



How To Cluster in ESIP

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This document details how ESIP Clusters, which are broadly groups of Earth science data technologists who collaborate on common data challenges and opportunities, operate and shares tips for success that may be particularly valuable for those who are leading a cluster or considering starting one. The current list of ESIP Collaboration Areas, including Clusters, can be found at <https://www.esipfed.org/collaborate>.

There is no one-size-fits-all approach to leading an ESIP cluster. ESIP Clusters are not intended to exist in perpetuity. They are proposed when a need or goal arises and are spun down when the goal has been achieved. In general, clusters have at least 3 phases in their life cycle - initiation phase, active phase, and hiatus phase. ESIP staff tailor their support to clusters based on where the cluster is in the life cycle and they serve as a sounding board for decisions regarding when to propose a cluster or when to move a cluster from active to hiatus phase. What follows is a series of recommendations based on past experiences and community input to aid cluster leads in proposing, leading, and spinning down a cluster broken down into sections on the 3 main phases. Contact the ESIP Community Director if you have any questions.

Why start an ESIP Cluster?

Do you have an Earth science data-related challenge or opportunity that you think other ESIP community members would be interested in tackling? Would your project benefit from accessing the ESIP backbone framework for collaboration? An ESIP cluster may be just what you need. If you are undecided about whether to start an ESIP cluster, share your initial idea with the ESIP-all Mailing List or with the ESIP Slack Channel to see what other ESIP community members think. You are always welcome to contact staff@esipfed.org to discuss as well.

Who can propose an ESIP Cluster?

Anyone who is employed by or a member of an ESIP Partner Organization. Not sure if your organization is an ESIP Partner? Check out <https://www.esipfed.org/partners> or contact staff@esipfed.org.

Collaboration Area Chair Responsibilities

When considering whether to propose a cluster or whether to continue in a leadership role for a collaboration area, please consider carefully the responsibilities of a collaboration area chair. For a Cluster or other Collaboration Area to function successfully, it must have a chair who takes the lead in goal-setting, planning, advertising, facilitating, and documenting group activities. It is not a trivial time commitment. ESIP staff can help the chair by providing advice and other support as outlined in this document, for example in disseminating news about group activities and outputs, but staff will not take over the duties of a chair. The recruitment of 1-2 co-chairs is strongly advised, as well as additional delegation of tasks. For a full-list of Collaboration Area Chair responsibilities, see <https://app.glassfrog.com/roles/10647226>. It is recommended that chairs give careful thought to their ability to continue chair-ship each year. For some clusters as for committees, it has also worked well to elect a new chair at least every 2 years.



ESIP Cluster Life Cycle: Proposal Phase

How to propose an ESIP Cluster

To propose an ESIP cluster, send an email to ESIP's Vice President (vp@esipfed.org). Although many details may not yet be determined, your email should include as much as you can describe about the following:

- Name of proposed cluster
- Names and email addresses of initial participants
- Name of initial chairperson and co-chairperson (if identified)
- Preliminary description of cluster and cluster goals (see section on Setting Cluster Goals)
 - What is the motivation for forming the cluster? What will success look like for the cluster in terms of goals and outputs? What is the anticipated timeline for achieving your goals? If known, how does the cluster fit in with or how will it interact with others? How is this proposed work related to your day job? Is your employer supportive of your involvement in this?
- Description of support needed from ESIP staff

ESIP Cluster Life Cycle: Start-Up Phase

What to expect after you have proposed an ESIP Cluster

Once your requested cluster has been approved, an ESIP staff member will contact you to let you know and to ask you about what ESIP collaborative tools you need. The basic collaborative support provided to clusters by ESIP staff includes a dedicated mailing list, access to GoToMeeting for telecons, a Wiki Page, and a place on the ESIP website that briefly describes your cluster that links to your Wiki page and other communication tools. Add-ons may include a dedicated Slack Channel, a GitHub Repo, access to ESIP's Amazon Web Services capabilities, and more.

Populating Your Wiki Page

One important step before advertising your cluster to the broader community is to put some content on your cluster Wiki page. This page should at least state in a paragraph or two what was in the preliminary description of the cluster that you provided upon proposal (see section on How to Propose an ESIP Cluster). Think about what information a person would need to decide whether to get involved in your cluster or even to simply join the mailing list. Be sure to include the nuts and bolts of how to get involved, including how to join the mailing list, who to contact for questions, when your telecons take place (once known), etc. You should also include a link to your running notes document and a link to your preliminary Cluster Plan (see section on Setting Cluster Goals below). You should aim to update your Wiki page periodically and you are welcome to appoint a specific person to do this over time.

Scheduling & Advertising Your First Telecon

Once your collaborative tools are in place and you are pleased with your cluster Wiki page, it is up to you to choose a time for a first telecon for your cluster. You may wish to have a brainstorming session with your co-chair(s) or with a few targeted invitees to develop a strategy for the early phase of the cluster prior to inviting others in or you may wish to wait to see who turns up and is likely to be involved in the cluster before developing a further strategy. If your initial telecon is open to all, please share event details with the Community Director at least 10 days in advance so that the call can be advertised more broadly within the ESIP Community.



ESIP Cluster Life Cycle: Active Phase

Active phase is defined as all activities happening during and after the first meeting of the cluster. Goal-setting is included in active phase, though it may be something that starts even prior to proposal of the cluster. The idea is that goals cannot be solidified until you know who will take part in the cluster and what they hope to get out of participation.

Setting Cluster Goals

There is no one-size-fits-all approach to running a cluster, nor will ESIP staff rigidly prescribe how you work. Likely you formed a cluster around an Earth science data challenge or opportunity, so you should find the structure and format that best helps you take steps toward addressing the challenge or opportunity. With past clusters, it has been observed that those groups that set **concrete and measurable goals** are most likely to reach their goals, as well as to attract and retain active participants. Break larger goals down into smaller sub-goals, so you have **smaller, but more frequent, milestones** to celebrate. Lay these goals out clearly in a **succinct cluster plan** (copy template available at http://wiki.esipfed.org/index.php/Cluster_Plan_Template). The plan should be shared with all cluster members and linked on the cluster's main Wiki page, as well as reviewed and updated twice a year, with assistance from the Community Director if desired. The most ideal times to review and update your cluster plan may be just after the Winter and Summer ESIP Meetings because it is likely that some of the activities from the meeting may have helped you to refine future directions. When a new cluster is first started, the chairs may draft an initial plan that is then refined through subsequent cluster events. Some examples of concrete goals that have been set by clusters include the development of guidelines or white papers, webinar series, and more.

Electing Cluster Chairs and Co-Chairs

Individuals who propose an ESIP cluster typically start off in the position of cluster chair and co-chair(s). A cluster should elect a new chair and 1-2 co-chairs every 1-2 years. Elections can take place by a simple majority vote on a cluster telecon or can be more formally run through an electronic platform with assistance from ESIP staff. At a minimum, notification of an election should be sent to the cluster mailing list at least a week in advance of the election, final results should also be shared via the mailing list, and ESIP staff should be notified of changes as well. When considering whether to run for chair of a cluster, individuals should take into account the factors described in the Collaboration Area Chair Responsibilities section above. An individual who has rotated off as Chair of a cluster can still remain very active in the group.

Scheduling Regular Cluster Telecons

For most clusters, monthly hour-long telecons are the primary event and communication pathway for cluster progress. Your cluster may choose to meet more frequently. Often, it works well to set the call on a recurring schedule (e.g., on the first Tuesday of the month at 1 pm ET), so that meetings are predictable. When identifying a regular time slot, please try to avoid times that conflict with other ESIP collaboration area calls, as shown on the ESIP Community Calendar at <https://esipfed.org/telecons>. Once an ideal time slot has been identified, notify the Community Director and the Operations Coordinator, so that the GoToMeeting link can be set up and details can be shared on the ESIP Community Calendar.



Telecon Formats

Telecons facilitate the achievement of cluster goals, so telecon formats may differ widely depending on what the goals of a given cluster are. Some clusters choose to host webinar series', some hold open discussion, while others spend telecon time on developing a concrete output, such as a publication or a set of guidelines. In preparation for ESIP's two meetings each year, most clusters spend a few telecons developing content for the meeting, most often a session. Some clusters spend telecon time preparing content for external meetings, such as RDA and AGU.

Advertising Your Cluster Telecons

In order to encourage greater attendance, please remember to send out a reminder email to your Collaboration Area mailing list prior to any telecons. It is ideal if this email is sent out 1 week in advance and includes a link to a running notes document with a draft agenda. If you have a Community Fellow assigned to your cluster, you can ask them to send the reminder. Doing so also helps the Community Director to include your telecon announcement in the Monday Update for that week. A second reminder sent out on the day of the telecon is often helpful for getting the best telecon attendance.

Starting and Joining Cluster Telecons

General instructions for joining a telecon can be found at <https://docs.google.com/document/d/1E-Q0tvdwXYuvBo9PZTKyUdfa8tS3KPSUOI6K5XbDPZk/edit?usp=sharing>.

Instructions for the telecon organizer can be found at https://docs.google.com/document/d/1Gwps91hkHsDE_w5Xv9P1fZub1yRhc5y-6lly9-kmlbA/edit?usp=sharing.

Preserving Cluster Telecon Proceedings & Recordings

A single running notes document should be kept for each cluster. The notes document should be the place to create an agenda for a telecon that can then be shared with cluster members prior to the telecon. The notes document should capture proceedings of the telecon, any action items generated, as well as who attended. It has worked well for cluster members to work together to take notes using a shared Google document. If a cluster has a Community Fellow, the cluster chair may designate the task of note-taking to them. Notes need not be an exhaustive transcript of telecon proceedings. It is reasonable to capture just a list of those who attended and a few key takeaways, along with action items.

Telecon Slides

Slides presented during cluster telecons should be available for future viewing. One way to do this is to encourage presenters to deposit their slides in the ESIP Figshare Repository at <https://esip.figshare.com/submit> using instructions found at <https://www.esipfed.org/figshare>. Once approved by ESIP staff, the slides will have a DOI that can be used to share and cite them. This DOI can be added to reference the presentation from the cluster Wiki page.

Telecon Recordings

It is important to capture the URL for your telecon recording soon after the telecon itself, for while GoToMeeting will store the recording indefinitely, the link to specific recordings only show on the meetings history page for a limited time (currently one year.) To access the recording, log in to GoToMeeting with the credentials that you were supplied to start telecons, go to Meeting History, then



find your meeting. You can copy the hyperlink and paste it into your meeting notes or to your cluster's Wiki page, or you can download the recording from there.

If you have recorded a telecon that you think should be disseminated more broadly, perhaps through the ESIP YouTube Channel, contact ESIP staff to find out how to do so. Key questions to ask yourself when trying to decide whether a recording should be posted to the ESIP YouTube Channel could include:

- Should others outside of my cluster know about what took place during the telecon?
- Does this telecon showcase a unique or cutting edge tool or resource?
- Would this recording encourage others to join my cluster or to get involved in ESIP?

How to Plan for Semi-Annual ESIP Meetings

Most clusters participate in ESIP's Summer and Winter Meetings either formally by leading a breakout session or informally. The meetings are a great time to share and advance cluster activities, as well as to interact with and find common ground with other ESIP collaboration areas.

Special Project Funding

The ESIP Finance Committee has established a mechanism for any ESIP collaboration area to request funds for special projects up to \$7,000 per project. These special projects must support ESIP's mission and vision (<https://www.esipfed.org/about/mission>) and align with ESIP's current strategic goals. The special project mechanism is intended to provide a flexible funding vehicle to quickly support high impact activities of interest to the ESIP community.

Special projects differ from ESIP Lab projects in that special projects do not have to be "technical" in nature and, thus, are broader in scope. They are, however, limited to ESIP collaboration areas only. To learn more about requesting special project funding, please see

http://bit.ly/ESIP_Special_Project_Funding.

Collaboration Area Reporting

Collaboration Areas, led by their chair, are required to do some reporting each year to summarize their efforts and to renew their status as an active ESIP Collaboration Area. Committees have the additional requirement of submitting a budget for each fiscal year.

- Update Collaboration Area Plan: This document outlines in brief the goals and activities of a collaboration area that are planned for that year. The plans are first drafted at collaboration area inception using the template here: http://wiki.esipfed.org/index.php/Cluster_Plan_Template. The plans should include the following subheadings:
 - Things we may do to fulfill our objectives (On Virtual Telecons, At ESIP Semi-Annual Meetings, and elsewhere)
 - Things our collaboration area needs to deliver our objectives? (e.g. Partnerships, in-kind support, staff support)
 - How will we know we are on the right track?
 - How will others know what we are doing in & out of ESIP?
 - Existing or Desired Cross-collaboration area connections
- Contribute to the ESIP Collaboration Area Showcase: This event takes place at each Summer Meeting. The showcase has had multiple iterations, including both a physical and a virtual



poster session. Regardless of format, the contribution should include information on the collaboration area's goals, recent activities and outputs, and how to get involved. The product may be used for several months post-meeting as an advertisement for the group's activities and as a recruitment tool for new participants. Here is a potential template to follow for virtual slides: http://bit.ly/collaboration_slide_template.

What Can Reporting Do For You?

Reporting by producing or updating a Collaboration Area plan yearly, presenting in the Collaboration Area Showcase at ESIP Meetings, and optionally participating in the ESIP Collaboration Area Highlights Webinars, and by producing a yearly Collaboration Area Plan benefits a Collaboration Area in a number of ways. First, it is a means by which groups can track their progress toward previously stated goals and adjust goals or activities as needed. Second, it allows participants to celebrate successes and have something to share with others to show their hard work and find potential areas for collaboration. Third, it provides content that ESIP staff, Board, and other volunteer leaders can use to elevate and amplify your efforts beyond the bounds of your collaboration area. Your efforts can attract others to get involved in your cluster's activities and result in new collaborations formed.

Practical Tips for Improving Virtual Collaborations

Periodically, the Community Director may share tips for improving virtual collaborations, such as those shown in the figure below. Often, these tips may seem like nuts and bolts suggestions, but they can really lead to more productive telecons and help newcomers jump in and get involved. If your cluster would welcome a brief check-in to assess and discuss topics like these, you can request one by contacting the Community Director.

- Telecon Scheduling
 - Discuss timing of next telecon at end of each telecon.
 - Send telecon reminders 1 week in advance + day of w/ agenda.
 - Notify staff if you need to reschedule >1 week in advance.
- Use a running notes document
 - You don't have to take exhaustive notes – few key takeaways style is great!
- At the beginning of each telecon
 - Ask everyone to introduce themselves and briefly share news or announcements.
 - Appoint a primary notetaker, encourage all to help if desired.
- Capture telecon content
 - Presentations and recordings of presentations are outputs that can be shared - consider depositing in Figshare or posting on YouTube.
- Keep Collaboration Area Wiki Page up-to-date
 - Keep it simple
 - Ask ESIP staff (Collaboration Area Manager) for help on this or anything else

Five Ways to Improve Virtual Collaborations

ESIP Cluster Life Cycle: Hiatus Phase

ESIP Clusters that have achieved their goals or are in a period of low activity (possibly defined as 4 consecutive months with no virtual meetings or other activities) should consider entering hiatus phase. Hiatus phase is not a sign of failure - it can, in fact, be a sign of success. ESIP Clusters are not meant to exist indefinitely, but to exist for a time to work on a discrete activity and then to either take on another



discrete activity or enter hiatus phase. If a follow-on goal or activity is identified, the cluster can be reactivated again in the future. An important step prior to hiatus phase is to ensure that the history of the cluster, including its activities and any outputs produced, is preserved. This should include, at a minimum, a succinct one-pager or webpage listing:

1. Year Initiated
2. Cluster goals
3. Current cluster leaders, including who to contact with questions
4. Key milestones, including presentations and activities within and outside of ESIP
5. List of outputs, including where to access

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