

The background of the entire page is a high-resolution satellite image of Earth, showing swirling cloud patterns over the Pacific Ocean and parts of North and South America. A white crosshair is visible on the left side of the image.

2023 ANNUAL REPORT

CELEBRATING 25 YEARS: 1998-2023

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GRAPHIC DESIGN: ERICA CRUZ



THE DEC. 4, 2017 THOMAS FIRE, SOUTHERN CALIFORNIA'S LARGEST WILDFIRE ON RECORD, BURNED MORE THAN 280,000 ACRES ACROSS VENTURA AND SANTA BARBARA COUNTIES FOR NEARLY A MONTH. CREDIT: JASON KEAN, USGS

ESIP MISSION AND VISION

ESIP VISION

A WORLD WHERE DATA-DRIVEN SOLUTIONS ARE A REALITY FOR ALL BY MAKING EARTH SCIENCE DATA ACTIONABLE BY ALL WHO NEED THEM ANYTIME, ANYWHERE.

ESIP MISSION

EMPOWER INNOVATIVE USE AND STEWARDSHIP OF EARTH SCIENCE DATA TO SOLVE OUR PLANET'S GREATEST CHALLENGES.

ESIP CORE VALUES

INTEGRITY

We are honest. Integrity is the basis for trust and the foundation of effective teamwork.

INCLUSIVENESS

We put people first and recognize, appreciate, and cultivate diversity in our global community.

COLLABORATION

We work together. We provide the space and the resources to gather people to take on challenges that cannot be solved alone.

OPENNESS

We are an open community. We embrace open science and open mindsets through which new ideas can take root and solutions can evolve.

CURIOSITY

We ask why and why not. We delve into exploring solutions knowing that the process is as important as the outcome.

EARTH SCIENCE INFORMATION PARTNERS (ESIP)



ESIP SUPPORTS VIRTUAL AND IN-PERSON COLLABORATIONS FOR CROSS-DOMAIN DATA PROFESSIONALS ON COMMON DATA CHALLENGES AND OPPORTUNITIES.

ESIP CELEBRATES 25 YEARS

Since 1998, ESIP has helped members of the Earth science data community find each other across organizations by fostering rich collaborative experiences like meetings and seed funding to foster innovation and technical skill building.

ESIP holds twice annual meetings, monthly telecons, workshops, and funds ESIP Lab pilot projects. ESIP brings together organizations as partners and is driven by individual volunteers from partner organizations and the broader Earth science data community.




ESIP CELEBRATIONS

- CELEBRATED OUR 25TH ANNIVERSARY
- GATHERED IN-PERSON AT THE JULY MEETING IN BURLINGTON, VERMONT
- MADE MEETINGS ACCESSIBLE WITH A FULLY VIRTUAL JANUARY MEETING AND HYBRID JULY MEETING
- PARTNER ASSEMBLY ENDORSED THE SANTA BARBARA CHARTER TO BROADEN PARTICIPATION IN ENVIRONMENTAL DATA MANAGEMENT
- BROUGHT TOGETHER A DOZEN ORGANIZATIONS IN THREE WORKSHOPS FOR UNDERSTANDING NEEDS TO BROADEN OUTSIDE USE OF NASA DATA FOR AIR QUALITY (UNBOUND- AQ)
- ORGANIZED THREE DATA HELP DESK EVENTS AND SUPPORTED OTHERS
- SUPPORTED SEVEN COMMUNITY FELLOWS
- HOSTED HUNDREDS OF COMMUNITY-LED TELECONS

THROUGHOUT THE REPORT, LOOK FOR MORE STORIES TO SEE ESIP IN ACTION.

“In 25 years, ESIP will be a world community leader in data innovation, Earth science information, and how we access Earth science data in open science.”

- ESIP 25TH ANNIVERSARY AUDIO STORY

 Excerpt from YouTube video “ESIP is a place to...”

ESIP IN ACTION #1

ESIP CELEBRATES 25 YEARS – ESIP IN ACTION

Created by NASA in 1998, ESIP was formed to bring together community stakeholders. A National Resource Council recommendation called for breaking down silos in the development of NASA's Earth Observing System Data and Information System (EOSDIS) as a critical element of the U.S. Global Change Research Program.

Building bridges and opening collaboration has remained core to ESIP even as the quantity of Earth data and its tools, software, and processes have greatly expanded. Because of the technical evolutions, the ESIP community now gathers to focus on many Earth science topics.

The Collaboration Area and cluster model developed to help the community collaborate. Their work ranges from deep technical knowledge like the Schema.org Cluster to the human dimensions of transdisciplinary geoscience in the Community Resilience Cluster. Additionally, the Community Fellows program arose from a need to mentor the next generation of Earth science data professionals and now serves as a career pathway for early career participants.

Through a quarter century, ESIP has continually grown and attracted a diverse group of partners. That now includes more than 180 partner organizations and about 30 Collaboration Areas. ESIP Partners include federal data centers, government research laboratories, research universities, education resource providers, technology developers and various nonprofit and commercial enterprises.

The future of ESIP is still rooted in community. As the technology that powers Earth science data becomes more accessible, so too must the community's purpose. With our new mission and vision, we seek to not only generate, use, and archive Earth data, but to also empower data-driven decision making.

—
Read more ESIP news and stories: esipfed.org/merge



NO CELEBRATION IS COMPLETE WITHOUT DECADENT CAKE FROM A LOCAL BAKERY.

ESIP STRATEGY AND FOCUS

2021-2026 STRATEGIC THEMES

- THEME 1: MAKING EARTH SCIENCE DATA MATTER - INCREASE USE AND PROMOTE THE VALUE OF EARTH SCIENCE DATA AND INFORMATION
- THEME 2: ELEVATING EARTH SCIENCE DATA PROFESSIONALS
- THEME 3: PROMOTING A HEALTHY AND INCLUSIVE CULTURE
- THEME 4: INCREASING EARTH SCIENCE COLLABORATION INTERNALLY AND WITH PARTNER ORGANIZATIONS
- THEME 5: LEADING INNOVATION IN EARTH SCIENCE DATA FRONTIERS

[ESIPFED.ORG/STRATEGY](https://esipfed.org/strategy)

“

As stewards and practitioners, we can only steward science in response to societal needs if we acknowledge barriers, tear them down, and collaboratively build bridges to advance equity and inclusion. ”

- KARI JORDAN, THE CARPENTRIES
2023 July ESIP Meeting - Opening Plenary

2023: OPENING DOORS TO OPEN SCIENCE

As ESIP started our 25th year, we embraced the challenge of opening doors to open science. As 2023 was the Year of Open Science, the topic was broadly discussed by the scientific community. What made the ESIP community focus unique was the emphasis on making Earth science data actionable.

Several highlights include:

- Unveiling ESIP's new Mission, Vision, and Core Values
- Plenary speakers Rebecca Heiss, Kari Jordan, and Scott Reinhard exploring new angles on open science through recalibrating our physical stress response, creating a sense of belonging as a community, and making accessible and beautiful data visualization
- Bringing back the “Rants and Raves” format in the monthly webinars co-hosted by the ESIP Information Technology and Interoperability (IT&I) Committee and the USGS Community for Data Integration (CDI)
- Focusing the ESIP Lab projects on wildfire and water resources, prioritizing projects that used the Geoweaver open science tool for geoscience workflow management

The opening doors metaphor offered the ESIP community to reflect: Who has opened doors for you? What doors are around you? How can you help open doors in open science?

2024: GROUNDED IN TRUST

Through the last two years, the ESIP community explored data accessibility and open science themes – topics that highlight the human dimensions of Earth science data, computing, and tech. At the same time, ESIP refined its vision, mission, and core values.

Two of ESIP's core values are Integrity and Collaboration. The two are woven together: Building trust in data, systems, and products requires teamwork. At the center of this interplay is data ethics and the decisions individuals, teams, organizations, and even whole agencies make to ensure information systems are accurate and equitable. The ESIP community wants data-driven decision making, which acknowledges that no data are collected, analyzed, or archived in a void. Likewise, the tools, software, and platforms used in the data life cycle also have social and cultural aspects. So even as Earth science data professionals tackle technical challenges, human elements remain present.

ESIP PARTNER ASSEMBLY ENDORSES THE SANTA BARBARA CHARTER

The ESIP vision is a world where data-driven solutions are a reality for all by making Earth science data actionable by all who need them anytime, anywhere. The “all” requires ESIP to broaden participation in environmental data science. The ESIP Partner Assembly's endorsement of the [Santa Barbara Charter: Broadening Participation in Environmental Data Science](#) helps amplify the need for inclusive and open collaborations.

MEETINGS

The broader ESIP community meets every January and July. The ESIP Meetings bring together a wide array of data professionals across the Earth sciences in government, academia, and industry. The 2023 January ESIP Meeting was all virtual and the 2023 July ESIP Meeting provided some virtual access but remained focused on gathering in-person.

The ESIP Meetings' detailed and insightful sessions led to vibrant conversations, many of which spilled over into coffee breaks and evening gatherings. Some continued past the meetings, carrying into new Collaboration Area projects and virtual collaboration through ESIP's Slack.

For gathering in-person, survey feedback indicates in-person attendees appreciate the refinements in ESIP's in-person approach in addition to ongoing virtual collaboration throughout the year. Specifically, attendees say longer breaks, intentional networking, and relevant plenaries matter to them.

The framework of the ESIP Meetings are collaborative, with dozens of breakout sessions led by community participants. The gatherings are often a gateway for Earth science data professionals to find their home in ESIP: About one-third of ESIP participants engage first through the meetings.

MEETINGS BY THE NUMBERS

2 ESIP MEETINGS	682 MEETING ATTENDEES
>200 SPEAKERS	245 FIRST TIMERS
>60 COMMUNITY-LED BREAKOUT SESSIONS	
79 RESEARCH SHOWCASE POSTERS, DEMOS, AND MORE	



THE 2023 JULY ESIP MEETING TOOK PLACE IN BURLINGTON, VERMONT.

JANUARY 2023

PLENARIES

OPENING PLENARY: FEARLESS MINDSET - OPENING THE DOOR TO CHANGE

Speaker: Rebecca Heiss

PLENARY: DIGITAL TWINS FOR EARTH SYSTEMS - PAST, PRESENT AND FUTURE

Speakers: Michael Goodchild, Peter Bauer, Jean-Marc Delvit, and Benjamin D. Smith

CLOSING PLENARY: STATE OF ESIP & PEER RECOGNITION CEREMONY

Get a fast-paced overview of the [January 2023 Meeting Highlights](#) and other recordings on ESIP's YouTube channel.

JULY 2023

PLENARIES

OPENING PLENARY - BREAKING BARRIERS, BUILDING BRIDGES:

OPEN SCIENCE, EQUITY, AND INCLUSION IN THE DATA REVOLUTION

Speaker: Kari Jordan

LAB PLENARY: TECH TRANSFER AND DATA VISUALIZATION

Speakers: Corine Farewell and Scott Reinhard

AWARDS LUNCH: CELEBRATING 25 YEARS, FALKENBERG AWARDEE, AND RASKIN SCHOLAR

Speakers: Angelia Seyfferth and Alexis Garretson

Experience the collaboration and innovation in the [July 2023 Meeting Highlights](#) on the ESIP YouTube channel.



ESIP BRINGS TOGETHER MEMBERS OF THE EARTH SCIENCE DATA COMMUNITY.



THE ANNUAL ESIP TEACHERS WORKSHOP FEATURED SOLAR ECLIPSE GEAR AND LESSON PLANNING.



OUR ESIP PARTNERS BRING THE ENERGY (AND SWAG) TO ESIP MEETINGS.



COMMUNITY IS THE HEART OF ESIP.

COLLABORATION

CLUSTERS

Collectively, clusters and technical committees are called Collaboration Areas by the ESIP community and focus on specific domain or technical areas. Collaboration Area participants set goals and produce a wide range of outputs. Some host webinar series while others author white papers or guidelines, and still others find it valuable to host an hour of open discussion. Administrative committees help guide and govern ESIP.

Join a monthly call, contribute to a cluster project, or connect with other Earth science data professionals:

esipfed.org/collaborate

COLLABORATION AREAS

CLUSTERS

- | | |
|---|---|
| <ul style="list-style-type: none">• Air Quality• Biological Data Standards• Cloud Computing• Coalition on Publishing Data in the Earth and Space Sciences (COPDESS)• Community Ontology Repository (COR)• Community Resilience• Council of Data Facilities (CDF)• Data Readiness• Disaster Lifecycle• Discovery• E2SIP• Enviroensing | <ul style="list-style-type: none">• Information Quality• Machine Learning• Marine Data• Open Science• Operational Ethics (New In FY23)• Physical Sample Curation• Research Artifact Citation• Schema.org• Semantic Harmonization• Soil Ontology and Informatics• Sustainable Data Management• Wildfire (New in FY23) |
|---|---|

TECHNICAL COMMITTEES

- Data Stewardship Committee
- Education Committee
- Information Technology and Interoperability (IT&I) Committee
- Semantic Technologies Committee

ADMINISTRATIVE

- | | |
|---|---|
| <ul style="list-style-type: none">• Equity, Diversity, Inclusion, and Justice (EDIJ) Advisory Committee• Finance Committee• Governance Committee• Meetings Committee | <ul style="list-style-type: none">• Nominations Committee• Partnership Committee• Program Committee |
|---|---|

COLLABORATION AREA HIGHLIGHTS

EDUCATION COMMITTEE

WHAT WE DID: Provided weather, water, climate, and Earth science resources and tools in our annual Teacher Workshop – including eclipse glasses – to help teachers create lesson plans rooted in data.

WHY WE DO IT: Engaging students in phenomena they can experience, like climate change and solar eclipses, inspires the next generation of scientists and data managers.

CLOUD COMPUTING CLUSTER

WHAT WE DID: Made room for hands-on learning and knowledge sharing in popular webinars and meeting sessions for adopting cloud computing for Earth science.

WHY WE DO IT: There is no one-size-fits-all approach for Earth science questions. Shared knowledge helps us find new ways to overcome common problems and advance our science.

OPEN SCIENCE CLUSTER

WHAT WE DID: Hosted a series of talks and discussions on case studies that show the nuance, challenge, hopes, and triumphs of the open science mindset.

WHY WE DO IT: Open science opens the doors of collaboration and can make Earth science data and workflows more accessible.

MARINE DATA CLUSTER

WHAT WE DID: Crafted a visual resource with the Deep Ocean Observing System (DOOS) to help marine scientists with data management.

WHY WE DO IT: Domain scientists are busy and data management can be intimidating. Key tools help them do their jobs and make their data more effective.



A FLOODED CHANNEL WHERE THE MISSISSIPPI MEETS THE GULF OF MEXICO SHOWS THE POWER OF SEASONAL SHIFTS.
CREDIT: OPERATIONAL LAND IMAGER (OLI) ON LANDSAT 8 - USGS AND NASA

ESIP IN ACTION #2

ESIP IN ACTION: DEEP LEARNING AROUND THE (ICY) RIVER BEND

Spring thaw is often a welcome shift. But as the snow melts, rivers rise.

Flooding is one of the major natural disasters that affects the U.S., costing about \$1.5 billion in annual damages. One challenge in flood prediction is estimating just how much of an area gets swamped. Additionally, when ice cover shrouds an underlying flood-to-be, understanding the fluid dynamics of the system could improve not only flood predictions but also erosion rates.

In an ESIP Lab pilot project, Trung Bao Le from North Dakota State University set out to use LiDAR and deep learning algorithms to marry field observations, satellite data and modeling. The work is complex and the ESIP project focused on validating algorithms to classify inundation in urban flooding.

After successfully showing that deep learning models can help predict flow rates and flooding, Le was then able to focus on what happens to rivers when the water is unseen. In a [paper published in Water Resources Research](#), Le and his team investigated the impact of ice on riverbends. They found that ice cover changes the equation: As water bounces off the ice, flow patterns change. Likewise, the models need to change for estimating flow, erosion and potential flooding.

Le continues his research under a CAREER Award from the National Science Foundation (NSF). It's always exciting to see an effort incubated in the ESIP Lab go on to gain recognition and support.

Read more ESIP news and stories: esipfed.org/merge

ESIP LAB

ESIP's core values of Curiosity and Openness are showcased in the ESIP Lab, which provides small-grant funding opportunities for Earth science technology research projects. Each project must outline a specific learning objective. So, rather than convincing funders that a proposal has all the answers already, the ESIP Lab looks at roadblocks that a small investment can help overcome. The ESIP Lab also provides a collaborative environment, access to tools and cloud resources, and support to innovate.

A key ESIP Lab collaboration is the NOAA Cloud Pathfinders Program (NCP). As a pilot project, the program focused on enabling NOAA scientists to experiment with using the cloud. NCP enables scientists to transition existing research or production workflows to the cloud alongside a cohort of other learners.



ESIP LAB PI SONYA RAUSCHENBACH USES IMAGES LIKE THIS TO DEVELOP BETTER COASTAL FOG PREDICTION. SHE HAS MANUALLY LABELED MORE THAN 10,000 IMAGES AND WON AN OUTSTANDING STUDENT POSTER AWARD AT THE FOGDEW2023 CONFERENCE LAST SUMMER. CREDIT: ROB HOLMAN

Amazon Web Services (AWS) provided cloud credits to kickstart NCP. In 2023, one of the NCP projects became operational: Data managers translated a ship-to-shore data workflow to ship-to-cloud, enabling faster and more collaborative access to the data.

In addition to cloud computing, machine learning (ML) and artificial intelligence (AI) remain important community topics. The 2022 ESIP Lab cohort wrapped up their [ML tutorials](#), providing insight for domain Earth scientists on leading practices.

The 2023 ESIP Lab RFP focused on wildfire and water resources. The [awarded projects](#) ranged from coastal fog detection using ML models to R and Python scripts to help standardize wildfire data. Their efforts to overcome technical challenges and push their skills will help improve natural resource management and natural disaster response.

FUNDED PROJECTS

WATER RESOURCES AND WILDFIRE COHORT

INCREASING ENVIRONMENTAL DATA ACCESS THROUGH A MORE ROBUST FEDERATED DATA CATALOG AND EXTENDING THE CLIMATER MODEL TO PYTHON

Rachel Bash and Mike Johnson | Lynker

REAL-TIME VISUALIZATION OF SATELLITE-DERIVED ACTIVE FIRE DATA TO SUPPORT MONITORING OF FOREST OFFSET PROJECTS

Max Jones, Oriana Chegwidan, Grayson Badgley and Kata Martin | CarbonPlan

OPEN SCIENCE: COMMUNITY STREAMFLOW EVALUATION SYSTEM (CSES)

Md. Shahabul Alam and Ryan Johnson | Alabama Water Institute

Dane Lijstrand | University of Utah

INSECT POLLINATOR NETWORK COMPOSITION IN POST-FIRE RECOVERY OF COASTAL SAGE SCRUB

Christina Simokat and Liz Ferguson | Ocean Science Analytics and California State University San Marcos

PROTOTYPING AN IMAGE-BASED COASTAL FOG DETECTION NETWORK

Sonya Rauschenbach | University of California Davis

John Kim | Pacific Northwest Research Station

Alex Dye | Oregon State University

WATER SERVICE AREA BOUNDARIES

Jessie Mahr and Gabe Watson | Environmental Policy Innovation Center

PARTNERSHIPS

Partner organizations create the stable backbone of ESIP's collaborative infrastructure.

From meetings to telecons, individual participation is open to everyone and it is not a requirement for participants to be part of member organizations. Organizations can become ESIP partners with voting representatives and volunteers who often help lead as cluster chairs, session organizers, and committee members. Additionally, some partner organizations step up as financial contributors and become sponsors. ESIP works with more than 180 Partners and is supported by cooperative agreements with three federal agencies: National Aeronautics and Space Administration (NASA), National Oceanic and Atmospheric Administration (NOAA), and United States Geological Survey (USGS).

NEW PARTNERS

Welcome to our new partners!

ANECDATA
www.anecdata.org

CALIFORNIA WATER DATA CONSORTIUM
cawaterdata.org

EARTHSCOPE CONSORTIUM
www.earthscope.org

ENGINEERING SCHOOL OF SUSTAINABLE
INFRASTRUCTURE & ENVIRONMENT AT
THE UNIVERSITY OF FLORIDA
www.essie.ufl.edu

GLOBAL INITIATIVE FOR FLOOD FORECASTING AND ALERTING (GIFFT)
<https://giff.org/>

INTERTIDAL AGENCY
<https://intertidal.agency/>

NEARVIEW
<https://www.nearview.net/>

RADIANT EARTH
<https://radiant.earth/>

US ANTARCTIC PROGRAM DATA CENTER
(USAP-DC)
<https://www.usap-dc.org/>



SPONSORS

ESIP is a community that spans multiple sectors including government, academic institutions, and the private sector. Sponsoring ESIP brings an organization's financial support along with products, expertise, and people. We are grateful for our growing sponsorship from the following organizations.

AMAZON WEB SERVICES (AWS)
July 2023 Silver Sponsor
In-kind Sponsor
\$50K ESIP participant use of AWS credits
aws.amazon.com

ELEMENT 84
Reusable Lanyard and ESIP Friend
element84.com

AGU
Research Showcase Sponsor
agu.org

ESRI
July 2023 Coffee Break Sponsor
esri.com

SSAI
July 2023 Coffee Break Sponsor
ssaihq.com

FIGSHARE
In-kind Sponsor
figshare.com

FEDERAL SPONSORS

NASA, NOAA, and USGS provide the foundation of funding and support for the ESIP Community. Multiyear cooperative agreements with our federal partners focus on collaboratively meeting needs in Earth science data management, engaging a broad community to do so. Even with different data and missions, each agency shares challenges like moving data to the cloud, navigating commercial partnerships, and connecting with domain scientists and cultivating the next generation for our workforce.

NASA

ESIP supports the annual [Earth Science Data System Working Groups \(ESDSWG\)](#) and runs the evaluation process for the [Advanced Information Systems Technology \(AIST\) Program](#). ESIP Lab Director is the Technical Chair of the Collaboration Methods in Technology Infusion (CMTI) Working Group and coordinates the [Ignite@AGU](#) rapid-fire storytelling event.

Understanding Needs to Broaden Outside Use of NASA Data for Air Quality (UNBOUND-AQ) seeks to make NASA tools and resources more usable and accessible to a wider audience. ESIP [supported three workshops](#) with more than a dozen organizations and provided a [recommendation report](#).



NOAA

In September 2023, ESIP supported the fifth [NOAA AI Workshop](#) on leveraging artificial intelligence in environmental sciences. Throughout the year, ESIP supported the development of the second GOES-R DataJam, a student hackathon that draws on GOES-R satellite data. The ESIP Lab and NOAA's Open Data Dissemination program continued in 2023 and one pilot project went on to operationalize cloud-based ship data.



USGS

The USGS Community for Data Integration (CDI) Tech Stack Working Group and ESIP's Information Technology and Interoperability (IT&I) [Committee](#) continue to collaborate on a monthly "rants and raves" webinar. The ESIP Community Director and Lab Director attended the 2023 CDI Workshop in Shepherdstown, West Virginia.



ESIP IN ACTION #3

ESIP IN ACTION: UNBOUND-AQ

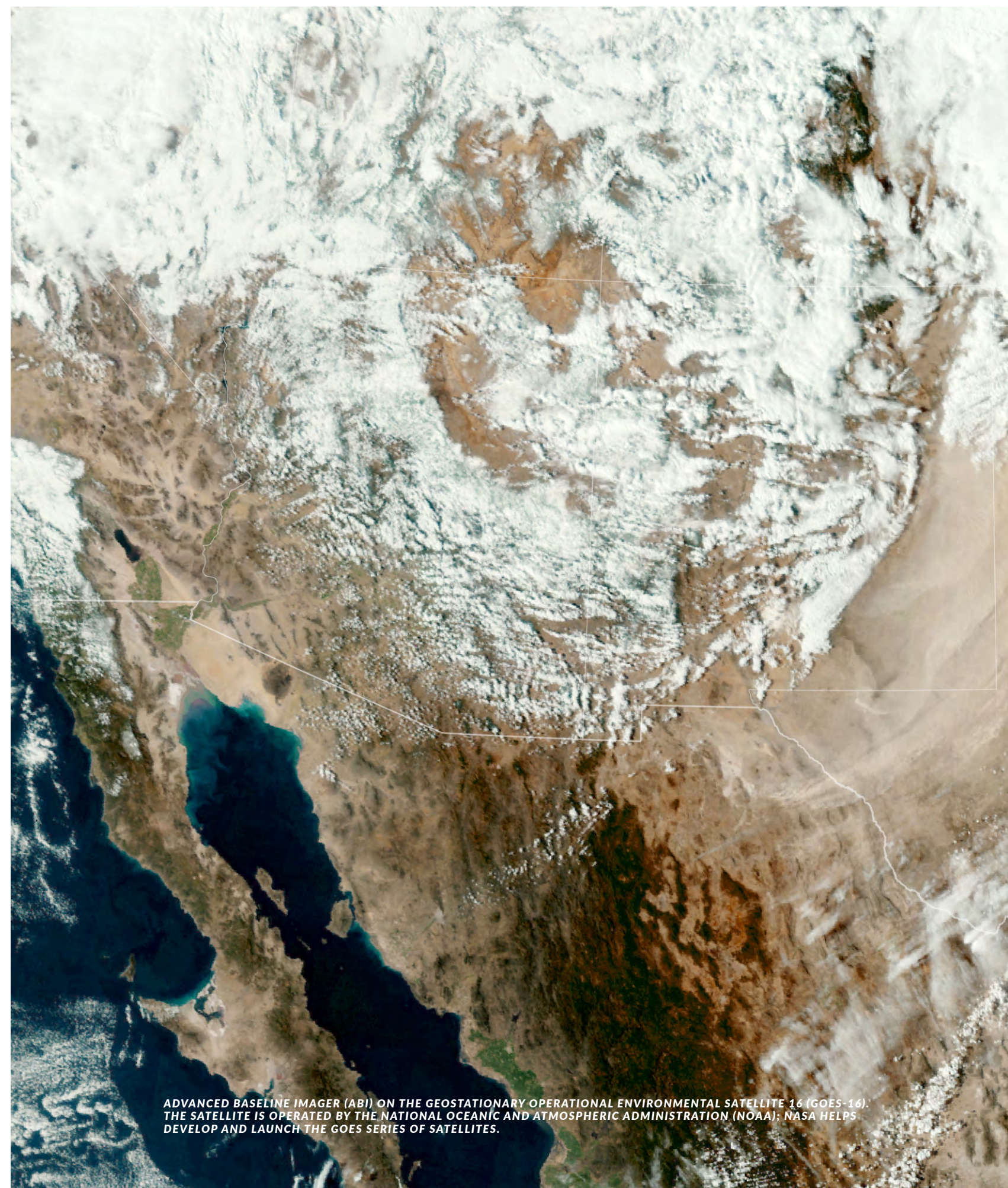
Understanding Needs to Broaden Outside Use of NASA Data for Air Quality (UNBOUND-AQ) seeks to make NASA tools and resources more usable and accessible to a wider audience. Air quality is one of several high-priority domains identified by NASA's Earth Science Division. ESIP hosted three UNBOUND-AQ workshops last year.

"This workshop has highlighted the vast amount of data that NASA makes available to the public, and also the challenges in making that data truly accessible to diverse potential users," said workshop participant Allison Patton from the Health Effects Institute. "It is important to know that pain points are being addressed to continuously improve data resources."

Many of the organizations in the UNBOUND-AQ workshops focus on connecting communities to data. Through the three workshops, which covered data discovery, data exploration and data use, every participant reported that they found new and applicable NASA Earth data for their work. Plus, 93% said they are more likely to use NASA data with 7% planning to use about the same amount of NASA data.

"NASA has an enormous amount of amazingly useful data that communities concerned about air quality can use in myriad ways," said workshop participant Daniel Fleischer from Hyphae Design Laboratory. "But being aware of, locating, obtaining, and analyzing this data is still challenging for most people, even for those with advanced technical backgrounds in remote sensing. Workshops like this can both help users understand the scope of NASA's data offering, and help NASA address the complex challenges of providing such a large and diverse collection of data to a large and diverse set of users."

Read more ESIP news and stories: esipfed.org/merge



ADVANCED BASELINE IMAGER (ABI) ON THE GEOSTATIONARY OPERATIONAL ENVIRONMENTAL SATELLITE 16 (GOES-16). THE SATELLITE IS OPERATED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA); NASA HELPS DEVELOP AND LAUNCH THE GOES SERIES OF SATELLITES.

AWARDS

An important aspect of the ESIP community is recognizing the outstanding accomplishments, achievements, and service to our community by individual participants. [Read more.](#)

MARTHA MAIDEN AWARD

Named for Martha E. Maiden, Program Executive for Earth Science Data Systems at NASA, the award honors individuals who have demonstrated leadership, dedication, and a collaborative spirit in advancing the field of Earth science information.

ROBERT R. DOWNS, Senior Digital Archivist, CIESIN - Columbia University

WHAT I DO: Help ensure that data is curated, open, preserved, and reusable. That means I build connections between technical spheres and interdisciplinary communities.

WHY I DO IT: My career has been dedicated to making data and information resources useful. The people generating and using that data continue to inspire me.

PRESIDENT'S AWARD

Selected by the current ESIP President, the award recognizes a participant who has made significant, tangible contributions to ESIP during the previous year.

JEFF DE LA BEAUJARDIÈRE, Director, Information Systems Division - NCAR Computational and Information Systems Lab

WHAT I DO: Manage an organization that develops and operates several data repositories containing petabytes of climate model outputs and Earth observations, accessible by on-premise HPC to enable data analysis and visualization.

WHY I DO IT: Since 1995 I have focused on public access to scientific data, which should be discoverable, accessible, documented, interoperable, citable, curated for long-term preservation and reusable not only by the original creator but by the broader scientific community and external users and decision-makers.

CATALYST AWARD

Given to participants who have brought about positive change in ESIP and inspired other members to take action. Selected by the President, the award recognizes exceptional volunteer efforts and enthusiasm.

KATHE TODD-BROWN, Computational Biogeochemist, Engineering School of Sustainable Infrastructure & Environment - University of Florida

WHAT I DO: I lead the Soil Ontology and Informatics Cluster. We pull together interdisciplinary scientists to review streamlined soil knowledge systems.

WHY I DO IT: Soils are complex. Likewise, our taxonomy and methodologies vary, which present challenges for carbon storage, ag impacts, and natural disaster risks.

RASKIN SCHOLAR

Given to a current graduate student in the Earth or computer sciences, the scholarship is named for longtime ESIP community member Robert G. Raskin, and seeks to promote collaboration, research support, and exposure for talented students with an interest in community evolution of Earth science data systems. [Read more.](#)

ALEXIS GARRETSON - Tufts University

WHAT I DO: Repurpose neglected data to investigate how communities change over time, using a combination of genomics and Earth science methods.

WHY I DO IT: Because I believe we have a responsibility to the public to maximize data use to understand the natural world and our place in it.

FALKENBERG AWARD

Co-presented with the American Geophysical Union (AGU), the award recognizes an early to mid-career scientist who has contributed to the quality of life, economic opportunities and stewardship of the planet through the use of Earth science information and to the public awareness of the importance of understanding our planet.

ANGELIA SEYFFERTH, Associate Professor of Biogeochemistry and Plant-Soil Interactions - University of Delaware

WHAT I DO: Explore soil biogeochemical processes that dictate contaminant and nutrient cycling and uptake by plants.

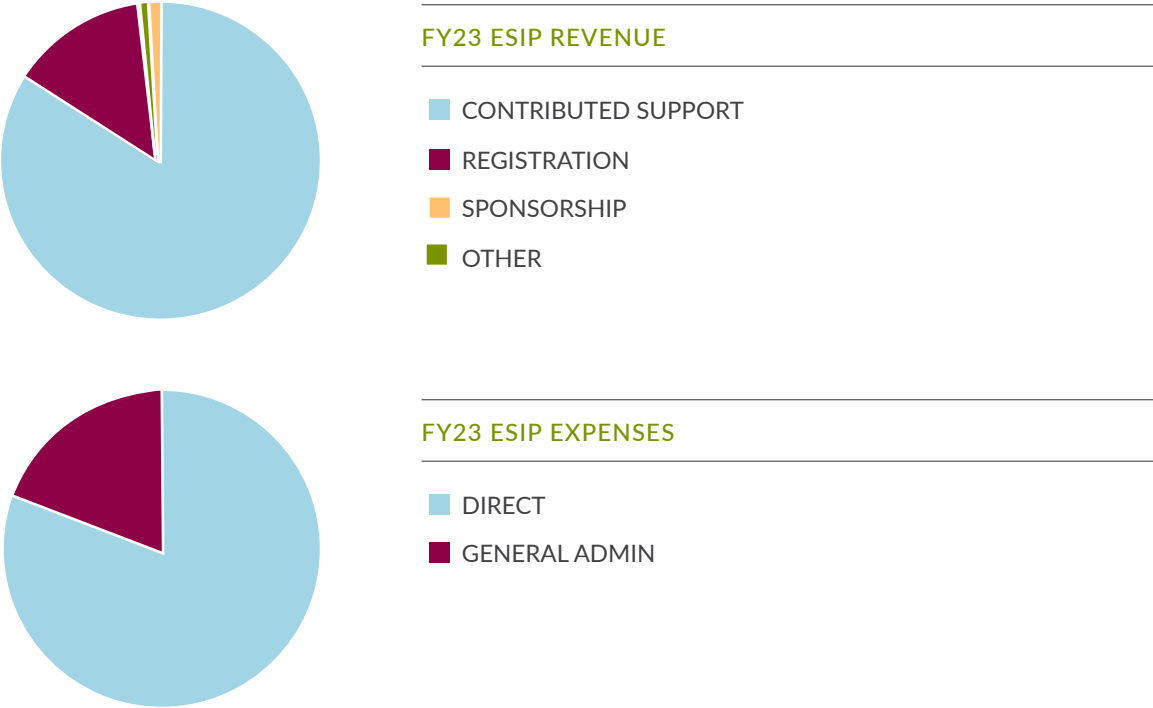
WHY I DO IT: Plant foods can contain contaminants. We use basic science to find holistic solutions that can benefit society on a local-to-global scale.

FINANCIAL UPDATE

ESIP’s revenue comes from multi-year Cooperative Agreements with three federal agencies. These agreements allow us to work in partnership with these key agencies to deliver our mission together. Meeting registration and sponsorship also comprise important revenue sources to fund work not covered by federal agreements. In 2023 we saw strong interest in our July in person meeting in Burlington, VT with higher than expected registration.

SUPPORT AND REVENUE	FY2022 TOTAL	FY2023 TOTAL
GOVERNMENT GRANTS/CONTRACT/UNIV	\$1,187,305	\$1,255,391
SPONSORSHIP	\$68,000	\$33,000
REGISTRATION	\$146,123	\$215,726
OTHER	\$1,921	\$1,243
TOTAL SUPPORT AND REVENUE	\$1,403,349	\$1,505,360
EXPENSES		
PROGRAM SERVICES	\$1,044,629	\$1,107,677
MANAGEMENT AND GENERAL	\$326,299	\$304,700
TOTAL EXPENSES	\$1,370,929	\$1,412,377
CHANGE IN NET ASSETS	\$38,543	\$94,947
NET ASSETS, BEGINNING OF YEAR	\$273,528	\$312,071
NET ASSETS, END OF YEAR	\$312,071	\$407,018

Note: These results have not been audited at press time; ESIP is audited annually and financial statements can be found at esipfed.org/about/funding-and-financials.



ESIP LEADERSHIP



THE ESIP BOARD KNOWS HOW TO HOLD LIVELY, PRODUCTIVE DISCUSSIONS.

As a volunteer organization, ESIP is led by the community and is truly a team effort between ESIP staff, the Board of Directors, the Program Committee, Cluster Chairs, Community Fellows, and the hundreds of people who contribute to our Earth science data community.

STAFF

- SUSAN SHINGLEDECKER
Executive Director
- ANNIE BURGESS
Lab Director
- MEGAN ORLANDO
Community Director
- PATTY ALLEN
Operations Director
- ALLISON MILLS
Communications Director

ELECTED LEADERSHIP

BOARD OF DIRECTORS

ESIP elects its officers, representatives, and committee chairs prior to the Annual Partner Assembly Meeting. The Board meets quarterly to govern ESIP.

- DENISE HILLS, PRESIDENT
Advanced Resources International
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PROGRAM COMMITTEE

The ESIP Program Committee meets monthly to guide ESIP programs and includes the President, Vice-President, and all the technical and administrative committee chairs.

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University of Idaho
- ALEXIS GARRETSON, DATA STEWARDSHIP COMMITTEE CHAIR
Tufts University, The Jackson Laboratory, and Anecdota

CLUSTER LEADERSHIP

Collaboration is where ESIP's magic happens. With almost 30 active clusters, these leaders bring ESIP's mission down to Earth, bringing together people across industry, government, and academia to solve challenges in Earth science data stewardship

STEVE YOUNG AND BETH HUFFER
Air Quality

ABBY BENSON, STEVE FORMEL, TIM VAN DER STAP, AND LAURA BRENSKELLE
Biological Data Standards

AIMEE BARCIAUSKAS AND SUDHIR SHRESTHA
Cloud Computing

ARIKA VIRAPONGSE AND RUPU GUPTA
Community Resilience

KERSTIN LEHNERT
COPDESS

JOHN GRAYBEAL
COR

KAREN STOCKS AND NICK JARBOE
Council of Data Facilities

YUHAN RAO, TYLER CHRISTENSEN, AND ROB REDMON
Data Readiness

MAGGI GLASSCOE AND DAVE JONES
Disaster Lifecycle

JONATHAN BLYTHE AND CHRIS LYNNES
Discovery

SCOTTY STRACHAN, JOSEPH BELL, JAMES GALLAGHER, DAN FUKA, AND MARTHA APPLE
Envirosensing

ZHONG LIU, YAXING WEI, BOB DOWNS, GE PENG, AND DAVID MORONI
Information Quality

ZIHENG (JENSEN) SUN
Machine Learning

CAROLINA BERYS-GONZALEZ AND CHRIS OLSON
Marine Data

JENNY HEWSON AND CYNDI HALL
Open Science

KATHE TODD-BROWN AND CAITLIN WHITE
Operational Ethics

SARAH RAMDEEN, VAL STANLEY, JOAN DAMEROW, AND ANDREA THOMER
Physical Sample Curation

MARK PARSONS AND MADISON LANGSETH
Research Artifact Citation

ADAM SHEPHERD AND DOUG FILS
Schema.org

RUTH DUERR AND GARY BERG-CROSS
Semantic Harmonization

KATHE TODD-BROWN, TANJA WILLIAMSON, AND DYLAN BEAUDETTE
Soil Ontology & Informatics

MARGARET O'BRIEN
Sustainable Data Management

YUHAN (DOUGLAS) RAO AND DAVE JONES
Wildfire

COMMUNITY FELLOWS

Each year, an outstanding group of early career researchers working on their graduate and post-doctoral studies supports different ESIP Collaboraion Areas. Here are the 2023 Community Fellows.

JAKE GEARON, INDIANA UNIVERSITY
Envirosensing Cluster

CHAD LANCTOT, UNIVERSITY OF TENNESSEE
Physical Samples Cluster

MICHAEL MAHONEY, STATE UNIVERSITY OF NEW YORK
Information Technology & Interoperability Committee

SRUTI MODEKURTY, ERASMUS MUNDUS JOINT MASTERS IN URBAN CLIMATE AND SUSTAINABILITY
Community Resilience Cluster

KYLA RICHARDS, HAWAII PACIFIC UNIVERSITY
Biological Data Standards Cluster

DANIEL SEGESSENMAN, GEORGE MASON UNIVERSITY
Data Stewardship Committee

MORGAN WOFFORD, UNIVERSITY OF MICHIGAN
Open Science Cluster

NOTE FROM THE EXECUTIVE DIRECTOR

2023 marks 25 years of ESIP! Your Board and leadership team were excited to unveil ESIP's new Mission, Vision, and Core Values taking a fresh look at where ESIP is headed in the next 25 years with an increased emphasis on the external impact of our work and the increasing need for Earth Science data management as a profession. We envision a world where data-driven solutions are a reality for all by making Earth Science data actionable by all who need them, anytime, anywhere.

This year the ESIP Community focused on Opening Doors to Open Science throughout our work together. Each of us walk through doors dozens of times a day, sometimes without effort and sometimes with great difficulty. As we started the year, I challenged the ESIP community to think about how we hold doors open for others – as that can make all the difference. When you walk through new doors do you keep on going or do you pause to see who is coming behind you and hold the door open for them and welcome them in? This is the essence of community and especially the ESIP community. To fully realize the full potential of open science we need to engage and welcome as many people as possible, from diverse backgrounds and perspectives into the movement.

In July we gathered in Burlington, Vermont, and we talked about the tricky doors. The doors that can appear stuck – these are precisely the doors and the areas that need our attention as a community. Open science is exciting, but it is not simple or easy. There are complicated questions, like costs, business models, incentive and disincentive structures that all need to be examined. The ESIP Community got to work in Burlington with over 360 active participants and 70 sessions and posters diving into the heart of our work together.

Our work together is urgent and important. In the weeks before our meeting, Vermont saw devastating flooding. The impacts of climate change were happening at the meeting itself. These impacts cannot be ignored and local communities and first responders count on data more than ever to help them prepare, respond, and anticipate these shifts. The conversations at ESIP including a breakout session with the Vermont State Climatologist were more relevant and timely than ever.

This work continues 52 weeks a year through ESIP's Collaboration Areas and the ESIP Lab. I invite you to join us.



Susan Shingledecker
ESIP Executive Director



JOIN US

ESIP welcomes ideas, partnerships, and support from the global community of organizations and individuals who share our vision of being data stewardship leaders.

LEARN MORE



Network



Collaboration Areas



ESIP Lab

SEND FEEDBACK

We welcome community feedback at any time. Please send a note to Susan Shingledecker, ESIP Executive Director (Susanshingledecker@esipfed.org).

STAY CONNECTED



YouTube



Github



Twitter



LinkedIn



Figshare



ESIP Update

CONTRIBUTE

If you would like to make a financial contribution to support the work of ESIP, please send your contribution by mail to the address: ESIP • 574F Ritchie Hwy #248 • Severna Park, MD 21146 • staff@esipfed.org

COVER PAGE

Hurricanes Idalia and Franklin off the U.S. East Coast in August 2023.
Credit: NOAA GOES-16 satellite's Advanced Baseline Imager (ABI)