Workshop Report

Bringing For-Profit Companies into the Boundary Chain Model



American Society of Adaptation Professionals



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Bringing For-Profit Companies into the Boundary Chain Model: Workshop Report

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Executive Summary

From November 2019 through November 2020, the American Society of Adaptation Professionals (ASAP) executed a small grant funded by Great Lakes Integrated Sciences and Assessments (GLISA) for the project, "Bringing For-Profit Companies into the Boundary Chain Model." The following report documents the design, execution, and lessons learned from "Stage 3: a 1.5 day workshop for climate adaptation service providers". The report accounts for ASAP's execution of the workshop and is designed to inform future workshops for for-profit climate service providers that GLISA designs or supports. ASAP's other work on this project included forming and meeting with a multi-organizational advisory group; compiling a comprehensive list of climate service providers' practices and needs.

The workshop, titled "Great Lakes Climate Service Providers Academy (Academy)", benefited from multi-modal instruction design, expert instruction team, advisory group support, and a diverse cohort of participants. The Academy successfully met its goals and objectives. It yielded insight into effective virtual engagement strategies, the development needs of climate service providers in the Great Lakes region, and the emergent value of long-term partnership-building across the climate services marketplace.

Academy participants' diverse interests were insightful but also challenging to accommodate. To better meet participants' needs, the project team developed a responsive feedback system to inform improvements between workshop sessions. The team also developed a series of flexible climate service enhancement activities.

Lessons from this work will support iterations of the Academy at a similar or larger scale in the Great Lakes region or in multiple regions across the United States served by NOAA Regional Integrated Sciences + Assessments (RISAs). Holding the Academy at a larger scale and simultaneously in multiple regions could promote collaboration between RISAs, increase the workshop's appeal to for-profit providers operating in multiple regions, and create an opportunity to enrich understanding of trends in the climate services marketplace.

Academy Purpose, Goals, and Learning Objectives

Purpose & Goals

The project team designed the Academy to improve for-profit climate service providers' competencies using climate data and information and help them better integrate into the climate services boundary chain model. Overall the workshop successfully achieved or advanced all project goals:

Convene for-profit climate service providers with GLISA staff/affiliates to exchange ideas and information & help workshop participants begin to build relationships with GLISA and its partners: The Academy design created several spaces that for-profit climate service providers used to interact with GLISA staff. GLISA's one-one-one consulting sessions supported direct exchange of ideas and information between GLISA and participants. GLISA staff also interacted with participants through question and answer with the full group on Day 1 and 2, during introduction activities, and by providing one-on-one instruction during breakout sessions for the Service Enhancement Plans.

Continue learning about the practices and needs of climate service providers and the climate services marketplace through interaction with workshop participants: The project team could generalize from the diversity of organizations and development goals represented among workshop participants that there is a diverse base of climate service providers seeking to grow their business in the Great Lakes region. Workshop participants included for-profit, academic, and government organizations of various sizes. They included companies headquartered in and outside the region. Some participants provided services to the entire region and internationally, while others only served one state in the region. Though the group was not a representative sample of practitioners in the region, it did introduce the project team to diverse categories of practitioners and demonstrated the breadth of interests and needs around climate data and information in the region.

Develop a workshop that can be replicated throughout the Great Lakes region and beyond: The project team is confident that the Academy design can be scaled to run in other RISA regions and host multiple regions at the same time, as outlined in ASAP's proposal for project Year 2 (forthcoming from ASAP to GLISA program staff.)

Improve for-profit climate service providers' competency in using climate data and information: Most participants came away from the Academy with a better understanding of GLISA products and climate data issues particular to the Great Lakes region. Several evaluation metrics support this finding though the project team did not collect a direct, objective measure of service providers' competency in using climate data and information. All evaluation participants agreed that the Academy increased their understanding of how GLISA products and services could inform their work and their understanding of specific products and services. Most evaluation participants also agreed that they would increase their use of GLISA products, services, and connections because of their workshop experience. Most

participants also agreed the experience improved their understanding of challenges associated with choosing projections for the Great Lakes region.

Learning Objectives

The project scope of work outlines two specific initial learning objectives for workshop participants. While developing the Academy, the instruction team developed three additional participant learning objectives. Each of the additional objectives refers to one of the major components of the final workshop plan.

Initial learning objectives, outlined in the scope of work:

- Workshop participants learn how to use GLISA products such as the Great Lakes Ensemble, Great Lakes Adaptation Data Suite, Regional and local climatologies, and Comprehensive Vulnerability Assessment Template.
- Workshop participants gain proficiency at replicating GLISA's processes for developing climate impact scenarios.

Additional learning objectives, outlined by the instruction team, are below. Based on feedback collected from participants through the workshop evaluation form, which had a 57% response rate, participants largely agree that the workshop thoroughly met or basically met all three of its participant objectives:

- Participants will gain increased confidence accessing vetted, publicly available climate data and information for the Great Lakes region and applying it to their projects. (94%)
- Participants will be able to recognize the presence or absence of field-spanning principles for quality climate change adaptation practice in their own work and the work of their organizations, partners, and stakeholders (see <u>ASAP's Living Guide to the Principles of Climate Change Adaptation</u>). (100%)
- Participants will create a resource (service enhancement plan) that aids in integrating the best publicly available climate data and adaptation best practices into their business. (94%)

Participants thought, overall, the workshop was of a high quality and they expect to use what they learned in the context of their climate services moving forward.

A full accounting of participant experiences is available in the <u>Academy Evaluation Methods and Results</u> section of this report.

Instructional Design & Assets

Originally envisioned as a 1.5-day in-person workshop, the project team redesigned the Great Lakes Climate Service Providers Academy in response to the coronavirus pandemic using input from the project Advisory Group as well as personal experience hosting and attending virtual events. The redesigned Academy included four 90-120 minute sessions over the course of two weeks. Each day had a tailored focus, as described in the schedule below. Each day had one "host", who led the session's opening, closing, and transition between each segment of the session, and between two and four "instructors", who delivered the day's educational content. Some participants also engaged in a one hour "office hour" with GLISA staff during those two weeks as well. Having staggered content delivery allowed instructors to use observations and participant feedback from Week One to improve the agenda and content for Week Two.

Week One		
Tuesday, September 22	Thursday, September 24	
Opening Training Session Orientation to the Academy, ASAP, GLISA, and the Service Enhancement Plan (SEP) Exercises (120 minutes)	Deep Dive 1: Integrating Historic & Future Climate Information into Decision Making Deep dive on GLISA products and services, and integrating these into SEPs (90 minutes)	
 Learning Objectives: Participants understand what they can expect to gain from the Academy Participants articulate their individual goals for the Academy Participants learn about the state of the adaptation and resilience marketplace and opportunities for growth Participants become familiar with ASAP and GLISA products and services and the organizations' roles in the climate service marketplace 	 Learning Objectives: Identify where to find best available historic and future climate information scaled for decision making in the Great Lakes Region Describe how to integrate climate information into other decision-making factors through a scenario planning approach; and Identify ways to integrate GLISA products and services into their own products/services. 	
 Goals Increase participant buy-in for remainder of the Academy: all attendees from Session 1 attend all subsequent sessions Increase participant preparation for remainder of the Academy: all attendees arrive to subsequent sessions with the content/ideas generated from Exercise #1 	 Increase participant understanding of the value of publicly available climate data and information Increase participant familiarity with GLISA team and inspire opportunities for collaboration 	

Week Two		
Tuesday, September 29	Thursday, October 1	
Deep Dive 2: Principles of Effective Adaptation Practice Deep dive on ASAP value-driven principles of practice, and integrating these into SEPs (90 minutes)	<u>Closing Training Session & Panel</u> Addressing barriers to, and opportunities for, SEP application and continued improvement with climate data and information, and relationship-building (120 minutes)	
 Learning Objectives Be able to recognize the presence or absence of field-spanning principles for quality climate change adaptation practice in your own work and the work of your organizations, partners, and stakeholders; Prioritize principles most important to you for inclusion in your service enhancement plan. Consider how to modify aspects of your service to include key principles. 	 Learning Objectives Participants understand the different types of actors in the climate data lifecycle and can situation their organization and others in that lifecycle. Participants generate ideas for future partnerships and collaborations Participants identify potential barriers to improving their services and potential solutions for overcoming those barriers. 	
 Goals Participants are inspired to integrate ASAP-defined principles into their products and services. Increase participant familiarity with ASAP programs and products and inspire opportunities for further engagement and collaboration 	 Goals Increase likelihood that participants will seek out partnerships or other relationships with each other, GLISA, and ASAP Increase likelihood that participants will propose and implement their service improvement plans at their organization 	

The Academy included a rich set of instructional modalities and corresponding assets that can be reused, refined, and adapted in future iterations of the event. Final versions of all assets are organized by Academy Session and available in the <u>Participant Materials Folder</u>. Editable copies of assets are available upon request.

Visual materials

Visual materials were especially important in a virtual environment, helping engage participants and ensuring they could easily follow along with the day's content and exercises. The project team produced four master slide decks, one for each day of the Academy, that combined and organized every instructor's visual materials as well as visual cues to support transitioning between the day's activities. This approach worked well, although it was challenging to coordinate all instructors/presenters to finalize their slides in time to distribute them to participants in advance of the week's sessions.

Service Enhancement Plan

The Service Enhancement Plan (SEP) encompasses a set of worksheets and guided activities that the project team designed to help participants integrate lessons from the Academy into their respective business models. Over the course of the Academy, the SEP asked participants to identify and then reflect on a specific service provided by their company and develop strategies to improve or enhance that service to make it climate informed or "climate smart". The SEP design furthered several Academy goals. It was designed to be flexible so that it would be relevant to any participant who provides a service that could utilize climate data. It was designed to help participants of varying experience levels learn how to integrate new climate data and information resources into their services. By helping participants integrate Academy lessons into their actual services, the SEP sought to ensure that participants would be able to directly use climate information and be more integrated into the boundary chain climate service model. Finally, the SEP activities included collaborative work, which supported participants interested in networking and relationship-building. The SEP was moderately successful, with a small number of participants rating among the most valuable elements of the Academy but several rating it among the least valuable elements. Participants wanted more guidance and time for completing the exercises. SEP assets include a set of slides, worksheets, and lesson agendas for SEP activities on each day of the Academy.

Hands-on data activity

During Day 2 of the Academy, a deep dive session focused on GLISA products and services, GLISA instructors led a step-by-step activity that showed participants how to access local observed climate data through GLISA's website. The activity served to teach participants about GLISA's climate station data, to orient participants to the website, to add variation to Academy instruction style, to demonstrate the utility of GLISA's tools, and to increase the likelihood that participants would further explore GLISA's web-based resources after the Academy. One of the most common pieces of feedback the team received was that participants wanted much more of these types of exercises integrated into the Academy.

Case Study Presentations

The project team invited four guest contributors selected from the Advisory Group to deliver case study presentations on Days 2 and 3 of the Academy. The team chose guest contributors based on familiarity with their work and best-fit to each day's topics. Guest contributors were prompted for a five-minute presentation tailored to the day's topic and a Q&A session afterward. The case study presentations served to reward Advisory Group members' service with visibility in the Academy's networking environment, to leverage the Advisory Group's familiarity with the Academy goals to produce tailored case studies, to help participants connect to the instructor presentations through examples, to respond to advice from the Advisory Group that called for case studies, and to add variability to the Academy instruction team and instruction modalities. The resulting asset is four sets of case study slides integrated into the master slide decks for days 2 and 3. The case studies were very popular among participants and participants recommended integrating more case studies into future iterations of the Academy.

Closing panel

Day 4 of the Academy featured a panel of Advisory Group members, who were also Academy participants, focused on the future of climate services marketplace in the Great Lakes region and applying lessons learned from the Academy. The project team designed the panel prompts to further the Academy goal of gathering more information on the marketplace. The panel was also intended to respond to the Advisory Group's interest in this topic, to add variation to instruction modalities, and to help participants analyze their own barriers and opportunities through the panelists' examples. By focusing on how individuals perceived barriers and opportunities in the marketplace, the panel also responded to practice and needs assessment participants who cited market demand as a barrier to using publicly available climate data and information.

Reflection activities

The instruction team strategically deployed five full-group reflection activities to help reinforce the lessons of each day of the Academy, gather information on participant interests, and gather participant feedback on their Academy experience. The project team reserved five minutes at the end of each session to invite participants to respond to prompts on Google Jamboards, an easy-to-use public collaboration tool. Prompts focused on what participants had learned that day and topics they wanted to explore next in the Academy. On the final day, each project team member led a small participant breakout group through a discussion on reflection questions that sought to evaluate the perceived utility of the SEP, identify takeaways from the Academy, and provide feedback for future iterations of the Academy (See "Final Reflection" document in the <u>Supplemental Materials Folder</u>).

GLISA one-on-one consulting sessions

During the registration period and Academy, the project team invited participants to sign up for a limited number of one-on-one consulting sessions with GLISA climate experts. These sessions were intended to support strong, direct relationship-building between GLISA and Academy participants and enhance participants' technical skills. GLISA team members collectively set aside 10, one-hour appointments. ASAP team members provided administrative support to schedule the meetings. Early indications from GLISA team members suggest the sessions helped build relationships and connections between participants and GLISA. Participants found them very valuable as well.

Breakout rooms

The project team made frequent, strategic use of Zoom breakout rooms throughout the Academy. The team used the rooms to support small group activities like introductions, networking, one-on-one instruction, reflection, and SEP exercises. The rooms also helped create a divide between public and private workspaces to support the preferences of participants who may have had different learning styles or wanted privacy when working on SEP exercises using proprietary or private information. The project team used breakout rooms to support participant networking during SEP exercises by allowing participants to indicate a preferred work partner--either, a specific participant, an instructor, or another participant chosen at random. These small groups provided a safer, more intimate space for participants to develop ideas before rejoining larger group activities. The rooms had two primary challenges. First,

Instructors did not observe participants in their breakout rooms and so were unable to encourage focused work. Several Advisory Group members shared that their SEP breakout rooms tended to shift toward networking and away from the activities. Second, there was a small learning curve for instructors and participants who were not used to the Zoom breakout room format, though most issues seemed to resolve by the third Academy session.

Development Process & Technical Execution

Six project team members designed, developed, and executed the four Academy sessions. The project team collaborated to sketch the flow and focus for each day's content, assigned responsibilities for content development, set expectations for collaborating on content, and set deadlines and guidelines for submitting presentations. Each instructor submitted final content to a shared Google Drive folder, one for each day of the Academy. The project team distributed agendas and participant materials for Week 1 to Academy registrants the week before the Academy began and distributed them for Week 2 at the end of Week 1. This allowed the team to process participant feedback and make adjustments as the Academy progressed to better meet participant needs.

Team members divided a set of speaking roles and technical roles amongst themselves for each session. The speaking roles include the list below. The project team prioritized including a diversity of voices in each session to help hold participants' attention.

- Host (1) led the session's opening, closing, and transition between each segment of the session
- Instructors (3-4) delivered instructional content in each segment
- Participant support (1) monitored and responded to any technical issues that participants shared in the Zoom chat, email, and phone.

The technical roles include the list below. Individuals filled multiple technical roles at any given time. This was challenging and led to some minor errors; therefore the team recommends that in the future a single individual fill each role at any given time.

- Zoom host sets up the Zoom call as the host, carries out any actions that requiring host powers, and oversees how host and co-host privileges are shared among other team members
- Timekeeper keeps speakers on schedule, issuing time warnings as needed
- Recording starts and stops Zoom recordings during presentations and ensures these recordings are saved appropriately after the session
- Breakout room management organizes participants into Zoom breakout rooms as needed throughout the session
- Chat box monitor responds to participant questions or issues raised in the Zoom chat box; shares important instructional information (e.g., prompts, instructions, resource links) with participants through the chat box
- Screen share screen shares the master slide deck and other visual resources from their desktop

A full description of technical roles and best practices is available in "Virtual Meeting Best Practices" in the <u>Supplemental Materials Folder</u>.

Material sharing and distribution

The project team shared, organized, and distributed all Academy materials and draft materials using Google Drive shared folders. The project team gave all content contributors access to private shared folders used exclusively by instructors to prepare content. All participants had access to a separate set of

folders containing only the final instruction products, organized into separate folders for each day. This folder also included a contact list of all participants and guidelines for participants seeking recognition for their Academy participation. The folders were updated as materials became available. All participant folders and content will remain live indefinitely. This method provided instructors with a common workspace and participants with a common reference folder.

Material design and branding

The project team created and applied unique branded templates for all original training materials produced for the Academy. The uniform design gave all slide deck, agenda, and worksheet documents a cohesive, professional finish.

Advisory Group

The project team leveraged Advisory Group members' familiarity with the project by tapping them for specific, strategic roles throughout the Academy. The project team intended for group members to serve as resources, networking nodes, enthusiastic participants, case study examples, and model participants throughout the Academy. Group members participating in the Academy became valuable sources of feedback. The project team gathered feedback from group members after Week One, to incorporate into Week Two plans. The project team tapped group members to lead introduction activities, case study presentations, and the closing panel in order to heighten group members' visibility as resources to other participants, take advantage of their unique position in the project, and boost group members' own networking goals for the Academy.

Lessons Learned for Replication, Transfer, & Scaling

Overall, the Academy was a success and is ready for replication, transfer to new regions, and scaling to serve multiple regions at once. Through the process of planning and executing the Academy, engaging with participants, debriefing from each session, and examining structured feedback from participants, the instruction team identified a set themes that help contextualize the success of Academy design elements and assets and should be considered for future iterations of this work.

"Homework" can create a rigorous and private experience for those who desire it

While drafting the practice and needs assessment for this project, Advisory Group members noted that it was important to be mindful of for-profit providers' desire to keep proprietary information private. To make this accommodation, the project team gave participants the option to work collaboratively or independently throughout the Academy and made time for individual work during Week One. At the same time, many participants readily engaged in collaborative work, and the project team received participant feedback asking for more collaborative work time. Future iterations of the Academy could consider asking participants who want privacy to complete each day's SEP assignment on their own time as "homework." Homework would reduce the need to maintain space and time for private work during live Academy sessions. Thus, more time could be devoted to collaborative work. Optional homework could also support participants who want to work ahead or have more time to reflect on the SEP.

Deepening relationships yields emergent value

The overall project Advisory Group became a great asset for the Academy. The Advisory Group's familiarity with and support for the project and their perspective as practitioners made them ideal case study contributors, panelists, and peer leaders during the Academy. Advisory Group members also became a source of targeted, candid feedback between sessions, supporting the instruction's teams work building responsive agendas. The Advisory Group also delivered Expansions of this work could benefit from continued investment in long-term, highly collaborative relationships between project team members and an Advisory Group of practitioners.

Responsive engagement strategies

The instruction team consistently received supportive comments from participants on the engagement strategies applied in the Academy. The instruction team's success can be largely attributed to its collective experience running virtual events, real time feedback from the Advisory Group, and the decision to discuss and adjust engagement strategies after each session according to participant feedback and instructor expertise. As an example, between Week One and Week Two, instructors created more time for work on service enhancement plans and for networking. Future iterations of this Academy, or any multi-day virtual events, may likewise benefit from allotting time and resources to make incremental adjustments to process agendas.

Workshop design that supports a wide variety of participant interests

The content and structure of the Academy was based on the results of the project's practice and needs assessment, input from the Advisory Group, and the participants' registration information. The project team designed the Academy and its content around these assessments to appeal to as many prospective participants as possible. Each component of the Academy received a variety of reactions from participants. Comments from the evaluation form and Advisory Group suggest that this reflects, in part, the variety of goals among the participants. Future iterations of the Academy could consider the following strategies (or others) intended to help the Academy achieve broad appeal among climate service providers while furthering its primary goals and objectives.

- Focus on developing and reallocating time to components of the Academy that, according to evaluations, participants wanted more time on or found particularly valuable, including networking, learning on climate data and tools, and service improvement planning.
- Develop 2-3 "tracks," each designed around a distinct participant goal (such as those above), that give participants options each day based on what components they find most valuable.

Cover greater breadth and depth on GLISA tools, resources, and services

Through evaluation feedback, Advisory Group members and a large portion of participants expressed both satisfaction with GLISA content presented at the Academy and a desire for a variety of additional content. Project teams designing future iterations of the Academy could consider reallocating more time to training on GLISA tools, resources, and services. These teams could consider giving special attention to the following suggestions made or inspired by Advisory Group members' and participants' feedback.

- Further explore GLISA tools, expertise, and lessons that can help participants learn how to vet different sources of climate data and information.
- Walk through hands-on exercises using GLISA climate data.
- Design learning experiences that are inclusive and challenging for participants with different levels of background knowledge on GLISA and climate data.
- Provide greater detail on the services that GLISA can provide to participants after the event.
- Take a more technical dive on GLISA software, tools, and projection modeling.

Academy Evaluation Methods and Results

The following summarizes the results of several evaluation feedback mechanisms that the project team used to understand and learn from participant experiences. Future iterations of the Academy may benefit from integrating these takeaways into event design. Evaluation protocols and data are available in the <u>Supplemental Materials Folder</u> for this report.

Participant Evaluations

One week after the last day of the Academy, participants were asked to complete an evaluation form within two weeks time. The project team prioritized several areas of the Academy for evaluation and iteratively developed questions for each area. Each of the following sections represents one of these areas and contains a summary of findings from the evaluation feedback. Seventeen responses were received from the twenty-nine participants.

Contribution to Project Goals

The Academy design created several spaces that for-profit climate service providers used to interact with GLISA staff. GLISA's one-one-one consulting sessions supported direct exchange of ideas and information between GLISA and participants. GLISA staff also interacted with participants through question and answer with the full group on Day 1 and 2, during introduction activities, and by providing one-on-one instruction during breakout sessions for the SEPs.

The project team is confident that the Academy design can be scaled to run in other RISA regions and host multiple regions at the same time, as outlined in ASAP's proposal for project Year 2.

Most participants came away with a better understanding of GLISA products and climate data issues particular to the Great Lakes region. Several evaluation metrics support this finding though the project team did not collect a direct, objective measure of service providers' competency in using climate data and information. All evaluation participants agreed that the academy increased their understanding of how GLISA products and services could inform their work (Figure 1) and their understanding of specific products and services (Figure 2). Most evaluation participants also agreed that they would increase their use of GLISA products, services, and connections because of their Academy experience (Figure 3). Most participants also agreed the experience improved their understanding of challenges associated with choosing projections for the Great Lakes region (Figure 4).

The project team could generalize from the diversity of organizations and development goals represented among participants that there is a diverse base of climate service providers seeking to grow their business in the Great Lakes region. Academy participants included for-profit, academic, and government organizations of various sizes. They included companies headquartered in and outside the region. Some participants provided services to the entire region and internationally, while others only served one state in the region. Though the group was not a representative sample of practitioners in the

region, it did introduce the project team to diverse categories of practitioners and demonstrated the breadth of interests and needs around climate data and information in the region.



Figure 1. Effect of Academy on participant understanding of GLISA products and services.





Full text of the responses chosen by participants reads:

"Great Lakes Adaptation Data Suite (GLADS)"

- "Great Lakes Ensemble (including Climate Model Buyer's Guide and Report Cards)"
- "Localized Data Products (e.g., Station and Division Climatologies)"
- "Regional Data Products (e.g., Annual Climate Summary, Climate Change in the Great Lakes 2-pager)"
- "Scenario Planning Process (creation of climate and impact scenarios)"
- "Customized interpretation of climate information for individual organizations"

Figure 3. Effect of Academy on participant interest in using GLISA products, services, and connections.



Figure 4. Effect of Academy on participant understanding of challenges associated with choosing climate projections for the Great Lakes region.



Contribution to Participant Learning Objectives

Based on feedback collected from participants through the Academy evaluation form, which had a 57% response rate, the event decisively advanced each participant learning objective. These conclusions are based on participants' subjective experience. The project team did not collect data on how the workshop objectively changed participants' proficiency with specific tools or activities.

Most evaluation participants (94.1% to 100%) agreed that the Academy either basically met or thoroughly met each of its articulated learning objectives (Figure 5, Figure 6, Figure 7). Comments from the evaluation form, a final reflection activity during the Academy, and the Advisory Group suggest that Learning Objectives 1 and 3 would have benefited if more time were spent on this content. Some comments suggested creating SEP "homework" for participants who want to take the activity further on their own time. Others suggest that the SEP activity did not support their individual goals for the Academy.

Most evaluation participants agreed that they had a better understanding of specific GLISA climate data and information products because of their participation in the Academy (Figure 2). 62.5% of evaluation participants represented in Figure 2 agreed they understood GLISA's scenario planning process better. The final content of the deep dive session on GLISA products and services focused on GLISA's engagement process and accessing local observed climate data through GLISA's website, which is a deviation from learning objectives outlined in the scope of work. This discrepancy represents, in part, the influence of data collected through the practice and needs assessment and the Advisory Group, which helped the project team tailor Academy content to the apparent interests and needs of service providers.



Figure 5. Participant evaluation of Academy success meeting Learning Objective 1.



Figure 6. Participant evaluation of Academy success meeting Learning Objective 2.



Objective 3: Participants will create a resource (service enhancement plan) that aids in integrating the best publicly available climate ... adaptation best practices into their business. 17 responses



Academy Experience

Overall, participants described the Academy as high quality. A majority of participants rated the following aspects of the Academy with either a 4 or 5 (with "5" meaning "Excellent") on a 5-point scale: content (82% positive), instruction (82%), virtual engagement (94%), logistics/organization (94%), pre-Academy communication (88%), and post-Academy communication (94%).

- Participants' ratings of each session of the Academy were generally positive as well, with the exception of the Opening Session, which only 56% of participants rated positively.
- Participants generally found the most helpful Academy components to be: (1) the Day 2 presentation on GLISA tools and products, (2) the Day 2 illustrative case studies, and (3) the Day 3 illustrative case studies.
- Participants generally found the least helpful Academy components to be: (1) the Day 4 closing service enhancement plan exercise, (2) the Day 3 service enhancement plan exercise, and (3) the Day 2 service enhancement plan exercise.
- Overall, participants wanted more time for every Academy component.
- 70% of survey participants agree they would definitely recommend the Academy to a colleague.

Learning About Climate Data and Information

- All survey participants agreed the Academy increased their understanding of GLISA products and services.
- Most participants agreed that the Academy helped them learn more about the following GLISA products: GLADS, Ensemble, localized data products, regional data products, and the scenario planning process. Some also learned about GLISA's customized interpretations of climate information (Figure 2).
- Most participants agree the Academy somewhat (65%) increased their understanding of challenges associated with choosing projections for the Great Lakes region, with 24% agreeing their understanding greatly improved.
- 65% of respondents agree they are likely to increase their use of GLISA products and services after the Academy.
- Participants were interested in spending time on more trainings with GLISA on the order of: 1-2 hours (37%), 3-4 hours (37%), and 5-6 hours (26%).

Service Enhancement Plan

- Most participants (63%) agreed the worksheets somewhat helped apply Academy lessons to their companies work. Most participants agreed they could use the worksheets somewhat (53%) or greatly (18%) going forward.
- All participants reported using the worksheets during the Academy. Most (82%) agreed they only made light/moderate use of the worksheets worksheets during the Academy.
- Most participants understood how to use the worksheets to a degree, with 47% understanding somewhat, and 47% understanding very well.

Academy Cost

• Nearly all participants (94%) agreed that the regular registration fee of \$99 was about the right price for the Academy's value.

Academy Discussions

On the final day of the Academy, each member of the instruction team joined a breakout room with several participants to discuss participants' high level takeaways from the Academy

Participants shared mixed feedback on how well the service enhancement planning activities and structural features of the Academy met their needs and expectations. While some participants expressed appreciation and interest for how the service enhancement activity challenged them to think of their projects in new and expansive ways that could integrate more public climate data, they also acknowledged that they felt they had insufficient time for this work and others felt the activities were not a good match for their work. Similarly, while some expressed they had made worthwhile new professional connections, others commented that they felt out-of-place among the demographic or did not have the opportunity they needed to network well.

The most common feedback on improving the Academy suggested increasing the amount of time spent on activities. Some participants wanted more time to network. Others wanted more time to work on their SEP. Others wanted more instructional presentations from GLISA and ASAP.

Raw data is available in the "Final Reflection" document in the <u>supplemental materials folder</u> for this report.

Other Feedback

Throughout the two week period covered by the Academy, instruction team members took conversations with participants and solicited feedback from Advisory Group members who were participating in the Academy.

These less formal feedback mechanisms yielded precise actionable feedback that was incorporated into subsequent sessions. As a result, during the second week of the Academy, the instruction team created more time for work in breakout groups and service enhancement activities and changed the placement of those activities in the agenda.

Recruitment and Participation

Recruitment

Recruitment tactics

The project team recruited participants through the extended ASAP Network, which includes ASAP's individual members, organizational members, and ASAP's social media (Twitter, LinkedIn). Advisory Group Members also recruited through their personal and business networks. For email outreach, the team crafted two template emails with feedback from the Advisory Group, one tailored for practitioners who likely identify as adaptation or resilience professionals and another tailored for practitioners who might not identify with these groups. ASAP members received information and updates about the Academy through ASAP publications. ASAP staff reached out directly to ASAP organizational members to recruit. Social media outreach included a series of LinkedIn posts describing the focus and outputs of each Academy session, which Advisory Group members and project team members were encouraged to share across their own platforms. For more information, see "Academy Marketing Toolkit" in the <u>Supplemental Materials Folder</u> for this report.

Lessons learned

With the right messaging, the Academy can be successfully marketed to practitioners who do not identify as climate or resilience professionals; even so it is valuable to define that category. To appeal to practitioners who work with, or would benefit from working with, climate data, the team used generalized language to describe how firms could benefit from participating in the event. The team also avoided terms of use. Advisory Group members successfully recruited participants with this messaging. Group members also shared that, after participating in the Academy, they felt more confident that its content would be relevant to a wider group of practitioners than they originally anticipated. On the other hand, Advisory Group members expressed concern that the Academy audience of "for-profit climate service providers" was not sufficiently defined for them to support the project team in targeting its marketing strategies. Future iterations of this work should define that category more explicitly while also being prepared to encourage individuals or companies that don't yet identify with it to attend the Academy as well.

Professional networking platforms, like LinkedIn, can be a convenient marketing tool. Professional networking platforms allow collaborators to share and boost information within their extended personal and professional networks with only a few clicks. Though the project team did not gather analytics on interactions with social media, the team's LinkedIn posts received consistent interaction and were easy to share with Advisory Group member networks.

Craft messaging that details specific participant learning outcomes. A significant amount of detailed content was developed after Academy registration opened. As details became available, the project

team updated its marketing messaging to make it as specific as possible. One Advisory Group member shared that they were uncomfortable marketing the Academy to their colleagues until detailed information was available. Future iterations of the Academy will benefit from having a large portion of content already developed, which can be readily marketed in detail.

Participant Profile

The 29 Academy participants represented 25 different companies and agencies that were diverse in the regions they served, sectors represented, the special business designations with which they identified, and services they provided. Supplement D contains summary tables of the following information collected from participants at registration.

Nearly one third of participants represented companies or agencies that were providing services to only one state in the Great Lakes region. Among these was a mixture of larger companies headquartered elsewhere, small companies based in the region, and a small handful of state-focused academic and government institutions. Nearly all of the remaining participants represented companies that had some international presence, most of which were already serving five or more states in the Great Lakes region.

Over one-quarter of participants represented woman-owned businesses. Around one-sixth identified their business as a small business enterprise.

Many participants represented agencies and companies that provided climate adaptation or resilience services with similar goals, including those focused on: planning (83%), communication and stakeholder engagement (72%), shifting management practices and recurring behavior (59%), measuring and learning from climate data (45%), building physical infrastructure (34%), climate resilient technologies (34%), changes to policy and law (31%), and funding and investing for adaptation actions (24%).

Many participants also described their organizations as filling similar roles in the climate data life cycle, including: facilitator (72%), end user of climate data and information (59%), climate advocate (59%), climate science provir (28%), climate data visualization and tool provider (28%), climate researcher (7%), and funder (3%).

At registration, participants expressed a diverse set of interests in the Academy. The most commonly mentioned interests could be categorized as general technical knowledge concerning climate data and information. As examples, this category included interests in learning about a greater variety of climate data sources, communication tools, trends in the field of adaptation practice, and where to access high quality observational climate data. Other interests grouped around technical knowledge specific to the Great Lakes region, including interest in best practices and tools for climate data in the region, the climate service needs of the region, and climate science particular to the region. Some registrants were interested in specific applications or issues, including in-migration to the region, relationships between

climate data and local determinants of health, and choosing projects for rainfall and stormwater management planning. Finally, a few registrants mentioned that they were explicitly interested in networking at the Academy and developing specific skills, like stakeholder engagement.

Climate services, descriptions

- **Measure and Learn**: Monitoring changes in the climate system, gathering and analyzing data to build understanding of climate impacts and climate risk, and monitoring and evaluating actions taken to adapt to climate impacts
- Plan: Considering climate science, climate impacts, and climate risk in institutional planning
- **Fund and Invest**: Repurposing, leveraging, or obtaining public or private funds to finance or invest in adaptation actions
- **Develop and Deploy Technology**: Developing and deploying climate-resilient technologies, and technologies that enable climate resilience
- **Communicate and Engage**: Communicating with people and institutions the information they need to prepare for climate impacts, communicating information about adaptation actions being taken on their behalf, and engaging individuals and institutions in iterative processes, including through workforce development and trainings, to increase the effectiveness and equity of climate adaptation action
- **Build Physical Infrastructure**: Building new or improved physical infrastructure aimed at providing direct or indirect protection from climate hazards
- Shift Management Practices and Recurring Behavior: Incorporating climate adaptation considerations into land management, and day-to-day practice and behavior of professionals and laypeople
- **Change Policy and Law**: Revising, or creating new, law, policy, or regulation that requires or incentivizes adaptation action and penalizes maladaptation

Organization roles, descriptions

- **Climate Researcher:** Conducting basic scientific research on climate change, including collecting data and developing climate projections
- Climate Science Provider: Providing climate science to decision makers
- Climate Data Visualization and Tool Provider: Producing climate data-driven tools and climate data visualizations
- Facilitator: Facilitating the effective use/application of climate data and information
- End User of Climate Data and Information: Making decisions for groups of people based on the application or interpretation of climate data and information
- **Climate Advocate:** Advocating for certain decisions to be made based on the application or interpretation of climate data and information
- **Funder:** Providing financial resources to enable other organizations to conduct one or more of the functions described in this list

Raw registration data is available in the <u>Supplemental Materials folder</u> for this report.

Supplemental Materials

The following Supplemental Materials are available in this folder:

- Participant Materials Folder: includes slide deck, agenda, recordings, worksheets, and jamboards from each day of the Academy
- Workshop Marketing Toolkit
- Workshop Evaluation Form Outline
- Select Summary Figures from Evaluation From
- Workshop Evaluation Form Data
- Participant Registration Data and Summary Tables
- Final Reflection
- Virtual Meeting Best Practices

These materials are available only to project partners. If you would like to access any of these materials, please send a request to Rachel Jacobson at rjacobson@adaptpros.org.

https://adaptationprofessionals.org/

American Society of Adaptation Professionals