confidence to make their science more accessible to the wider audience.

Keynotes by Dr. Sian Henley, Dr. Matt Donnelly, David Derbyshire, and Dr. Helen Czerski explored the importance of scientific communication from multiple angles: Sian on

the continuous reward of public engagement, Matt on the accessibility of science for scientists, David on science within the popular press, and Helen on communicating error and simplifying without "dumbing it down". Additionally, our very own Ella Darlington and Laura Hobbs gave a short presentation on their own experiences of social media, blogging from the field, school outreach, and making podcasts. Two interactive workshops by Dr. Jon Copley and Kim Marshall-Brown explored the benefits of working with media to highlight one's own science. Jon firmly argued on how outreach makes one a better researcher, while Kim discussed the lack of science that is featured in daily news, and how to liaise with the press to help them help you. Additionally, Vijay Shah, of several Arctic expeditions, gave an excellent "crash course" in Polar film and photography, as well as Liz Pasteur from the International Polar Foundation who featured some interactive maps and hands-on experiments as model tools for future public outreach in polar science.

The workshop was a huge success, thanks to all of our supporters, including the National Oceanography Centre, Southampton, the British Antarctic Territory, Loughborough University and the Software Sustainability Institute. Additionally, thanks to all of the facilities, reception, estates and catering staff at the NOC, Southampton, who put in a tremendous amount of effort to help the workshop run smoothly. Finally, a huge thanks to all of our speakers who gave their time and effort to contribute to the workshop, with special thanks to Kim Marshall-Brown at the NOC, who not only provided a session of her own, but assisted us with both time and finances extensively to help with finding and booking other aspects of the programme.

Polar Marine Workshop

29th – 31st July 2014, University of East Anglia, Norwich

The UK Polar Network hosted a three day Polar Marine Workshop at the University of East Anglia, on the 29th-31st July 2014. Funded by the iStar project, the three days featured advice panels: "Emerging technologies in the Polar Regions", "Finding and applying for fellowship funding", and "Alternative careers out of academia". Each day, there were also sessions

of presentations from delegates - 13 in total, and a series of talks on data management, widening participation, and the BAS Polar Roadshow.

On the Tuesday evening, the workshop was delighted to host Antony Jinman as a keynote speaker, in an event open to the public. Antony has undertaken countless Polar expeditions, including to both the North and South geographic poles. His expedition success is matched by that of his business - Education Through Expeditions, an online-based outreach company that brings expeditions to life and into the classroom for the purpose of education.

There was excellent feedback from all attendees, and both the presentation and poster sessions had a real feel of support about them. Many of the speakers stayed around to offer advice to the early career presenters, and the entire workshop was very supportive towards presenting and sharing research, no matter what stage you are at. In this regard, many thanks and appreciation goes to Katrin Schmidt and Ben Webber, who were continually kept busy behind the scenes before and during the workshop!

Selected Future Events

IGSBBM and UKARS

September 2014, Bristol Glaciology Centre, University of Bristol

This September Bristol Glaciology Centre (University of Bristol) will be hosting two Polar research related conferences - the annual IGS British Branch Meeting (IGSBBM, and the biennial UK Antarctic Research Symposium (UKARS). Around 200 scientists are expected over the two weeks, comprising early career researchers to senior academics. The UKPN will have a strong presence at both. During the IGSBBM a panel will be held for early career researchers in glaciology, with the theme "Life after a PhD - Careers outside of academia". We already have four confirmed panellists (all ex-PhD students) covering careers from media through to climate modelling at the Met Office. During the UKARS the UKPN will be hosting another panel for early career researchers with the theme of "Fieldwork in Antarctica - insider advice for early career researchers". We have a distinguished panel of Antarctic researchers already, including recent Polar medal winners

Prof Mike Bentley, Dr Rob Bingham and Prof Dominic Hodgson, and the 2013 Muse Prize for Science and Policy in Antarctica, Prof Martin Siegert.

Sea Ice, Shackleton and Science

2014-15, Dundee Science Centre, Scotland

We have again been successful in a funding application from the Polar Regions Department, UK Foreign and Commonwealth Office to run a series of three-day events across the UK, in collaboration with the International Polar Foundation. These events will focus on the changes that have occurred in the Antarctic over the last 100 years since Shackleton's Endurance expedition, with particular reference to climate, expedition clothing methods, science, and the state of sea ice.

Although still in early development, the first dates and venue have been confirmed as the 27th-29th September 2014 at the Dundee Science Centre, Scotland. We are working to coordinate this with the staff at the Dundee Science Centre, and our exhibition/workshops will include the following:

- ❖ Class Zero Emissions workshops (hands on science experiments)
- ❖ Opportunities to see and try historic Antarctic kit, and the modern day equivalent
- ❖ The use of Polar Puzzles (large, 3D puzzles of both the Arctic and Antarctic)
- ❖ Display boards on the changes in Antarctica, Shackleton, and sea ice in general
- ❖ Presentations and open discussions from early career scientists (ECS) regarding their own research and interests in the Polar Regions

The Saturday and Sunday will see us running open-door workshops for the public, with the possibility of running specific sessions for local adult community groups. On the Monday, we will have four groups of 15 pupils from local primary schools (ages 5 - 12) booked in for a 40 minute session in the Class Zero Emissions workshop, and an hour to look at the rest of our displays.

A big part of the funding application was to include ECS in the running of these workshops, and so at each of the three events we will be able to fund three ECS to attend and assist in running the workshops.

UKPN Leadership Committee:

- ❄ President – Tun Jan Young (Scott Polar Research Institute/University of Cambridge)
- ❄ Vice-President - Laura Hobbs (Scottish Association for Marine Science)
- ❄ Treasurer - Sammie Buzzard (University of Reading)
- ❄ Secretary - Franki Perry (Marine Ecological Solutions)
- ❄ Secretary - Katrin Schmidt (University of East Anglia)
- ❄ Education & Outreach - Madeleine Brasier (University of Liverpool/National History Museum)
- ❄ Webmaster & Social Media - Millie Watts (National Oceanography Centre/University of Southampton)
- ❄ Arctic Sciences Representative - Amy Jowett (University of Sheffield)
- ❄ Antarctic Sciences Representative - Jon Hawkings (Bristol Glaciology Centre/University of Bristol)
- ❄ Member-at-Large - Ella Darlington (University of Loughborough)
- ❄ Member-at-Large - Jenny Turton (British Antarctic Survey)
- ❄ Member-at-Large - Jonny Day (University of Reading)

Contact UKPN:

- ❄ Website - <http://www.polarnetwork.org>
- ❄ Email - info@polarnetwork.org
- ❄ Facebook - <http://www.facebook.com/ukpolarnetwork>
- ❄ Twitter - <http://twitter.com/UKPolarNetwork>

APECS United States

APECS US Northeast Regional Committee

The geographic spread of the members of the NEUS group has made organizing in-person events difficult in the past. We have partnered with other APECS committees in North America to organize events such as the annual polar science career panel at the American Geophysical Union (AGU) Fall meeting in 2013.

This year we have focused on compiling a list of polar science research groups and creating a web presence with resources for members to find events and potential mentors. This can all be found on our website listed above. We have made contact with a number of research groups and mid-career scientists in the region who have agreed to provide support to our members and participate in potential future events.

APECS US Northeast Leadership Committee:

- ❄ Alex Robel – Harvard University Dept. of Earth & Planetary Science
- ❄ Alexandra Giese – Dartmouth College

Contact APECS US Northeast

- ❄ Website: <https://sites.google.com/site/apecsneus/>

APECS US Northwest Regional Committee

Over the 2013-2014 year APECS USA Northwest has had some difficulty recruiting members for leadership roles to organize events. However, through Facebook and email communications we have encouraged members to support exploring cross-disciplinary Arctic research and in-person symposiums at the University of Alaska Fairbanks.

We are also in the process of building a MatLab and computer programming support group to help APECS members interested in using programming tools as part of their research.

APECS US Northwest Leadership Committee

- ❖ Greg Deemer – University of Alaska Fairbanks
- ❖ Alex Ravelo – University of Alaska Fairbanks

Contact APECS US Northwest

- ❖ Facebook:

<https://www.facebook.com/APECS.USNorthwest>

APECS US Southwest Regional Committee

Initial interest in National Committee formation was pursued in the fall of 2013 by Alex Thornton, then a Master's student at Scripps Institution of Oceanography (SIO). While e-mails and a post by APECS went out searching for members as well as those interested in leadership responsibilities within the new chapter, concerted efforts to launch advocacy in the region was not initiated until the first quarter in 2014. Recognizing the diversity of research interests and in potential members, the decision was made also made at this time to find a second primary organizer for the group who could coordinate Arctic content; Chelsey Nieman, another SIO master's alum, was chosen for and accepted this position.

In 2014, members in leadership roles have met monthly to discuss our goals: (1) promote polar research, (2) teach effective science communication, and (3) take advantage of exciting professional opportunities for all of our early career members. Particular emphasis has been placed on how to increase our membership numbers and current member involvement during these meetings.

To promote our new committee and foster positive relationships within our local community while meeting each of these new goals, APECS SW US has developed a proposal for a polar awareness event in the fall of 2015 for approximately twenty-five (25) high school students and graduate student mentors. These students will have little to no experience with the polar sciences and come from disadvantaged backgrounds within the San Diego community.

The event will be held on three consecutive days:

- ❖ On the first, students will spend the day in hands-on workshops led by graduate students and respected researchers. We are delighted to have already had interest in teaching these sessions from individuals studying everything from phytoplankton to glaciology, and look forward to confirming their attendance as planning continues.
- ❖ On the second day, students will spend the day with a PhD student as a mentor (a maximum of five students in each group, though preferably 1-2 students per mentor), matched up to each student's interests. For some students who may not be interested in typical STEM fields, we have also reached out to science communicators and educators as alternate mentors. On this day, students will be required to attend a workshop on reading to comprehend scientific papers and on how to effectively communicate ideas to an audience. They will spend the rest of the day exploring some project on a matter pertaining to polar studies in pairs.
- ❖ On the third day, students will attend another science communication workshop and spend the day working with their mentor and teammate to put together a ten-minute presentation. Each student team will then present their project in an approximately three-hour long to be held for their friends, family, and the public.

To receive a certificate of successful completion, each student must submit their own report of no more than five pages long detailing their project, experiences, and importance of polar research and awareness. Alternatives to a writing assignment will be available to ensure the flexibility to allow each student to shine (e.g. video of a presentation they gave to their class) and everyone will receive a grading rubric to ensure transparency. We will then highlight these works on our website.

While organization names have been withheld until firm commitments have been obtained in writing, we have begun discussions with community organizations and volunteer groups comprised of both graduate students and

researchers affiliated with a local university regarding the possibility of a joint effort towards this event. To our delight, we have received ample preliminary support, including an offer to host the event at a double-platinum LEED-certified building. We look forward to continuing these negotiations.

We hope to have lunch donated by a local fisherman who is well-known in the city for his sustainable practices at least one day. We may coordinate with local professionals to offer some information on sustainable seafood to the students.

We will utilize our existing professional network to call media attention to the workshop, aiming to showcase our intentions and gain further support from our community.

Funding is still a concern, but a preliminary budget is being finalized and we expect to begin formal solicitations for financial support within the next month.

This year, we launched a new site, blog, Facebook page, and Twitter feed. We look forward to exploring how to promote our goals to the greater community through these means. Several new blog postings are in the works - detailing, amongst other things, our member's involvement in policy and research investigations.

We are awaiting copies of logos for the national committee, which are being created by artists volunteering their time. We expect to have options for members to vote on by the end of the year.

We will continue to have monthly meetings for those in leadership positions and will be seeking representatives from each state in our region to take on some coordination responsibilities. We then hope have quarterly meetings for every member in the national committee, to be hosted via webinar from a local meeting in La Jolla, CA.

APECS US Southwest Leadership Committee:

- ❄ Antarctic Coordinator: Alexander E. Thornton, MAS
- ❄ Arctic Coordinator: Chelsey L. Nieman, MAS

Contact APECS US Southwest:

- ❄ Website: <http://www.ipecs.org/apecs-sw-us.html> (including mailing-list sign-up)
- ❄ Facebook: <https://www.facebook.com/APECS.US.SW>
- ❄ Twitter: @PolarScientists (will be launched at SCAR 2014)
- ❄ Blog: <http://www.ipecs.org/apecs-sw-us-blog> (two more posts in editing now)



An important part of our job as scientists is communicating our research and its relevance to others. This communication happens on many levels. We have well established methods of sharing our research with others in our field and with the broader scientific community through our publications, conference presentations, posters, etc. How we communicate with the general public, decision makers, teachers and students in many fields is less formalised. Although, this type of communication is often less practised it is an essential part of science and arguably needed for

science to have a broader impact.

The IPY placed strong emphasis on education and outreach in its planning and many early career polar researchers are using this momentum to get involved in broader communication of their work and the importance of the Polar Regions. Here we outline polar science outreach activities and how APECS and its members are staying involved, sharing experiences of outreach involvement, and continuing to communicate polar research.

For more information on APECS Education and Outreach activities go to: <http://www.apecs.is/en/outreach>

7.1 International Polar Week September 2013

APECS Brazil and APECS Spain Working Together in Amazon

Maria Comandolli Lira School (Rondonia, Brazil) has been participating in the International Polar Weeks since September 2012. With APECS-Brazil and APECS-Spain, this School has been developing the project "The Amazon goes to the Arctic and Antarctica" idealized by Núbia Caramello (APECS-Brazil: Coordinator of Education and Outreach). As part of this project, teleconferences with researchers from Rio de Janeiro (APECS-Brazil), APECS Portugal and Spain have taken place, helping the kids understand the importance of local preservation.

In 2013 (August 28 to September 1), the Second Symposium on Water Resources and the First International Polar Seminar in the Amazon held in Rondonia, had the participation of APECS Vice-secretary - Spain (Francyne Elias-Piera) and

Secretary of APECS-Brazil (Elaine Alves), spreading APECS word also on radio and on TV.



A talk on the Exploitation of Natural Resources in Antarctica, including water, was given for the diverse audience of the symposium (researchers, political leaders, children, farmers and people of the community). About 200 people took part every day during the 05 days of the event.

During the Polar Seminar, the President of APECS-Brazil (Erli S. Costa), members of APECS (Miriam Hebling Almeida) and APECS Portugal researchers (Jose Xavier, João Canario and Sílvia Lourenço) also took part actively giving

presentations via teleconference. The presentation themes were: "A brief history of APECS", "Life in a Polar Boat" and "How is a polar researcher born?", and were presented by APECS members.



The members of APECS-Spain and APECS-Brazil also talked about the activities of the association in FACIMED (Faculty of Biomedical Sciences, Cacoal - Rondonia) encouraging Biology, Chemistry and Environmental Management students to become young polar researchers.

Now, for Antarctica Day, about 3 schools in Rondonia will be taking part.

<http://www.apecs.is/en/news-feeds/apecs-news/6377-francyne-elias-piera>

APECS France polar week, 30.9.13 to 4.10.13

About 600 students in 18 different schools participated in the second French polar week, which was organised between September 30 and October 4. Teachers were invited to participate in a science & art activity about the Antarctic Food web, where students learned about the different species of the ecosystem,

about the links between these species, and about the things that might affect krill abundance such as harvesting strategies or climate change. The students' drawings were compiled to create an image of the Antarctic ecosystem:



During this polar week, seven webinars allowed students to learn about Polar Regions, from biology to geopolitics. These were hosted through the GoToWebinar platform.

- ❖ 30.09.13 - La vie sur une base scientifique en Antarctique, by Françoise Amélineau (CEFE-CNRS, Montpellier)
- ❖ 30.09.13 - La vie dans un village au Groenland, by Pascaline Bourgain (APECS-France)
- ❖ 1.10.13 - Les animaux polaires, by Mathieu Bourreau (IPHC-DEPE, Strasbourg)
- ❖ 1.10.13 - Les manchots empereurs, by Françoise Amélineau (CEFE-CNRS, Montpellier)
- ❖ 3.10.13 - En mission sur un brise-glace scientifique, en Antarctique, by Bruno Jourdain (LGGE, Grenoble)
- ❖ 4.10.13 - Allons-nous vers une guerre mondiale pour l'Arctique ?, by Mikå Mered (Polariis). This webinar was also opened to APECS-France members.
- ❖ 4.10.13 - La dernière frontière: à qui appartient l'Antarctique ?, by Mikå Mered (Polariis). This webinar was also opened to APECS-France members.

Polar Week October 2013 in Portuguese



From 2 to 9 of October 2013, numerous schools and scientists around the world

got together again in order to take polar science to classrooms and to the general public, through, between other activities, lectures and

skype calls.. POLAR WEEKS occur twice a year, coordinated by APECS international (www.apecs.is) and Polar Educators International (PEI) Association. Portugal, through the new project “Profissão: cientista polar”, with APECS Portugal, Polar Educators International and the Portuguese Polar Programme PROPOLAR, developed activities bringing together scientists, students, pupils, educators and the community in general to discuss the relevance of the polar regions to the conservation of the planet and the daily life we have today.



During this POLAR WEEK October 2013, that was carried out with APECS Brazil, a total of 10478 pupils/students, 13 scientists and 158 teachers/educators Portugal, Brazil, United Kingdom and Angola. Various activities took place during this week, including talks in schools and universities (21), skype calls (8), discussion panels (2), talks in workshops, symposiums and international seminars (3) and interactions with students/pupils that used scientific data for their school projects (1). The activities also include the exhibition “Limits of Science” about the polar regions, in coordination with the Institute of Education and citizenship (IEC), that has been in various schools in Portugal, along with interviews to newspapers and radio. The connection between Portugal and Brazil continues to produce very good results, with an amazing participation of schools from Brazil. Worth mentioning the skype calls to the Amazon region and to Rio grande do Sul. Also should be emphasized the contact with Angola, in the African continent. All participants (teachers, educators, school directors, students/pupils, scientists and the general public) demonstrated a big interest in this initiative and showed an excellent level in co-coordinating these activities. It was also very positive for the scientists to be questioned about their science, obligating them to improve/adapt their scientific language while talking to

students of different age groups while improving their communication skills.

Sílvia Lourenço, Patrícia Azinhaga & José Xavier

7.2 Antarctica Day 2013



Celebrate Antarctica Day with APECS on 1 December 2013

APECS, together with the Our Spaces -

Foundation for the Good Governance of International Spaces, Polar Educators International, PolarTREC, the International Polar Foundation, Gateway Antarctica, the International Association of Antarctic Tour Operators, eBIRD and the British Antarctic Survey are once again proud to support Antarctica Day commemorations. This event was created to celebrate the spirit of international peace and scientific cooperation that signified the signing of the Antarctic Treaty in 1959.

Antarctica Day 2013 is an international effort to disseminate knowledge about Antarctica and APECS is proud to help inspire a new generation of polar researchers. The day is for everyone, so take some time to celebrate with your co-workers, family and friends!

This year several events and classroom activities were happening and centered around Antarctic science and exploration. To see a list of activities for Antarctica Day 2013, visit <http://www.apecs.is/outreach/antarctica-day/antarctica-day-2013/antarctica-day-2013-activities-worldwide>

To include your support for Antarctica Day 2013 you can also insert your information in our map available at <http://apecs.is/outreach/antarctica-day/antarctica-day-2013/antarctica-day-2013-map>.

Continuing in the spirit of international cooperation, APECS, in conjunction with Our Spaces and Polar Educators International, were

once again encouraging educators and their students from around the world to express their own knowledge, curiosity and amazement about Antarctica in the form of Antarctica Flags and Books. To find out more information go to <http://www.apecs.is/outreach/antarctica-day/antarctica-day-2013/antarctica-day-2013-flags-and-books>

Happy Antarctica Day 2013 from APECS!

Antarctic Day in Brazil, December 2013

The Antarctic Day, in the first of December, was celebrated by the APECS-Brazil in a collaboration with APECS international, Fundação Internacional para a Boa Governança dos Espaços (www.ourspace.org.uk), Polar Trec (www.polartrac.org), Fundação Polar Internacional (www.polarfoundation.org), Antarctic Gateway (www.anta.canterbury.ac.nz), Associação Internacional de Operações de Turismo Antártico (<http://iaato.org/home>), eBird (<http://ebird.org/content/ebird>) e British Antarctic Survey (www.antarctic.ac.uk). We proposed several activities in more than 20 schools when children was proposed to draw Antarctica flags. Flags were taken to Antarctica by researchers and photographed. Authors of all draws received the photos.

APECS Belgium celebrated Antarctica Day with Presentations and New Developments

On November 29th thirteen members of APECS Belgium gathered in the Belspo offices in Brussels to celebrate Antarctica Day. The morning started with all members introducing themselves to each other and to newcomers. The group, consisting of physicists, glaciologists, biologists, biogeochemists, a meteorologist and a few earth science professionals, was a good representation of the broad diversity in polar research disciplines Belgium is specialised in.

Morning presentations were held by Matthias Vraeghe and Sam De Ridder, who explained about the detection of neutrinos and cosmic rays by the IceCube neutrino observatory (<http://icecube.wisc.edu/>). Kristof Van Tricht presented his research on remote sensing of polar low elevation clouds in Greenland and

Antarctica, and the morning session was closed by glaciologist Denis Callens, who gave us an overview of how ice fluxes in Dronning Maud Land are being investigated in the framework of global warming.



Additionally, two posters were presented, respectively dealing with paleoclimate and density calculations from ice cores (Morgane Phillippe), and Carbon and Nitrogen uptake rates in sea ice from East-Antarctic sites (Arnaud Laurent).

In the afternoon, past activities were evaluated in the context of ongoing and planned projects. Anton Van de Putte gave an extensive update about an exhibition that is planned in collaboration with the Belgian project "the New Belgica" (www.newbelgica.be), and final decisions were taken before the launch (<http://apecs.is/news-feeds/apecs-news/6403-launch-of-a-story-contest-for-students-from-the-5th-and-6th-grade-in-belgium>) of the Belspo-funded story contest for teachers and students. Finally, good progress was also made in the establishment of a legal framework for APECS in Belgium.

Launch of a Story Contest for students from the 5th and 6th grade in Belgium

On December 1st, APECS Belgium and the Belgian Science Policy Office (Belspo) launched a story contest for students of the 5th and 6th grade. This is done to celebrate 'Antarctica Day', because on this day in 1959, the Antarctic Treaty was signed, dedicating the Antarctic continent to peaceful and scientific purposes only.

The idea behind the story contest is that students pick one of the 22 pictures as inspiration (some pictures are shown here on the left) and then get creative and write a 2-3 pages long story. A jury composed of young scientists and the Antarctica programme manager from Belpo will pick the 10 best stories in Dutch and the 10 best stories in French and collect them in a book. All participating schools will receive a printed book and the winning schools will also get a visit from a polar scientist. Deadline was 14 December 2013.



4. Onderzoeksschip Aurora Australis en Adélie Pinguin bij Mawson Basis.



5. Winter duikkamp van het schip Polarstern.



6. Deze wetenschappers worden via een helikopter van het schip Polarstern naar de Duitse basis Neumayer III gebracht.



7. Goed uitgeruste wetenschapper.



8. Mysterieus diertje van de micro-wereld.



9. De bemanning van de Polarstern zegt hallo aan de pinguïns.



10. Een 'wegwijzer' illustreert hoe ver de Duitse basis Neumayer III op het Antarktisch vasteland zich van de rest van de wereld bevindt.



11. Veldwerk kan vrij zwaar zijn.



12. Wetenschappers worden vervoerd naar de top van een gletsjer op het Antarktisch Schiereiland.

7.3. Polar Facts Segments – APECS Canada

APECS Canada is happy to present a new series that we hope will entertain and intrigue you (not to mention educate you about polar science!). "Did you know" will be a series posted that shares interesting fun facts about polar research in Canada.

All "Did you know" notes will be sent out via the APECS Canada mailing list, as well as posted on the [APECS Canada website](http://www.amundsen.ulaval.ca).

"Did you know" facts is a member driven initiative, so if you would like to contribute in order to get your discipline featured or highlighted please contact Jennifer Provencher (jennifpro at gmail.com) or Ann Balasubramaniam (annbala at gmail.com).

For more information visit [here](http://www.amundsen.ulaval.ca).

Did you know ... Amundsen

Alright, did you know the CCGS Amundsen is on the Canadian 50\$ bill, but what else is there to say about it? Well, the vessel is one of four medium weight Canadian Coast Guard icebreakers and is arguably the most iconic image of Canadian arctic research.

A proposal was made to the Canadian Foundation for Innovation (CFI) to retrofit of the decommissioned CCGS Sir John Franklin (built in 1979), and it was approved in 2002. The new arctic research vessel was christened as the CCGS Amundsen on August 26, 2003. In its first five years of service the vessel travelled more than 114 000 km during a total of 1005 days at sea.

Though the official mandate of the research vessel focuses on the study of the Arctic Ocean, the vessel has also participated in projects such as the Canadian Shelf Exchange Study in 2003-04, the Inuit Health Survey in 2004, and a suite of ArcticNet projects from 2005 to date.

<http://www.ccg-gcc.gc.ca/>

<http://www.amundsen.ulaval.ca>

This "Did you know" note was prepared by Alexandre Bevington

Saviez-vous le NGCC Amundsen est sur le billet de \$ 50 canadien... qu'a t-il de plus à dire? Et bien, ce navire est parmi quatre brise-glaces de taille moyenne de la Garde côtière canadienne et est sans doute l'image la plus emblématique de la recherche scientifique dans l'Arctique canadien.

Une proposition a été faite à la Fondation canadienne pour l'innovation (FCI) pour rénover le navire déclassé NGCC Sir John Franklin (construit en 1979), elle a été approuvée en 2002. Le nouveau navire de recherche a été baptisé le NGCC Amundsen le 26 Août 2003.

Dans ses cinq premières années de service le navire a parcouru plus de 114 000 km lors d'un total de 1005 jours en mer.

Bien que le mandat officiel du navire a l'accent sur l'étude de l'océan Arctique, le navire a également participé à des projets tels que l'Étude internationale du plateau continental arctique canadien en 2003-04, l'enquête sur la santé des Inuits en 2004 nommé Qanuippitaa? (Comment allons nous?), et une série de projets d'ArcticNet entre 2005 et aujourd'hui.

<http://www.ccg-gcc.gc.ca/>

<http://www.amundsen.ulaval.ca>

Cette capsule "Saviez-vous" vous a été présentée par Alexandre Bevington

Did you know.....Great Bear Lake // Le Grand lac de l'Ours

The largest lake entirely in Canada is Great Bear Lake (32 000 km²) in the Northwest Territories. Only 15 species of fish live there, this is a low number for an arctic aquatic system of this size...

However, an unusual intraspecific diversity in several species has been observed. One example is the four sympatric Lake Trout in shallow-water of Great Bear Lake coexist challenging the iconic diversity of Arctic char from Thingvallavatn Lake. Also, there is no better fishing in the world since Great Bear Lake hold world record for both Lake Trout (78.86 pounds) and Grayling.

<http://www.thecanadianencyclopedia.com/en/article/great-bear-lake/>

This "Did you know" note was prepared by Louise Chavarie

Le plus grand lac qui est entièrement au Canada est le Grand lac de l'Ours (32 000 km²) au Territoires du Nord-Ouest. Seulement 15 espèces de poissons y résident, un nombre d'espèces plus faible que la norme d'un système aquatique arctique...

Cependant, une diversité intra-spécifique inhabituelle chez plusieurs espèces a été observée. Par exemple, le fait que quatre

espèces sympatriques de truite grise en eaux peu-profondes coexistent ensemble conteste la diversité emblématique de l'omble de l'arctique du lac Thingvallavatn. En outre, c'est la meilleure pêche du monde, le Grand lac de l'Ours maintient le record mondial de truite grise (78,86 livres) et de l'ombre commun.

<http://www.thecanadianencyclopedia.com/fr/article/great-bear-lake/>

Cette capsule "Saviez-vous" vous a été présentée par Louise Chavarie

Did you know.... Northern Wheatear

Did you know that Iqaluit, Nunavut is one of the only places in North America where you can be sure to see a **Northern Wheatear**, a bird that can travel up to 290 kms a day?

The Northern Wheatear is a small songbird that overwinters in Africa each year, with some populations traveling from Africa to Canada via Europe and Greenland. Interestingly just around Iqaluit is one of the only places Wheatears have been recorded.

So, the next time you are walking around Iqaluit, look out for this global flyer.

<http://news.nationalpost.com/2012/02/15/tiny-songbird-makes-a-non-stop-14500-km-migration-each-year-from-alaska-to-africa/>

<http://www.dailymail.co.uk/sciencetech/article-2101530/Tiny-bird-weighs-spoons-sugar-baffles-scientists-18-000-mile-return-migration-journeys.html>

This "Did you know" note was prepared by Jennifer Provencher and translated by Lorelei Guéry.

Saviez-vous qu'Iqaluit au Nunavut est une des seules places en Amérique du Nord où vous pouvez être sûrs de voir le **Traquet motteux**, un oiseau capable de parcourir jusqu'à 290 km par jour?

Le Traquet motteux est un petit passereau insectivore qui hiverne en Afrique chaque année, avec certaines populations qui voyagent d'Afrique au Canada en passant par l'Europe et le Groenland. De

façon intéressante, les alentours d'Iqaluit sont une des seules places où les Traquets Motteux peuvent être observés.

La prochaine fois que vous marcherez autour d'Iqaluit, partez à la recherche de ce volatile cosmopolite!

<http://news.nationalpost.com/2012/02/15/tiny-songbird-makes-a-non-stop-14500-km-migration-each-year-from-alaska-to-africa/>

<http://www.dailymail.co.uk/sciencetech/article-2101530/Tiny-bird-weighs-spoons-sugar-baffles-scientists-18-000-mile-return-migration-journeys.html>

Cette capsule "Saviez-vous" vous a été présentée par Jennifer Provencher et traduit par Lorelei Guéry.

7.4. International Polar Week March 2014



APECS Members from around the world took part in International Polar Week March 2014. Find more information here:

<http://www.apecs.is/en/outreach/polar-week/polar-week-march-2014>

APECS Canada and Science Borealis team up for March Polar Week!!!!



Calling all Canadian Science

Bloggers!!! APECS Canada and Science Borealis are teamed up to feature Canadian polar science blogs during the upcoming Polar Week during March 2014.

Science Borealis is an inclusive digital science salon featuring Canadians blogging about a wide array of scientific disciplines. Science Borealis is a one-stop shop for the public,

media, educators, and policy makers to source Canadian science information. Science Borealis is built on the principles of curiosity, engagement and collaboration. The Science Borealis community is open to science bloggers located in Canada – and Canadians located abroad – who share our commitment to respect, support and encourage science communication in Canada, and engage passionately and critically with science.

Polar Week 1: Why do science at the poles?

<http://blog.scienceborealis.ca/polar-week-1-why-do-science-at-the-poles/>

Polar Week 2: Arctic Zooplankton and Climate Change

Check out how Arctic zooplankton will be affected by climate change on the guest post by APECS members Jordan Grigor and Moritz Schmid over on Science Borealis where APECS Canada has taken over for Polar Week!

<http://blog.scienceborealis.ca/arctic-zooplankton-and-climate-change/>

Polar Week 3: Arctic seabirds, canaries of global change

APECS member Jennifer Provencher writes about how polar seabirds are being used to study change in the polar regions.

<http://blog.scienceborealis.ca/arctic-seabirds-canaries-of-global-change/>

Polar Week 4: Antarctica – Early explorers, terrestrial magnetism and investigating climate change

Carol Devine writes about what we have learned from studying magnets in Antarctica over the last 100 years.

<http://blog.scienceborealis.ca/antarctica-early-explorers-terrestrial-magnetism-and-investigating-climate-change/>

Polar Week 5: Science and Community – Connecting the dots

As part of APECS Canada blogging for Polar Week 2014, Samantha Dalring writes about the importance and need of researchers to work with communities.

<http://blog.scienceborealis.ca/science-and-community-connecting-the-dots/>



Polar Week 6: Profiles from the Arctic – The making of a web documentary

Check out the last polar feature written by Katriina O'Kane exploring the people who do polar research in northern Canada.

<http://blog.scienceborealis.ca/polar-week-6-profiles-from-the-arctic-the-making-of-a-web-documentary/>

APECS France Polar Week, 24-27.3.14

About 300 students in 9 schools participated in this polar week, during which students could ask questions to scientists, through e-mails and following six webinars.

- ❖ 24.3.14 - La vie dans un village au Groenland, by Pascaline Bourgain (APECS-France)
- ❖ 24.3.14 - Le Tourisme en Antarctique, un marché en essor mais pas sans danger, by Anne Choquet (Université de Bretagne Occidentale, Brest). This webinar was also opened to APECS-France members.
- ❖ 25.3.14 - Découverte du Spitzberg, terre polaire, terre de science, by Céline Clément-Chastel (APECS-France)
- ❖ 25.3.14 - Au pays des manchots, by Anne-Mathilde Thierry (Norwegian Institute for Nature Research, Trondheim)
- ❖ 25.3.14 - Etudier un oiseau marin, le mergule nain, au Groenland, by Françoise Amelineau (CEFE-CNRS, Montpellier)
- ❖ 27.3.14 - Le renard polaire, by Anne-Mathilde Thierry (Norwegian Institute for Nature Research, Trondheim)

APECS-France members also participated in Polar week abroad, through Skype call with Portuguese schools in March 2014 (Education PROPOLAR).

Northern lights herald Dutch Polar Week

On February 28, deeply red northern lights could be seen in the Dutch skies – at 53°N! I like to think they heralded the participation of APECS Netherlands in the International Polar

Week of March 2014. We organized a poster session at the *Pool tot Pool* Day, a public event for polar enthusiasts held at the Ethnological Museum in Leiden. Louise Flaherty, Director of Inuit Languages and Culture at Nunavut Arctic College, was one of our valued poster judges. Her attendance had been made possible by the Canadian Embassy who, as part of Canada's chairmanship of Arctic Council, promote Arctic knowledge in the Netherlands and support our APECS activities. The poster award went to Eugenie Stapert and her work of Dolgan languages.



In a discussion with APECS Netherlands, Mrs Flaherty felt inspired by our admission that as a non-polar nation, our early-career researchers can be very blueeyed with regards to indigenous peoples and may lack the necessary cultural competence for mutual knowledge transfer. She promptly highlighted Linda Tuhiwi Smith's 'Decolonizing methodologies: research and indigenous peoples' as a key text her own students use and a good place to start for APECS members everywhere. Last but not least, the meeting provided APECS Netherlands with a whole host of ideas for our symposium later in the year. Also keep a look-out for our activities during the IPW in September!

Other Polar Week Activities

- ❖ 18 March 2014: Polar Week Science Symposium Clark University, Geography Commons, Jefferson Academic Centre, Worcester, MA, USA – Organizer: Kristen Shake

- ❖ Late March / Early April 2014: XI Polar Week – diving into the Antarctic Treaty – Organizer: APECS Brazil <http://www.apecsbrasil.com/semanapolar/xi-spi/>
- ❖ Throughout the week: Polar Science to classrooms and to the general public – talks in schools, skype calls and activities – Organizer: APECS Portugal
- ❖ February and March 2014: Contest “Message Polar” promoting scientifically grounded action <http://apecsportugal.wix.com/apecsportugal> Organizer: APECS Portugal
- ❖ 20 March 2014: Northern Research Day, Edmonton, Alberta, Canada – Organizer: Circumpolar Student Association University of Alberta
- ❖ 11 – 20 March 2014: ESCUELA DE VERANO DE GEODESIA POLAR apoyada por el SCAR (Scientific Committee on Antarctic Research), se esta desarrollando en la Estación Sub Grey de la Universidad de Magallanes, ubicada en el Parque Nacional Torres del Paine – Chile, Punta Arenas, Chile – Organizer: Alfredo Soto
- ❖ 19 March 2014: Opening talk about of the main polar research lines (conducted in Antarctica) currently being undertaken on the Los Angeles campus of the Universidad de Concepción., Los Ángeles, Chile, Organizers: Dr. Marely Cuba-Díaz, Dr. Angela Machuca and Dr. Mauricio Rondanelli-Reyes.
- ❖ 17 March 2014: IV Polar Week – activities about the Antarctic, São Gabriel, Brazil – Organizer: APECS Brazil

7.5. International Polar Week September 2014

International Polar Week September 2014 coincides with the spring equinox in the week of September 23th, one of two times a year when everyone on the planet gets 12 hours of



sunlight. We want to celebrate on a global scale by focusing on the science being conducted in the Arctic and Antarctic. Inspired by the many great things that came out of the International Polar Year celebrations, we hope that the bi-annual Polar Week celebration will link people in polar science and polar education.

APECS and its partners are excited to celebrate polar science and discovery from 20 - 28 September 2014! Looking for activities and ways to celebrate? Below you will find a listing of activities, events, and information for Polar Week all over the world. Have an event you'd like to add? Please feel free to email your event or activity to info@apecs.is. Happy Polar Week!

APECS Brazil

APECS-Brazil are preparing dozens of activities to you that would like to know more about polar researchers! Access our website: www.apecsbrasil.com and know how to take part of this incredible journey!

- ❖ 17- 26 September: XII International Polar Week live broadcast of 10 lectures and two short courses
- ❖ Photography exhibition - APECS-Portugal and APECS-Brazil - From September 17 to 19 (Canoas, Rlo Grande do Sul) and from September 22 to 27 (Arraial do Cabo, Rio de Janeiro). Launching of exhibition catalog (As soon we have it available we can send the link)
- ❖ 17 - 19 September: II APECS-Brazil Workshop in Canoas, South of Brazil. More than 200 students and teachers from Basic Education will join in discussions about polar researchers with researchers from Brazil and abroad

APECS France

Between 25 September and 3 October, APECS France is again organizing a French polar week webinar series with 12 webinars:

- ❖ 25 September: Sur les traces de Shackleton, 100 ans après (Zoé en expé) (primaire - collège)
- ❖ 29 September: Découverte du Spitzberg, terre polaire, terre de science (CM1 - 5ème)
- ❖ 29 September: Le renard polaire en Scandinavie: hier, aujourd'hui et demain (3ème, 2nde)
- ❖ 30 September: La vie dans un village au Groenland (CP-CM2)
- ❖ 30 September: La vie du manchot empereur (CP-CM2)
- ❖ 30 September: Sur les traces de Shackleton, 100 ans après (Zoé en expé) (primaire - collège)
- ❖ 30 September: Géopolitique des nouvelles routes maritimes de l'Arctique (lycée)
- ❖ 2 October: Les mouettes tridactyles du Spitzberg: pourquoi les étudier? (CP-CM2)
- ❖ 2 October: Au pays du froid (CP - CE1)
- ❖ 2 October: Le renard polaire (CM1 - 5ème)
- ❖ 3 October: La vie sur une base scientifique en Antarctique (CM1 - 5ème)
- ❖ 3 October: Un peu d'histoire et de géographie de l'Antarctique (CE2-CM2)

In addition: More than 1300 are registered for the polar week, as well as more than 40 schools to follow a PhD student during a 6-week exhibition on a sail boat along the Antarctic Peninsula and South Georgia.

APECS Portugal

APECS Portugal will be celebrating their POLAR WEEK between 28th September and 5 October.

Planned activities are:

- ❖ Education ProPolar activities - Portuguese scientists giving lectures in schools and Museums and Skype calls to schools abroad (on during both POLAR WEEKS; international and Portuguese polar weeks).
- ❖ Photography Exhibition. We will have a itinerary photography exhibition that is going around the country (called "At the limits of science: Portuguese research in the

Arctic and Antarctic") in schools, Universities, shopping centres and anywhere that would be keen to have it:) It is already booked until mid 2015.

- ❖ University of Coimbra OPEN DAY. The University of Coimbra (UC) will open their laboratories to a group of awarded students of schools around Coimbra, so that they learn what is to be a polar scientist and understand what we do in the laboratory. We will also show them the University and dine with us!

<http://www.apecs.is/en/outreach/polar-week/polar-week-september-2014/6638-apecs-portugal-during-polar-week>

UK Polar Network

27 - 29 September 2014: Shackleton, Sea Ice and Science - polar science outreach days at Dundee Science Centre

- ❖ The International Polar Foundation UK and UK Polar Network are bringing an interactive science learning experience to the public and schools at Dundee Science Centre later this month. The polar science outreach days will take place at the end of Polar Week, over the weekend 27-29th September 2014.
- ❖ The IPF polar puzzle will be used to bring the Antarctic to life and show the explorer Shackleton's journey and discuss how it might be now due to climate changes. Participants can try on polar clothing similar to what Shackleton and his men might have worn during the 1914 expedition and compare it to modern-day clothing. They will then have the chance to become scientists by doing "hands on" experiments investigating climate change.
- ❖ Four scientists from the Scottish Association for Marine Science (SAMS), British Antarctic Survey, Aberdeen University and Edinburgh University will give short talks and "meet the scientist" discussions during each of the days and discuss how research techniques in their field of science have changed over the last hundred years.

- ❄ This will be a great chance to become fully immersed in polar science set in the exciting historical context of Shackleton's great endeavour a century ago.

APECS Bulgaria

APECS Bulgaria will have several activities during this Polar week:

- ❄ European Researchers' Night on Friday, 26 September 2014 - GPS and satellite games for children. Common event with British Council Bulgaria
- ❄ Talks about Poles in 4 schools and kindergartens in Sofia and Yambol town
- ❄ Polar day in the orphanage in Doganovo village, close to Sofia - it's the beginning of our social program for orphans and children from the minorities
- ❄ We are planning to participate in a public competition "The seven most important words for me" announced by a famous Bulgarian music band, the winning words will be a part of a new song :) We will use this possibility to "advertise" our favorite polar words ;)

The Research Activities Committee (RAC) organized three research features in 2013-2014. Each research feature is organized by a group of APECS members who put together current information on their topic of interest. A webpage is created describing the research field and containing links to key resources, allowing those new to the field to gain a quick overview. Additionally, webinars are organized, introducing aspects of the research topic in more depth and these are followed by a question and answer session providing a valuable learning and networking tool.

APECS wants to thank Bredbåndsfylket in Tromsø, Norway, for generously hosting our Webinar calls since January 2012 using GoToWebinar services.



Ice-Ocean Interactions

February 2014



Within the past few decades, global climate change has led to widespread changes in the mass and aerial

extent of the Earth's glaciers, ice sheets, and sea ice as well as changes in the temperature and circulation of the oceans. This research feature focuses on the interactions between glaciers, ice sheets, sea ice and the oceans, the feedbacks inherent to the coupled systems, and the broader impacts of changes in ice-ocean interactions.

Three webinars on ice-ocean interactions were held during February 2014 and recordings of the webinars can be found on the APECS website. These webinars focused on the current understanding of ice-ocean interactions, the governing processes, and recent observations of rapid change, with a specific focus on the following three subject areas: sea ice in the Arctic, marine-terminating glaciers, and glacial fjords. Background information and journal articles on glacier ice- and sea ice-ocean interactions can also be found on the website.

Webinar Series:

Part 1: Sea ice in the Arctic

Dr. Angelika Renner from the Norwegian Polar Institute provided an overview of sea ice-ocean interactions, with a focus on sea ice in the Arctic. Following the presentation of

introductory/background information, she presented the methodology and results for her recent research on turbulent heat flux between Arctic sea ice and the underlying upper ocean layer.

Part 2: Marine-terminating Glaciers

Dr. Gordon Hamilton from the University of Maine provided background on recent changes in marine-terminating glacier behavior and potential ocean triggering mechanisms. The presentation focused on research performed at the margins of the Greenland Ice Sheet, where the majority of the research on glacier ice-ocean interactions has been executed and where Dr. Hamilton has conducted a suite of research projects.

Part 3: Glacial Fjords

Dr. David Sutherland from the University of Oregon provided an overview of ice-ocean interactions in glacial fjords, with a focus on the controls of fjord circulation and temperature structure. Current techniques used to study glacial fjords and their limitations were also presented in detail.

<http://www.apecs.is/en/research-sp-359857820/areas-of-research/geosciences/iceocean>

Traditional Knowledge

April 2014

Polar research involves knowledge gathering and information integration from many sources. In the Polar Regions, Traditional Knowledge

(TK) plays a central and important role. The notion and definition of traditional knowledge varies across geography, disciplines, and peoples, however, is becoming increasingly recognized as valuable information and knowledge in the area of polar science in particular. Discussions pertaining to traditional knowledge also relate to local knowledge, indigenous knowledge or traditional ecological knowledge. This research feature summarized these different areas of Traditional Knowledge and provided the reader with various resources and opportunities to learn about the important discussions amongst traditional knowledge holders and experts in this area.

The plenary talks from the ASSW APECS Nordic Workshop were recorded for this research feature and are available on the research feature webpage. The webinars featured talks dealing with the topic of Traditional Knowledge, in the context of the APECS project *Bridging Early Career Researchers and Indigenous Peoples in Nordic Countries*.

Speakers:

Gail Fondahl (Department of Geography, University of Northern British Columbia, Canada)

Arja Rautio (Center for Arctic Medicine, Thule Institute, Finland)

Roberto Delgado Jr (Department of Biological Sciences, University of Southern California, USA)

Lars-Anders Baer (Nordic Saami Council, Sweden)

Anna Afanasyeva (Indigenous People Adviser, International Barents Secretariat, Norway)

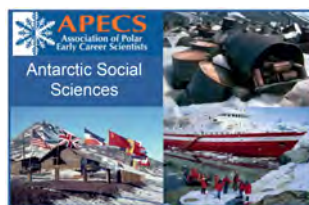
Heidi Eriksen (Utsjoki Health Centre, Finland)

<http://www.apecs.is/en/research/areas-of-research/social-science-a-humanities/traditional-knowledge>

<http://www.apecs.is/en/get-involved/working-groups/traditional-knowledge>

Antarctic Social Sciences

Fall 2014



Antarctica encompasses a rich range of human interactions that is increasingly becoming

inseparable from its natural environment. Although no indigenous populations live on Antarctica, the continent is home to scientific research stations from 30 different countries and is the destination of choice for an increasing number of tourists. Understanding the history of human presence, its social and anthropological dynamics, its politics and its shared cultural constructions are important themes in Antarctica Social Science research and management. The Antarctic Treaty was ratified in 1961 to ensure *"in the interests of all humankind that Antarctica shall continue forever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord"*. However, as several countries have overlapping territorial claims, future geopolitical tensions could jeopardize the treaty. Millions of people have been exposed to Antarctica through its popularization in the media (books, film, TV, art) and this has prompted curiosity and questions of value. The costs of human presence in Antarctic are remarkable from economical, environmental and cultural points of view. Therefore, Antarctica has become the object of innumerable debates and balancing these different viewpoints could have global implications particularly when they affect climate and international policy. Thus, Antarctic Social Science provides a vital contribution to the region's future.

APECS continued offering several webinar series during 2013-2014 and is very thankful to Bredbåndsfylket in Tromsø, Norway, for generously hosting our webinars as of January 2012 using GoToWebinar services. GoToWebinar is an essential part for many of APECS's online activities from webinars to showcasing special events like the Svalbard workshop or Belgium Science days.



9.1. Career Development Webinar Series

The Career Development Webinar series first began in 2010 and was originally made possible through cooperation between the National Science Foundation-funded ARCSS Thermokarst Project and the Association of Polar Early Career Scientists (APECS). In 2012-2013, it was supported by the High North Academy in Tromsø and the fall 2013 series was entirely funded by APECS.

The Fall 2013 series highlighted a sample of the career opportunities available to graduates with degrees in the sciences. The speakers in this series represented a cross-section of the worlds of academia, government, and non-profit work. All have (or are nearing completion of) advanced degrees in the earth, physical, or biological sciences and many had polar connections. The series was organised by APECS Vice-President Russell Fielding:

Government Official 6 November 2013

- ❖ David Scott, Executive Director, Canadian Polar Commission

Academic Teaching 7 November 2013

- ❖ Michael Kerwin, Associate Professor, University of Denver

Academic Research 12 November 2013

- ❖ Matthew Shupe, Research Scientist, University of Colorado

Public Good 14 November 2013

- ❖ Paul Berkman, Associate Professor, University of Denver

Conservation 19 November 2013

- ❖ Catherine MacDonald, PhD Candidate, University of Miami

Public Good 21 November 2013

- ❖ Martin Robards, Arctic Beringia Program Director, Wildlife Conservation Society

9.2. APECS Nordic Webinars

The APECS Nordic Project "Bridging Early Career Researchers and Indigenous Peoples in Nordic Countries" featured a series of 6 webinars. In this webinar series we tried to identify current research challenges from the perspective of early career researchers, experts and Indigenous peoples and define potential solutions to overcome these existing challenges to communication and other research issues. Speakers included leading experts, early career researchers, Indigenous youth and Indigenous researchers from Nordic regions as well as others. Themes covered by the series are broad but focused mainly on communication challenges and solutions on getting tight connections and open dialogue in between indigenous communities and young scientists. More than 50 participants of the series were able to ask questions and discuss urgent issues during online sessions. All 6 webinars were recorded and posted to APECS website. The general information about APECS Nordic webinars can be found at <http://www.apecs.is/en/research/apecs-norden/apecs-nordic-webinars>

Bridging the Gap: Indigenous, Social and Natural Science Perspectives on Research Relationships in Nordic Countries

23 October 2013

❖ Gail Fondahl (IASSA President, University of Northern British Columbia) and Gunhild Ninis Rosqvist (Stockholm University and Tarfala Research Station)

❖ Every story has at least two sides. The story of climate change research in Nordic communities has three. This webinar is intended to highlight the main communication challenges faced by natural scientists, as well as social scientists, in their community-based research efforts. As well, it seeks to highlight Indigenous perspectives on how to open a successful dialogue and begin to overcome challenges. In this webinar, you will be introduced to the fundamental issues that can hinder cross-communication between social scientists, natural scientists and members of indigenous communities in Nordic regions. When communication is compromised, relevant knowledge and evidence from indigenous sources can be left out of scientific considerations, and the validity of findings can be compromised in turn. Climate change is a problem that impacts us all, so it is essential to start working together to find solutions we can share

❖ Recording: <http://vimeo.com/86993536>

Getting in touch with Nordic communities: Reaching out gently

30 October 2013

❖ Svetlana Usenyuk (Aalto University School of Art, Design and Architecture, Finland)

❖ Heidi McCann, Colleen Strawhacker and Peter Pulsifer (Exchange for Local Observations and Knowledge of the Arctic at the National Snow and Ice Data Centre, USA)

❖ Approaching an unfamiliar community can be a challenge for a researcher, considering it takes time for a community to come to know and trust a new face. The process of building a trusting relationship between a community and a research group is delicate, and we must all tread lightly towards co-operative cohabitation during research

efforts. This webinar is intended to highlight some difficulties faced by researchers and community members, even of a shared background, in introducing the prospect of collaborating in a shared space

❖ Recording: <http://vimeo.com/86993539>

Reflections on Sami research: being a researcher and being researched

6 November 2013

❖ Else Grete Broderstad (Centre for Sami Studies at the University of Tromsø, Norway)

❖ What does it mean to be a researcher, but also to be researched at the same time? In this webinar we will share Sami perspectives and thoughts on this very cutting-edge of community-based research

❖ Recording: <http://vimeo.com/86993541>

Youth indigenous peoples in education and outreach

13 November 2013

❖ Dmitriy Berezhkov (University of Tromsø, Norway)

❖ Engaging Indigenous youth in research that guides the development of their home communities is not a matter of simply giving them tools to think scientifically. Part of the purpose of education and outreach is to create a platform for different kinds of knowledge to merge, and to cultivate innovative solutions for a shared future. This webinar seeks to promote the indigenous youth voice and provide guidance for outreach planners in polar communities

❖ Recording: <http://vimeo.com/86993542>

Indigenous Knowledge management through Information and Communication Technologies

27 November 2013

❖ Heidi McCann, Colleen Strawhacker and Peter Pulsifer (Exchange for Local Observations and Knowledge of the Arctic at the National Snow and Ice Data Centre, USA)

❖ Community-based research by, with, and for Arctic Indigenous peoples has become recognized as a valuable source of data and often involves knowledge and observations of residents and local experts. These data

frequently take the form of recordings or books, but recent development of Information Technologies of various kinds such as GIS, interactive mapping, and websites documenting oral histories allow for Indigenous Arctic research to be made available to communities, researchers, and other interested groups. In this webinar, we will present a review of various systems being developed through the Exchange for Local Observations and Knowledge in the Arctic (ELOKA) as well as discuss the opportunities to collect, manage and represent Indigenous knowledge through Information and Communication Technology. Throughout the presentation, we will discuss issues that must be considered and addressed throughout the project including practical challenges, appropriate representation, and ethical and legal issues.

❖ *Recording:* <http://vimeo.com/86993543>

Essential keys to successful research summarized: Building collegial relationships with Indigenous community
04 December 2013

- ❖ Jocelyn Torma and Yulia Zaika
- ❖ The sixth and final webinar in this series summarizes the key points made by the speakers featured in the previous five, and illuminates some practical takeaways that will be useful to researchers and indigenous community members alike. The insights shared in this series range from tips about initial contact to nurture lasting relationships after data collection needs have been met. The main relevant theme is cultural inclusion, in a day to day sense, in gathering and disseminating knowledge through formal and informal avenues, and in recording and databasing a complete set of observations that can be interpreted and critiqued from many perspectives. This summary offers an overview of essential considerations that will enhance the field research experience for everyone involved and optimize the value of scientific conclusions by generally guiding the most well-informed analyses of data.

❖ *Recording:* <http://vimeo.com/86995257>

9.3. APECS Canada Webinar Series



APECS Canada, the National Committee of APECS in Canada organized its second webinar series during 2013-2014. The series was organized by Louise Chavarie:

How to present your research at an Arctic conference effectively
22 November 2013

A Data Sharing Model from the IASOA Consortium: The Scientist-Centered Approach
3 December 2013


- ❖ Sandy Starkweather (IASOA)
- ❖ Content: What the Meta with other peoples' Data? If you have had problems finding the data you need or effectively using the data you find, this webinar is for you. The International Arctic Systems for Observing the Atmosphere (IASOA) has listened closely to its science community to design an effective data access portal for flagship Arctic atmospheric observatories. This portal uses a transparent place-based inventory of datasets from observatories around the Arctic, organized in terms our community understands. We aim for the fewest clicks possible between our search engine and real data files. Our approach to capturing dataset documentation (Metadata) is interoperable with relevant global archives and emphasizes non-duplication. Even if you are not an atmospheric scientist, you will benefit from learning about this scientist-centered approach to effective dataset discovery and use. Our system is constantly evolving. Please join us and share your data searching pet peeves with us! This work was jointly funded by the U.S. National Science Foundation and the U.S. National Oceanic and Atmospheric Administration.

❖ *Recording:* <http://vimeo.com/85492853>

Ten Ways to Put an Audience to Sleep and Ten Ways to Get Them Begging for More. The Elusive Art of Communicating Science

4 February 2014

 Ed Struzik


 Content: When I teach my course in science writing at the University of Alberta in Canada, I ask my students at the outset who they think is the most famous and influential scientist in country. Nine times out of ten, the answer is David Suzuki, a geneticist who once taught and conducted research at the University of British Columbia. I then ask them whether they think he is the best, or most accomplished scientist in the country. Ten times out of ten, the answer is “no”. Why then, I ask, is he so famous and so influential? After some discussion, the answer becomes crystal clear to all. Suzuki is famous because he is a great communicator. The art of science communication is not as elusive as most people think. It is easy, if you follow some basic rules, which I will outline and discuss in this webinar.

 Recording <http://vimeo.com/85950417>

Ocean Tracking Network and the Arctic: Quantifying and tracking the movement of marine animals and their environmental correlates

27 January 2014

 Nigel Hussey

 With environmental change and increased anthropogenic impacts in the arctic marine ecosystems, the need to quantify regional and global movement of arctic animals has become critical. Rapidly warming temperatures and associated receding ice has created new opportunities for commercial fishing, global shipping, resource extraction, and the movement of temperate species to higher latitudes. The ice and harsh temperatures that protected the fragile arctic ecosystem from development also limited research, and very little is known about polar marine animal movements and how these are influenced by environmental conditions and trophic interactions. New telemetry technologies (acoustic and satellite) are permitting

investigators to understand where aquatic animals move and how they interact, and the relationship of both to oceanographic and climate variables. The Ocean Tracking Network (OTN) is a recent global infrastructure and research project funded by the Canadian Foundation for Innovation (CFI) and the Natural Sciences and Engineering Council of Canada (NSERC), respectively, that utilizes telemetry, along with autonomous vehicles and oceanographic pods to measure environmental conditions, for documenting the movements, survival, and habitat use of animals, and how environmental conditions affect them. The seamless compatibility of the equipment used means that animals tagged by one investigator can be detected by the receivers of other investigators thousands of km away, and investigators have access to data detections of their tagged animals for free. OTN maintains a secure database (>53 million detection records and growing) that provides a resource to the science community for comparative studies and to document changes in species movement patterns over time in the face of changing environmental conditions. Vertebrates or invertebrates that are 5 cm long or larger can carry tags, which work in fresh and salt water, can be fitted with environmental sensors (temperature, depth, accelerometry, etc.), and larger sizes can communicate for more than 10 years. OTN is guided by an international science plan, and currently involves more than 400 investigators and students. Open access to OTN infrastructure is provided to Canadian and international investigators. OTN's infrastructure and logistics are always open to collaborations in support of other researchers working in the Arctic. OTN is built on sharing data, operations and maintenance, and draws scientists and partners from academia, government, the private sector, NGO's, and individuals. OTN at present is active in the central and eastern Canadian arctic, with current acoustic receiver arrays in Lancaster Sound, Dease Strait and off the east coast of Baffin Island near Scott Inlet, and planned arrays in Eclipse Sound, northern Labrador

and Ungava Bay. These arctic arrays support research on arctic cod, sculpin, Arctic charr, Greenland halibut, Greenland sharks, arctic skates, and associated marine mammal (ringed seals, narwhal, beluga, bowhead and killer whales) and oceanographic studies. This presentation will introduce the OTN mission and infrastructure, summarize current achievements by arctic OTN researchers, and discuss the potential for collaborations and development of animal movement studies in polar oceans.

Is there a role for science in policy?

18 March 2014

- ❖ Diane Freeman and Harry Borlase
- ❖ APECS Canada, in collaboration with the Air and Waste Management Association, is launching their Science & Policy webinar series this March, 2014 in honour of Polar Week. The bridge between science and policy is a growing focus in our society. Early career researchers are often asked to frame their science in a policy-relevant format but are not equipped with the knowledge or tools they need to effectively accomplish this. This webinar series aims to ignite conversation about this important subject. Our first webinar will be on the role of “science in policy”. Increasingly, scientists are asked to enter the policy arena, but is there a role for science in policy? If so what is it? And how can scientists use their skills and knowledge to influence and inform policy makers? We will start the discussion by having two invited speakers make some comments about how they use science within their roles as policy makers. Then we will open the floor to participant questions.

- ❖ Recording: <http://vimeo.com/90475562>

Arctic Science Policy

25 March 2014

- ❖ Marc-André Dubois and Bob Van Dijken
- ❖ The webinar focused on defining the science/ policy interface and outline the role of science in developing ecosystem-based Arctic policies. Northern communities are in a state of flux facing multiple political and environmental pressures that lead to a

complex policy landscape. Historically science has played a key role in Arctic policy and decision making. Trans-boundary scientific research and collaborations have been on the main agenda of the Arctic Council, an international ‘soft- power’ governance body. International science has had a decision-shaping influence at the Arctic Council, which uses its scientific knowledge to inform its policy-frameworks. These international policy frameworks set the stage for decision-making at national and regional levels. However, policies in northern Canada face added regional pressures from development, climate change, devolution, and land claims agreements. It is important to recognize that Canada’s northern communities demand new perspectives in policy that take a community-centered approach based on science that is relevant and accessible. In this webinar our speakers will outline some important science policy documents that will help young scientists understand how to conceptualize the relevance of their science to regional, national, and international policy priorities.

- ❖ Recording: <http://vimeo.com/90884782>

Bridging Careers: From Science to Policy

25 March 2014

- ❖ Eva Kruemmel and Aynslie Ogden
- ❖ In this webinar we will speak to two Scientists that use their science to inform policy in both the national and international forum.

- ❖ Recording: <http://vimeo.com/91986882>

APECS Canada Online Conference

24 April 2014

The first APECS Canada Online Conference took place April 24, 2014 using GoToWebinar platform. Two guest speakers will joined us: Steve Ferguson and Louis Fortier. The conference provided a great opportunity to present current Arctic or Antarctic research in Canada.

- ❖ Steve Ferguson: Killer whale predation in the Arctic

- ❖ Nick Pilfold: Polar bear predatory behaviour reveals seascape distribution of ringed seal lairs.
- ❖ Isabel Barrio: Creating a research network to study herbivory in northern and alpine environments.
- ❖ Patrick O. Englehardt : A textural and lithological examination of the Camp 26 Medial Moraine Atlin, British Columbia, Canada
- ❖ Leah Beveridge: The Environmental Risks of Shipping in the Canadian Arctic, the Implications for Northerners, and a Way Forward
- ❖ Louis Fortier: Deciphering the ontogenic migrations of the Arctic cod using acoustics over the annual cycle in the Beaufort Sea.
- ❖ Jessica Goldsmit: Early detection of non-indigenous species in ports of the Canadian Arctic: Establishing a baseline.
- ❖ Matthew Gilbert: Alternative migratory strategies of Arctic char in a highly variable and changing environment.
- ❖ Karen Dunmall: Arctic Salmon: Monitoring Change through Local Communities
- ❖ Louise Chavarie: Fatty acid signatures and stomach contents of four sympatric Lake Trout: assessment of trophic patterns among morphotypes and spatio-temporal variability in Great Bear Lake.
- ❖ *Recording:* <http://vimeo.com/94551762>

9.4. APECS France Polar Week Webinars



2013.

APECS France ran a Polar week outreach program for school children (mainly primary) to get acquainted with the polar and polar science. Four webinars were held for this special event during the week of April 8-12,

La science aux poles (Science at the Poles)

8 April 2013

❖ Presenter: Pascaline Bourgain

La vie dans un village au Groenland (Life in a village of Greenland)

9 April 2013

❖ Presenter: Camille Robineau

La vie dans une base scientifique en

Antarctique (Life at the Antarctic science base)

9 April 2013

❖ Presenter: Anne-Mathilde Thierry

Les animaux polaires (Animals of the poles)

12 April 2013

❖ Presenters: Camille Robineau, and Anne-Mathilde Thierry

9.5. APECS Research Features Webinars

APECS's research activities committee (RAC) organized a couple Research Feature webinars.

Antarctic Glaciology Webinar

5 November 2013

- ❖ Holocene glacial history of the Weddell Sea: the record in the ice rise - Neil Ross (Lecturer in Physical Geography, University of Newcastle, UK)
- ❖ Weakening contract between ice shelves and ice rises caused by fracture - Christopher Borstad (Post Doc, Jet Propulsion Laboratory, USA)
- ❖ Pine Island Glacier Ice Shelf: Bathymetry and Ice Thickness - Kiya Riverman (Penn State University, USA)
- ❖ Geologic control of Whillans Ice Stream grounding lines and the Crary Ice Rise, inferred from ground-based gravity measurements - Atsuhiko Muto (Penn State University, USA)
- ❖ This webinar was a follow-up of the first International Workshop on Antarctic Ice Rises held in Tromsø late August 2013, with support from the Scientific Committee on Antarctic Research (SCAR), Climate and

Cryosphere Project (CliC), Association of Polar Early Career Scientists (APECS), British Antarctic Survey and Norwegian Polar Institute's Center for Ice, Climate and Ecosystems. Presentation video, slides, posters and Frostbytes are available on the workshop web-site: <http://www.climate-cryosphere.org/meetings/past-meetings/ice-rises-2013>

Ice-Ocean Interactions Part 1: Sea Ice in the Arctic

11 February 2014

❄ Dr. Angelika Renner

❄ Dr. Angelika Renner from the Norwegian Polar Institute will provide an overview of sea ice-ocean interactions, with a focus on sea ice in the Arctic. A more detailed presentation of the drivers of turbulent heat flux towards Arctic sea ice and the impacts of sea ice cover on the upper ocean will follow the overview.

❄ <http://vimeo.com/89560166>

Ice-Ocean Interactions Part 2: Marine-terminating Glaciers

12 February 2014

❄ Dr. Gordon Hamilton

❄ Dr. Gordon Hamilton from the University of Maine will provide an overview of marine-terminating glaciers and explain why these glaciers are incredibly sensitive to changing ocean properties. The presentation will focus on research performed at the margins of the Greenland Ice Sheet, where the majority of the research on glacier ice-ocean interactions has been executed.

❄ Recording: <http://vimeo.com/89560563>

Ice-Ocean Interactions Part 3: Glacial Fjords

14 February 2014

❄ Dave Sutherland

❄ Dr. David Sutherland from the University of Oregon will provide an overview of ice-ocean interactions in glacial fjords. A general introduction of glacial fjords will be presented, followed by more detailed information on fjord circulation and how changes in fjord circulation can impact marine-terminating glaciers.

❄ Recording: <http://vimeo.com/89560562>

Lukes, L. A., Fleming-Sharp, L., and Fugmann, G. (2014): Researchers Offer Strategies to Build Community-Driven Research in Nordic Region. *Eos* 95 (27): 248.

Pope, A., Fugmann, G. and F. Kruse (2014): Association of Polar Early Career Scientists Promotes Professional Skills. *Eos, Transactions American Geophysical Union* 95, no. 24 (June 17, 2014): 204.

Tondu, J.M.E., Balasubramaniam, A.M., Chavarie, L., Gantner, N., Knopp, J.A., Provencher, J.F., Wong, P.B.Y., D Simmons (2014): Working with Northern Communities to Build Collaborative Research Partnerships: Perspectives from Early Career Researchers. *Arctic*. 67(3): 419-429.

Bull, J. and S. Juutilainen (n.d.): APECS Nordic Workshop – Connecting Early Career Researchers and Community-Driven Research in the North. *The Polar Journal* (accepted).

Selected Conference Posters:

Moore, J.S., Provencher, J.F., Peck, K., Tondu J. (2013): APECS Canada. Poster presentation at ArcticNet Annual Science Meeting, Halifax, Canada.

Fleming-Sharp, L., Fugmann, G., Kruse, F., Zaika, Y. and the APECS Nordic Project Team (2014): APECS Nordic: Bridging Early Career Researchers and Indigenous Peoples in Nordic Countries: Building Nordic Networks". Poster Presentation at Arctic Frontiers 2014, January 2014.

Fleming-Sharp, L, Fugmann, G, Zaika, Y. and the APECS Nordic Project Team (2014): APECS Nordic Research Project: "Bridging Early Career Researchers and Indigenous Peoples in Nordic Countries". Poster Presentation at 8th International Congress of Arctic Social Sciences (ICASS VIII), May 2014.

Trifonova, I (2014): Polar exploration for kids and parents. APECS Bulgaria at the Sofia Science Festival (poster). *Criosfera* 2014, Bucarest, Romania

Tondu, J., Gantner, N., Balasubramaniam, A., Chavarie, L., Ip, M., Simmons, D., Moore, J.S., Fielding, R., Campbell, K., Provencher, J.F. (2014): Working with communities: tools developed by APECS to help engage early career researchers. Poster Presentation at Arctic Frontiers 2014, Tromsø, Norway.

Kruse, F. (2014): APECS – shaping the future of polar research (poster used to promote APECS Netherlands), Groningen: Arctic Centre.

J. C. Xavier, P. Azinhaga, S.Lourenço, G. Vieira, A. S. David, B. Cruz, S. Ferreira, V. Pereira & J. C. Marques (2013). Portugal Education & Outreach: our new educational polar projects "PROFESSION: POLAR SCIENTIST" and "EDUCATION PROPOLAR": bringing polar science to wider audiences. In 5 Portuguese conference on polar sciences, University of Algarve, Faro, Portugal (Poster)

Sílvia Lourenço, A. Nieuwendam, A. S. David, J. Seco, P. Azinhaga, S. Aparício, E. Costa, G. Fugman, F. Elias-Piera, I. Tavernier, I. Trifonova & J. C. Xavier. 2014. SEMANAS POLARES | POLAR WEEKS : Projeto Internacional de divulgação e educação científica a juntar a ciência e as escolas através dos pólos. In Science Communication Conference. SCICOM2014. June 2014. Oporto. Portugal (poster)

11.1. Formal Partnerships (MoUs)

- ❖ Scientific Committee on Antarctic Research and International Arctic Science Committee (renewed on 16 April 2013)
- ❖ University of the Arctic and the International Antarctic Institute (9 June 2010)
- ❖ International Association of Arctic Social Scientists and Social Sciences and Humanities Antarctic Research Exchange (24 Sept 2010)
- ❖ Arctic Frontiers (5 October 2010)
- ❖ Conservation of the Arctic Flora and Fauna (CAFF) (17 February 2011)
- ❖ International Association for Cryospheric Sciences (23 September 2011)
- ❖ Bredbåndsfylket - 27 February 2012
- ❖ Arctic Frontiers - 27 August 2012
- ❖ Permafrost Young Researchers Network (PYRN) and International Permafrost Association (IPA) - 18 August 2012
- ❖ High North Academy (HNA) – 24 September 2012
- ❖ American Geophysical Union – 31 January 2013
- ❖ Polar Educators International – 23 May 2013

These groups often provide in kind support in the form of advertising, high-level endorsement, meeting space at conferences, travel support for APECS members.

11.2. Partnership Highlights and Funded Projects

Through the generous support provided by the Research Council of Norway, the University of

Tromsø – the Arctic University of Norway and the Norwegian Polar Institute, APECS was able to secure funding for its International Directorate Office at the University of Tromsø for 2013 - 2016. Thank you from the entire APECS leadership to our sponsors for helping us Shape the Future of Polar Research in the years to come!

Highlights in funded projects and contributions from partners during 2013-2014 include:

- ❖ Nordic Council of Ministers: 150,000 DKK towards the second year of the “Bridging Polar Early Career Researchers and Indigenous Peoples in Nordic Countries”
- ❖ International Arctic Science Committee (IASC): 5000 Euros for the “ICARP III FrostBytes” project, a joint project between APECS and the Climate and Cryosphere (CliC) project of the World Climate Research Programme
- ❖ International Arctic Science Committee (IASC): 3000 Euros for the ICARP III “Where are they now” project, a joint project between APECS and the Climate and Cryosphere (CliC) Project of the World Climate Research Programme
- ❖ Travel funding for the “Connecting Early Career Researchers and Community-Driven Research in the North” Workshop at the Arctic Science Summit Week 2014 by the US National Science Foundation (US\$ 32000), the International Arctic Science Committee (IASC – 12800 Euros) and the Swedish Polar Research Secretariat (ca. 2000 Euros)
- ❖ The Climate and Cryosphere (CliC) project contributed with 137500 NOK towards travel of early career researchers attending CliC events, video recording, processing, editing and posting from CliC workshops and events
- ❖ The company Bredbåndfylket in Tromsø, Norway provided the GoToMeeting and GoToWebinar System for APECS as an in-kind support in 2013-2014.

- ❖ Several APECS National Committees were able to get funding from various national sponsors and we want to thank all of them!
- ❖ Travel support for APECS leaders and representatives to attend various meetings and events was provided among others by: International Arctic Science Committee; Arctic Monitoring and Assessment Programme; the Arctic Frontiers conference; the Climate and Cryosphere (CliC) project; the Research Council of Norway; Norwegian Polar Institute; UiT – The Arctic University of Norway; University of the Arctic / CIRCLA / Ilisimatusarfik / Aalborg University Summer School 2014; IASS Potsdam Summer School 2014.

11.3. News and Updates from our Partners and Sponsors

APECS works with many partner organisation from around the world. See the updates and news from some of them (in alphabetical order).

American Geophysical Union (AGU)



One of our biggest highlights this year is our first AGU Student & Early Career Scientist Conference. The Conference is a grassroots idea suggested by our students and the Hydrology track will be entirely organized by students, from the scheduling to the selection of speakers and the management of the track on the day of the Conference. Here is a link for further information: <http://fallmeeting.agu.org/2014/people/students/student-early-career-scientist-conference/>

Student & Early Career Scientist Conference

Sunday, 14 December 2014 9:00 A.M. – 5:00 P.M.

AGU is excited to host our first Student & Early Career Scientist Conference, which will be held the day before the Fall Meeting begins. The conference will provide opportunities for networking and workshops on sharpening your career skills. It will be followed by a happy hour so that students can discuss the days'

activities and practice their networking skills. Workshops include "How to Write and Successfully Publish a Paper," "Clear and Compelling Communication for Any Audience," "Science, Social Justice, and Career Options,".

Website: <http://sites.agu.org/>

Arctic Monitoring and Assessment Programme (AMAP)

Arctic Monitoring and Assessment Programme (AMAP) is an international organization established in 1991 to implement components of the Arctic Environmental Protection Strategy (AEPS). Now a working group of the Arctic Council (www.arctic-council.org), AMAP's (www.amap.no) current objective is "providing reliable and sufficient information on the status, trends and effects due to pollution and climate change on arctic environment and human health; and providing scientific advice on actions to be taken in order to support arctic governments."

AMAP has several ongoing projects and below is an overview of progress and status.

The first Arctic Ocean Acidification (AOA) assessment was produced by AMAP in the period 2010-2013. We have now started to produce an update which will be finalised in 2017, and it will be based on selected case studies. These will be regional, geographical or socio-economic, but should be predominantly driven by ocean acidification. In addition the report should contain new findings in order to update the 2013 report. The coming report will also address 'teleconnections'. These are the 'carbon highway' processes, transporting carbon to and from the Arctic and these processes will have impact on global oceans.

The AMAP Unmanned Aircraft Systems (UAS) Expert Group was established in 2009 to identify how UAS can fulfil unmet scientific needs in the Arctic regions. In 2012, the Expert Group published the document "Enabling Science use of Unmanned Aircraft Systems for Arctic Environmental Monitoring". The

challenge for any potential UAS operator in the Arctic region is to identify and understand the applicable regulations in the geographic area where they want to deploy their system, and to develop a process for interfacing with aviation authorities in order to obtain the appropriate permissions to conduct those operations. In order to assist operators, the expert group is currently drafting two documents “Implementing Scientific Data Collection across the Arctic Oceanic Region Utilizing Unmanned Aircraft Systems (UAS)”, and “UAS science operators handbook”.

Sustaining Arctic Observing Networks (SAON) is a process to support and strengthen the development of multinational engagement for sustained and coordinated pan-Arctic observing and data sharing systems that serve societal needs, particularly related to environmental, social, economic and cultural issues. SAON has recently established the Committee on Observations and Networks (CON) with the mandate to support the collection of data/information from Arctic social, economic, health and environmental sciences and observations, including permission to access geographical areas and platforms, and to present financial options for long term funding of platforms and operations. SAON has also established the Committee on Data and Information Services (CDIS) with the mandate to work for free and easy access to data and information in Arctic observing. In 2014, National Science Foundation worked with SAON on the Arctic Observing Assessment, which sought to identify Societally Significant Information and Products (SSIPs) to assess the capacity of observational networks in the Arctic. AMAP and IASC are providing secretariat support to SAON.

AMAP has now started to update the major work on “Snow, Water, Ice and Permafrost in the Arctic” (SWIPA). The first workshop to organize the work has been arranged and author teams are now being established. There is a strong connection between SWIPA and AACA (see below) with products being delivered between the projects and several common authors.

The project “Adaptation Actions for a Changing Arctic” (AACA) is for the time being AMAP’s most resource consuming project. A vast and rapid transformation of the Arctic and surrounding areas is taking place. There is a limited understanding of how climate, environmental, and socio-economic drivers interact in the Arctic. An understanding of the interactions of these multiple drivers is necessary to inform stakeholders and decision makers as they respond to a changing Arctic. To respond to these challenges and opportunities, the Arctic Council initiated the AACA project led by AMAP. Until summer of 2016 three scientific AACA regional reports will be produced; the Barents region, Baffin Bay/Davis Strait region and Bering/Chukchi/Beaufort region. All three regions cover both marine and terrestrial areas and include environmental and social sciences. Based on the three regional reports a pan-Arctic report will be produced for the Arctic Council Ministerial meeting in 2017. APECS members are heavily involved in AACA as contributing authors to all three regional reports.

AMAP supports two projects under UNEP/GEF – Russian Federation Partnership on Sustainable Environmental Management in the Arctic under a Rapidly Changing Climate (Arctic Agenda 2020). AMAP Secretariat see the UNEP/GEF project “Integrated River Basin Management (IRBM) for major Arctic rivers to achieve multiple global environmental benefits” as an important project to provide information regarding the hydrology of major Russian Arctic rivers. The project will thereby also contribute to the circum-Arctic assessments AMAP is performing. AMAP also assists the implementation of the component 3 “Technology assessment and technology transfer pilots simultaneously reducing GHG and SLCFs” of the UNEP/GEF project “Improvement of environmental governance and knowledge management for SAP-Arctic Implementation”. This subproject is primarily associated with the work of the AMAP Expert Group on black carbon. Both projects are currently under the UNEP/GEF process of approval.

An important part of AMAP work is the outreach and communication and as part of this AMAP is improving our social media coverage. The AMAP Twitter account is @AMAP_Arctic and we are happy for the agreement with APECS to help us tweet about AMAP and the Arctic. We encourage you all to follow AMAP on Twitter.

Website: www.amap.no

Arctic Portal – The Arctic Gateway



The Arctic Portal, www.arcticportal.org, is the Arctic Gateway, providing a comprehensive gateway to the Arctic on the internet.

The Arctic Portal provides access to Arctic data, information and organizations across the Arctic, facilitating information sharing and co-operation between public and private parties.

The portal is based in Akureyri, Iceland, managed as a non-profitable organization under an international board of directors. It was formally launched at the Ministerial Meeting of the Arctic Council in Salekhard in Russia in November 2006.

The Arctic Portal is

The role and operation of the Arctic Portal in supporting sustainability and resilience through cooperation and knowledge can simply be explained in three principal functions:

The Portal

The Gateway to Arctic information www.arcticportal.org includes features such as: News from around the Arctic; information on the Arctic Council and other Arctic stakeholders; sections on science, societies and business; 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; feature of the week; advanced search and much more.

The Arctic Portal serves as an internet venue for conferences and other special Arctic events. The Arctic Portal has facilitated numerous important events with virtual presence through web casting and further being the venue where presentations, documents, pod-casts and other multimedia material are saved and made accessible for the generations to come.

Communication and outreach support and hosting

The Arctic Portal provides consultation, technical and content support and web hosting to numerous Arctic organizations and projects. Many key Arctic organizations and projects have established their web presence through the Arctic Portal. These include but are not limited to: APECS – The Association of Polar Early Career Scientists; the Arctic Yearbook; Sustaining Arctic Observation Networks – SAON; Strategic Environmental Impact – Assessment of Development of the Arctic (arcticinfo.eu), IASC - International Arctic Science Committee; ICR - The International Centre for Reindeer Husbandry; the Iceland Arctic Cooperation Network, NF – the Northern Forum, PAGE21 – Changing Permafrost and its Global Effects in the 21st Century, IPA – International Permafrost Association, IASSA, – International Arctic Social Science Association; IPS – Indigenous Peoples Secretariat; Pacific Arctic Group – PAG; IPY – the International Polar Year and many more.

Participation in projects:

The Arctic Portal, due to its expertise and importance as an outreach and data management partner and the high international qualifications of its staff, is a partner in various international projects of high Arctic importance and relevance.

Recent Developments

The Arctic Portal is under constant development. Its activity is constantly increasing and diversifying. The staff has steadily increased, currently counting 15 qualified professionals with multiple academic qualifications from 7 nationalities.

Recent highlights in our operation include:

The development of the AMATII database on Arctic maritime and aviation transportation infrastructure – www.arcticinfrastructure.org, in cooperation with The Institute of the North in Alaska.

In further cooperation with The Institute of the North in Alaska, the Arctic Portal organized the Arctic Energy Summit 2013 conference held in Akureyri, Iceland. Conference executive summary and all presentations and panels can be found on the Arctic Portal and the conference website www.arcticenergysummit.com

The Arctic Portal is providing outreach and communication services for European Union's projects to include PAGE21 (Changing Permafrost in the Arctic and its Global Effects in the 21st century – www.page21.eu) and EU AIC (The EU Arctic Information Center Initiative – www.arcticinfo.eu), recently endorsed both by the European Parliament and the Council of the European Union.

As a part of and a development from the PAGE21 project the GTN-P database on permafrost has been released and can be viewed at www.gtnpdatabase.org. For a continuation of the process the Arctic Portal in cooperation with and supported by lead Arctic Institutions and organizations has launched a project with the concept to utilize observational permafrost data, as a result from the PAGE 21 project and the GTN-P database, with cryospheric data as a test model to identify and evaluate key challenges and opportunities for Arctic environment, economics and societies as consequences of climate changes. The aim is to produce protocols and tools for interfacing, comparison and evaluation of observational data for the identification, analyzing and understanding of different parameters affecting the Arctic and thus benefiting the development and sustainability of Arctic societies.

The Arctic Portal has been strengthening its cooperation and project partnership with leading institutions in North America, China and Russia. Important recent partners we look very much forward to working with further in the future include: The National Snow and Ice Data Centre; Canadian Cryospheric

Information Network/Polar Data Catalogue; The Northern Forum; Northern Arctic Federal University – NArFU and The Polar Research Institute of China – PRIC.

The Arctic is an area of opportunities and threats. The Arctic Portal pledges to actively contribute to and support the interfacing and interpretation of information and data into permanent knowledge for the benefit of the Arctic region and its people in a Global context.

Website: www.arcticportal.org

Climate and Cryosphere (CliC) Project



The Climate and Cryosphere Project (CliC), a core project of the World Climate Research Programme (WCRP), has a number of exciting opportunities for early career scientists and continues to work closely with APECS on a number of fronts.

Over the past year, CliC has been running a number of Targeted Activities, which intended to be limited in scope and time span (3-5 years) and produce tangible progress in various areas connecting the cryosphere and climate. Early career researchers are encouraged to contact the activity leaders if they are interested in getting involved. More information on our activities can be found at the CliC website: <http://www.climate-cryosphere.org>. Below are a few of our recent additions:

- ❄ **Arctic Freshwater Synthesis** - Surface hydrology and water drainage in the Arctic Basin. The goal is to improve quantification of the various contributors to Arctic freshwater drainage, its variability and change, and the role of this freshwater in the circulation and water-mass properties of the Arctic Ocean.
- ❄ **West Antarctica Glacier-Ocean Modelling Activity** - the connections between the Antarctic ice sheet, the ice streams and ice shelves which drain it, and the surrounding Southern Ocean.

- ❄ **ESM Snow Model Intercomparison** - This involves careful evaluation of the snow simulations in contemporary Earth System Models (ESMs). This is conducted in cooperation with WCRP's Working Group on Coupled Modelling (WGCM) 6th Coupled Model Intercomparison Project (CMIP6).
- ❄ **Ice Sheet Model Benchmarking and Intercomparison** - international coordination in the evaluation and testing of large-scale ice sheet models and the development of consistently-applied test cases and diagnostics.
- ❄ **Polar CORDEX Analysis / Arctic Regional Climate Scenarios** - this activity mobilizes expertise in high-latitude climate and cryosphere topics to enhance the evaluation of results from the Arctic and Antarctic domain CORDEX runs, thereby improving the integration of the cryosphere science community into regional climate modelling efforts.
- ❄ **Glacier volume change monitoring** - this activity is aimed at augmenting glacier area monitoring through research targeted at observational methods to estimate changes in glacier elevation. This is particularly important in areas of the world where glaciers constitute a vital source of freshwater for part of the year.
- ❄ **Interactions between cryospheric elements** - is an attempt to cross disciplines and explore interactions between different components of the cryosphere. This activity provides opportunities to establish linkages and research collaborations between scientists (and programs) concerned with individual cryospheric components, and promises to yield new insights into the way in which cryospheric elements interact.
- ❄ **Polar Jet Stream Variability and Extremes** - Although not directly a cryosphere topic, sea-ice and terrestrial snow cover play important roles in modulating the jet stream and so this represents a societally-relevant connection between the cryosphere and atmosphere, particularly as the jet stream is associated with weather and climate

impacts that touch a huge fraction of the world's population.

- ❄ **Improved Greenland Mass Balance Estimation** - aims at improving our ability to quantify surface mass balance over Greenland using in-situ and remote-sensing observations, along with process models.
- ❄ **Carbon cycle feedbacks in a changing Arctic climate** - is focused on connections between the cryosphere and the biogeochemical cycles that control sources and sinks of carbon dioxide and methane at high latitudes. This activity represents an important contribution to improved understanding of permafrost / carbon processes and will help quantify the potential positive feedback between climate warming and natural greenhouse gas emissions.

CliC has also rejuvenated FrostBytes, 30-60 second videos of 'cool' research. Researchers receiving funding from CliC to participate in various meetings are required to share their research by creating a FrostByte. So far this year we have created more than 150 new FrostBytes thanks to our editors Lorna Little and Erik Warming, and many APECS members. FrostBytes can now be downloaded through our new iTunes video podcast channel. Every day we publish a new FrostByte created by researchers from around the world working in various disciplines. As not to forget where this concept began, on the weekends we re-release the APECS FrostBytes from the IPY Montreal conference, as these have been on ice for some time now and are slowly being defrosted. We are hoping that more APECS members will be interested in sharing their research by creating FrostBytes, and to develop a strong partnership with the Polar Educators International to have these shared in classrooms all over the world. To subscribe to the iTunes FrostBytes channel, click on this link: <https://itunes.apple.com/us/podcast/frostbytes-soundbytes-cool/id548585075?mt=2&ign-mpt=uo%3D4>

CliC is also working with APECS on the "Where are they now?" project, a contribution to ICARP III which will investigate the subsequent career

paths of early career researchers (ECRs) that received support and funding from the International Arctic Science Committee (IASC) since the start of the most recent IPY (2007-2008) and beyond. The goal of this project is to assess how IASC support impacted careers and to find ways to further enhance the support and training of ECRs. Results from this project will be released at the ICARP III conference in Japan in April 2015. Learn more about the project here: <http://www.climate-cryosphere.org/activities/targeted/wherenow>.

CliC is also in the process of developing a Fellows programme, where early career researchers help to provide coordination support for various activities, and in return receive mentoring, travel funding and gain invaluable experience. More information on this programme will be coming soon.

To find out more about the Climate and Cryosphere Project and the ways you can get involved, please visit <http://www.climate-cryosphere.org>

Conservation of the Arctic Flora and Fauna (CAFF)



The [Conservation of Arctic Flora and Fauna \(CAFF\)](#) is the biodiversity working group of the Arctic Council. CAFF's mandate is to address the conservation of Arctic biodiversity, and to communicate its findings to the governments and residents of the Arctic, helping to promote practices which ensure the sustainability of the Arctic's living resources. It does so through various monitoring, assessment and expert group activities.

This year CAFF has focussed on implementing the findings and recommendations arising from the [Arctic Biodiversity Assessment](#) (ABA), a report released at the 2013 Arctic Council Ministerial and containing the best available science informed by traditional ecological knowledge on the status and trends of Arctic biodiversity and accompanying policy recommendations for biodiversity conservation. APECS members were involved in various

aspects of the assessment and implementation analysis as well as follow-up activities.

Resulting projects and follow-up from the ABA have included 1) the development of an ABA implementation plan including a recommendation analysis and priority-setting exercise and mapping of recommendations to Arctic Council activities 2) organizing and hosting the [Arctic Biodiversity Congress](#) in Trondheim, Norway, December 2-4, 2014, 3) initiating [The Economics of Ecosystems and Biodiversity \(TEEB\) for the Arctic Scoping Study](#), 4) initiating the [Arctic Migratory Bird Initiative \(AMBI\)](#): protecting Arctic lifestyles and people through migratory bird conservation and 5) publishing the [Life Linked to Ice: a guide to sea ice associated biodiversity in this time of rapid change](#).

CAFF continues to develop mentorship opportunities with APECS through the [Circumpolar Biodiversity Monitoring Program](#) (CBMP), an international network of scientists, governments, Indigenous organizations and conservation groups working to harmonize and integrate efforts to monitor the Arctic's living resources. The CBMP organizes its efforts around the major ecosystems of the Arctic. It coordinates the development and implementation of integrated circumpolar marine, freshwater, and terrestrial biodiversity monitoring plans and activities, while establishing international linkages to global biodiversity initiatives.

As part of the Resolution of Cooperation between APECS and CAFF, APECS members have attended various workshops and meetings to contribute to the development of CAFF's work. These include attendance and presentations at recent CAFF Board meetings in Yellowknife and Cambridge Bay, and participating in the development and implementation of the CBMP's integrated biodiversity monitoring plans. In 2014 activities focussed on implementing the [Arctic Freshwater Biodiversity Monitoring Plan](#) (see [accompanying video here](#)), the [Arctic Terrestrial Biodiversity Monitoring Plan](#) and the [Arctic Marine Biodiversity Monitoring Plan](#) (see [accompanying video here](#)). Country specific annual updates

can be found under [Monitoring Publications](#) on the CAFF website.

Website: www.caff.is

International Arctic Science Committee (IASC)



The International Arctic Science Committee (IASC) promotes and supports leading-edge multi-disciplinary research in order to foster a greater scientific understanding of the Arctic region and its role in the Earth system. “Promoting and involving the next generation of scientists working in the Arctic” is of major importance for IASC towards achieving its mission of encouraging and facilitating cooperation in all aspects of Arctic research, in all countries engaged in Arctic research and in all areas of the Arctic region. Based on a Memorandum of Understanding signed in 2008 and renewed in 2013, IASC has been closely working with APECS to involve early career researchers (ECRs) in its activities and groups.

IASC’s main ongoing activity is the **3rd International Conference on Arctic Research Planning (ICARP III)** entitled “Integrating Arctic Research – a Roadmap for the Future” which is a process to

- ❖ identify Arctic science priorities for the next decade;
- ❖ to coordinate various Arctic research agendas;
- ❖ to inform policy makers, people who live in or near the Arctic and the global community;
- ❖ and to build constructive relationships between producers and users of knowledge (<http://icarp.iasc.info>).

The next generation of Arctic researchers is among the primary audience of the ICARP III outcome, which will be a consensus statement identifying the most important Arctic research needs for the next decade and a roadmap for research priorities and partnerships. Consequently, APECS is a key partner on the

ICARP III Steering Group, composed of the ICARP III partner organizations, which are participating in shaping the future of Arctic research needs.

Beginning with a formal launch at the Arctic Science Summit Week (ASSW) 2014 in Finland and culminating in a final conference at the ASSW 2015 in Japan, the ICARP III program includes a series of activities and events during 2014-2015 and a number of these activities are coordinated by APECS and co-financed by IASC:

- ❖ Permafrost Young Researchers Workshop – organized by the Permafrost Young Researchers Network (PYRN) in Evora (Portugal), 8 June 2014;
- ❖ Integrating Spatial and Temporal Scales in the Changing Arctic System: Towards Future Research Priorities (ISTAS) – a workshop organized by IASC’s ECR network Arctic in Rapid Transition (ART) in Plouzané (France), 21-24 October 2014.
- ❖ APECS - CliC – Where are they now? – a project organized by APECS and the Climate and Cryosphere (CliC) project, investigating the subsequent career paths of ECRs that received support and funding from IASC during the last years;
- ❖ ICARP III FrostBytes - Soundbytes of Cool Research – A Communication Activity organized by APECS and CliC.
- ❖ Goals of ICARP III – the Future of Arctic Research from the ECR’s Point of View – a workshop organized by APECS and others in Toyama (Japan), April 2015.

IASC’s main scientific working bodies are five Working Groups (WGs): Atmosphere, Cryosphere, Marine, Social & Human and Terrestrial. The main function of the WGs is to encourage and support science-led international programs by offering opportunities for planning and coordination, and by facilitating communication and access to facilities. To involve ECRs in the work of the WGs, IASC Council at its last meeting at the ASSW 2014 decided to establish an **IASC Fellowship Program**. In collaboration with APECS, one IASC Fellow per IASC WG will be selected and

funded to actively participate in the activities of the WG. The model was successfully tested at the ASSW 2014.



IASC Fellows at ASSW 2014: Yoo Kyung Lee (IASC Secretariat), Elena Kuznetsova, Volker Rachold (IASC Secretariat), Paul Suprenand, Louis-Philippe Roy, Noemie Boulanger-Lapointe, Candice Lys, Emily Choy and Malgorzata Smieszek (left to right). Not on photo: Jeffrey Ross.

In particular for Russian ECRs, IASC is offering additional opportunities to get involved in international activities through its advisory group **International Science Initiative in the Russian Arctic (ISIRA)**. The recent ISIRA meeting, held during the ASSW 2014 in Helsinki, got together all national ISIRA members and 14 ECRs (one from each ISIRA member country and 6 Russian ECRs) to share information about ongoing and planned international and bilateral research projects in the Russian Arctic. The new open format of the meeting allowed the participation of over 50 attendees and all 14 ECRs had the chance to introduce themselves and their research projects to the group.

At its meeting during the ASSW 2014, IASC Council elected a new President and three Vice-Presidents. The new IASC President is **Susan Barr**, Norwegian Directorate for Cultural Heritage. Susan Barr has been working on the IASC Executive Committee as a Vice-President since 2010 and she is now taking over the Presidency from **David Hik** whose 4-year term came to an end. David Hik will, however, continue to work with the Executive Committee in his function as the Chair of ICARP III. IASC

Council re-elected Vice-President **Naja Mikkelsen**, Geological Survey of Denmark and Greenland, for another 4 years. **Larry Hinzman**, International Arctic Research Center, Fairbanks AK, and **Vladimir Pavlenko**, Russian Academy of Sciences, were elected new Vice-Presidents. The Executive Committee is complemented by the fourth Vice-President **Huigen Yang**, Polar Research Institute of China, and the Executive Secretary **Volker Rachold**.

IASC Council also approved the Austrian application for IASC membership and welcomed Austria as the 22nd IASC member country. Austria will be represented in IASC through the **Austrian Polar Research Institute (APRI)**.

Website: www.iasc.info

International Arctic Social Science Association (IASSA)



ICASS VIII IN PRINCE GEORGE AND ICASS IX IN UMEÅ

Every third year the International Arctic Social Sciences Association (IASSA) convenes the International Congress on Arctic Social Sciences (ICASS). This past May 22-26 468 participants from 26 countries gathered at the University of Northern British Columbia in Prince George for ICASS VIII, which turned out to be the largest thus far, with 109 sessions, and 411 papers presented.

The theme of ICASS VIII was *Northern Sustainabilities*. A novelty of the Congress was the inclusion of three plenary 'Sustainability Panels', along with four regular keynotes. The panels focused on Arctic sustainability from various perspectives. The first, a university led project from Umea, Sweden, problematized the concept of sustainability and contextualized the position of social sciences and humanities research at the wider scientific arena. The question "can extractive resource development lead to sustainability in the Arctic?" was addressed by the second panel, a circumpolar research initiative. The final panel described a university-government-community partnership

in Labrador, Canada that delineated a community approach to sustainable futures.

ICASS VIII sessions mirror the development of Arctic social sciences and humanities research. Cultural, social, historical, economic and environmental sustainabilities are still the foundation, but the number of panels on education and health grew compared to previous conferences. Several sessions and papers on new Observer states to the Arctic Council considered Arctic shipping, resource development, and political relations, Presenters of these included several participants from China and Korea.

A number of Arctic community members, especially indigenous persons, attended and participated in panels, plenary sessions and regular sessions. Although several Russian citizens experienced difficulties in getting travel visas, the number of participants from this important group was strong, especially from its northern universities in Yakutsk (NEFU) and Arkhangelsk (NaRFU).

Holding ICASS VIII in Prince George was a positive experience for the community. As part of an outreach strategy early career researchers spoke to around 1000 students at the local schools, from ages 5 to 17, about the dynamic and complex Arctic, and were received with great enthusiasm. The Congress also presented a number of public events, including a preview of the film *Romance of the Far Fur Country*, originally shot in 1920, and just restored, and a concert of northern music performed by the Prince George Conservatory of Music.

During ICASS VIII, the IASSA General Assembly was held, and Umeå University in Sweden was chosen for the site of ICASS IX in 2017. Umeå, a city in northern Sweden at the Bothnian Gulf, is the county capital of Westerbothnia. With more than 120,000 inhabitants, it is the second largest city north of Stockholm (after Uppsala). Umeå is the 2014 European Capital of Culture. Located on the traditional territory of the Gran and Ran Sami, Umeå University is Sweden's northernmost complete university. Next year the university will celebrate its 50th anniversary. With more than 36,000 students, 4,000 employees including 365 full professors, and 50

departments a solid ground has been built for academic operation. Umeå University has been ranked first in Europe and ninth in the world for student satisfaction according to the latest International Student Barometer (ISB). The survey was responded to by international students from 170 universities in the world during the autumn of 2013. The university was ranked first in the world for campus environment and first in Europe for the learning and living categories. In addition, international students also indicated the highest satisfaction among the eight participating universities in Sweden within three of the four main categories including: learning, living and student support. QS50 and Times Top 100 ranking of universities younger than 50 years put Umeå University on place 29 respectively 27 in the world.

The strong emphasis on local and regional research has produced a tradition of innovative research and education rooted in social responsibility while also remaining at the cutting edge of global scholarship (evidenced by an increasingly vigorous network of international collaborations). With the opening of Arcum – Arctic Research Centre at UMEå University – in December 2012, this existing cluster of regional excellence now provides a leading environment for Arctic research.

Arcum offers a research environment for cooperation in project management, publications, supervision, international networks, arrangements, seminars and strategic research planning. The centre has more than 200 affiliated researchers, and follows a. It has an innovative and multi-disciplinary approach meet the challenges of the Arctic is a distinct ambition, access to strong research infrastructures is present, and the willingness to interact with northern peoples, communities, and industries is pronounced. An important partner will be the Centre for Sami Research (CeSam), which over the last fifteen years has established a competent and dynamic environment for indigenous research. Our ambition is to give the next ICASS a strong indigenous profile.

There are three years until ICASS IX, but that does certainly not mean that IASSA meanwhile rests. The newly elected council has many

challenges and opportunities to assist in developing Arctic social sciences and humanities. Collaboration cross the disciplinary borders, collaboration with the society outside the universities, collaboration with countries outside the Arctic, collaboration with indigenous organizations, and collaboration with students are all tools to accomplish this ambition.

Peter Sköld, Umeå University

Gail Fondahl, University of Northern British Columbia

Gary Wilson, University of Northern British Columbia

International Association of Cryospheric Sciences (IACS)



2014 started with a very pleasant, interesting and constructive meeting of the IACS President with the

APECS Executive Committee in Tromsø, Norway. Such face-to-face meetings are very helpful to learn know each other and an efficient way to exchange ideas. It was also a good opportunity to meet the newly appointed APECS Executive Director Gerlis Fugmann.

The most important and most visible activities of our scientific association are carried out by Working (WG) and Standing Groups (SG). This year, IACS endorsed two new WG related to Glacier Mass Balance, the Randolph Glacier Inventory and infrastructure for glacier monitoring and the Glacier ice thickness estimation WG. Note that the latter is co-chaired by two rather young cryospheric scientists, Dr Huilin Li from the Cold and Arid Regions Environmental & Engineering Research Institute (CAREERI), Lanzhou, China, and Dr Daniel Farinotti, conducting research at the German Research Centre for Geosciences (GFZ), Germany. To help these two early career scientists to successfully lead this WG, IACS asked two senior scientists to act as advisory board. IACS believes this to be a very effective way to foster early career scientists willing to work for the community.

By August 2014, the IACS scientific programme for the 2015 IUGG General Assembly was published on the web (<http://www.iugg2015prague.com/iacs-symposia.htm>). As agreed in Tromsø, IACS Secretary General Andrew Mackintosh asked all lead conveners whether they would welcome early career co-convenors. The response was largely positive. IACS is now looking forward to this collaboration.

2014, the YES network of young geoscientists joined the International Union of Geodesy and Geophysics (IUGG) as affiliated member. Both IACS and IUGG are keen to promote exchange between APECS and YES, particularly at IUGG scientific meetings.



In summary, IACS is still a small and flexible organisation that welcomes your suggestions and ideas to help better serve the community, joining experienced mentors with enthusiastic early career scientists.

Charles Fierz
IACS President

11 September 2014

Website: <http://www.cryosphericsscience.org>

International Permafrost Association (IPA)



The International Permafrost Association (IPA), founded in 1983, has as its objectives to foster the dissemination of knowledge concerning permafrost and to promote cooperation among persons and national or international organisations engaged

in scientific investigation and engineering work related to permafrost. The IPA's primary responsibilities are convening International Conferences on Permafrost, publishing its annual report "Frozen Ground" undertaking special projects such as preparing databases, maps, bibliographies, and glossaries, and coordinating international field programs and networks. The IPA Executive Committee consists of the President, two Vice-Presidents and other members. The IPA Secretariat is operated by the Executive Director.

The IPA fosters to involve young researchers in their activities and during the international polar year (IPY), IPA initiated the Permafrost Young Researchers Network (PYRN). PYRN's main goal is to foster collaborations and seeks to recruit, retain, and promote future generations of permafrost researchers. During the past years there was always one PYRN member chosen by the Executive Committee which jointly served on the APECS open Council. This will of course be continued in the future. Hence an intense exchange of information and the conduction of joint activities is very important for the IPA.

As an outcome of the cooperation between APECS, IPA and PYRN, the three organizations decided in 2012 to sign a memorandum of understanding (MoU) in which they clarified the specific tasks of the organizations, defined joint goals and consolidated the future collaboration. The main issues upon which were agreed are (i) the invitation of representatives of the IPA to serve as members of the APECS Advisory Committee, (ii) the coordination with PYRN for permafrost related topics and involvement of IPA members in APECS activities as well as (iii) the close cooperation on research activities, like education and outreach, geosciences and other interdisciplinary actions to highlight the importance of ongoing changes in the Polar regions.

MoU between IPA, APECS and PYRN



One of the most important events this year for early career permafrost researchers was the Fourth European Conference on Permafrost (EUCOP4) in June 2014 in Évora, Portugal. In the context of the conference a Permafrost Young Researchers Workshop organized by APECS, PYRN, PAGE21 (Changing Permafrost in the Arctic and its Global Effects in the 21st Century) and ADAPT (Arctic Development and Adaptation to Permafrost in Transition) was held. The IPA sponsored the PYRN-IPA awards for outstanding presentations. The winners were: Bethany Deshpande (Centre for Northern Studies of Laval University, Canada) for outstanding oral presentation; Jana Eichel (Department of Geography, University of Bonn, Germany) for outstanding poster presentation and Sina Muster (Alfred Wegener Institute Helmholtz Center for Polar and Marine Research, Potsdam, Germany) for the best FrostByte (<http://ipa.arcticportal.org/news/56-ipa-news/728-pyrn-ipa-awards-2014.html>).



Jana Eichel, receiving the outstanding poster presentation award from Anne Morgenstern (PYRN) and IPA President Antoni Lewkowicz during EUCOP4 closing ceremony.

For the next big permafrost conference, the 11th International Permafrost Conference (ICOP 2016) that will be held in June 20-24, 2016 in Potsdam, Germany (<http://icop2016.org>), it is planned that each session is co-chaired by a young scientist. An preceding workshop for early career scientists is also planned.

The IPA Standing Committee on Education and Outreach has taken the initiative to develop a Thematic Network on Permafrost (TNP) within the University of the Arctic. This network was formally approved in June 2013 by the University of the Arctic, and immediately started its activities, very enthusiastically directed by

Prof. Kenji Yoshikawa, University of Alaska Fairbanks, USA. Thanks to Norwegian UArctic funding it has become possible to run an International Bachelor Permafrost Summer Field School course in 2014 at the University Centre in Svalbard, 19 June to 11 July 2014, where senior bachelor students, who are interested in obtaining an overall interdisciplinary knowledge about permafrost were welcomed. The course offered insights into several scientific permafrost topics such as permafrost history and global distribution, how climate and other factors control permafrost temperatures, methods of permafrost observations including drilling, coring and instrumentation, permafrost databases and their use in permafrost analyses, how permafrost affect local community infrastructure and cultural life, interaction between carbon and water in permafrost landscapes and how sensitive permafrost landforms are towards climate change. There was no tuition fee for this course, and there was the possibility for non-European students to apply for a travel stipend to attend the course. Another course is planned for 2015. (<http://www.uarctic.org/organization/thematic-networks/permafrost/>)

We look forward to seeing many APECS members at our upcoming activities and conferences. APECS members are also warmly welcomed to keep up to date with IPA news on our website or on Facebook/Twitter and to become an individual IPA member.

Website: www.ipa-permafrost.org

Facebook: www.facebook.com/ipapermafrost

Twitter: <https://twitter.com/ipapermafrost>

Polar Educators International (PEI)



Polar Educators International had a busy internal year as they worked diligently on moving the organizational Strategic Plan forward with planning for marketing, international collaborations, among other components.

The most visible success was the development and implementation of the first Master Class

featuring educator and PEI member, Nell Herrmann, and world class researcher Dr. Richard Alley. The PEI master class program, which launched in May 2014, aims to improve the ways in which polar scientists and educators develop robust collaborations, exchange scientifically accurate information, and inspire future generations of scientists and effective science communicators. The model intends to move beyond the static exchange of classroom activities to an open networking platform that supports virtual collaboration. This program partners polar scientists with master educators with similar experiences or interests and supports these teams in the development and sharing of age- and audience- appropriate polar science resources. The Master Clases utilize best practives of the Mass Online Open Course (MOOC) interactive model of knowledge sharing and dialogue, which includes access to science and educational content, webinars hosted by the researcher-teacher teams, and interactive forums. Each Master Class is free, open to the public, and is contained within the network-based infrastructure of the PEI website (www.polareducator.org). Nearly 100 participants participated in the webinar, viewed the archive, and/or participated in the subsequent two week discussion.

An upcoming event for PEI is a workshop hosted in Hannover, Germany on April 1-4, 2015. The workshop, Education Meets Science: Bringing Polar Research into Classrooms, will be structured similarly to the recent meeting in Coimbra, Portugal. The mornings will be science presentations by guest scientists and the afternoons will be hands-on activities and demonstrations of ways to transfer the morning science to classroom audiences led by educators.

Lastly, Sarah Bartholow is graciously stepping down from her position as the PEI liaison to the APECS council. Over the last few years Sarah has been an active member in the APECS Education and Outreach Committee helping to spur on activities such as Polar Week. She will be replaced by Dave Grant whom can offer fresh new ideas as an educator and mentor for APECS members that are interested in science

communication efforts with Polar Educators International.

Website: www.polareducator.org

Scientific Committee on Antarctic Research (SCAR)



SCAR is committed to developing scientific capacity in all its members, emerging National Antarctic Programmes, students and early career scientists (ECS).

SCAR has worked closely with APECS to involve ECS in all of its activities including, but not limited to, conferences, meetings, symposia, business meetings, science groups and research programmes.

This year we are awarding four Fellowships, with COMNAP currently deciding on an additional one or two. From next year we will be using the funds SCAR was awarded from the Prix biodiversité to offer an additional Prince Albert II of Monaco Fellowship, with a focus on biodiversity research.

The next generation of SCAR Scientific Research Programmes (SRPs) are forging ahead: State of the Antarctic Ecosystem (AntEco), Antarctic Thresholds - Ecosystem Resilience and Adaptation (Ant-ERA), Antarctic Climate Change in the 21st Century

(AntClim21), Past Antarctic Ice Sheet Dynamics (PAIS) and Solid Earth Responses and influences on Cryospheric Evolution (SERCE). The Science Steering Committees of all will include representation of ECS. These new programmes join Astronomy and Astrophysics from Antarctica (AAA).

Following the crowdsourcing of over 850 unique scientific questions and the nomination of almost 500 leading scientist by the SCAR community, the 1st SCAR Antarctic and Southern Ocean Science Horizon Scan assembled more than 70 of the world's leading Antarctic scientists, policy makers and visionaries (including many early career scientists) in Queenstown, NZ, in April this year. The outcomes have so far been published

in Nature and Antarctic Science.

During the SCAR Delegates' Meeting held in New Zealand this September 2014 two new countries joined SCAR: The Czech Republic and the Islamic Republic of Iran, bringing the total number of countries in the SCAR family to 39. Two new Vice Presidents were also elected – Azizan Abu Samah (Malaysia) and Terry Wilson (USA). The SCAR Delegates decided on Davos, Switzerland as the location for the SCAR 2018 meetings. Just a reminder that the 2016 meetings will be held in KL, Malaysia (<http://scar2016.com>) and even before that the next SCAR ISAES meeting will be in Goa, India in 2015 (<http://isaes2015.ncaor.gov.in>).

Over the next two years SCAR will produce its next Strategic Plan 2017+. The input of the next generation of polar scientists will be critical and we will explore ways in which to engage APECS in this process.

For further information and to keep up to date with SCAR news see the new website at www.scar.org or join us on Facebook, LinkedIn, Google+ or Twitter.

University of Tromsø (UiT), the Arctic University of Norway



UiT The arctic university of Norway has had a good year. The first year as a multi-campus university has had its challenges, but thanks to a cooperative spirit throughout the organization and good use of technology, we are becoming one organization spread across Northern Norway.

The number of students has reached a new high, with 12 500 students attending UiT this fall semester.

Last year we reported that we are hosting the Centre for Arctic Gas Hydrate Environment and Climate (CAGE), which has been awarded status as a Norwegian Centre of Excellence in Research. This year we are happy to announce the ARCEX Research Centre for Petroleum Exploration. ARCEX aims primarily at improving our knowledge of petroleum resources in

northern and Arctic areas, with the additional aim of providing essential knowledge and methodology for eco-safe exploration in the high north. Eco-safe refers to the use of best available technology and practices in order to minimize impacts and risks to the Arctic environment. Both CAGE and ARCEX will have relevant PhD and Post Doc positions for APECS members, so keep an eye on them!

Other good opportunities for APECS members in Tromsø is the K.G. Jebsen Centre for the Law of the Sea, a centre for legal scholars interested in international maritime matters, in particular in the High North.

UiT has also signed an agreement about a joint master's degree with the University of Saskatchewan: *Governance and Entrepreneurship in Northern and Indigenous Areas – GENI*. This master's degree complements our existing Master in indigenous studies.

January marks the return of the sun in Tromsø, and with that the Arctic Frontiers conference, hosted at our main campus in Tromsø. AF is successful in drawing attention to important issues in the Arctic, both from a political and academic perspective. It is also an ideal meeting place for scientists and politicians from all over the world to discuss Arctic issues. This is reflected in the large number of side events taking place before, during or after the conference itself. For many APECS members, the Young Scientist forum has been a rewarding experience both socially and academically.

In June, we hosted the first Barents Summer School in Kirkenes, focusing on "Epidemiology in the High North". Barents Summer School is a collaboration between Tromsø, Umeå, Oulu and Arkhangelsk. Umeå University of Sweden will host the second Barents summer school in Abisko in June 2015. The theme will be "Climate change effects on Arctic landscapes: integrating responses across terrestrial and aquatic ecosystems".

Website: www.uit.no

University of the Arctic



UArctic

UArctic published its new Strategic Plan in late 2013, which further establishes the network as a member organization that supports the cooperative efforts of its member institutions and organizations under our vision of "An Empowered North – With Shared Voices." The Strategic Plan also reinforces UArctic's mission to "empower the people of the Circumpolar North by providing unique educational and research opportunities through collaboration within a powerful network of members." See www.uarctic.org/about-uarctic/strategic-plan/

As part of UArctic's commitment to providing shared networking resources that support higher education and research in the region, it launched its new student web portal, **education.uarctic.org** in March 2014, centered around the UArctic studies catalogue. The catalogue provides an rich listing of northern-relevant study programs and courses from across our membership. The new student site also features profiles of all our higher education institutions in the region, student-focussed news, and testimonials. The student web portal will also include a Field School Calendar and Graduate Programs, which are being developed jointly between APECS and UArctic.

With a total of over 1 million students and 100 000 faculty, UArctic members form a truly powerful network. All members are represented in the Council of UArctic, which meets at a member institution once a year. In May 2014 the Council meeting was hosted by the University of Northern British Columbia, together with the International Congress of Arctic Social Sciences. During the meeting, the Council took key decisions about the University of the Arctic's future development, including welcoming of additional institutions and organizations as Council members, bringing UArctic's total membership to 172.

Lars Kullerud, President of UArctic, introduced UArctic's new management structure with new vice-president positions for Research, Education, Organization (replacing Administration), and Interregional Cooperation, joining the existing vice-presidents Indigenous

and Finance. The Council endorsed the UArctic Strategic Implementation Plan for 2014-16, laying out the action plan for UArctic on Education, Research, Mobility, as well as the Organization. UArctic also convened a very successful Rectors' Forum, bringing together northern university leadership in Reykjavik in June 2014.

UArctic also re-launched its main website in August 2014, bringing it in line with the student portal. Towards the end of 2014, we will be working to renew the members area and develop the new Research portal, to better support and promote research activities across the network.

UArctic will once again be present at the European Association of International Education (EAIE) congress in Prague in September 2014. In October 2014, the Board of Governors of UArctic will hold their meeting at Memorial University of Newfoundland, having previously met in Umeå, Sweden in April.

The University of the Arctic (UArctic) is a cooperative network of universities, colleges, research institutes and other organizations concerned with education and research in and about the North. UArctic builds and strengthens collective resources and collaborative infrastructure that enables member institutions to better serve their constituents and their regions. Through cooperation in education, research and outreach we enhance human capacity in the North, promote viable communities and sustainable economies, and forge global partnerships.

Early Career Partner Organisations

Permafrost Young Researcher Network (PYRN)



The Permafrost Young Researchers Network (PYRN) is an international organization established under auspices of the International Permafrost Association (IPA). The organization fosters an innovative collaboration,

seeking to recruit, retain and promote, future generations of permafrost young researchers.

PYRN was officially initiated during the 4th International Polar Year (IPY) in order to meet the provisions of the IPY instrument, i.e. to direct the multi-disciplinary talents of their members, towards global awareness, knowledge and response to permafrost-related challenges in the 21st century.

PYRN continues to increase and broaden its activities and initiatives. In addition to the capacity-building tools provided by the website, the [newsletter](#) and the [member listing](#), PYRN has progressively established itself as a true service provider for the young researcher community. PYRN organized and carried out workshops at the 2014 European Geosciences Union General Assembly and 4th European Conference on Permafrost. PYRN also granted PYRN-IPA awards to outstanding presenters at the 4th European Conference on Permafrost. Click [here](http://pyrn.arcticportal.org/index.php/en/activities) (<http://pyrn.arcticportal.org/index.php/en/activities>) to read more about current activities of PYRN.

PYRN recently elected its new Executive Committee for 2014-2016 and looks forward to hosting several new activities in coming years. PYRN members will continue to organize workshops at major conferences, including the International Conference on Permafrost 2016 in Potsdam. Additionally, PYRN is committed to expanding its online and international presence by growing its database of abstracts by promoting online networking tools (including its newsletter, job postings, and researcher and conference lists) to help permafrost young researchers connect across disciplines.

PYRN has been mostly successful because of its partners and sponsors. The full list of current sponsors is available [here](http://pyrn.arcticportal.org/index.php/en/usefullinksresources) (<http://pyrn.arcticportal.org/index.php/en/usefullinksresources>). For more information on PYRN visit us at <http://pyrn.arcticportal.org/en/>.

Young Earth System Scientists (YESS) community



The Young Earth System Scientists (YESS) community has been busy in the last year. While continuing local

efforts such as the organization of seminar series on career opportunities as well as on self-correction of science, we also have successfully organized the first international Interdisciplinary Conference of Young Earth System Scientists (ICYESS) in September 2013. In this conference we have dealt with the inherent language problem of interdisciplinary research. We have talked about different meanings and forms of uncertainty in various disciplines and how one can attempt to communicate those uncertainties to other scientists and to the public. Some results of this conference can be found in the BAMS conference report <http://journals.ametsoc.org/doi/pdf/10.1175/BAMS-D-13-00271.1>. This work will be continued in a YESS workshop in Germany in autumn 2014.

Another focus of activities has been international outreach. We have been in contact with both the World Climate Research Program and the World Weather Research Program to establish YESS as the leading international early career network in the Earth system sciences. To do this we have unified YESS with the early career network CLIVAR-ECS and had informal meet-ups for YESS members at the AGU Fall Meeting in San Francisco, the Ocean Sciences Meeting in Honolulu, and the EGU General Assembly in Vienna. Furthermore, we have organized meetings and talks at the World Weather Open Science Conference in Montreal and the ESA Climate Symposium in Darmstadt.

YESS continues to grow - if you think you are a Young Earth System Scientist and want to contribute to an international community of like-minded colleagues, please join us at yess-community.org.