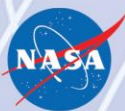


# DOMINICAN REPUBLIC ANNUAL REPORT

AUG 2018 – AUG 2019

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## INTRODUCTION

Since its start in the Dominican Republic, the GLOBE Program has grown and is getting larger every year. Presently we have:

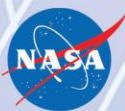
5 MASTER TRAINERS  
26 TRAINERS  
5 GOVERNMENTAL INSTITUTIONS  
\*MINISTRY OF EDUCATION  
\*MINISTRY OF ENVIRONMENT  
\*MINISTRY OF PUBLIC HEALTH  
\*BOTANICAL GARDEN  
\*OFFICE OF THE FIRST LADY  
43 PUBLIC & PRIVATE SCHOOLS  
8 NGO'S  
4 UNIVERSITIES  
92 TEACHERS  
5 PRE-SERVICE TEACHERS  
121 GLOBE OBSERVERS  
1,361 STUDENTS

GLOBE students, alumni, teachers, and citizen scientists in the Dominican Republic are changing the way our society interacts with the environment. When the GLOBE Program started in the country in 1997, the nation did not have a Ministry of Environment but a humble Environment Project (sponsored by the German Government). Environmental issues received the lowest rank at every decision making. Even the National Tree and Flower were projects presented by our GLOBE office.

Nowadays, Dominicans are increasingly concerned about the ecological welfare of their communities and the world and are willing to act to preserve our water, land and air. Last but not least, many GLOBE Alumni are opening environmentally friendly businesses showing their commitment to their ecosystem; others participate in green movements. All demonstrate a full awareness and responsibility for their impact on the planet.

We are sure that the GLOBE Program will continue to inspire future generations of scientists and responsible citizens.

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## EDUCATION

### 1.- GLOBE Program in the PUCMM Curriculum

GLOBE DR is working with the PUCMM (Pontificia Universidad Católica Madre y Maestra) to include the GLOBE Protocols in all the Bachelor Degrees curriculum offered in the institution. The prestigious university recently opened a building for Environmental Studies and is interested that all their graduates become ecological citizens. PUCMM recognized the scientific achievements of 5 GLOBE schools giving “Certificates of Excellence” to the students that presented the best projects on the 2019 Science Fair. The students also received the honour to have the university's science professors as mentors and the new building facilities for their next year's science projects.

### 2.- GLOBE in the curriculum

Many GLOBE Program Protocols are embedded into the Science Curriculum of all the GLOBE Schools based on grade level, content and competencies. The Protocols give students a hands-on look at concepts studied in their textbooks and allows them to make connections with real-world social and environmental issues through critical thinking analysis.

### 3.- Scholarships for GLOBE Students

Twenty Five GLOBE students received scholarships at national and international universities. The press highlighted the edge the program gives to the student's education. The prestige and appreciation of the GLOBE Program in the country raised after the achievement. It is important to highlight that the 4 students that attended the GLOBE GLE 2018 in Ireland where among the recipients of the scholarships.

### 4.- The next frontier

Valentina Saavedra, the GLOBE student that with help from her GLOBE teachers, participated in the Kepler Telescope Exoplanet Project and was accredited with finding a five-planet system; received a full scholarship at INTEC University (Instituto Tecnológico de Santo Domingo) for her extraordinary achievement. This milestone highlights the way the GLOBE Program develops specific skills to observe, analyzed data, hypothesize, recognize patterns, to be curious and discover new things.

The Aeronautical Engineer Edwin Sánchez, a GLOBE scientist and professor at the university, participated in recognition of the talented student.

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## SCIENCE

### 1. SCIENCE FAIR 2019

The GLOBE theme this year, "Water, Ecosystem and Human Development", emphasized topics involving Chemistry, Biology, Engineering and Environmental Science. Students used GLOBE Program protocols to investigate the relationships science has in our daily lives, community and the critical roles they play on our fragile planet. As we do every year, all GLOBE schools organize Science Fairs that presented local issues, their impact and possible solutions.

2. Ms Waleska Rivera, Senior Trade Commissioner and Commercial Counsellor of the Canadian Embassy was impressed with the GLOBE students' projects, congratulated the teachers, and offer scholarships in Canada for the young scientists.

3. The next Mosquito Protocols will be organized with the American Embassy help in the following months, as part of the GREEN FAIR activities. Unfortunately, our office runs out of funds after the first workshop, that was a huge success. GLOBE DR have to wait for the next year's budget to organize the activity.

4. Yamila Michelle Franco, a Dominican GLOBE Alumni, was the recipient of the ACTÜA Experience Award for her achievements inspiring girls to study science and reach their potential. ACTÜA is Canada's largest outreach STEM organization inspiring the next generations of innovators through hands-on STEM. Yamila Michelle graduated with honours at the University of Victoria, Canada and worked in the Science Venture of the prestigious university.

### 5. First GLOBE pilots

The GLOBE Program in DR graduated the first 40 drone pilots as part of the Remote Sensing program. Thermometers and infrared cameras are installed in the drones to conduct studies and gather data for further analysis.

6. GLOBE DR promoted the Earth Hour with the Santo Domingo City Council on 2019 to inspire urgent action for the environment. Many citizens pledged their support for the planet and encouraged the government to push the preservation of nature up the global agenda.

8. GLOBE DR organized two presentations to the parents interested to send their kids to summer camps in the USA and recommended the NASA Space Camp at the Kennedy Space Center Visitor Complex. The Space Camp offers the Astronaut Training Experience (ATX) program. This half-day extensive "astronaut training" program is being provided for teens over 14 years old. GLOBE DR continue inspiring the next generation of space scientists in the Dominican Republic.



## TECHNOLOGY

1. Technology use in the GLOBE Program included Drones, Robotics and Virtual/Augmented reality. Students supplemented both their Computer Science and Science curriculum with the incorporation of the use of technology. Drones with infrared imaging technologies were used to monitor the stress of crops on different plantations. Robots were programmed to find the optimum location, based on light measurements, for solar panel placement. Virtual/Augmented Reality goggles provided varied, immersive environments for students to interact inside travelling virtually to various ecosystems and appreciating the planet Earth its movements and characteristics.

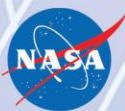
## COMUNITY

1. GLOBE DR promoted the Earth Hour with the Santo Domingo City Council on 2019 to inspire urgent action for the environment. Many citizens pledged their support for the planet and encouraged the government to push the preservation of nature up the global agenda.

2. Twelve GLOBE Schools participated in the International Coastal Clean-Up activity. This year the coastal clean up was not relegated to one day, but an entire year's schedule. Students and citizens clean the beaches of the island, raising awareness of the pollution in the oceans and the urgent changes in habits that are required to reduce plastics and other pollutants in the water.

3. The Santo Domingo City Mayor invited GLOBE DR to give a presentation to the Paraíso Neighborhood Council. GLOBE DR trained the citizens to control the mosquito population in the area affected by a proliferation in a pond nearby. The participants praised the need for these types of activities to educate everyone on how to identify and eradicate the mosquitoes, especially the one that spreads the ZIKA virus.

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## COMMUNICATION

1.- GLOBE activities are well received and covered by the Dominican Press and Media. GLOBE teachers and students are always present in various media formats for using protocols and their innovated ideas in applied environmental science.

2.- MICROSOFT INNOVATIVE EDUCATOR Virtual Conference

This year we had a spectacular event where our newly trained GLOBE interns presented their work and the GLOBE Protocols via webinar to the Microsoft Innovative Educator Program. Here hundreds of teachers from Latin America (Mexico, Colombia, Panama, Costa Rica, Puerto Rico, Peru, Argentina, Chile, Paraguay, Uruguay, Guatemala, El Salvador, Trinidad and Tobago, Jamaica, among others) were introduced to the GLOBE Program and heard firsthand how it can be used as an essential tool in education in their schools.

## STAFF

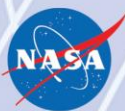
1.- INTERNSHIPS

Students studying Biology from the University of Victoria, Canada, came to the Dominican Republic to impart science laboratory classes to both the elementary and secondary levels. The interns completed their online training through the GLOBE website (and were trained in person with GLOBE Teachers). The exercise allowed them to gain all the knowledge and skills necessary to keep up with a new student body.

2.- GLOBE DR promotes that all the GLOBE schools required their science teachers to complete the online certification as part of their professional development plan. This activity will be perfect at the beginning of the school year before classes start. Visits to another GLOBE teacher's class and field workshops with experts are also part of the program.

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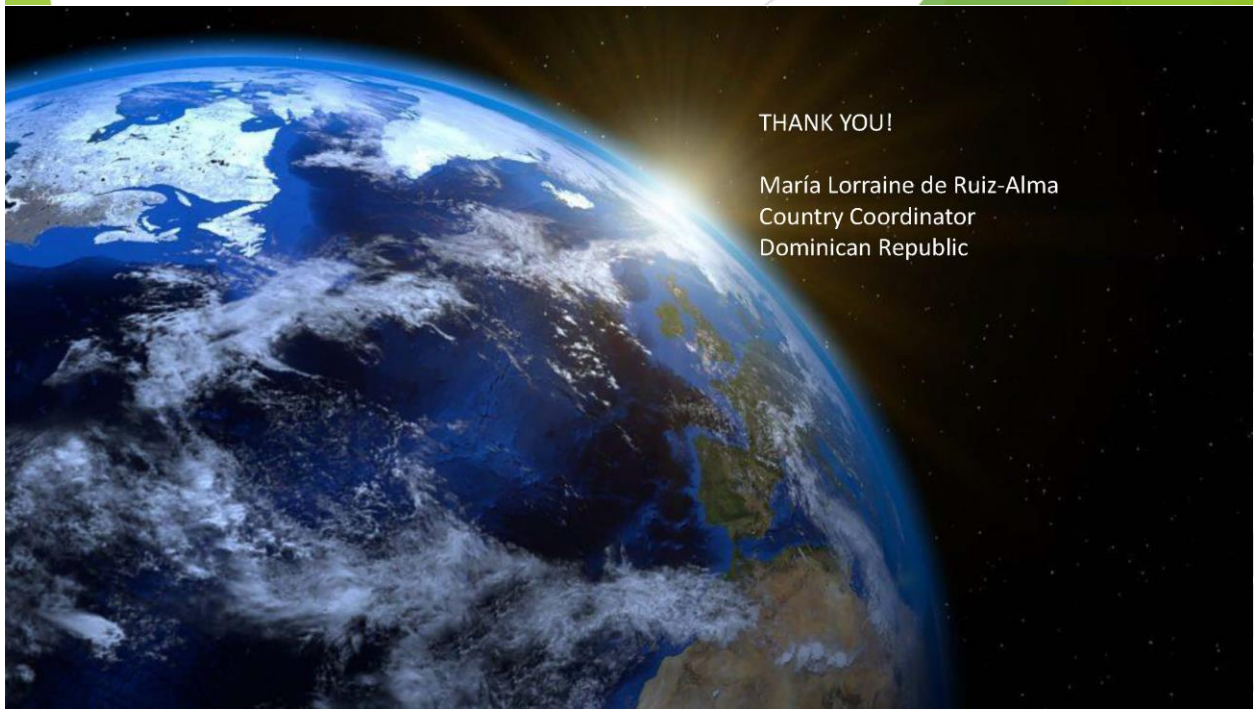
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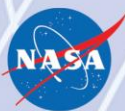
## APPENDIX



THANK YOU!

María Lorraine de Ruiz-Alma  
Country Coordinator  
Dominican Republic

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