

Briefing Note

Exploring the Past, Present, and Future of USAPECS: Lessons from a Decade of Supporting Early Career Research Across National and International Polar Networks

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Navigating the multitude of organizations and institutions involved in Arctic research can be daunting for those just beginning their careers, from outside traditional academic circles, or from historically excluded communities. These difficulties are exacerbated by the rapid changes unfolding across the Arctic environment, highlighting the interconnectedness of the region and the need for evermore cooperative research that transcends geopolitical and disciplinary boundaries. It is the goal of the United States Association of Polar Early Career Scientists (USAPECS) to foster such connections and encourage the inclusion of underrepresented groups within the broader Arctic, Antarctic, and Alpine research community while advancing the principles of Inclusion, Diversity, Equity, and Accessibility (IDEA). Led by a board composed of volunteers, USAPECS has engaged in a variety of collaborative activities and partnerships with U.S. and international institutions over its 10 years of operation in order to bring together early career researchers from across disciplines, regions, and from historically underrepresented groups and to support and showcase their work. This has included collaborations with Interagency Arctic Research Policy Committee, Polar Science Early Career Community Office, Association of Polar Early Career Scientists International, and Arctic Research Consortium of the United States and the production of an annual blog series, online webinars and roundtables, conference presentations and events, and the international Polar Film Festival. Drawing on feedback from past and current members, participants, and partners, this briefing note provides an overview of the past and current work of USAPECS and its collaborative activities. It focuses on the challenges faced and lessons learned over USAPECS's decade of existence as a means to highlight the value of such volunteer organizations.

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Introduction

Addressing the rapid environmental changes unfolding across the Arctic requires partnerships from across both disciplinary and geopolitical boundaries. While such cooperation has been a hallmark of both Arctic governance and scientific research over the past four decades, work is still needed to ensure the future of collaborations between the next generation of Polar researchers, Arctic communities and Indigenous Peoples, and the broader public. One such organization working to encourage continued collaborative research in the Arctic is the United States Association of Polar Early Career Scientists (USAPECS), the national committee representing the U.S.-based members of the international Association of Polar Early Career Scientists. Like its parent organization, USAPECS aims to bolster the work of early career researchers, educators, and others with interests in the Arctic, Antarctic, and Alpine regions and the wider cryosphere. This article explores the work of USAPECS over its decade of existence with a focus on its efforts to support early career researchers, its advocacy for more inclusive practices in Polar and Alpine research, and its engagement with nation and international collaborative networks. Drawing on surveys and interviews of past members and collaborators, USAPECS archival documents and event histories, and the experiences of the current board, it provides a brief history of the organization and an overview of its composition and network of collaborators. It then offers a glimpse into some of USAPECS's activities and events that aim to encourage collaboration, cross-/trans-disciplinary interconnections, and knowledge sharing across national and international spaces. Finally, this article concludes with a discussion of the challenges faced and lessons learned over USAPECS's first decade of existence as well as plans for its future in an Arctic experiencing rapid climate change. It is our hope that this briefing note will both highlight the value of groups like USAPECS and provide information to others interested in participating in and supporting all-volunteer organizations.

Growing an Organization to Support Early Career Researchers in the U.S.A.

The 1980s marked the beginning of what Osherenko and Young have termed "the Age of the Arctic" (1989: 4-5). Driven by a combination of interconnected environmental concerns, possibilities for increased resource extraction and expanded transportation networks, social and Indigenous rights movements, and renewed geostrategic importance, the once-peripheral Arctic was quickly becoming the focus of growing international attention and activity (Grant, 2010; Keskitalo, 2004). In the U.S., part of this interest centered on supporting research and education in and about the region. The Interagency Arctic Research Policy Committee, for instance, was formed as part of the Arctic Research and Policy Act in 1984 and was followed by the university-driven Arctic Research Consortium of the United States in 1988 (Rich et al., 2015; Arctic Research Policy Act, 1984). The thawing of political relations in the post-Cold War years also saw a surge in international cooperation in the region with the establishment of organizations, such as the International Arctic Science Committee in 1990, which included 23 countries conducting research in the Arctic (Smieszek, 2015). This was followed by the Arctic Environmental Protection Strategy in 1991 and the Ottawa Declaration and the formation of the Arctic Council in 1996, the primary intergovernmental forum supporting coordination, interaction, and cooperation between Arctic states, Indigenous organizations, and non-Arctic observer nations (Arctic Council, 2024; Heininen et al. 2020; Ottawa Declaration, 1996). This push toward collaboration

in the region continued into the 2000s with events, such as the 4th International Polar Year in 2007-2008 led by the International Arctic Science Committee and the Year of Polar Prediction. These efforts opened spaces for new international organizations, such as the Northern Forum and Association of Polar Early Career Scientists and the national committees that took shape within it, like USAPECS (Goessling et al., 2016; Heininen et al., 2020; Heininen, 2023; Hindshaw et al., 2018).

USAPECS is a volunteer organization founded in 2014 through the unification of several regional groups in the United States as a means of overcoming the challenges of maintaining engagement at a regional level and to encourage greater inclusion and collaboration in Arctic, Antarctic, and Alpine research. During its first years, USAPECS faced a number of challenges, including the difficulty of integrating its regional precursor organizations into one entity, maintaining and growing its membership within a largely online space, and charting its own identity under the broader Association of Polar Early Career Scientists International umbrella. However, by navigating these initial hurdles, USAPECS began to take on its current shape; forming working groups, growing its network of collaborators, and setting the foundations for what would become its annual events and activities.

USAPECS's membership today is primarily composed of early career researchers from inside and outside of academia with an interest in the Arctic, Antarctic, and Alpine regions. It is led by an executive board of early career researchers from various institutions across the U.S. that serve for a 1-year period with the option of term renewal. All board members participate in at least two of USAPECS's eight task groups which focus on specific events or activities. These include Website, Polar Film Fest, Interagency Arctic Research Policy Committee, Social Media, Conferences, Blog, IDEA (inclusion, diversity, equity, accessibility), and Webinar teams with new task groups formed as necessary to address specific needs or handle particular activities or events. These groups meet at least once a month online while general board meetings are held twice monthly to accommodate members' differing schedules. Meeting minutes and other related documents are compiled and held online in a common file with additional ongoing discussions between the entire board and individual task groups taking place over the Slack communication platform. This flexibility in the open flow of information and in USAPECS's overall structure has proved essential for maintaining an active and engaged volunteer membership that is often juggling educational, employment, and personal obligations and is located across multiple time zones.

The overall goals of USAPECS, from its inception, have been to stimulate inclusive, interdisciplinary, and international research collaborations and develop effective future leaders in Polar and Alpine research, education, and outreach in the United States and beyond. To further these aims, USAPECS is supported by informal and formal connections with a number of Polar and Alpine focused networks and organizations. These include the advertisement and amplification of USAPECS events and activities through listservs, websites, and institutional networks, such as Cryolist, UArctic, and the International Arctic Social Science Association, although there is no formal relationship with these groups. Official collaborations are maintained with several U.S.-based organizations and the Association of Polar Early Career Scientists International. USAPECS's official network of collaborators includes:

- Association of Polar Early Career Scientists International: USAPECS's parent organization, which is responsible for the overall functioning of the organization and the code of conduct which guides both USAPECS and its events.
- Interagency Arctic Research Policy Committee: a U.S. governmental organization focused on addressing research needs and objectives in the Arctic.
- Polar Science Early Career Community Office: a community-building and community-support organization for polar early career scientists, funded by U.S. National Science Foundation Office of Polar Programs, Award #2135176 (Dryak, et al., 2022).
- Arctic Research Consortium of the United States: a nonprofit organization consisting of institutions organized and operated for educational, professional, or scientific purposes to advance Arctic research and education.

In addition, USAPECS also partners with:

- United States Permafrost Association: an organization that shares knowledge and data related to permafrost.
- Center for Oldest Ice Exploration (COLDEX): a U.S. National Science Foundation science and technology center focused on exploring Antarctica's oldest ice cores to understand the earth's past climate.
- PolarSTEAM: a newly formed U.S. National Science Foundation program that connects polar educators and scientists with writers and artists in Antarctica.

As USAPECS is not a funded organization, it relies upon this network of collaborators for both monetary and logistical support. Recently, for instance, Polar Science Early Career Community Office has provided for the further development of USAPECS's online presence through the financial support of USAPECS's website and its Slack communication channel. In addition, Interagency Arctic Research Policy Committee provides the online platform for many USAPECS webinars and other online events. Without the aid of these organizations, USAPECS's activities to advance early career researchers' voices in Polar and Alpine sciences as well as its broader outreach efforts would not be possible.

All of the work of USAPECS, including its collaborative activities, are guided by Inclusion, Diversity, Equity and Accessibility (IDEA) principles (Kasprowicz et al., 2023; Sukhai & Mohler, 2016). While these principles have been foundational to USAPECS since its inception, a plan to form a task group specifically focused on Diversity, Equity, and Inclusion was not formulated until 2018 following feedback received from a correspondent panel at the American Geophysical Union Fall Meeting 2018. The IDEA task group grew from these discussions surrounding diversity, equity, and inclusion and was officially launched in 2020 as a response to the political and social turmoil in the United States, as well as the lack of diversity in Polar Science (Bernard and Cooperdock, 2018; Gewin and Wongpan, 2019; Gewin, 2019). Initial aims of the IDEA task group included the development of a concise mission statement for the implementation of IDEA principles, the outline of short- and long-term IDEA-related goals, and the integration of these principles into the work of all the other task groups.

The IDEA team relied on various resources, such as Association of Polar Early Career Scientists International's diversity, equity, and inclusion principles as well as support from Interagency Arctic Research Policy Committee, to develop an official strategy guide for organizing its efforts. This document now serves as a roadmap for the application of IDEA principles throughout USAPECS's organizational structure and in its events and activities. However, it remains a living text; flexible and adaptable enough to meet both expected and unexpected challenges while being open to updates and revisions when necessary.

One of the early applications of this guide was in the development of a land acknowledgments policy for USAPECS. Land acknowledgments are generally formal statements by organizations that reflect a recognition and respect for the Indigenous Peoples, cultures, histories, and rights that relate to an institution's physical location (Native Governance Center, 2024).¹ However, given that USAPECS is composed of volunteers, based online, and not tied to any one institution, formulating a land acknowledgment policy proved more challenging than expected. After discussions between the IDEA task group and the wider USAPECS board, it was decided that any land acknowledgment policy for USAPECS needed to be broad enough to encompass the variety of different geographical regions on which its members lived and worked. Thus, the final iteration of the land acknowledgment, which appears prominently as a popup on the USAPECS homepage, specifically notes that all of the institutions in which Arctic researchers work are situated on Indigenous lands. In addition, individual board members have the option of adding specific land acknowledgments related to their location and their pronouns to their personal biographies on the USAPECS website. This is part of USAPECS's broader effort to encourage a more respectful and open forum for Polar and Alpine research in which all identities are heard, seen, and supported. In 2022-2023, these efforts were furthered in a code of conduct designed by the IDEA task group to enhance diversity and inclusion in USAPECS events. It initially included guidelines for events directed at both participants and organizers but eventually led to the development of a new code of conduct for all board members which took effect at the start of the 2023-24 board cycle. This document builds upon the code of conduct provided by Association of Polar Early Career Scientists International and includes event-specific rules and guidelines for members along with recommendations for action to be taken to address violations.

Finally, a new core objective of the IDEA task group has been to design a series of training sessions on IDEA-related issues for the board. Topics were first chosen based on the results of an anonymous board member survey, in which respondents were asked to identify subjects connected to inclusion, diversity, equity, and accessibility that were unfamiliar or that they would like to learn about in greater detail. After topics were selected, board members volunteered to research their chosen subject, provide a short 30-minute interactive presentation, and moderate a group discussion related to their topic. A list of materials and resources for further reading was also prepared. To date, these training sessions have included subjects such as colonialism in science, co-production of knowledge, gender identity, best practices for collecting demographic data, and improving accessibility in online spaces. This activity has proven beneficial, providing a safe forum for USAPECS board members to engage with a

¹ Additional resources related to land acknowledgments are available from Edmonds College Library: <https://edcc.libguides.com/land>

multitude of perspectives and ask questions about topics that can sometimes be difficult to discuss. Expanding upon this work, the IDEA team plans to develop training modules that can be uploaded to YouTube, making such information available to the wider Polar and Alpine research community and to the public. Overall, these new initiatives, combined with living strategy documents and guidelines designed by the IDEA task group, represent USAPECS's ongoing efforts to foster a more open and inclusive Polar and Alpine research community while also encouraging outreach and engagement with the public. The IDEA task group works to ensure that these IDEA principles are evident throughout all aspects of the organization.

Activities and Events for the Polar and Alpine Research Community and Beyond

USAPECS activities and events are crafted to encourage collaboration, cross-/trans-disciplinary interconnections, and sharing among Arctic, Antarctic, and Alpine early career researchers, established researchers, community members, Indigenous Peoples, and others interested in the region. While many of these efforts are held annually and led by dedicated task groups, others are one-time events designed to meet specific needs or foster early career researchers' professional development, such as networking opportunities and mentorships. These events and activities rely on previous years' efforts and the work of past board members to carry skills and knowledge forward even as USAPECS's membership changes. Yet, these efforts are also designed to be responsive to the current and future needs of the early career research community. Both the direction of USAPECS activities, as well as their chosen themes, are selected annually in order to meet changing interests and in response to feedback from members and participants. In recent years, USAPECS has also begun to encourage synergies between some of its annual activities, bringing together the skills and experiences of members from various task groups to expand events and outreach. This section briefly explores the development of some of USAPECS's activities and events with a focus on how such efforts support the broader goals of the organization. It also highlights some of the challenges that have been faced during this work, the opportunities they have presented for learning and growth, and how they continue to be shaped and reshaped to address the shifting needs of the Polar and Alpine early career researcher community.

Annual Blog Series

USAPECS's blog task group was developed in 2018 to expand the organization's mediums of communication and to facilitate greater collaboration within the Polar and Alpine research community. The annual blog series is the primary focus of this group and is designed as a space for a diverse group of Early- to Mid-Career scientists and educators to share their personal insights and experiences in Polar science. These blogs are meant to communicate valuable advice and learning opportunities for early career researchers through first-hand accounts. They also reflect a shared passion for Polar research and education in order to foster a community of informed and interconnected Polar scientists. Themes for the blog series are chosen yearly after which an open call is sent out through social media, across various listservs, and through other networks to solicit submissions. Themes have included "Communicating Your Science," "Navigating Your Early Career and Beyond," "Science Policy at the Poles," "Becoming a Polar Scientist," and our current theme of "Exploring Polar Science Across Disciplines." Since 2018, USAPECS has published thirty-six blog posts.

The annual blog series is a reflection of USAPECS's goal of encouraging the open exchange of knowledge and experiences from across disciplines as well as perspectives from outside of academia as a means to support the next generation of Polar and Alpine early career researchers. To this end, individual blog authors are selected from a variety of disciplines, career stages, backgrounds, and more. Each contributor offers valuable advice aimed at early career researchers, drawing from their own journeys and challenges within their specialized communities of knowledge. The strength of these blog posts lies in their conveyance of lived experience; the authors provide first-hand accounts that not only narrate their individual histories but also illuminate broader aspects of Polar research and its impact. These personal stories also serve as important learning tools. They allow readers, especially those just beginning their careers, to gain practical knowledge and inspiration, helping them navigate both the expected and unexpected, and glimpse the complexities of Polar science. Moreover, each author contributes a shared enthusiasm for both Polar and Alpine research and the importance of education in their respective fields. This collective passion enriches the blog series content, making it a vital resource for fostering a community of informed, motivated, and interconnected early career researchers.

The main challenges the annual blog series has faced in recent years relate to ensuring a diversity of disciplines and perspectives are reflected in its content. Most notably, the social sciences, the humanities, and art-based research are largely absent from the blog. Additionally, most blog authors to date are from academic and research-related backgrounds which limits the exchange of experiences and viewpoints from outside those realms. Indigenous researchers and authors are also absent from the blog series. To address these gaps in representation, USAPECS plans to make a concerted effort to broaden its outreach and better amplify the multitude of voices and experiences reflective of the Polar community.

Annual Webinar Series

In addition to providing early career researchers with the opportunity to highlight their voices and gain knowledge from more established researchers in written blog form, USAPECS also hosts an annual webinar series with approximately 2 to 3 events held per year. These webinars are free and open to both the early career researcher community and the public and are managed by a dedicated webinar task group. The goal of USAPECS's webinar series, much like that of the blog, is to elevate a diverse set of voices and convey new ideas and information to both the Polar and Alpine research communities and others interested in learning more about the region. These webinars have been a staple activity of USAPECS from its early years with the first held in conjunction with Association of Polar Early Career Scientists International. At that time, they typically focused on themes related to best practices for scientific communication or specific research questions, such as on the stability of the Thwaites Glacier. The focus of webinars expanded in 2019 with the "Polar Science 101" theme which provided a general overview of several Polar and Alpine related topics, such as running and analyzing fully-coupled global climate models or writing policy briefs on environmental and social issues in the Arctic region. There were also several Association of Polar Early Career Scientists International/USAPECS collaborative webinars related to the theme of the best practices for conducting trans-disciplinary work in a region like the Arctic where an understanding of both physical and social science perspectives is

crucial for addressing current and future climate change. More recently, with the support of Interagency Arctic Research Policy Committee, USAPECS has broadened the focus of its webinars further to include issues related to early career skills and capacity building. These webinars have included a panel discussion with established researchers on creating an online science persona through social media and professional websites and a webinar training session on the inclusion of alt text for enhancing the accessibility of online spaces. All of USAPECS's webinars produced over the last three years are publicly available through the USAPECS YouTube channel.²

One of the biggest hurdles faced by USAPECS's webinar task group in recent years has been growing participation and viewership of the webinar series. As in so many other aspects of work and life, the COVID-19 pandemic heavily impacted the activities of USAPECS with the number of annual webinars and their attendance sharply declining. In the years that have followed, many researchers and the general public have increasingly shifted to virtual platforms for employment, meetings, conferences, and other interactions, hence contributing to a fatigue in relation to these virtual spaces (Wooston, 2020; Tao et al., 2021). While active interest and participation in online events has always been challenging for outreach organizations, such as USAPECS, it has become even more difficult to draw attention to traditional research-style webinars. To address this issue and better assess the needs of USAPECS membership and webinar participants, the webinar team has recently launched an anonymous reflection poll. It is hoped the qualitative feedback received will aid the webinar team in better gearing the webinars to meet the interests of early career researchers and improving the overall event coordination. The webinar team also recently applied for a small education and outreach grant through Polar Science Early Career Community Office to provide honorariums for webinar speakers and panelists. Although this was a one-time source of funding, the webinar team is actively looking into a long-term solution for providing speaker honorariums. This is a crucial component of improving inclusivity and equitability for early career researchers, but unfortunately there are a number of challenges in implementing this type of system for a volunteer organization like USAPECS, which has no direct institutional home. Over the next few years, the webinar team aims to continue providing a platform for early career researchers to share their research via online webinars, but also hopes to continue expanding webinar topics through skill training, surveys of different career pathways, including more speakers from the social sciences and humanities, and increasing outreach about the importance of polar science to the public (e.g., Guímaro et al., 2024).

The International Polar Film Festival

The international Polar Film Festival is USAPECS's largest event, held annually in conjunction with Association of Polar Early Career Scientists International's Polar Week every September. Begun in 2016, the Polar Film Festival was designed as an online showcase of recent short films about the Polar and Alpine regions produced by researchers, community members, Indigenous Peoples, organizations, and institutions from around the world. It is also meant to provide a resource for teachers and others interested in finding up-to-date information about the region for use in education. The Polar Film Festival strives to include content that highlights ongoing issues related to the Polar and Alpine regions

² <https://www.youtube.com/@usapecs>

and communicate such material to as wide an audience as possible in order to facilitate education and give a platform to those interested in sharing their experiences and knowledge of the region from around the globe. The 2023 Polar Film Festival, for instance, included films submitted from Switzerland, the Netherlands, Norway, Chile, Russia, Alaska U.S.A., Turkey, New Zealand, and Finland. The Polar Film Festival is organized by a dedicated USAPECS task group but also works with the Association of Polar Early Career Scientists' Polar Week team. A call for films is generally released in May with additional calls in July and August. Film submissions are due by the end of August with final film reviews, letters of acceptance, and preparations taking place at the start of September. The Polar Film Festival is hosted on USAPECS's website which provides links and information about the films and filmmakers. A selection of films is advertised daily on USAPECS's social media over the September International Polar Week with in-person screenings being held by interested individuals at institutions within and outside of the U.S.

In recent years, the Polar Film Festival has grown to become USAPECS's most synergistic event, linking together the work of several task groups. Beginning in 2023, the webinar team along with the Polar Film Festival task group held a live online filmmaker roundtable during which filmmakers discussed their work and interacted with the public. The success of this event has encouraged its continuation in 2024, as well as the addition of a new filmmaker mini-blog series. Currently being organized in conjunction with the blog team, the new mini-blogs will allow filmmakers to further discuss their unique stories, motivations, and filmmaking techniques and, it is hoped, inspire others to share their experiences and viewpoints through visual media. These new additions to the Polar Film Festival are designed to highlight perspectives, activities, and organizations that may receive less attention in traditionally published academic circles and to include a window into the Arctic, Antarctic, and Alpine that is accessible to a wider audience.

The Polar Film Festival has also faced a number of struggles since its inception, including the upheaval caused by the COVID-19 pandemic and managing the intensity of labor involved in running the event. The global pandemic put a halt to the Polar Film Festival with no film festival occurring in 2021. Afterwards, the Polar Film Festival struggled back in 2022, but received fewer submissions than in previous years with only the 2023 Polar Film Festival beginning to reach the level of attention as pre-COVID-19 events. The short burst of intensive labor involved in running the Polar Film Festival has also been daunting at times. As many filmmakers are also Arctic researchers that conduct fieldwork during summer months, the film submission deadline is set for August when many are returning. However, this leaves a very short window for films to be reviewed and the Polar Film Festival to be organized. USAPECS's Polar Film Festival task group has endeavored to distribute the labor involved in organizing the event and relies on the aid of the entire board to ensure no volunteers are overwhelmed in the lead-up to the Polar Film Festival.

Conferences and In-Person Events

While many of USAPECS's activities take place in virtual spaces, the organization also participates in several in-person conferences and organizes periodic social events and workshops. These activities generally focus on increasing awareness of USAPECS and its activities, providing opportunities for early career researchers to interact, build skills, network, and engage in discussions in formal and

informal settings, and to increase awareness and support dialogues focusing on IDEA-related topics. Larger events have included a three-day Polar Science Communication Workshop held in 2017 in Boulder, Colorado and supported by the National Aeronautics and Space Administration (NASA) and the U.S. National Science Foundation (Bliss et al., 2018). Smaller, less formal activities for early career researchers have included social gatherings, such as events co-sponsored with the Polar Science Early Career Community Office and Polar Impact during the American Geophysical Union Fall 2023 meeting and an online event held during American Geophysical Union Fall 2022 meeting for virtual attendees.

USAPECS has maintained a presence at all in-person American Geophysical Union Fall Meetings since 2018 with the goal of bringing together early career researchers in Polar science and discussing issues related to academia. At the 2018 American Geophysical Union Fall Meeting, for example, USAPECS hosted a panel together with Permafrost Young Researchers Network: North American titled “Diversity and Inclusivity in Polar Sciences”. The panel session discussed current challenges faced by minority groups and women in the Polar and Alpine research and related disciplines along with possible avenues for addressing these issues head-on in academia and in scientific organizations. It also included strategies for promoting diversity, equity, and inclusion. During the American Geophysical Union Fall 2022 and 2023 meetings, USAPECS members presented “Advancing Inclusion, Diversity, Equity, and Accessibility (IDEA) in the Polar Sciences by USAPECS,” given in both years to discuss the activities the organization has taken on over the course of its lifetime (Ashokkumar et al., 2022 & Ashokkumar et al., 2023). In addition, USAPECS also participated in the International Congress of Arctic Social Sciences during the larger Arctic Congress in 2024. Members organized and chaired a session together with APECS Norway, entitled “Cross/Trans-Disciplinary Collaborations and Advancing Community, Equity, and Inclusion in Arctic Research” that included presentations related to diversity, equity, and inclusion principles and the challenges and opportunities of cross/trans/interdisciplinary collaborations (Arctic Congress, 2024). USAPECS members also presented a paper on the history of USAPECS, its activities, and its plans for the future during the session entitled “Building & Sustaining Strategic linkages for Network-to-Network Arctic Research Collaboration” (Ashokkumar et al., 2024).

Conclusion: Lessons Learned and the Future

As USAPECS has grown and taken shape over the past decade, it has faced a number of difficulties. While some have been overcome, others persist, and it is the goal of the organization to continue the process of addressing these issues. The concluding section of this paper will discuss some of these challenges, the lessons that have been gleaned by confronting and seeking to address them, and how they contribute to ongoing plans for USAPECS’s future. While some of these issues have been discussed already, it is hoped that bringing them together here will contribute to a better understanding of USAPECS and its activities and aid other organizations that are confronting similar issues. They represent steps in USAPECS’s development as an organization built to support early career researchers and the wider Polar and Alpine community while also increasing inclusivity, diversity, equity, and accessibility in research - a process that is never complete. Continuing to carefully identify these challenges remains key for expanding trans-disciplinary understanding, education, and research across the rapidly changing Polar and Alpine regions (Gaffey et al. 2024).

For all organizations, but particularly a voluntary one, continuity of information and maintaining an active and engaged membership can be daunting. This is especially difficult when the organization is composed mainly of early career researchers that are balancing education, employment, and personal obligations. Flexibility in requirements and meeting schedules have proven essential as has a dedicated system for maintaining the flow of information. Communication platforms, such as Slack, as well as shared files for documents and other materials are essential for allowing members to interact at differing times and to catch up on missed information (Perkel, 2017). These channels have also aided in stemming the loss of institutional knowledge as board members leave the organization for other pursuits. Schedules of events, turnover documents, past meeting minutes, and other materials allow for past activities and events to be built upon in the future. However, maintenance of these systems is paramount and requires both oversight and attention.

Maintaining such systems, as well as the variety of annual events and activities run by USAPECS, also requires support from other organizations in the form of money, time, and logistics. While USAPECS is a voluntary organization with no dedicated funding source, its website, Slack channel, conference participation and social events, speaker honorariums, and other efforts require funding. USAPECS relies heavily on its network of collaborators to provide this financial support as well as other periodic funding sources. However, money is only one aspect of the aid USAPECS receives from these organizations. The Association of Polar Early Career Scientists International, Interagency Arctic Research Policy Committee, Polar Science Early Career Community Office and Arctic Research Consortium of the United States all contribute time to aid in USAPECS activities, use of their platforms to hold events, share their skills and experiences to bolster the work of USAPECS, and help the board and its members grow their skills and knowledge. This strong network of collaborators has allowed USAPECS to grow over the past decade, rebound from the COVID-19 pandemic, and expand. But this requires transparent goals, open channels of communication, and clearly defined roles and expectations.

Finally, organizations like USAPECS need flexibility in order to grow and meet the shifting needs and interests of its membership (Bohleber et al., 2020). Polar and Alpine research, much like the regions themselves, is dynamic. It encompasses multiple disciplines, perspectives, peoples, cultures, and ideas. As an organization that represents the next generation of early career researchers and strives to advance diversity, equity, and inclusion principles, USAPECS must be able to adapt to these changing needs and challenges, approach and openly discuss difficult issues, and find new avenues to bring support to those that have been excluded (Rauser et al., 2017; Moraru et al., 2024). There is no end point in addressing these subjects, just an ongoing and iterative process. Thus, USAPECS's organization, as well as its events and activities, must be flexible enough to meet these changing needs and goals. With these lessons in mind, USAPECS plans to continue to grow through increasingly synergistic activities which bring together a variety of task groups, like the Polar Film Festival. The organization also plans to work to maintain relationships with alumni members, find new ways to reach out to groups and disciplines that have not been represented, and increase engagement with the public. These efforts, as well as the Polar and Alpine networks that have been built since the 1980s, are essential to maintain a cooperative and collaborative research community in a rapidly changing Arctic landscape.

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