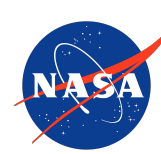


Abbreviated Presentation

5-minute Oral Presentation at AGU



Stakeholder Engagement Program Activities Supporting the Satellite Needs Working Group

AGU Fall Meeting 2021 / SY34A-01
December 15, 2021

**Andrew Molthan^{1,2}, Cerese Albers^{1,2}, Brian Freitag^{1,2}, Andrew Weis^{1,3},
Katrina Virts^{1,3}, Gerald Bawden⁴, and Rahul Ramachandran^{1,2}**

¹Interagency Implementation and Advanced Concepts Team (IMPACT)

²NASA Marshall Space Flight Center, Huntsville, AL

³University of Alabama Huntsville, Huntsville, AL

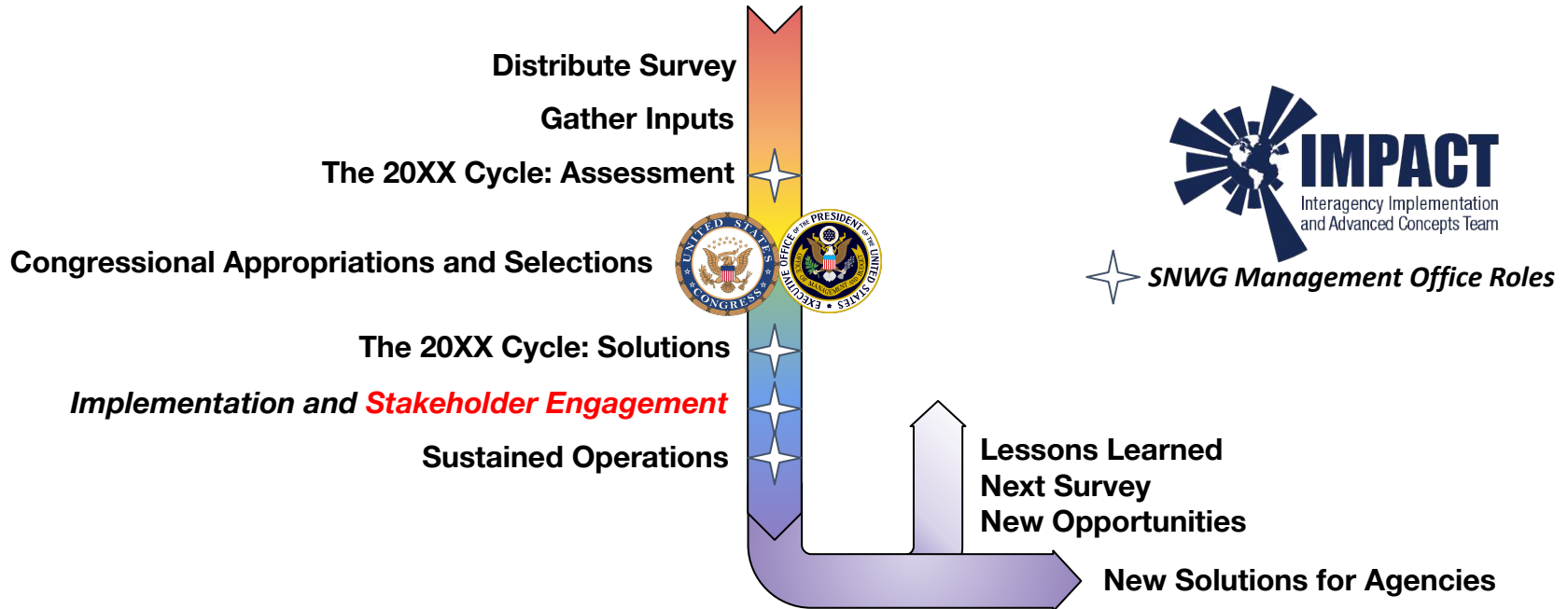
⁴NASA Headquarters, Washington, D.C.

Satellite Needs Working Group

White House National Science and Technology Council

U.S. Group on Earth Observations (USGEO)

Satellite Needs Working Group (SNWG)



SNWG Cycle Highlights



Harmonized Landsat Sentinel-2 Data (HLS)

- Cloud migration of operational processing with tools and tutorials offered by LP DAAC.

Access to Commercial Satellite Products

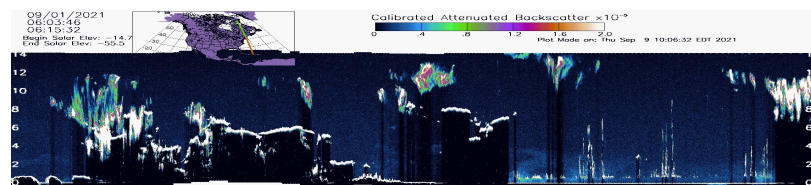
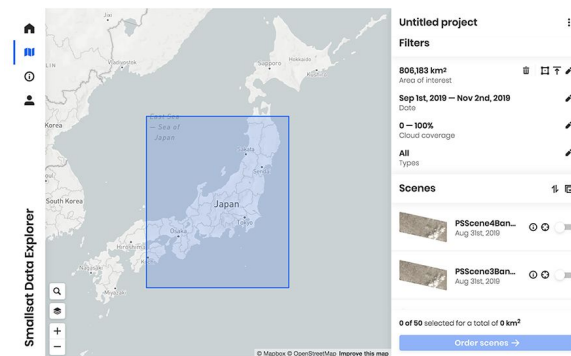
- New license agreements with commercial vendors for Planet and Maxar imagery plus tools for search and acquisition of NASA holdings



Curation of Suborbital Field Campaigns

- Development of a new Catalog of Archived Suborbital Earth Science Investigations (CASEI) for uniform access to past field campaign data

Smallsat Data Explorer



Expedited Products from ICESat-2

- New suite of products with substantially reduced latency (~3 days) for cloud and ice analysis

**ICESat-2 QLs in early 2022 with support from NSIDC and LANCE*

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Observational Products for End-Users from Remote Sensing Analysis

- (OPERA) will implement new products for:
 - Global surface water extent
 - Global land surface disturbance
 - Surface displacements in North America

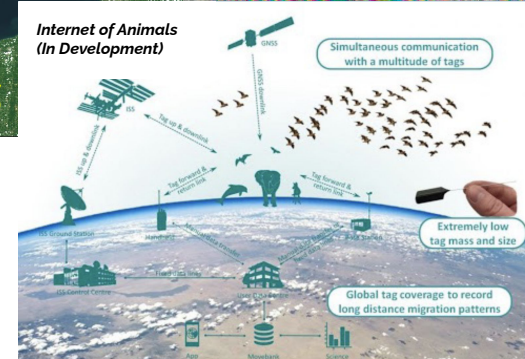
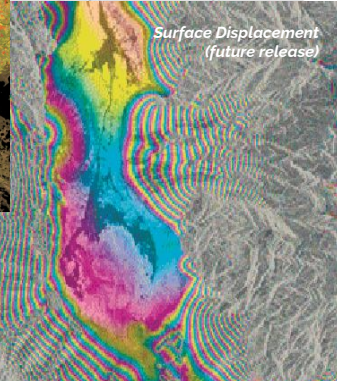
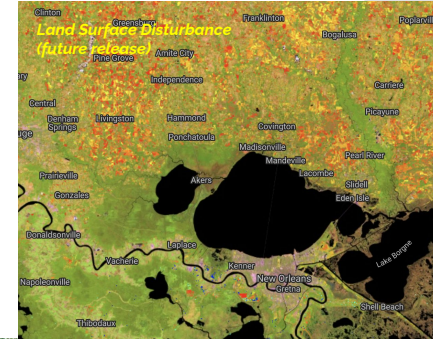
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- Additional Sentinel-3 imagery and products for ocean and inland water bodies are now available and provided by LAADS DAAC

Animal Tracking via ICARUS (Internet of Animals)

- Developing concept plans for a new and improved ability to track migratory species from space
- Understand their linkages to biodiversity as measured from remote sensing

Dynamic Surface Water Extent
(future release)



Images of products shown are representative examples only; specific products are in formulation stages.

Roles for Stakeholder Engagement

Manage and develop user communities supported by SNWG Cycles and Solutions

- Gather information about user interests specific to products, encourage collaboration among agencies with common applications, and look to improve solution adoption.

Identify, understand, and respond to training or capacity building needs expressed by agencies

- Inventory the remote sensing and programming training available within NASA and other agencies, curate content, and link to relevant SNWG solutions or other NASA services

Ensure uniform efforts for engagement between SNWG solutions and stakeholders

- Help solution teams develop effective engagement plans that ensure all solutions are adequately represented in terms of outreach, training, and feedback

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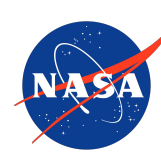
andrew.molthan@nasa.gov

Thank you.



Extended Presentation

15-minute recorded online presentation for AGU



Stakeholder Engagement Program Activities Supporting the Satellite Needs Working Group

AGU Fall Meeting 2021 / SY34A-01
December 15, 2021

**Andrew Molthan^{1,2}, Cerese Albers^{1,2}, Brian Freitag^{1,2}, Andrew Weis^{1,3},
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Satellite Needs Working Group: Missions to Measurements and Solutions



NASA's Earth Science Division and Earth Science Data Systems drive missions to measurements.

The **Satellite Needs Working Group (SNWG)** develops measurements into solutions for U.S. federal agencies.

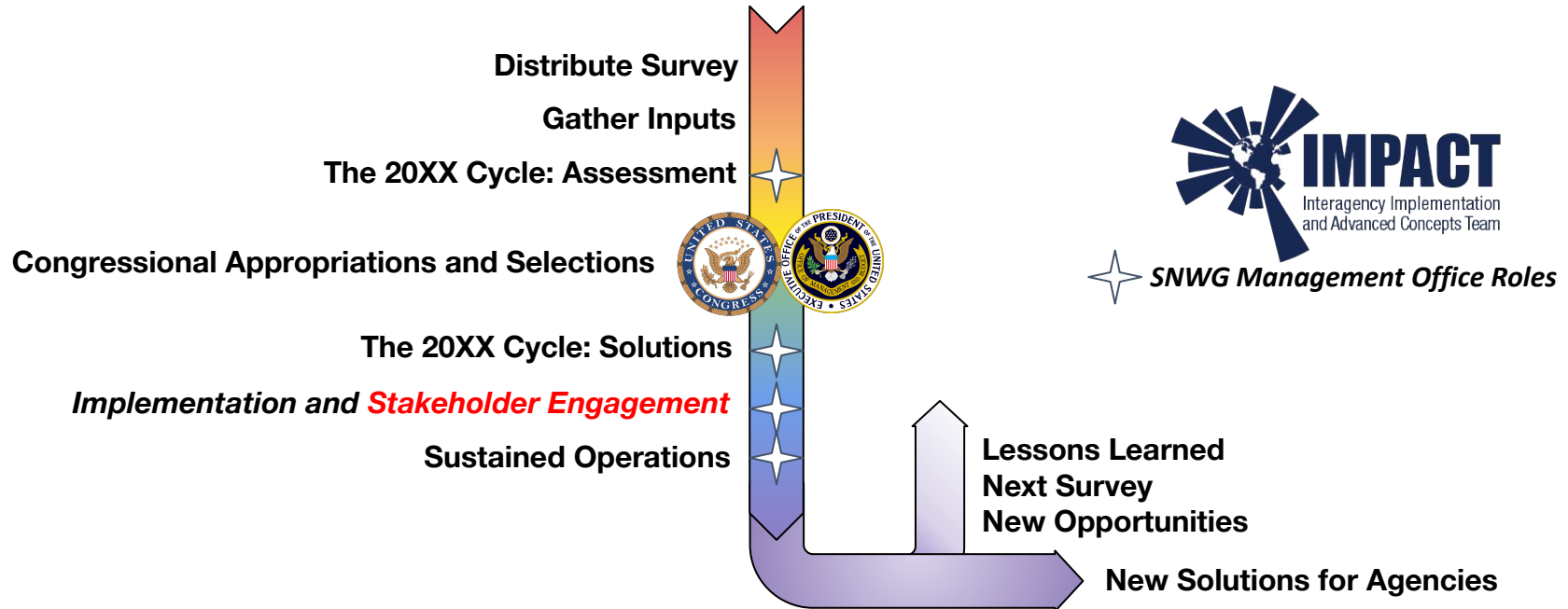
The **SNWG Management Office** leads NASA's efforts to manage and execute SNWG activities.

Satellite Needs Working Group

White House National Science and Technology Council

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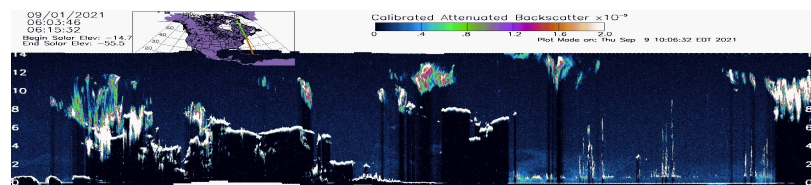
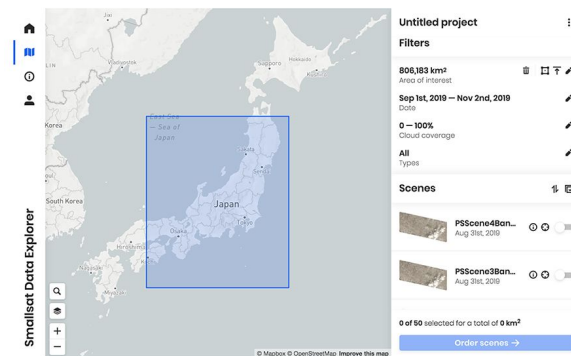
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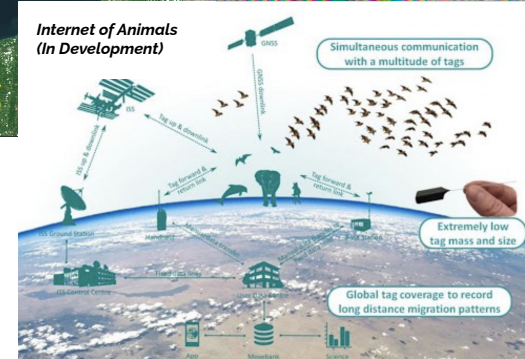
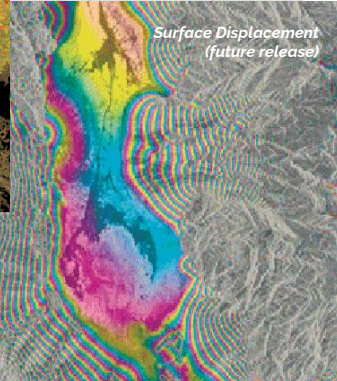
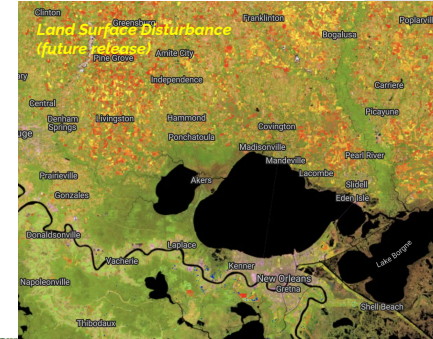
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Stakeholder Engagement in the SNWG Cycles

Receive Surveys

Survey Assessment

Propose Solutions

Formulation

Implementation

Operations

SNWG Stakeholder Engagement Program (SEP)

- Build a customer management system to retain information on participants and interests
- Use information to develop communication strategies, updates about products, etc.

- Participate in Agency interviews to understand needs for training and new capacity
- Capture training needs from surveys and interviews
- Identify gaps and new opportunities

- Incorporate engagement requirements for a proposed solution
- Identify what will be needed for training, outreach, workshops and costs

- Plan new training modules, workshops, hackathons, and outreach
- Product fact sheets and use case white papers
- Open curation and sharing of training

- Share training and workshop updates and get feedback
- Get feedback on beta, provisional products to make adjustments as needed
- Coordinate on workshops and hackathons to build open source tools

- Build community, identify and share success stories
- Curate SNWG outcomes for community usage
- Training, code, and open sharing
- Transition of products and capabilities to DAACs

Expected Training Needs

oriented to	Inform		Provide		Broaden
	Reference	Explanation	How-To Guides	Tutorials	Outreach
	information	understanding	achieving a goal	learning	collaborating
	must describe characteristics	explain scientific basis; uncertainties	address a specific, narrow challenge	start from scratch or advanced users apply new skills	sustain and grow a cadre of users who share their expertise and knowledge
	its form specifications	details of physical processes and relationships to applications	well-commented and stepwise instructions focused on an incremental task	comprehensive lesson with learning goals and measurement of new understanding; combines multiple how-to steps	in-person or virtual workshops, or conference sessions, focused on open sharing and collaboration
	analogy nutrition facts	instructions for how to use an appliance	a recipe for a single dish	culinary school; a learned set of skills allowing for self-direction	sharing your recipes online and learning new dishes from family and friends

Categorical breakdowns inspired by documentation software provider 'divio' (<https://documentation.divio.com/introduction/>)

Expected Training Needs

Stakeholder Engagement Activities

Inform		Provide		Broaden
Reference	Explanation	How-To Guides	Tutorials	Outreach
Product Quick Guides	ARSET: Fundamentals	DAAC Training: Data Access / APIs	Interactive Use Stories "Data in Action"	Hands-on Workshops
Provisional Sample Products	ARSET: SNWG Product Training	DAAC Training: Manipulate few files, plot	DEVELOP Projects NASA Internships	Virtual or Recorded Workshops
Communications: product availability, releases, updates, list-servs	ARSET: Product Uses	DAAC Training: Code examples / git repo	Jupyter Notebooks	Conference Sessions
Peer-Reviewed publications; ATBDs	White Papers and Use Stories	Data Training: Complex Analyses	Hackathons Competitions	Town Hall Meetings

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NASA and Interagency Collaborations

Stakeholder Engagement Activities

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Training Materials Available Online



IMPACT Program

[IMPACT Overview](#)

[The Airborne Data Management Group \(ADMG\)](#)

[Algorithm Publishing Tool \(APT\)](#)

[Analysis and Review of CMR \(ARC\)](#)

[Data Curation for Discovery \(DCD\)](#)

[Satellite Needs Working Group \(SNWG\)](#)

[Stakeholder Engagement Program \(SEP\)](#)

Stakeholder Engagement Program (SEP)



The Satellite Needs Working Group ([SNWG](#)) includes a Stakeholder Engagement Program (SEP) focused on supporting SNWG product user communities with relevant training and end-user engagement activities. SEP efforts include aggregation and delivery of relevant training in remote sensing topics, background on developed products, and training on how to efficiently access and utilize new products for stakeholder decision-making. Resources aggregated or provided by SEP focus on NASA and partner contributions in areas of remote sensing training, code recipes, and data processing.

Our SEP web presence is **under construction** but will continue to grow with links to new Solutions and materials...

Search "IMPACT SNWG SEP" or visit
<https://earthdata.nasa.gov/esds/impact/snwg/sep>

Upcoming Activities

Several activities continue to be planned for Stakeholder Engagement in 2022, including:

- Presentations and outreach at the American Meteorological Society's Annual Meeting
- Revisions to the SNWG/SEP web page that will continue adding additional content
- Upcoming workshops to engage SNWG users around initial OPERA product releases
- Official release of quick-look ICESat-2 products and associated training materials
- Development of user engagement workshops broadly around SNWG solutions from the 2016 and 2018 cycles, along with improved communications and outreach to end users

We expect that Congress and OMB will offer guidance on new solutions from the 2020 Cycle, and we will be kicking off a new 2022 survey and assessment cycle beginning in June of this year!

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