

# TREES Within LAC

**Results of the first year (2023)  
New campaign (2024)**

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Implemented by:





## During the first year of the campaign, the objective was to:

Identify the most common tree species in Latin American and the Caribbean countries, describing their phenophases and the variables related to their development.





**We seek to improve the knowledge about the ecosystems in which trees grow, describing the existing problems and proposing solutions.**





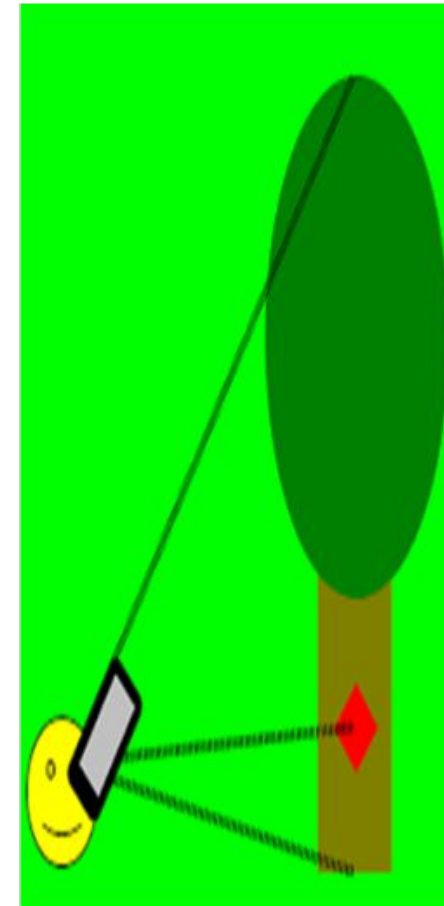
# Specifically, we wanted to know:



What are the most important tree species in the region?



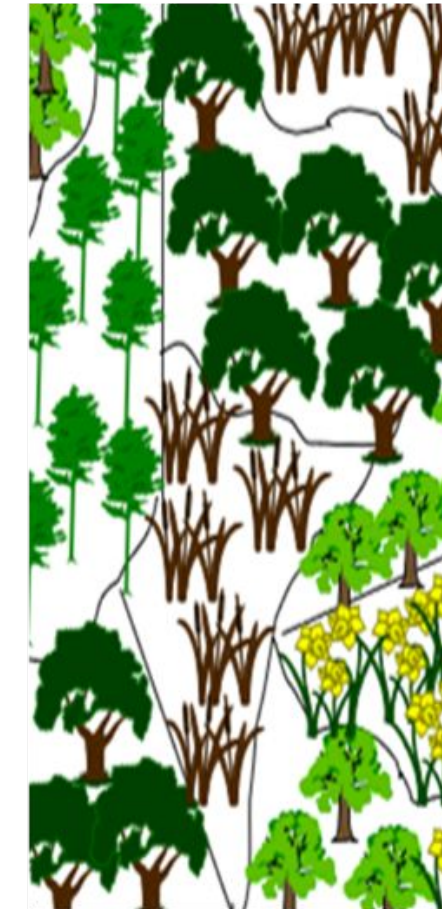
Comparing the phenological phases of trees common in the region.



Measuring tree height



Measuring the diameter of trees



Characterize the cover of the sites where the trees grow



Identify the environmental variables that influence tree growth



Recognize the importance of trees for educational communities.



# In addition, the campaign aimed to contribute to the achievement of some important SDGs



**The campaign offer an opportunity for teachers to have new tools to make their classes more meaningful and improve students' perception of their environment.**

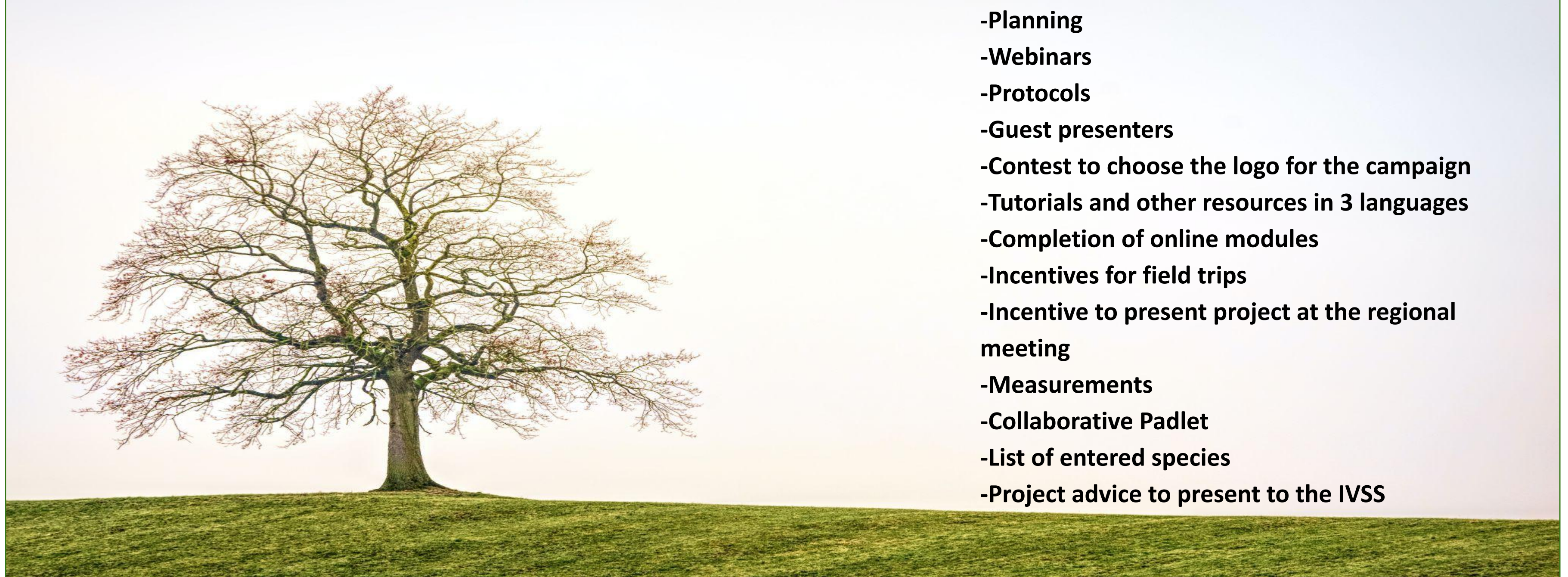




The campaign was launched in February 2023 with a series of planned activities

### SUMMARY

- Planning
- Webinars
- Protocols
- Guest presenters
- Contest to choose the logo for the campaign
- Tutorials and other resources in 3 languages
- Completion of online modules
- Incentives for field trips
- Incentive to present project at the regional meeting
- Measurements
- Collaborative Padlet
- List of entered species
- Project advice to present to the IVSS





**During 2023 we had interesting results, among which the following stand out:**



Estudiante: **Mayerli E. Juárez**  
Escuela: **Centro Educativo Baganvilia**  
País: **Guatemala**

A logo chosen after a drawing contest with 258 submissions from 8 countries

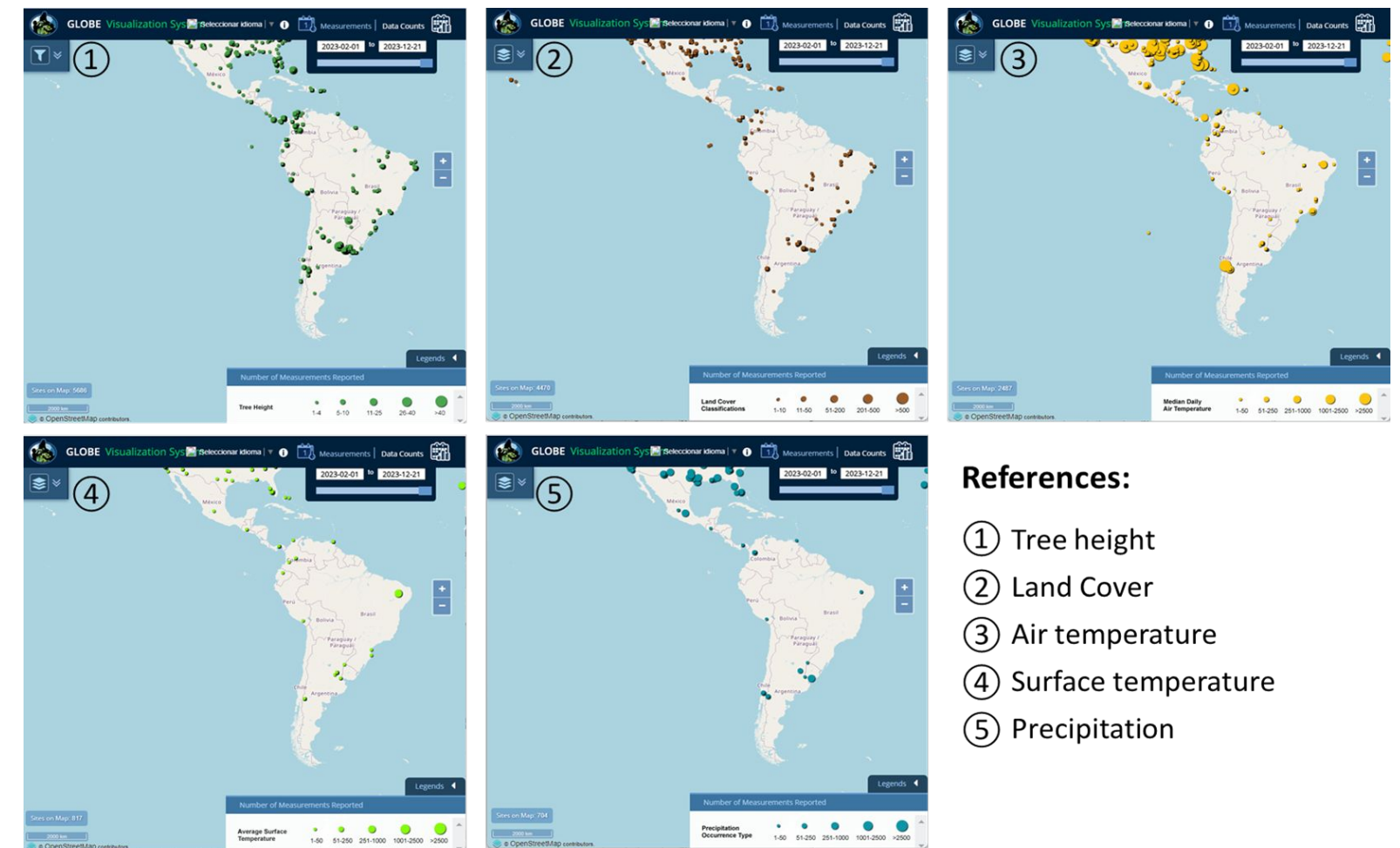
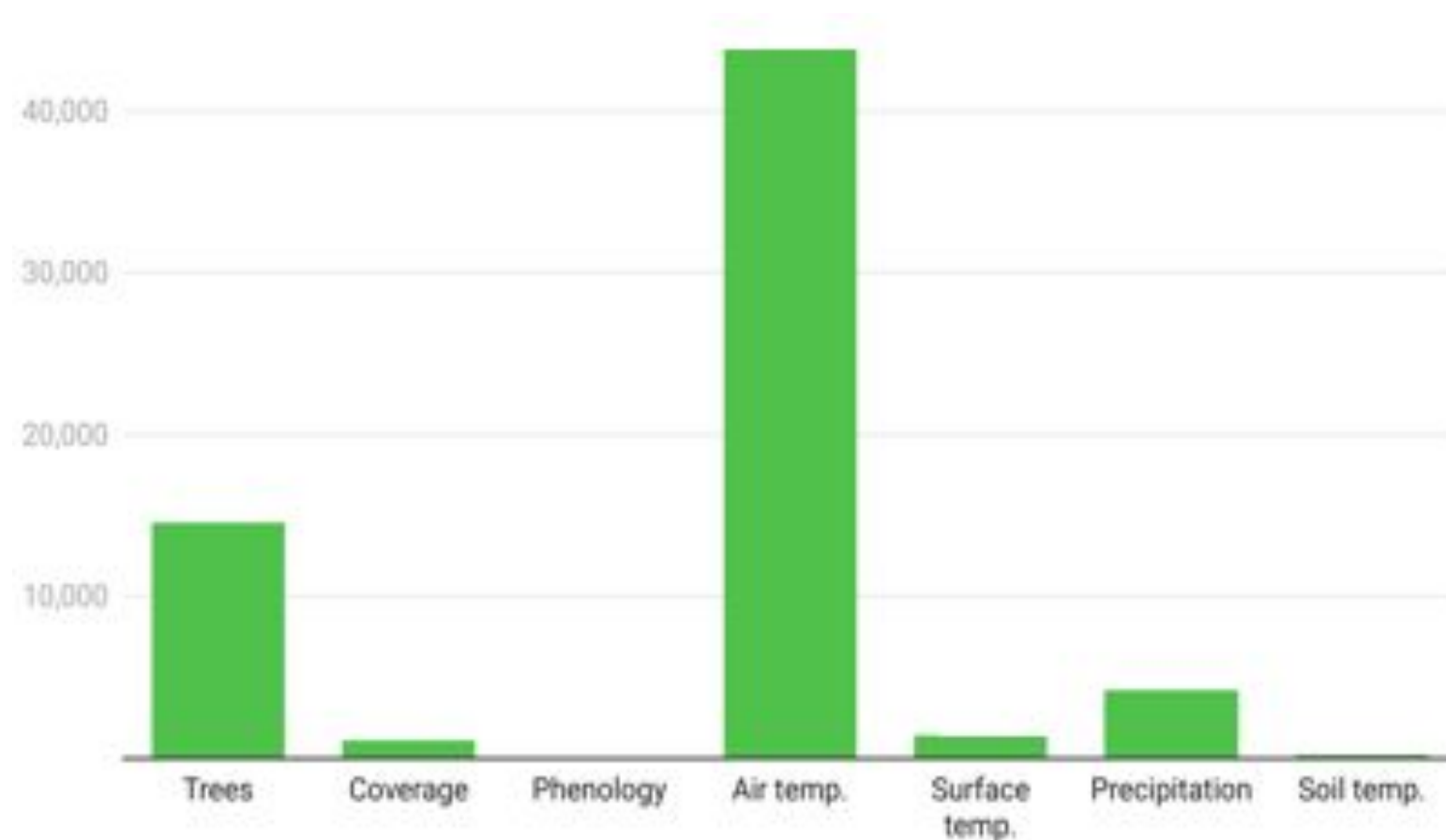


# The Campaign in numbers

Items	Numbers
Total registered to the campaign:	<b>566</b>
Total people who have attended the webinars:	<b>405</b>
Total number of teachers, schools or citizen scientists who have carried out measurements in the campaign:	<b>110</b> (13 new schools in September)
Countries that submitted data:	<b>18</b> (Argentina, Bahamas, Belize, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Mexico, Panama, Paraguay, Peru, Dominican Republic, Suriname, Trinidad & Tobago, Uruguay)

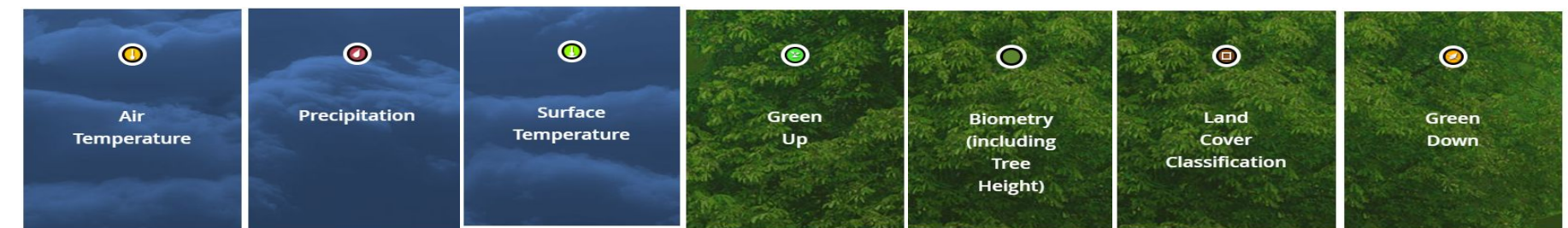


# A total of 66067 data using 7 GLOBE protocols from which 14971 data were from trees



**References:**

- ① Tree height
- ② Land Cover
- ③ Air temperature
- ④ Surface temperature
- ⑤ Precipitation





# Common tree species shared in the Padlet



*Enterolobium contortisiliquum* (Vell.) Morong



*Jacaranda mimosifolia* D. Don



*Erythrina crista-galli* L.

5 Mentions



*Schinus molle* L.

4 Mentions



*Araucaria araucana*



*Ceiba speciosa*



*Peltophorum dubium* (Spreng.) Taub



*Phytolacca dioica* L.

3 Mentions



*Populus alba*



*Syagrus romanzoffiana*



*Tecoma stans* (L. Juss. Ex Kunth)

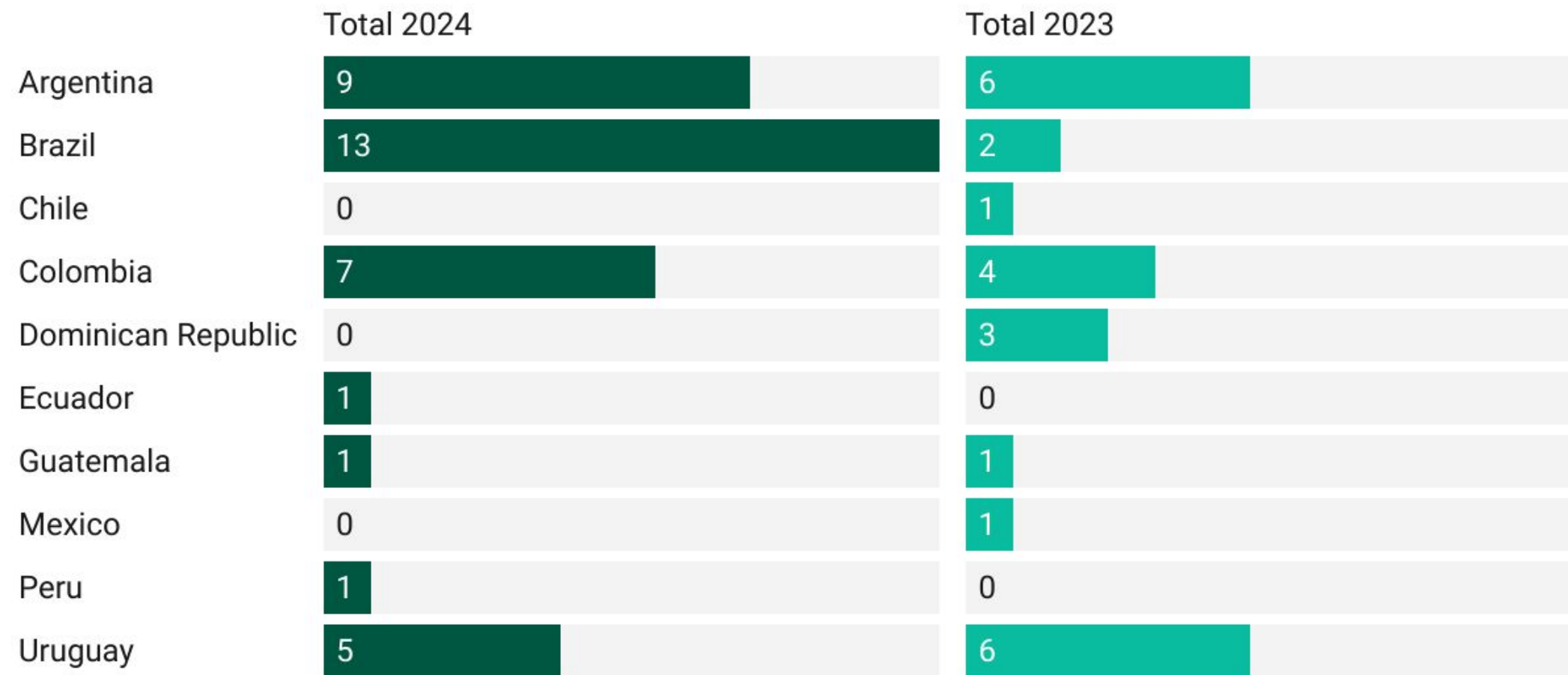


*Tipuana tipu* (Benth.) Kuntze



# Projects for the IVSS 2024:

## GLOBE LAC - Student Research Reports - IVSS



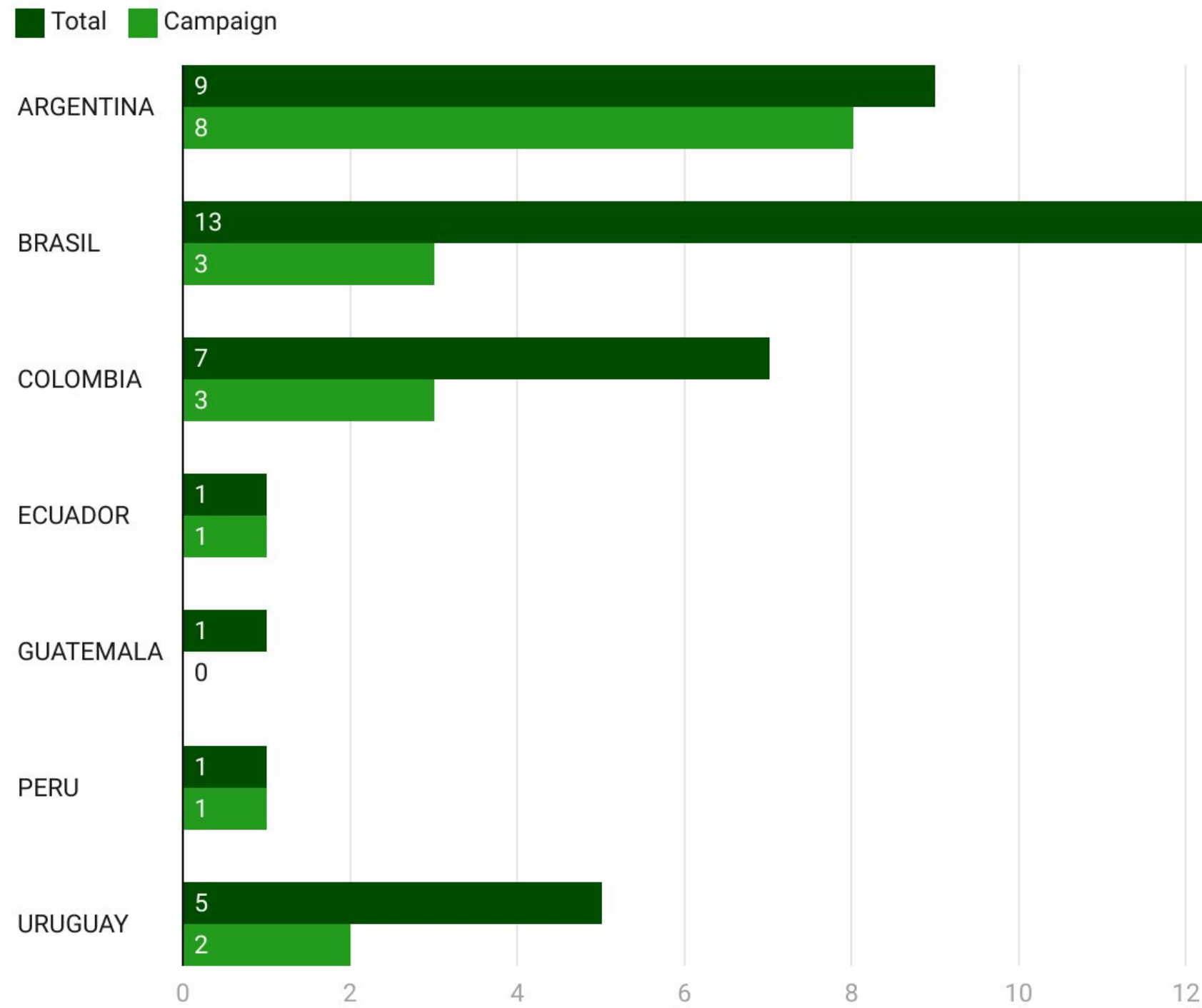
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### Latin America and Caribbean - IVSS 2024

Projects:	37
Teachers:	23
Citizen scientists:	2
Teachers registered for the campaign:	19



### Student Research Reports - IVSS 2024



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### Student Research Reports - IVSS 2024



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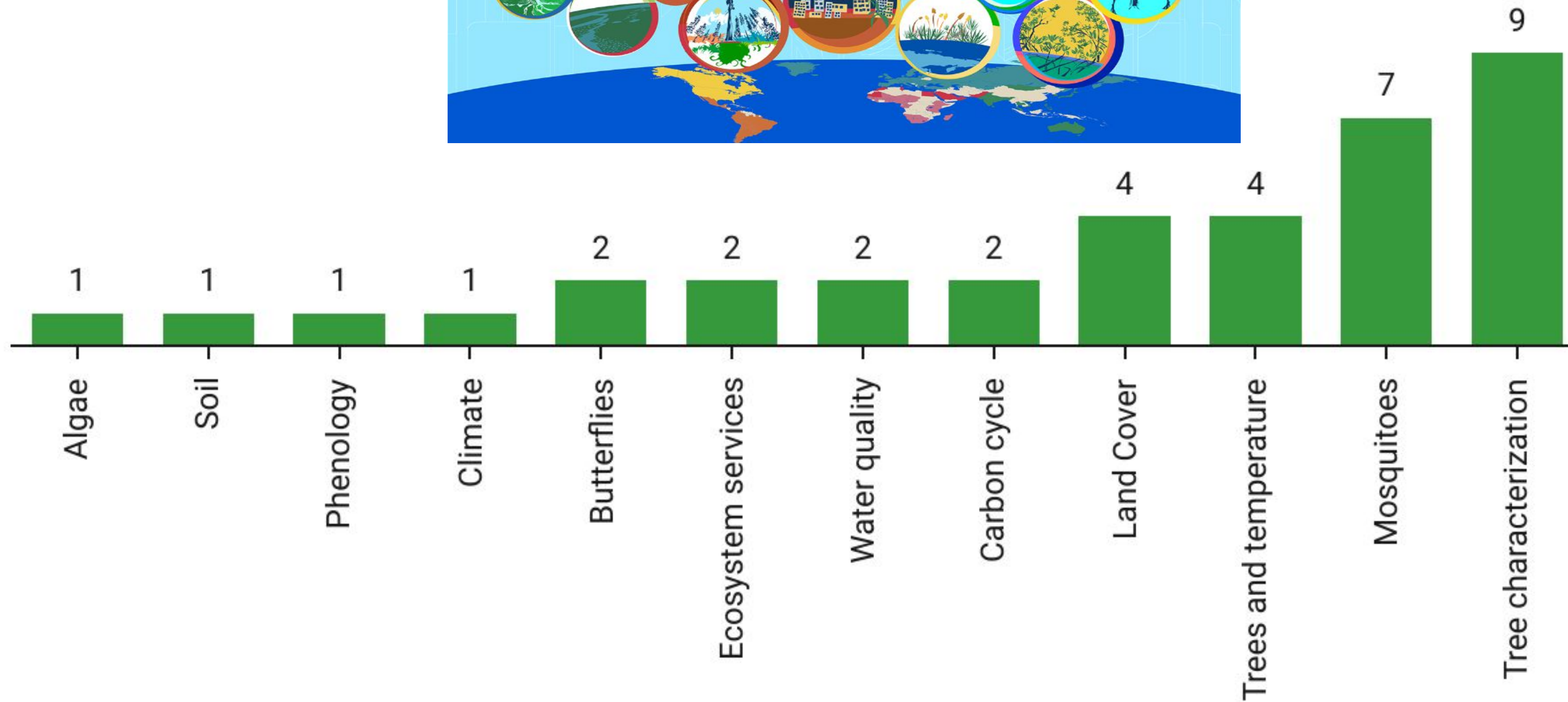


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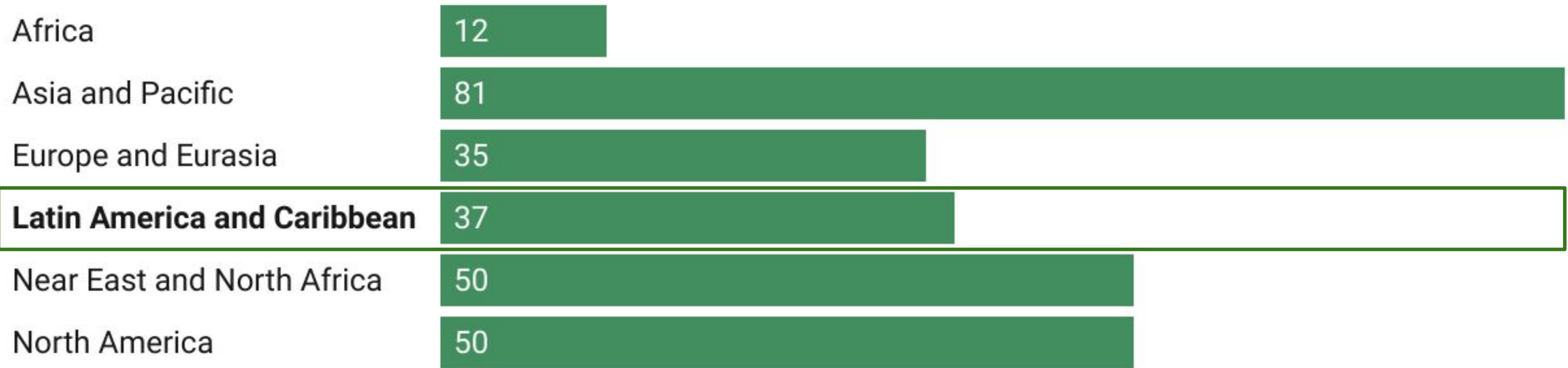
# Project topics



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# IVSS 2024 - Regions



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# Webinars: February - July

**Webinar: Lanzamiento Campaña "Árboles dentro de LAC"**

16 de febrero

18:00 Hs de Argentina

Plataforma ZOOM

The GLOBE Program  
LAC Regional Office

129 participants

**CAMPAÑA "ÁRBOLES DENTRO DE LAC"**

**Primeros pasos para iniciar con la campaña de árboles**

16 de Marzo - 18:00 hs Argentina

Plataforma Zoom

**Temas a tratar:**

- ¿Cómo aplicar la educación STEM y hacer un proyecto de investigación con estos temas?
- Concurso de elaboración del logo de la campaña
- Presentación IOP (Intensive Observation Period - Período Intensivo de Observación) Abril y Mayo
- Uso de la app GLOBE Observer
- Navegación por el sitio web de la campaña

The GLOBE Program  
LAC Regional Office

125 participants

**CAMPAÑA "ÁRBOLES DENTRO DE LAC"**

**WEBINAR: BIOMAS Y TRABAJOS COLABORATIVOS**

**TEMAS A TRATAR:**

- Anuncio del ganador del logo elegido para la campaña
- Uso de la app Globe Observer para cobertura terrestre
- Método manual de cobertura de dosel y de suelo
- Ejemplos de biomasa de GLOBE LAC
- Ejemplo de actividad de aprendizaje con imágenes satelitales
- Proyecto colaborativo. Fenómeno ENSO
- Recordatorio IOP

20 de abril - 18:00 hs Argentina

Plataforma Zoom

The GLOBE Program  
LAC Regional Office

94 participants

**CAMPAÑA "ÁRBOLES DENTRO DE LAC"**

**Webinar: ¿Cómo cambian los árboles en las distintas estaciones del año?**

18 de mayo

6:00 p.m. Argentina

**TEMAS A TRATAR:**

- Carga de datos GLOBE en forma manual
- Fenología y fenofases
- Protocolo de fenología. Green Up y Green Down
- Fenología desde el espacio
- Recordatorio IOP
- Datos en mapa y resultados parciales

The GLOBE Program  
LAC Regional Office

88 participants

**Campaña "Árboles dentro de LAC"**

**WEBINAR: ¿CÓMO INFLUYEN LAS PRECIPITACIONES EN EL CRECIMIENTO DE LOS ARBOLES?**

**Temas a tratar:**

- Las precipitaciones y el crecimiento de los árboles (Dorian Janney, Científica de NASA)
- Uso de la app GLOBE Observer para registro de las mediciones atmosféricas
- Inicio del trabajo de investigación
- Aclaraciones, recordatorios, preguntas y respuestas

15 de Junio

18.00 p.m. (Argentina)

Plataforma Zoom

The GLOBE Program  
LAC Regional Office

38 participants

**THE GLOBE PROGRAM**

Campaña de "Árboles dentro de LAC"

**WEBINAR**

**¿UN BOSQUE EN EL AGUA? LOS MANGLARES**

**Temas a tratar:**

- Biodiversidad
- Servicios ecosistémicos
- Desafíos de conservación

13 de julio

6:00 PM Argentina

PLATAFORMA ZOOM

Sponsored by: NASA Supported by: NSF, NOAA, U.S. Department of State Implemented by: UCAR

32 participants



# Webinars: August - December

**WEBINAR**  
"Aprendiendo a extraer, analizar y visualizar datos"

17 de agosto 6 pm Argentina

**Temas**

- Cómo descargar datos y procesarlos
- Análisis e interpretación de datos (uso de gráficos)
- Nuevo IOP (Período de Observación Intensiva): Agosto - Septiembre
- Adjudicación de fondos para las salidas de campo

Sponsored by: NASA Supported by: NSF, NOAA, DOD Implemented by: UCAR

41 participants

**WEBINAR**  
DENDROCRONOLOGÍA: SU CONTRIBUCIÓN AL ENTENDIMIENTO DE LA DINÁMICA AMBIENTAL EN AMÉRICA DEL SUR

Dr. Ricardo Villalba  
Instituto Argentino de Nivología, Glaciología y Ciencias Ambientales (IANIGLA) CCT-CONICET

14 de septiembre 6 pm (hora Argentina)

Plataforma de Zoom

Sponsored by: NASA Supported by: NSF, NOAA, DOD Implemented by: UCAR

72 participants

**WEBINAR**  
EL ARBOLADO URBANO EN LA ESTRATEGIA DE ADAPTACIÓN AL CAMBIO CLIMÁTICO

DÍA: 26 de Octubre  
HORA: 06:00 PM (HORA ARGENTINA)  
PLATAFORMA: Zoom

Orador: Elisa Dalgarrondo (Ingeniera Agrónoma)

Sponsored by: NASA Supported by: NSF, NOAA, DOD Implemented by: UCAR

65 participants

**WEBINAR**  
USOS TRADICIONALES DE LAS ESPECIES ARBÓREAS

16 de Noviembre 06:00 pm (Hora Argentina)

Oradora: Gladys Tello (Universidad Nacional Agraria La Molina, Perú)

Plataforma de Zoom

Sponsored by: NASA Supported by: NSF, NOAA, DOD Implemented by: UCAR

30 participants

**Webinar**  
Bosques en todas partes y al mismo tiempo

Los bosques y sus productos están más cerca de nosotros de lo que pensamos, aunque no vivamos en ellos

Orador: Ignacio Larco Roca (Ingeniero Forestal, Universidad Agraria La Molina, Perú)

1. Productos del bosque: más cerca de nosotros de lo que imaginamos  
2. Servicios que nos dan los bosques: efectos locales y globales

Jueves 7 de diciembre 06:00 pm (Hora Argentina)

Plataforma de Zoom

Sponsored by: NASA Supported by: NSF, NOAA, DOD Implemented by: UCAR

34 participants



# Guests to the webinars



Brian Campbell  
(United States)



Dorian W. Janney  
(United States)



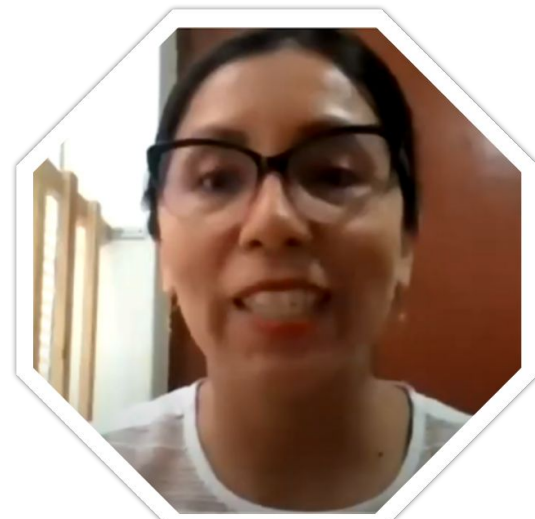
Monique Pool



Geneviève Sontowingolo  
(Surinam)



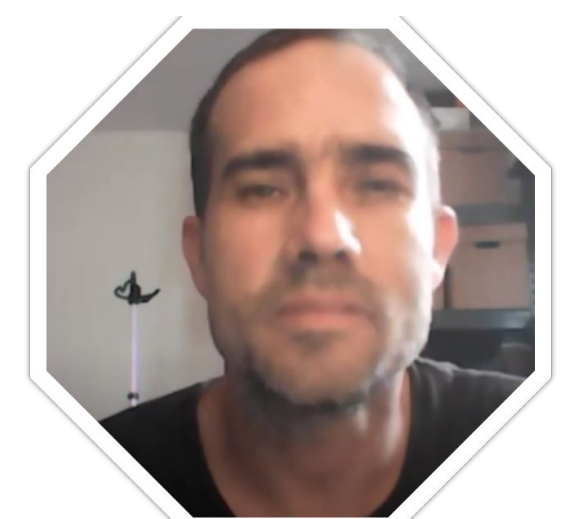
Ricardo Villalba  
(Argentina)



Gladys Tello  
(Peru)



Elisa Dalgarrondo  
(Uruguay)



Ignacio Larco Roca  
(Peru)





# Countries of origin of those registered for the campaign

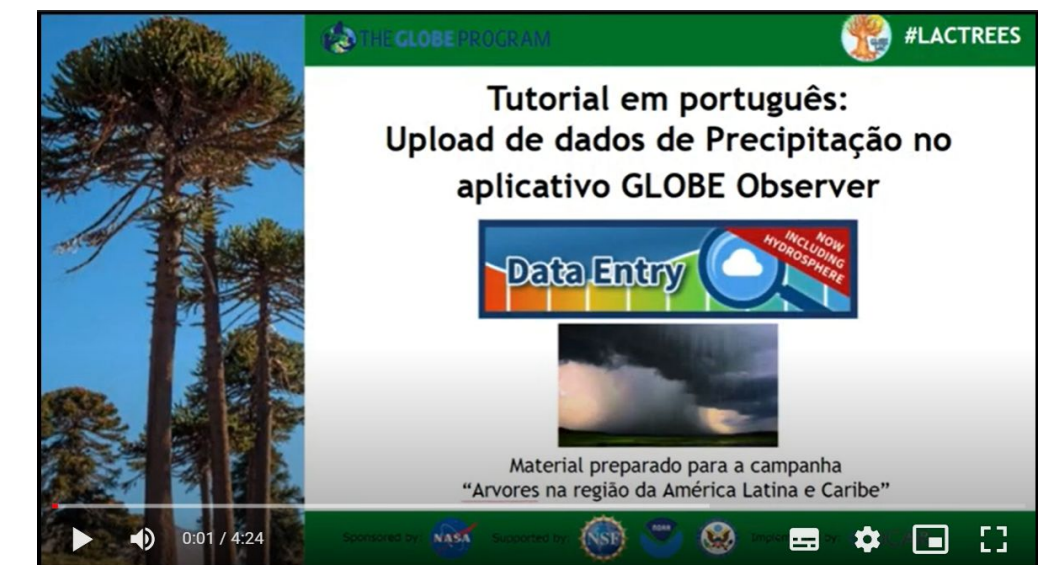


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# Tutorials prepared for the campaign

- Tree height with GLOBE OBSERVER application (Spanish, Portuguese and English)
- Tree height with clinometer (Spanish, Portuguese and English)
- Land coverage (Spanish, Portuguese and English)
- Canopy and ground cover (Spanish)
- View and download data (Spanish and Portuguese)
- Uploading precipitation data to GLOBE OBSERVER (Spanish and Portuguese)
- Uploading Air Temperature data to GLOBE OBSERVER (Spanish and Portuguese)
- Uploading Surface Temperature data to GLOBE OBSERVER (Spanish and Portuguese)
- Uploading Tree Height data to the GLOBE website (Spanish)





## Incentives for participation

**Five** stipends of **US\$300** each were awarded to 5 teachers from different educational centers for field trips with their students to a park or nature reserve where they could perform other measurements for the campaign.

A total of 10 applicants applied.

Profesor / Teacher:	Escuela / School:	País / Country:
<b>Emiliano Vinocur</b>	EETP N° 449 "Pago de los Arroyos" y EPPI N° 1345 "Nuestra Señora del Carmen"	<b>Argentina</b> (Acebal y Pujato)
<b>Juan Manuel Martínez</b>	Escuela No. 88 Alfred Nobel (rural)	<b>Uruguay</b> (Canelones)
<b>Erquinio Taborda</b>	Semillero de Investigación en Ciencias Espaciales (SICE)	<b>Colombia</b> (Baranquilla)
<b>Maria Fernanda Kielmanowicz</b>	Colegio de la Mesopotamia	<b>Argentina</b> (Victoria)
<b>Raúl Rocha</b>	Institución Educativa Carlos Vieco Ortiz	<b>Colombia</b> (Medellín)

# Incentives for participation

## Regional Meeting in Panama:

6 teachers and 6 students were chosen to attend the **2023 LAC Regional Meeting**. They could choose to bring a second student at their own expense.

The students participated in activities organized for them, with other children from the host country and the teachers participated in the regional meeting and the training that was developed.

**12 applications** were submitted.



Profesor / Teacher:	Escuela / School:	Estudiante/ Student:	País / Country:
<b>María Fernanda Kielmanowicz</b>	Colegio de la Mesopotamia	<b>Victoria Zanoni (12)</b>	<b>Argentina</b> (Victoria)
<b>Emiliano Vinocur</b>	EETP N° 449 "Pago de los Arroyos" y EPPI N° 1345 "Nuestra Señora del Carmen"	<b>Juan Manuel Hernández (18)</b>	<b>Argentina</b> (Acebal y Pujato)
<b>María Inés Amato</b>	St. Luke's College	<b>María Pilar Bartrons (14)</b>	<b>Argentina</b> (Buenos Aires)
<b>Juan Felipe Restrepo</b>	Grupo de Investigación Biontessori	<b>Diego Andrés Luna (15)</b>	<b>Colombia</b> (Cartagena)
<b>María Marta Gutiérrez</b>	St. Luke's College	<b>Felipe Sanes (15)</b>	<b>Argentina</b> (Buenos Aires)
<b>Juan Manuel Martínez</b>	Escuela No. 88 Alfred Nobel (rural)	<b>Bruno Acevedo (11)</b>	<b>Uruguay</b> (Canelones)



# Presentation of Research Reports at the Regional Meeting of Panama





# Student experience at the Panama Regional Meeting Field trips





# What's coming this year

A new phase

The Year of Climate and Carbon

Campaign registration link:  
<https://acortar.link/B9k8mY>





# This year the campaign will focus on:

Analyze the relationship of changes in climatic variables in the development of trees and land cover throughout the year in the study sites.

## Specific objectives:

Measure tree height and diameter to identify growth patterns and trends of change (ecological succession).

Observe and record the phenological response (leaf color, flower, fruit) of the trees to climatic variables throughout the year.

Determine the carbon storage capacity of the measured trees.

Describe land cover changes where trees grow by identifying drivers of change.

Contribute to climate literacy by understanding their teleconnections to explain various events that impact socio-ecosystems

Recognize the most important tree species in the region



# Expected results



Biometry and phenology records of trees observed throughout the year.



Records of climatic variables throughout the year.



Research relating land cover change and use to climatic variables



Estimation of the carbon storage potential of the trees studied



Calendar with popular trees in the region



Narratives on trees, climate and carbon in the region



Training actions to explain conceptual and procedural elements of the campaign



## Planned activities

- Webinars
- Protocols
- IOP (Intensive Observation Period)
- Guest presenters
- Tree photography contest
- Tutorials and other resources in 3 languages
- New learning activities
- Conducting virtual workshops/online modules
- Measurements
- Collaborative padlets
- List of popular species uploaded by participants
- Project advice to present research projects to the IVSS



The GLOBE Program

"TREES WITHIN LAC" CAMPAIGN

**EXPLORING THE VEGETATION'S RESPONSE TO THE SEASONS OF THE YEAR**

MARCH 21ST 06:00 PM  
(ARGENTINIAN TIME) ZOOM PLATFORM

Sponsored by:  Supported by:    Implemented by: 



# New challenges

## Photo Contest:

Contest for students from elementary school to college.

The rules will be launched on March 1 and the contest will run from that date to April 15.

- Link to the contest:

<https://forms.gle/vBzNXc5cHAJE29h96>

TREES WITHIN LAC'  
CAMPAIGN YEAR 2



## Photography Contest

"Celebrating the Connection Between Trees, Climate, and People"



Registration link in the description

**DEADLINE OPEN UNTIL APRIL 15TH**

Sponsored by:  Supported by:    Implemented by:  UCAR

# New challenges

## Student Podcasts

Interviews with outstanding students from the LAC region about their projects and future research.





# Protocols to be used in the campaign



**Biosphere**



**Atmosphere**

# IOPs (Intensive observation periods)

## Campaign IOPs:

- April 1 to May 10, 2024 (Fall)
- July 1 to August 10, 2024 (Winter)
- October 1 to November 10, 2024 (Spring)

## Optional: (considering the Caribbean school year)

- January 15 to February 15, 2024

Recommended: registration of at least **two protocols** in each period



# GLOBE LAC Campaign Team Leaders



**Mariana Savino**  
Coordinadora  
de la Oficina Regional  
GLOBE para América  
Latina y el Caribe  
Argentina



**Josefina González**  
Asistente de Comunicación  
de la Oficina Regional  
GLOBE para América  
Latina y el Caribe  
Argentina

# GLOBE LAC Campaign Team Members



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**Ana Beatriz Prieto**

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¡Muchas gracias!  
Thank you so much!  
Muito obrigada!

¿Preguntas?  
Questions  
Perguntas?

