

# OPEN DATA & OPEN KNOWLEDGE Workshop



Open Knowledge for Action and Impact  
Angélica Gutiérrez, Co-directora AmeriGEO

# Open Knowledge for Action and Impact


*Exploring AmeriGEO's efforts to support Open Knowledge*



- *Principle 1 Open Science*
- *Principle 2 Open Access*
- *Principle 3 Citizen and Participatory Science*
- *Principle 4 Open Data*
- **Principle 5 Open Reproducibility**
- *Principle 6 Open Software*
- *Principle 7 Open Infrastructure*
- *Principle 8 Open Education*
- **Principle 9 Open Evaluation**
- **Principle 10 Open Hardware**
- *Principle 11 Diversity of Knowledge*



- Strengthen National GEO's and partnerships to **advance the use of Open Data and Knowledge** for Decision Making
- Improve **open data access, sharing and integration** in the Americas (Social, Economic, Environmental, Other Remote Sensing and In-situ data)
- Demonstrate ability to integrate social, economic, environmental **open data and knowledge** to improve understanding and decision-making
- Improve **diversity of knowledge, open science, open education, open infrastructure** to use EO for decision-making, through capacity development at AmeriGEO Week events



**AmeriGEO**  
Earth Observations for the Americas

**GEOSS**  
Global Earth Observation System of Systems

Advocate · Engage · Deliver

The AmeriGEOSS initiative is a framework that seeks to promote collaboration and coordination among the GEO members of the American continent.

The AmeriGEOSS initiative focuses its efforts in the four Societal Benefit Areas (SBA's) selected and prioritized by the Americas Caucus

- Biodiversity and Ecosystem Sustainability
- Disaster Resilience
- Food Security and Sustainable Agriculture
- Water Resources Management

**Implementing GEOSS in the Americas**

- Capacity Building
- Address User Needs
- Actionable Data & Information

Together, the Americas are advancing use of Earth Observations

GEO GROUP ON EARTH OBSERVATIONS  
Amerigeoss.org



# Diversity of Knowledge, Open Education, Citizen and Participatory Science, Open Data

**AmeriGEOSS**  
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Amerigeoss.org

Colombia: Geo Director in Colombia and its priorities.

<https://sostenibilidad.semmana.com/medio-ambiente/articulo/pondre-la-lupa-en-la-erosion-del-suelo-y-la-contaminacion-de-las-aguas-directora-del-ideam/41616>

2014  
AmeriGEOSS is a Regional Initiative of the Group on Earth Observations (GEO). In October 2014 at the...

715 Total Likes, 724 Total Followers

"Pondré la lupa en la erosión del suelo y la contaminación de las aguas"; directora del Ideam

Alexandre Solis - Director of SAC Regional Center for the Americas

**AMERIGEASS WEEK 2019**  
August 19 - 23, San Miguel, Lima, Peru  
Registration Now Open

**AmeriGEOSS Week 2017 - Participation**

- 1 Americas Geospatial & AmeriGEOSS Coordination Working Group (CWG) Meeting
- 2 Webinars
- 3 Training Sessions
- 45 People Trained
- 40 Institutions

**Top Outcomes:**

- Launched AmeriGEOSS Community Platform
- Costa Rica was selected as CWG Vice Chair starting October 2018
- AmeriGEOSS Week 2018 will be hosted by Brazil

**Number of People Per Sector**

**Number of People Per Country**

130 Participants

**AmeriGEOSS Week 2018 Highlights**

- 1 Americas Geospatial & AmeriGEOSS Coordination Working Group (CWG) Meeting
- 5 Training Sessions
- 5 Webinars
- 24 Core Institutions
- 65 Service Providers

**TOP OUTCOMES:**

- GEO Chile joined IGGIO to co-chair the CWG
- GEO Peru initiated development of Geo-SAT1 Platform & Software
- Developing a community platform invited to join the CWG
- Data citation activities in the AmeriGEOSS platform were initiated with participants
- IGGIO scientists from NASA-ROSES projects supporting AmeriGEOSS participated

**148 PARTICIPANTS**

People by Country: USA (18), Brazil (12), Chile (10), Colombia (8), Costa Rica (6), Ecuador (4), Mexico (3), Peru (2), Venezuela (1)

*Communication, Outreach, Partnerships, Training and Development*



AmeriGEO AmeriGEO Week 2023 About Registration Travel Information More ▾

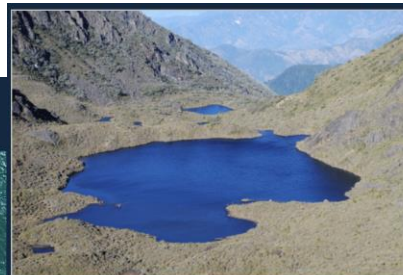
August 7th - 12th, 2023

## AmeriGEO Week 2023

### Costa Rica

Data Driven Solutions for a Sustainable Planet

[Register for Event](#)



#### Session 6: Data Gaps and Barriers

09:00 - 11:00 Local time

Speakers: Coming soon

In this session representatives from the Americas will present on the value of EO data and how the community can work together to advance data driven decision-making in the region.



#### Session 4: National Adaptation Plans: Water, Agriculture, and Food Security

09:00 - 11:00 Local Time

Speakers: Coming Soon

This session will examine regional priorities and advances in National Adaptation Plan development and implementation with a focus on water resources, agriculture, and food security.



#### New Generation

10:00 - 16:00 Local Time

Speakers: Coming soon

This session will place a spotlight on the work and activities of youth and young professionals in the Americas.



#### Session 5: Science and Technology applied to Nature-based solutions for Risk Mitigation

11:30 - 13:30 Local Time

Speakers: Coming Soon

This session will provide organizational highlights on efforts in the Americas Region to advance the use of Geographic information to support Disaster Risk Reduction.

<https://2023amerigeoweb.amerigeo.org/>



## PeruSAT-1 | 3DGallery

Explore beautiful 3D views of the Republic of Peru as seen by PeruSAT-1

Search the Developer Hub

## MAPATÓN PERÚ 2021

"Unidos en las observaciones para la gestión comunitaria en el riesgo de desastres"

28 de junio al 2 de julio

Inscríbese

## 55,037 Structures Mapped

+\$200,000 in Scholarships, Internships

Leaderboard - Group Status

Alpca Kinlay	601
Gatless	94
INT-Tech	50
Lluylla	55,037
GeoPathways 2	29
Ica	1
Avenida UNALM	1
GeoPathways	1
Barón Mujica	1
Junin-4	1
GRD-CUENCA RIMAC	1
Ayacucho	1
Jaime	1
Glacier	1



### PeruSAT-1 | 3DALLERY

Explore your world in 3D

Tour our collection of beautiful 3D versions of imagery from PeruSAT-1 created by our global user community. Each viewer provides powerful capabilities to explore the Republic of Peru.





# Open Education – Addressing Gaps and User Needs

## Capacity Development to advance EO – Inter-American Academy



**Inter-American Academy of Geosciences & Applications**  
Empowering Data-Driven Decision Making

Home About Us Upcoming Trainings On-Demand Webinars Self-Paced Trainings

English Spanish

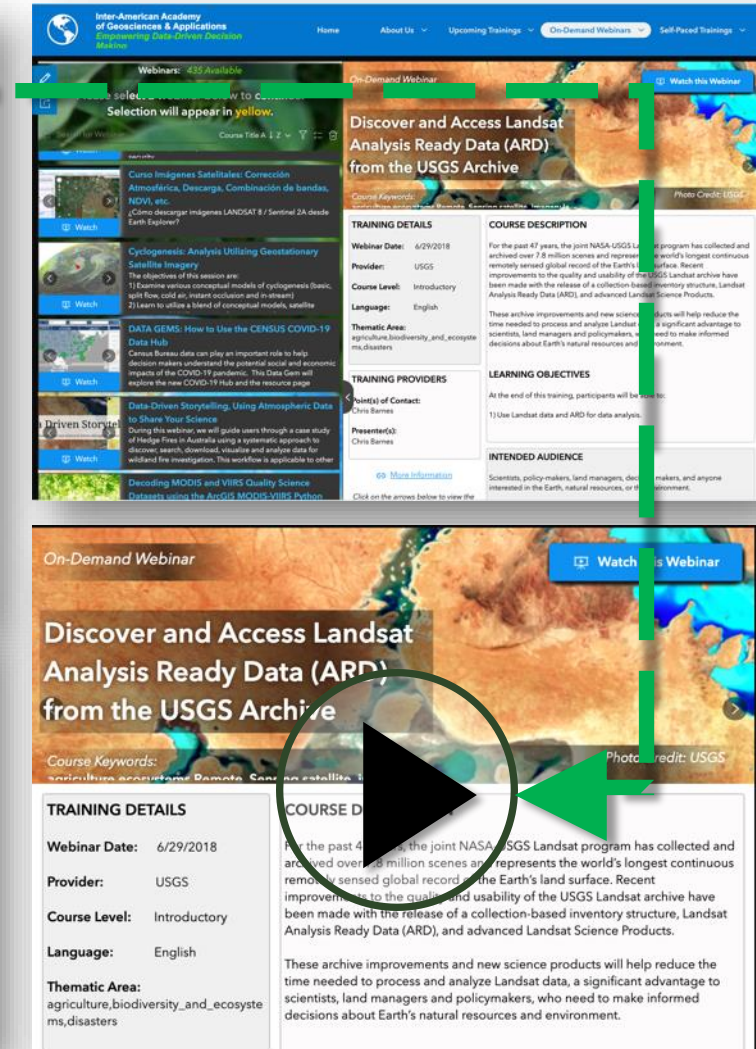
1 UPCOMING TRAININGS Register  
435 ON-DEMAND WEBINARS Watch  
6 PAST SESSIONS Watch  
48 SELF-PACED COURSES Enroll  
30 REGISTERED PARTNERS Visit

### Welcome to the Inter-American Academy of Geosciences & Applications

Partners in the Inter-American community are working to build capacity to advance the use of Statistical, Earth Observation, Geospatial and other Data to improve understanding and promote data-driven decision-making.

AmeriGEO is proud to host the Inter-American Academy of Geosciences & Applications on behalf of a growing network of public and private institutions, academia, and commercial partners.

[Our Partners](#)



**Discover and Access Landsat Analysis Ready Data (ARD) from the USGS Archive**

Webinar Date: 6/29/2018  
Provider: USGS  
Course Level: Introductory  
Language: English

**COURSE DESCRIPTION**  
For the past 47 years, the joint NASA-USGS Landsat program has collected and archived over 7.8 million scenes and represents the world's longest continuous remotely sensed global record of the Earth's land surface. Recent improvements to the quality and usability of the USGS Landsat archive have been made with the release of a collection-based inventory structure, Landsat Analysis Ready Data (ARD), and advanced Landsat Science Products. These archive improvements and new science products will help reduce the time needed to process and analyze Landsat data, a significant advantage to scientists, land managers and policymakers, who need to make informed decisions about Earth's natural resources and environment.

**LEARNING OBJECTIVES**  
At the end of this training, participants will be able to:  
1) Use Landsat data and ARD for data analysis.

**INTENDED AUDIENCE**  
Scientists, policy makers, land managers, decision makers, and anyone interested in the Earth, natural resources, or environment.



## Cursos disponibles

ARSET - Evaluación de los servicios ecosistémicos



### Descripción

Los ecosistemas saludables brindan piezas esenciales para la vida diaria de los humanos, como agua limpia, alimentos, medicamentos, secuestro de carbono, protección contra el clima extremo y mucho más. La contabilidad del capital natural reconoce que estos activos deben mantenerse, administrarse y medirse para las actividades críticas de toma de decisiones. Los datos de la NASA se pueden usar para mapear con precisión los ecosistemas para respaldar una planificación efectiva y una toma de decisiones sostenible.

Esta capacitación describirá los conceptos básicos de los servicios ecosistémicos y la contabilidad del capital natural. También proporcionará una descripción general de cómo se pueden usar las Observaciones de la Tierra (EO) para respaldar marcos e iniciativas globales, como los estándares establecidos por el Sistema de Contabilidad Económica Ambiental de las Naciones Unidas (UN-SEEA). Los participantes recibirán información sobre técnicas y herramientas para usar EO en la contabilidad del capital natural, como el uso del mapeo de la cobertura terrestre, el análisis de series temporales y los esfuerzos de modelado realizados con el Proyecto de Capital Natural a través del software InVEST, la Inteligencia Artificial para el Medio Ambiente y la Sostenibilidad (ARIES) Proyecto, y más. Se proporcionarán ejemplos de estudios de caso para resaltar los esfuerzos locales específicos, como la valoración de los polinizadores nativos, las cuentas de los ecosistemas urbanos, la valoración de la resiliencia costera y los hábitats de los arrecifes de coral, y la conservación de los bosques y el secuestro de carbono.

Gerente: [Madison Fung](#)

Organización : EE.UU. | NASA  
 Sitio web de la organización : <https://appliedsciences.nasa.gov/>

Logotipo de la organización :



Course Information

Institutional Branding

Multilingual

Course Curriculum & Activities

- SOBRE
  - Anuncios
  - Bienvenidos
- Introducción
  - Descripción del curso
  - Audiencia
  - Objetivos
  - Agenda
  - Formato del curso
- Parte 1: Introducción a lo...
  - 1.1 | Descripción general de...
  - 1.2 | Contabilidad de ecosist...
  - 1.3 | Marcos e iniciativas glo...
  - 1.4 | Observaciones de la Ti...
- Evaluación
- Parte 2

05 | Ciencias Naturales, Matemáticas y Estadística / 052 | Ambiente / 0521 | Ciencias Ambientales / 0521.01 | Ecología

## ARSET - Evaluación de los servicios ecosistémicos con sensores remotos

Curso Configuración Participantes Calificaciones Informes Más

### SOBRE

Instructor Features



### DESCRIPCIÓN

Los ecosistemas saludables brindan piezas esenciales para la vida diaria de los humanos, como agua limpia, alimentos, medicamentos, secuestro de carbono, protección contra el clima extremo y mucho más. La contabilidad del capital natural reconoce que estos activos deben mantenerse, administrarse y medirse para las actividades críticas de toma de decisiones. Los datos de la NASA se pueden usar para mapear con precisión los ecosistemas para respaldar una planificación efectiva y una toma de decisiones sostenible.



## Participant Resources

- > GeoPathways Orientation
- ▼ August 1 - 7
- August 2, 2022 | Applicati...
- ▼ August 8 - 14
- ▼ August 15 - 21 **This week**
- > August 22 - 28
- > August 22 - 28
- ▼ August 29 - September 4
- ▼ September 5 - 11
- ▼ September 12 - 18
- Holiday Break | No Group ...
- ▼ September 19 - 25
- ▼ September 26 - Octobe...
- ▼ October 3 - 9
- ▼ October 10 - 16
- ▼ October 17 - 23
- ▼ October 24 - 30
- Holiday Break | No Group ...
- ▼ October 31 - November 6
- ▼ November 7 - 13
- ▼ November 14 - 20
- ▼ November 21 - 27
- ▼ November 28 - Decemb...
- ▼ December 5 - 11

## GeoPathways 2022-2023

Course Settings Participants Grades Reports More

### Announcements and Discussion

### GeoPathways Orientation

FORUM  
Announcements  
**Supports Recurring Training Events**

LESSON  
About GeoPathways (DRAFT) Mark as done

### Supports Co-Development of Courses

- Develop knowledge and skills in the use of geographic information
- Support participant development by connecting participants with practitioners in the community to assist them in their development.
- Build knowledge and skills by conducting research in the application of geospatial data and technologies

#### Connect with mentors/network



### Latest announcements

- Add a new topic...
- 10 Aug, 10:37 Rich Frazier
- News | Metaverse
- 10 Aug, 04:40 Rich Frazier
- Networking | LinkedIn Actions
- 10 Aug, 23:25 Rich Frazier
- Welcome to GeoPathways 2022-2023
- Older topics ...

### Calendar

August 2022						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Full calendar  
Import or export calendars

### Recent activity

Activity since Tuesday, 16 August 2022, 4:28 PM  
[Full report of recent activity...](#)  
  
No recent activity



**Amber Kremer** Message

Amber Kremer | AmeriGEO | USGS

User details Edit profile

Country  
Peru

Institution  
AmeriGEO | USGEO | USGS

Interests  
Climate ECOSYSTEMS Geospatial Remote Sensing

### Training Certificate

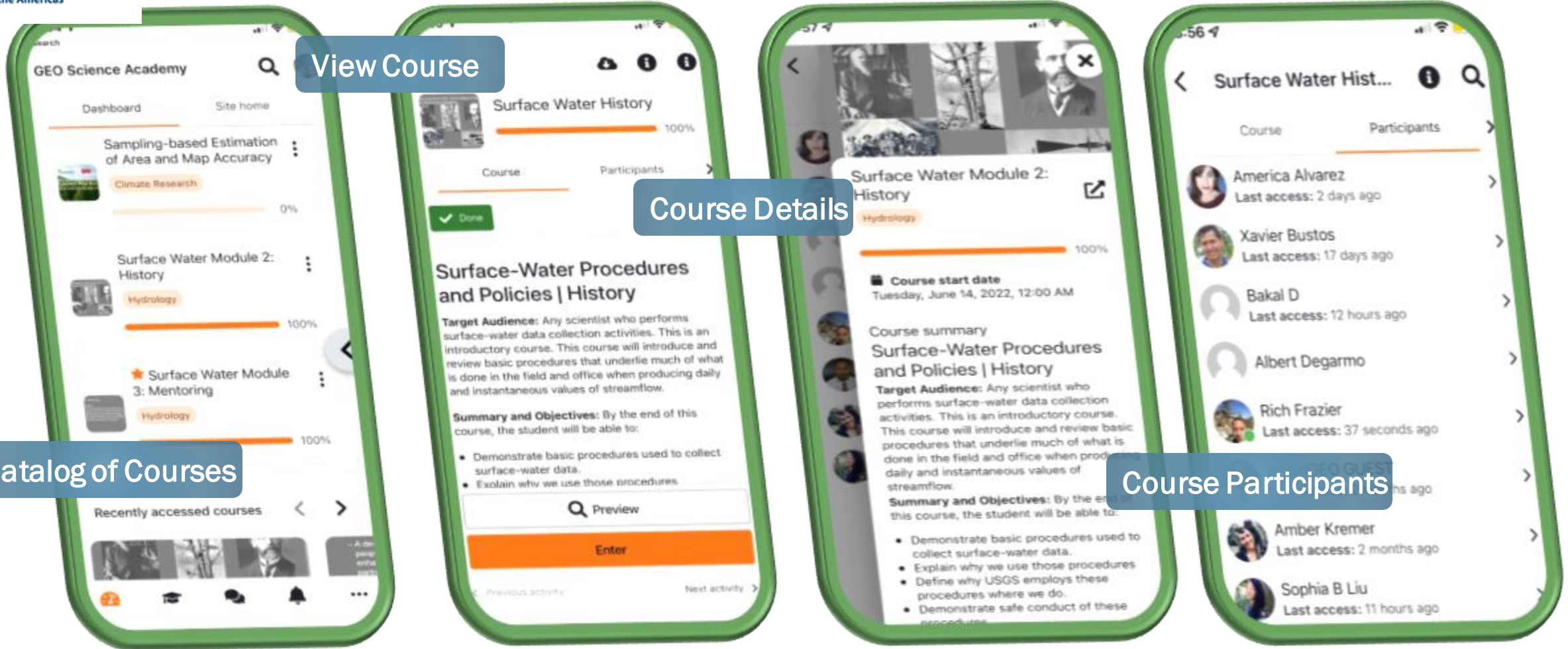


- Course details
- Course profiles
  - ARSET - Evaluating Ecosystem Services with Remote Sensing
  - GEOGLOWS | Intro to Global Water Sustainability
  - GeoPathways 2022-2023
  - GEOGloWS ECMWF Streamflow Model
- Miscellaneous
- Notes
- My certificates
- Forum posts
- Forum discussions
- Learning plans
- Today's logs
- All logs
- Outline report
- Complete report
- Grades overview
- Grades



# Open Education | Mobile Version

## Supporting Offline and Remote Participants





# Results Achieved/Lessons Learned

*Open Access, Open Data, Citizen and Participatory Science, Infrastructure, Software*

## AmeriGEOSS Platform Transforming Data for Decision Making

### SEARCH DATA

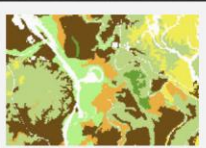
Use keyword searches to find and quickly display content, e.g., water or agua

446.7k  
DATASETS

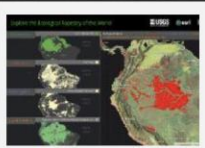
41  
ORGANIZATIONS

49  
GROUPS

### FEATURED MAPS, TOOLS, AND APPLICATIONS



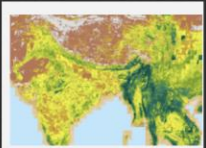
USA Soil Survey (Mature Sup...



EcoExplorer



Global Agriculture Disaster A...



Sentinel-2 Imagery: NDVI C...



**AmeriGEO**

Search for locations

DATA SETS [ 13 ]

- Very Low Risk
- Low Risk
- Low to Medium Risk
- Medium Risk
- Medium to High Risk
- High Risk
- Extremely High Risk

Peru Admin 03 Medical Supply Needs Index

Zoom To Extent About This Data Split Remove

Opacity: 50 %

- 0 - 9303
- 9303 - 33255
- 33255 - 64717
- 64717 - 119867
- 119867 - 180190
- 180190 - 278717
- 278717 - 452160

Louisiana Mortality Risk Index

Zoom To Extent About This Data Split Remove

Opacity: 60 %

- Extremely Low Risk
- Low Risk
- Moderately Low Risk
- Moderate Risk
- Moderately High Risk
- High Risk
- Extreme Risk

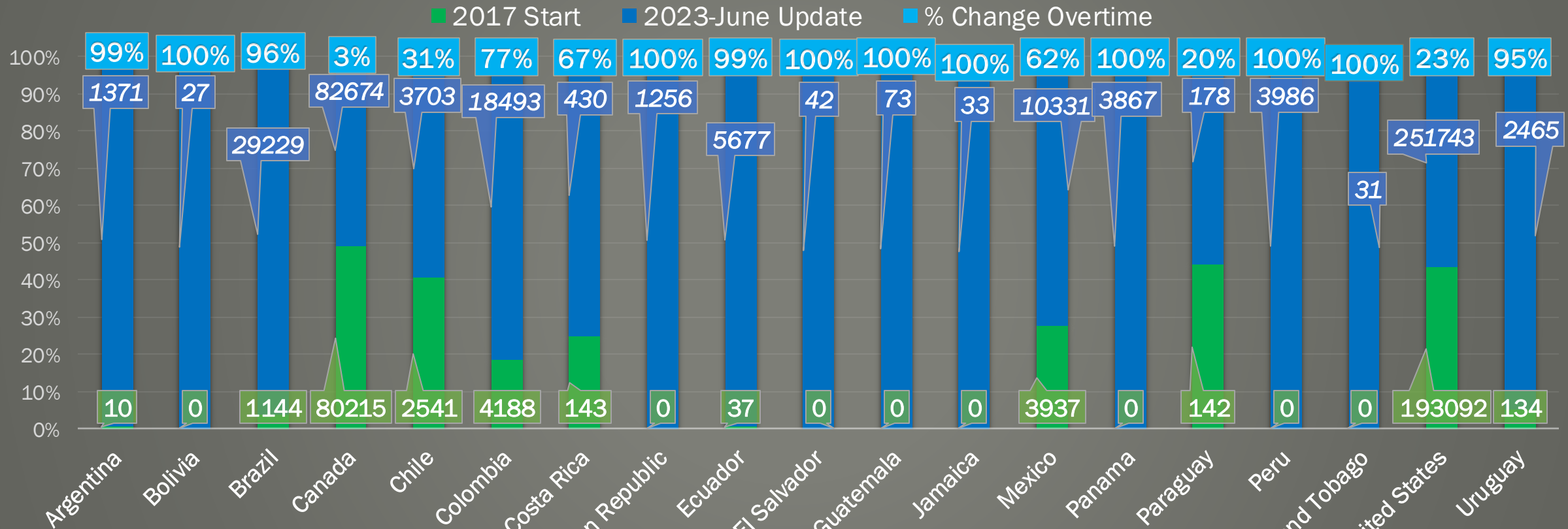
Tropical Storm Intensity Radial

Zoom To Extent About This Data Split Remove





## Open Data Improvement in the Americas



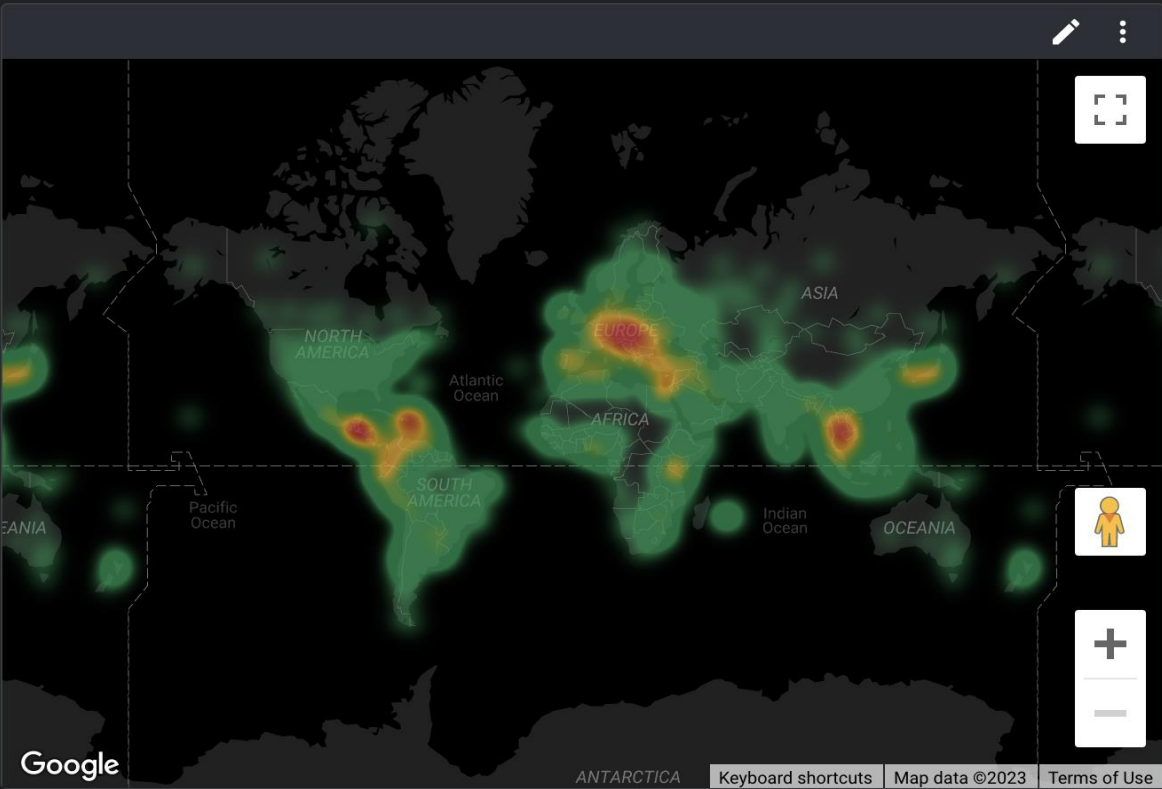
As of June 2023

**Advocacy and engagement** with member states have **resulted in marked improvement in data sharing**

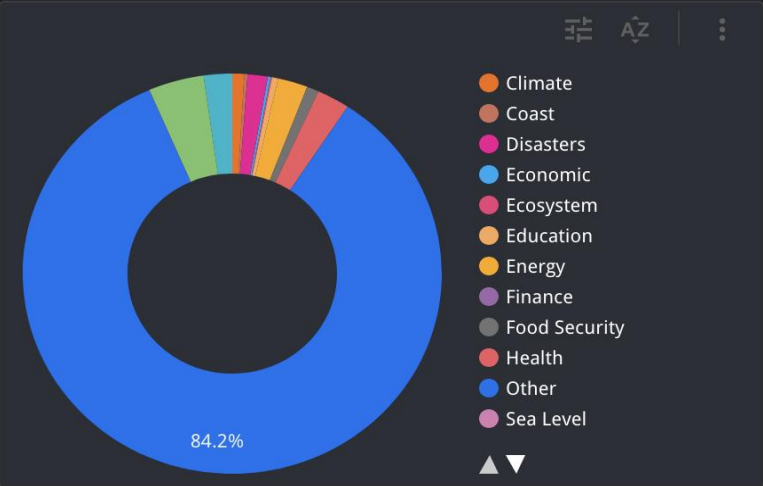


Jan 1, 2023 - Jun 13, 2023    Country    Countries **202**

Total users **46,807**    Sessions **56,861**    New users **46,089**    Active users **46,758**    1-day active users **46,758**

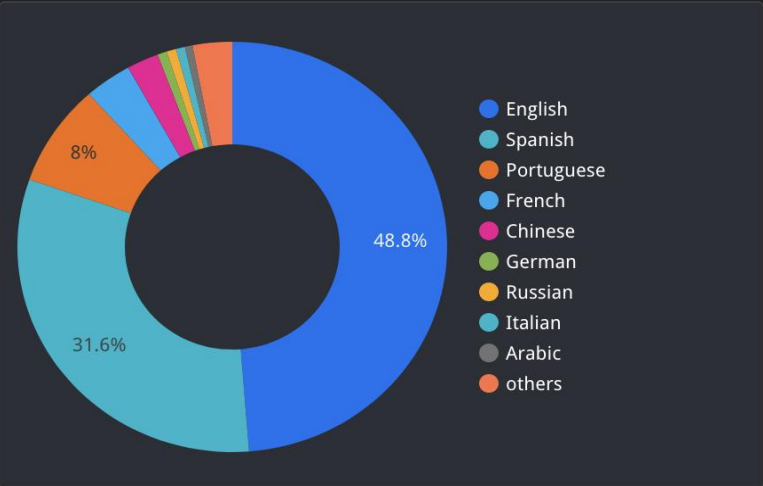


*Note: Data is only available since February 22, 2023 when the new reporting was implemented*



Country	Views
1. United States	22,891
2. Brazil	9,957
3. Colombia	8,659
4. Mexico	7,259
5. Ecuador	6,967
6. India	4,605
7. Argentina	4,273
8. Peru	2,276
9. United King...	2,250
10. Dominican ...	2,053
11. Canada	2,014
12. Spain	1,911
13. France	1,604
14. Germany	1,549
15. China	1,411
16. Chile	1,369
<b>Grand total</b>	<b>119,085</b>

1 - 100 / 202

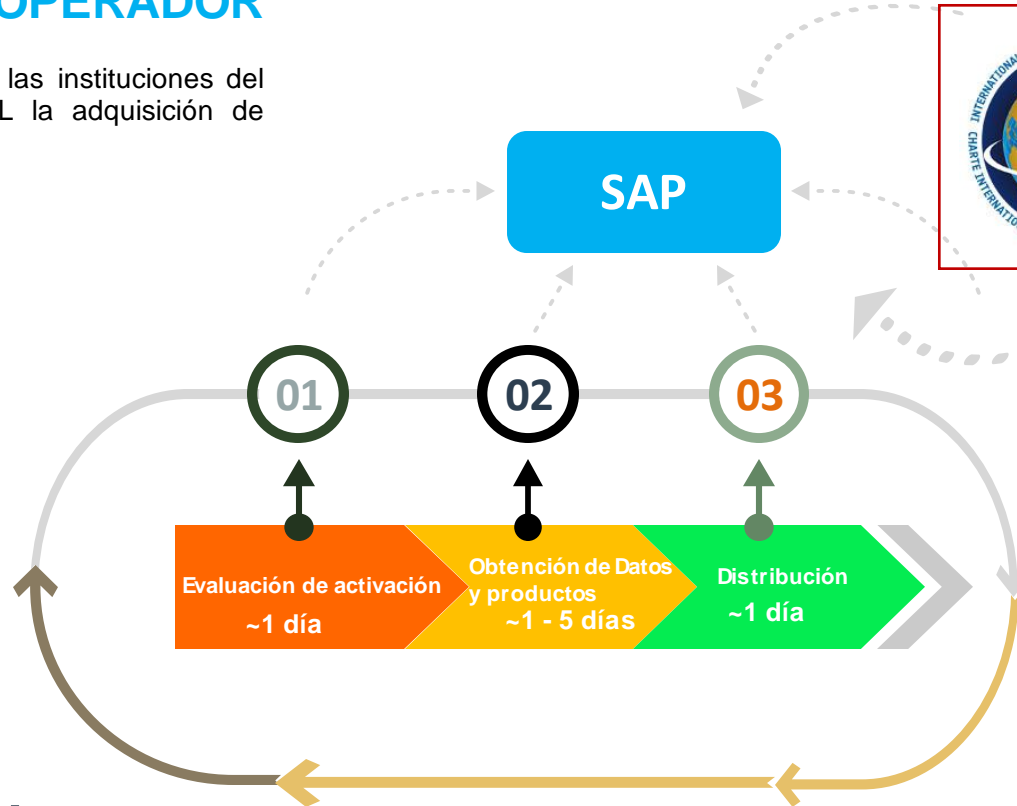




CUMPLIMIENTO DE LA DIRECTIVA PARA EL ACCESO Y USO DE IMÁGENES SATELITALES Y AEREAS PARA ACCIONES DE RESPUESTA Y REHABILITACIÓN POR DESASTRE O PELIGRO INMINENTE CON RESOLUCION MINISTERIAL N | 277-2021-PCM. Aprobada: 16 de noviembre 2021 y DIRECTIVA DE SERVICIO DE ALERTA PERMANENTE DE LA AGENCIA ESPACIAL DEL PERU. Aprobada con RESOLUCION JEFATURAL N° 051 -2018-JEINS-CONIDA

## OPERADOR

Coordina con las instituciones del GN, GR y GL la adquisición de imágenes



## CONIDA

El operador coordina con CNOIS la entrega de imágenes de archivo y programa nuevas adquisiciones. Además coordina con DIAPG la elaboración de nuevos productos

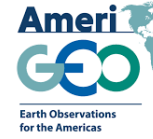


## USUARIO (GN, GR y GL)

Se apoya con información geoespacial a las instituciones que integran el SINAGERD



Activation of the Oil Spill Emergency Access to satellite images SAP + Charter International Technical Advice: AMERIGEO, NOAA and USGS. Declaration of Environmental Emergency approved by Ministerial Resolution No. 021-2022-MINAM



**EQUIPO TECNICO**  
(Enero a Abril 2022)

MINAM, OEFA and CONIDA create a working group to determine the area affected by the Environmental Emergency



Organismo de Evaluación y Fiscalización Ambiental



AGENCIA ESPACIAL DEL PERU CONIDA

**INTEGRAR EL PROGRAMA COSTA**

CONIDA accepts NOAA's proposal to integrate the COSTA Program (COLLABORATION FOR OIL SATELLITE TRACKING IN THE AMERICAS) and personnel from MINAM, OEFA and CONIDA were trained.

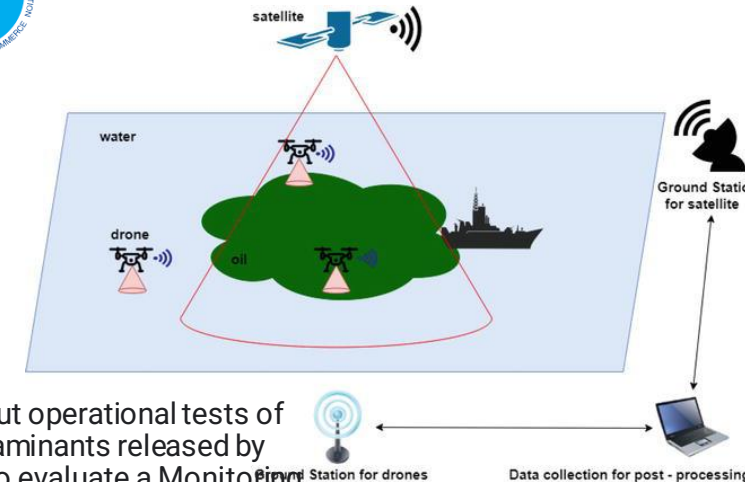


**PRODUCTOS ELABORADOS**

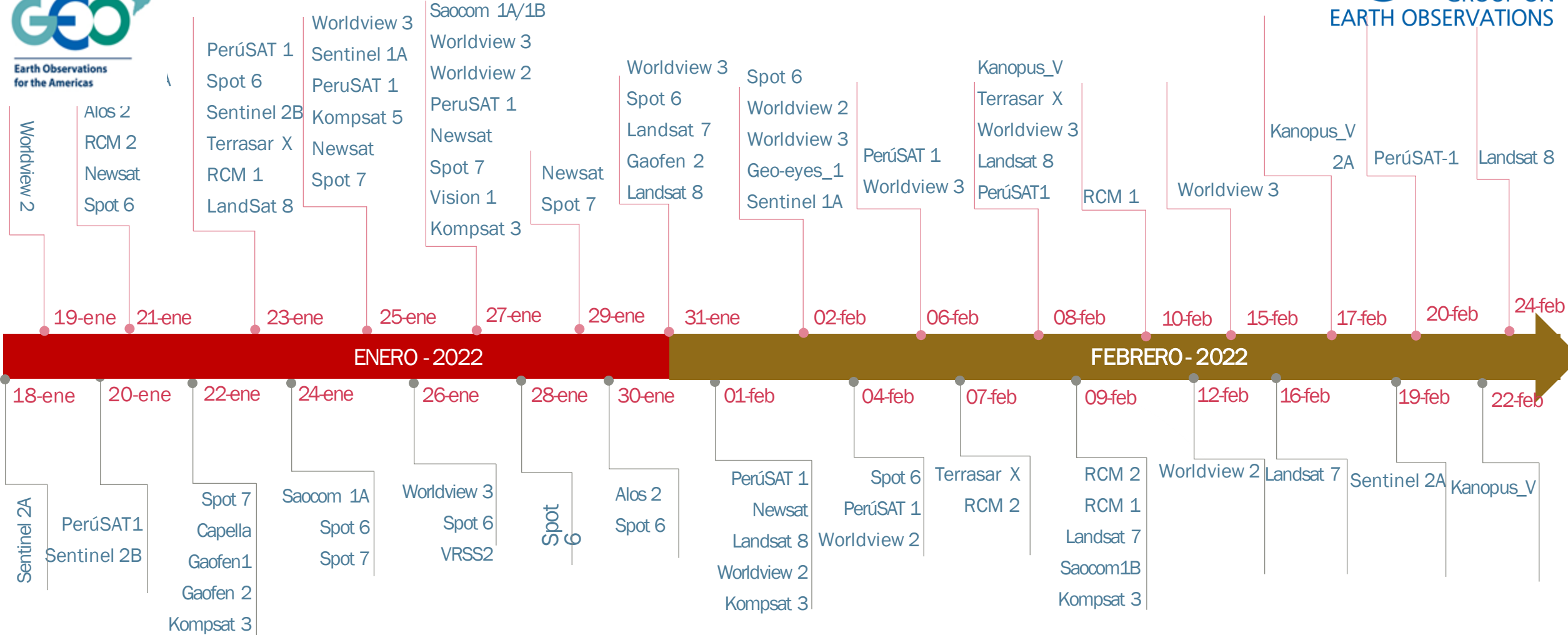
MINAM, CONIDA and OEFA They prepare the map of the area affected by the oil spill. Prepare a scientific publication An Oil Spill Monitoring System is implemented.

**ACCIONES FUTURAS**

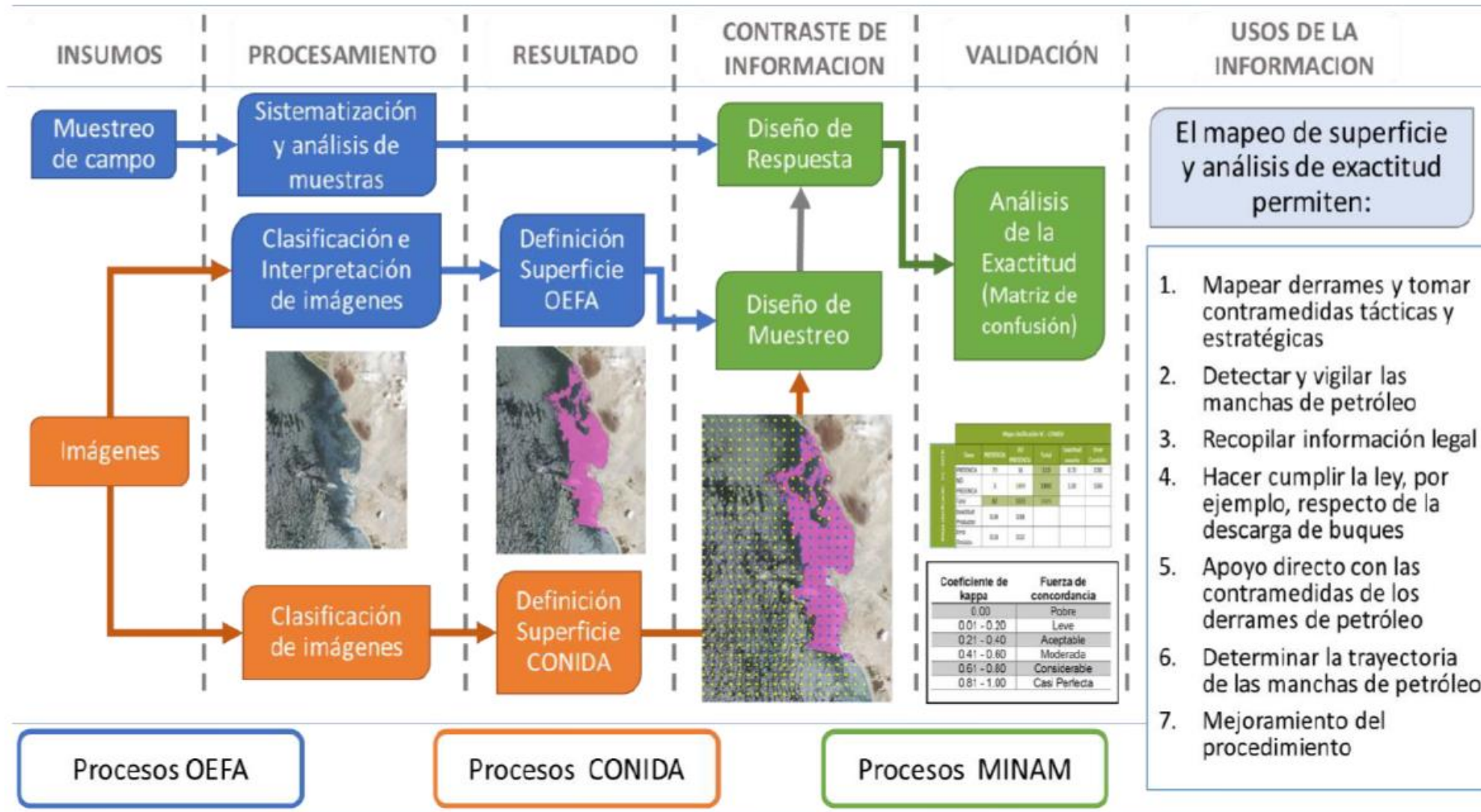
NOAA proposes to CONIDA to carry out operational tests of other space systems to monitor contaminants released by fishing vessels, likewise, it proposes to evaluate a Monitoring System for vessels outside 200 miles for illegal fishing purposes



# SERVICIO DE ALERTA PERMANENTE : Emergencia x Derrame de Petroleo







Thank You

**OPEN DATA  
& OPEN KNOWLEDGE  
Workshop**



**Open Knowledge for Action and Impact**  
Angélica Gutiérrez, Co-directora AmeriGEO