ESPACIO Y SOSTENIBILIDAD

INTERNATIONAL COLLOQUIUM ON

SPACE & SUSTAINABILITY

The International Colloquium on Space and Sustainability is a collaboration with NASA to foster discussion in Mexico about the current state of the use of Earth observation technology and its potential applications for sustainability, using data from NASA missions such as the Ice, Cloud and land Elevation Satellite-2 (ICESat-2), the Global Ecosystem Dynamics Investigation (GEDI), and the Carbon Monitoring System (CMS) initiative.

AGENDA

15 y 16 de noviembre de 2023. Guadalajara, Jalisco.

Precisión Agrícola · RUBISCO · NASA Carbon Monitoring System · ICESat-2 · SELPER · Alianza empresarial por el clima · Plataforma Abierta de Innovación · Innovación, Ciencia y Tecnología · Jalisco

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OBJECTIVES

The colloquium will bring together an existing community of applied users, as well as potential users from academia, civil society NGOs, private companies and specialized government agencies to:

- **Provide an overview of NASA's instruments**, data, science, and mission applications.
- **Present examples** of how NASA Earth observations are already being used in Mexico for practical applications.
- **Explore the needs of current and potential data us**ers and identify best practices for integrating NASA Earth science in decision-making projects.
- **Build capacity** for exploring, accessing and customizing NASA data.
- **Foster multidisciplinary collaboration (strategic alliances)** for decision-making to address sustainable development goals using data, science and resources from NASA missions.
- **Foster a community of citizen scientists** interested in combining NASA data observations and ground-based information to monitor local environmental changes.
- **Promote and document the findings and achievements of the colloquium** to serve as a reference guide for government, companies, academia and NGO's in meeting their sustainability and environmental objectives.

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DAY 1 | 15.Nov.2023

TIME	TOPIC
8:00 a.m.	**Check in** – Register at PLAi - Ciudad Creativa Digital
9:00 a.m.	**Opening Ceremony by Colloquium Committee**
9:15 a.m.	Talk: ***Connecting researchers and end users with NASA's Earth observations***- Christina Moats-Xavier, Program Manager for Mission Engagement, NASA Earth Action Program
9:30 a.m.	Talk: ***Earth Observation with Remote Sensing - SELPER Project Synthesis*** – Johana Carmona García, Secretaria General, SELPER & Fabiola Yépez, Presidente SELPER
9:45 a.m.	Talk: **Sustainable Development Goals in Mexico**- Laura Iglesias *, Coordinator of Strategic Alliances, UNESCO Mexico
10:00 a.m.	Talk: ***Earth observations to advance Sustainable Development Goals*** - Argyro Kavvada*, U.S. Greenhouse Gas Center Manager, NASA Headquarters
10:15 a.m.	**Questions from the audience and discussion**
10:30 a.m.	Coffee break
10:45 a.m.	Talk: ***Precision agriculture and sustainability***. - César Salgado, Director General, Precisión Agrícola.
11: 05 a.m.	Talk: ***NASA's Carbon Monitoring System***- Edil Sepúlveda Carlo, Applications Coordinator, NASA Carbon Monitoring System.
11:25 a.m.	Talk: ***Mexico-wide carbon monitoring system: continued development and nationwide implementation***- Rodrigo Vargas, Profesor, Universidad de Delaware
11:45 a.m.	Panel: ***Perspectives of the Carbon Cycle in Mexico***- Guests TBC*
1:00 p.m.	Lunch Break

* To be Confirmed

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DAY 1 (cont.) | 15.Nov.2023

TIME	TOPIC
2:00 p.m.	**Listening session** – Moderated by SELPER • Forests and technology. Gabriel Levy Hanenberg, Reforestamos México • Forest Cover Satellite Warning System. Heriberto Padilla Ibarra, Guardián Forestal • "VINDREW" - vision intelligence networks for developing research in ecosystems of the world . Juan Badouin - Precisión Agrícola / Rubisco
3:00 p.m.	Talk: ***The Ice, Cloud and land Elevation Satellite-2 (ICESat-2) Mission*** – Sorin Popescu, Texas A&M University
3:30 p.m.	Talk: ***The Global Ecosystem Dynamics Investigation (GEDI) Mission*** - Adrián Pascual, University of Maryland**
3:50 p.m.	Talk: **Biomass estimation with ICESat-2/GEDI in conjunction with other satellite imagery**- Adriana Parra Ruiz, Postdoctoral Researcher, NASA JPL**
4:10 p.m.	Talk: **Overview of the MAAP (Multi-mission Analysis and Algorithm Platform) and VEDA (Visualization, Exploration and Data Analysis) projects** - TBC*, NASA/Development Seed
4:30 p.m.	**Q&A Session**
4:40 p.m.	Networking Coffee break
5:00 p.m.	**Value-creation Roundtable Exercise**
6:00 p.m.	**Announcement of Day 2 Tutorials and Activities**
6:15 p.m.	Day 1 **Adjournment**
6:30 p.m.	**Cultural social activity**

* To be Confirmed,
** Virtual Presentation

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DAY 2 | 16.Nov.2023

TIME	TOPIC
8:00 a.m. - 11:00 a.m.	**Optional activity of morning sightseeing tour in Guadalajara**
10:00 a.m.	**Press conference at PLAi with organizers (closed)**
11:00 a.m.	Panel: ***Space and Sustainability****
12:00 p.m.	**Networking space with attendees and mission members**
1:00 p.m.	Talk: ***Citizen Science & Space*** – • Alejandra González Jiménez. Coordinator of Citizen Empowerment in Urban Trees, Reforestamos México. • Brian Campbell, NASA Senior Earth Science Outreach and Education Manager, Science Lead NASA GLOBE • Peder Nelson, Science Lead for NASA GLOBE, Oregon State University
2:00 p.m.	**Group Plenary Discussion | Conclusions | Next Steps**
2:30 p.m.	**Group photo with attendees | Networking | Closing**
3:00 p.m. - 5:00 p.m.	Taller: ***Introduction to the use of data and modeling for carbon cycle monitoring***- Guillermo Murray Tortarolo, Ecosystems and Sustainability Research Institute, Universidad Nacional Autonoma de Mexico.
3:00 p.m. - 5:00 p.m.	Taller: ***Introduction to the use of ICESAT-2 and GEDI data*** • Welcome & Overview • GEDI Applications & Potential. Adrián Pascual, University of Maryland** • Access and Discovery of ICESat-2 Data via the DAAC at the NSIDC. Luis Alberto Lopez Espinosa, National Snow and Ice Data Center • Access and Discovery of GEDI Data via the DAAC at the ORNL. Rupesh Shrestha, Oak Ridge National Laboratory ** • The icepyx Software Library and Community. Rachel Wegener, University of Maryland • CryoCloud - A Shared Cloud Platform for NASA. Tasha Snow, Colorado School of Mines**

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** Virtual Presentation