

Uruguay



Name:	ANDREA VENTOSO
Function:	Country Coordinator (CC) and member of the 'Trees within LAC' Campaign Committee
Organization:	Ministry of Environment
E-mail:	andrea.ventoso@ambiente.gub.uy
Tel:	2900.61.36 int. 4654
WebSite:	https://www.gub.uy/ministerio-ambiente/

Organization and Staff Number: Ministry of Environment, Division of Environmental Education and Public Participation. 1

Funded by: Ministry of Environment and grants from the U.S. Embassy

Collaborating Organizations/Individuals: United States Embassy, NGO Cultura Ambiental (grant administrator)

GLOBE Schools: 171

GLOBE Protocol Areas: Atmosphere, Hydrosphere, Biosphere, Pedosphere.

Number of schools that reported data over the past year: 13

Data entered in the past year: 2,789

Program Implementation, International Cooperation in the GLOBE Network, and Activities in the Past Year (categorized by the objectives of the GLOBE Strategic Plan 2018-2023):

- **Education:**
 - ❖ **Participation in the "Trees within LAC" Campaign Committee** in its second year. Activities conducted for the region include:
 - Monthly Webinars
 - Development of tutorials on app and website usage and how to take measurements.
 - Organization of a photography contest on trees in our region.
 - Conducting a series of 7 workshops on Atmosphere and Biosphere, covering all protocols in these areas.



- Creation of podcasts with students to be promoted on GLOBE LAC's social networks.
 - Advisory and follow-up meetings with teachers' projects for presentation at the IVSS. Internal meetings of the campaign committee to organize, plan, and develop annual actions.
- ❖ **Visits to schools** to provide mini-workshops on various protocols and activities related to the "Trees within LAC" Campaign, assistance with measurements, and use of the GLOBE Observer app.
- **Instituto Adventista del Uruguay, Progreso, Canelones** (April 12): Definition of pixel and Canopy and Soil Cover Protocol with 5th-year high school students and Professor Shirley Harreguy.
 - **Escuela No. 88 Alfred Nobel, Las Violetas, Canelones** (April 9): Senescence and leafing activities, and Leaf Classification with 5th and 6th-grade primary students, Teachers Darío Greni and Juan Manuel Martínez. Recording of student podcast with Juana Bazzino and Bruno.
 - **Visit of Dr. Claudia Caro**, GLOBE Mentor Trainer from Peru, to conduct a workshop at Escuela No. 88 Alfred Nobel on research idea development based on the Photo Voice technique and work with Land Cover Classification identification (June 6).
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- ❖ **8th National Meeting of the Environmental Education Network and 3rd Latin American Round.** Organized by the Ministry of Environment, Division of Environmental Education and Public Participation. My task was to evaluate the presentations in the Biodiversity and Protected Areas Axis, out of a total of 11 thematic axes. There were 66 speakers and 316 attendees from June 7 to 9. This event was held as part of the Expo Uruguay Sostenible 2024. Also, within this context, I presented and there were presentations on the GLOBE Program as follows:
- *GLOBE Program "Trees within the LAC Region"*: Results from the first year and new campaign. Presented by Lic. Andrea Ventoso.
 - *The Role of Environmental Education in Ecosystem Services Conservation*. Presented by Dr. Claudia Caro from Universidad Agraria La Molina, Peru.
 - *On the Flight of Butterflies*. GLOBE research project presented by Mtro. Dir. Darío Greni and Juana Bazzino from Escuela No. 88 Alfred Nobel.
- Science
 - ❖ Participation as a Jury Member for IVSS 2024 for the fifth consecutive year, evaluating 3 international projects.
 - ❖ Participation of Uruguayan projects in the LAC Virtual Science Fair held in June, featuring projects from Escuela No. 88 in Canelones, Liceo 1 in Bella Unión, and Colegio Adventista del Uruguay, led by teachers Darío Greni, Martín Lucas, and Shirley Harreguy.
 - ❖ Attendance as an invited guest at the GLOBE Annual Meeting in Fredonia, United States, from July 15 to 18, 2024. There, posters were presented regarding the status of the GLOBE Program in Uruguay and the Photography Contest held as part of the "Trees within LAC" Campaign. Examples of learning activities specifically prepared for the meeting were also implemented to promote and share knowledge with the rest of the



GLOBE community. Additionally, we presented on the Campaign, its development, activities involved, workshops, webinars, and data collection figures.

- ❖ As part of the "Trees within LAC" campaign activities, I was responsible for advising two of the projects presented by the region for participation in the Regional Meeting in Panama (Professors María Fernanda Kielmanowicz and María Marta Gutiérrez).
- ❖ In February of this year, I invited several GLOBE teachers and trainers to participate in the project "Butterflies and Environmental Variables" and to submit a proposal for funding instruments, materials, and field trips to conduct observations and record the environmental variables accompanying the presence of butterflies, particularly atmospheric and some biospheric variables. These are recorded according to GLOBE protocols. We proposed the project to YLACES, a nonprofit organization chaired by Dixon Butler, and in July, we were informed that the grant was awarded. This allowed us to proceed with the acquisition of instruments and materials, shipment along with funds for field trips, and we are now in the initial phase of the project, with common work elements defined (field guide, data sheet developed in the project, dynamic Excel spreadsheet for recording). We have also already begun with the first two lectures delivered by the entomologists advising us: Dr. Gabriela Bentancur-Viglione (from Uruguay) and Juan Farina (from Argentina) for the students and teachers involved in the project, as well as some other potential project members.

The team involved in the project is composed as follows:

From Argentina:

Professor of Geography, Mentor Trainer, and National Coordinator Marta Kingsland.
 Biologist and Professor of Biology María Marta Gutiérrez (from Saint Luke's and Santísima Trinidad schools – participating with two groups, one at each school).
 M.Sc. in Science Didactics and Mentor Trainer Claudia Romagnoli (advisory teacher for Maestra Cintia at Primary School No. 1345 Nuestra Señora del Carmen).
 Biology Teacher and Veterinarian María Fernanda Kielmanowicz (Colegio de la Mesopotamia).

From Peru:

Dr. Claudia Caro, Mentor Trainer (Professor of Ecology at Universidad Agraria La Molina) with a group of students.

From Uruguay:

Teacher and Director, Trainer Darío Greni (teaching and directing Public Primary School No. 88 Alfred Nobel).

Librarian, Mentor Trainer, and National Coordinator Andrea Ventoso.

The first phase of the project began on August 19 and will continue until the end of November, coinciding with the end of the school year in our countries.

- Community

- Podcast with Sofía Losada, a student from San Lucas School in Argentina, who was part of the research project presented at IVSS in 2024. (April 16)
Available [here](#)

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- Podcast recorded with students from Rochester School: Laura Pardo, Diego Sierra, and Angelina Chiodo, from Chía, Colombia, who won the stipend to present their



project at the Annual Meeting in Fredonia, United States, from July 15 to 18. Available [here](#).

- Podcast with Diego Andrés Luna from the Biontessori Research Group in Cartagena, Colombia, who presented his project at the LAC Regional Meeting in Panama last year. (To be edited soon)

- Technology

Providing guidance to teachers who require assistance with the use of the GLOBE Observer app and data entry both on the app and the GLOBE website.

Advising the Costa Rican Country Coordinator, Ana Lorena Orozco, on how to manage the GLOBE website for Coordinators.

- Communications

- **A streaming session conducted by Meteorologist Graciela Salaberri from the NGO Amigos del Viento titled "Education in Science and Citizen Monitoring: The GLOBE Program."** This session discussed what the GLOBE Program is, how it operates, the science and education activities it develops, campaigns, protocols, use of applications, etc. The interview was conducted via Radio Epicentro Uruguay on Facebook and shared by the NGO's networks in Latin America. Available [here](#)
- **Star of the Butterfly and Environmental Variables Project sent to GLOBE Communications for publication.**

Plans and Ideas for the Coming Year:

- The Regional Collaborative Project "*Butterflies and Environmental Variables*" will begin implementation on August 19. The first measurement period will run from August to November 2024, with the second period starting in March 2025. During this project, we will measure and record air temperature, surface temperature, precipitation, cloud cover, relative humidity, and wind, as well as land cover classification. We hope to have at least 3 projects presented at IVSS 2025. Funding has been secured through a grant from YLACES.
- We have been invited by Uruguay, along with educator Darío Greni, to participate in the international collaborative project on Hydrosphere and freshwater macroinvertebrates. This project will involve educators from four continents and will be led by Trainer Peggy Folleta for the 2024-2025 period.
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- Organize new courses for Uruguayan educators and a workshop to learn and review advanced protocols in all four spheres to refresh knowledge, train new teachers, and keep existing teachers active. Invite international trainers to make it more engaging.
- Hold meetings to work on data entry with teachers, as protocols are often completed but data is not uploaded to the website or app due to unfamiliarity or reluctance.
- Continue visits to schools and high schools, as this activity encourages teachers to engage with GLOBE and students enjoy field science activities and using the GLOBE Observer app.
- Encourage, guide, and support teachers and students in presenting their projects at IVSS 2024 and also at national science club fairs.



- Provide the instruments and materials needed by teachers for specific periods to carry out their GLOBE classroom activities and research. This often includes additional bibliographic materials developed by the ministry related to various GLOBE themes (native species, pollinators, protected areas, biodiversity, climate change, etc.).
- Certify 2 new Mentor Trainers to assist in training teachers and tutoring online courses.

STAFF:

Country Coordinators:

B.Sc. Andrea Ventoso

Mentor Trainer in Atmosphere, Trainer in Hydrosphere
Ministry of Environment

E-mail: andrea.ventoso@ambiente.gub.uy

Telephone: 2900.61.36 ext. 4654

Honorary Staff

Alternate GLOBE Coordinator

Teacher Dir. Patricia Píriz

Trainer in Hydrosphere and Biosphere

E-mail: patywuan@gmail.com

Teacher Director Darío Greni

Trainer in Hydrosphere and Atmosphere

E-mail: dariovgreni@gmail.com

B.Sc Elena Rodó

Division of Environmental Quality – Water Quality
Ministry of Environment

Prof. Chem. Alejandra Gualco

Trainer in Hydrosphere and Mosquito

E-mail: prof.alejandraqualco@gmail.com

PHOTOS:



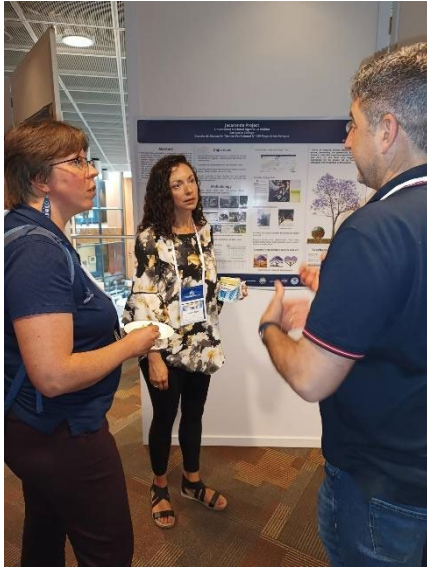
Podcast with Diego Andrés Luna, Biontessori Research Group, Cartagena, Colombia

New International Group for Research on Hydrosphere and Macroinvertebrates in Freshwater Courses. Collaborative Project Across 4 Continents.



Left: Presentation of the 2nd Year of the “Trees within LAC” Campaign at the GLOBE Annual Meeting 2024. Members of the Campaign Committee and Director of the Regional Office.

Right: Presentation of Learning Activity: Wildlife Monitoring with GLOBE Atmospheric Parameters.



Exhibition of posters during the GLOBE Annual Meeting. Uruguayan teacher, Master Director Darío Greni, and his research project on butterflies.

Visits to educational centers to promote GLOBE activities and measurements using the app.



8th Network of Environmental Education Meeting and 3rd Latin American Round (June 7-9, 2024)

