

Malta

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Organization and Number of Staff:

Neither of the individuals overseeing GLOBE Malta is employed full-time by GLOBE. The Country Coordinator (CC) holds a full-time professorship at a university, and GLOBE-related tasks are undertaken beyond the scope of his regular duties. The Deputy Country Coordinator (Deputy CC) is a classroom teacher officially allocated three weekdays to actively advocate for GLOBE in schools and assist teachers.

Funding by:

GLOBE Malta operates without dedicated funds. Instead, it receives backing from the Directorate for Learning and Assessment Programmes (Ministry for Education, Sport, Youth, Research and Innovation) and the Centre for Environmental Education & Research (University of Malta). Additional support comes from the US Embassy, HSBC Bank (Malta), and Europe Direct Gozo, which contribute by acquiring scientific equipment and sponsoring events for GLOBE Malta.

Cooperating Organizations/Individuals:

A researcher affiliated with the Institute of Earth Systems at the University of Malta is actively involved in directly assisting 9 schools in a project focused on weather observations. Furthermore, the non-governmental organization (NGO) Nature Trust – FEE Malta actively encourages GLOBE investigations in conjunction with activities associated with the Eco-Schools and LEAF programmes.

GLOBE Schools (what types, how many):

Total number of schools: 49. The schools are from the State, Church and Independent Sectors and are distributed thus: Primary schools (5 -11yrs): 30; Middle Schools (11-13yrs): 3; Secondary Schools (13-16yrs): 10; Post-Secondary Schools (16 – 18yrs): 2; University: 1; and Field Study Centres: 3.

GLOBE Areas you and schools focus on:

- Atmosphere (Air Temperatures, Barometric Pressures, Cloud Observations, Precipitations, Relative Humidities, Surface Temperatures);
- Biosphere (Green Up/Green Down, Biometry Trees, Vegetation Covers);
- Hydrosphere (Water Temperature, Water pH, Alkalinity, Conductivity, Transparency, Dissolved Oxygen);
- Pedosphere (Soil Temperatures, SMAP Soil Moisture)

Number of Schools Reporting Data Over Past Year:

31

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

1. Education

Integrated GLOBE into academic programs, we offer study units for the BSc Science for Education & Communication and the Masters in Teaching & Learning.

Conducted in-school **induction training sessions for students and teachers** of new GLOBE schools.

Conducted various lessons demonstrating how GLOBE seamlessly aligns with and enhances normal classroom schedules, illustrating its practical application in various educational contexts.

Presented the work done on Urban Heat Islands through GLOBE during the EduChange intensive 7-day field course in Malta. EduChange is a European funded project that aims to promote innovative teaching methods such as short educational clips, e-learning platform, multimedia online maps, and gamification. Attendees from the Netherlands, the Czech Republic, Norway and Malta were also given an overview of the GLOBE Program, the GLOBE Observer App and the Surface Temperature Field Campaign.

Visited several schools and led fieldwork sessions with students from seven schools. During the fieldwork student were taught how to measure tree height, to explain why tree height measurements are important and how to use the trees tool on the GLOBE Observer App.

2. Science

European Autumn Phenology Campaign 2022: The campaign was active between September and December 2002. Students from **3 schools** continued observing and gathering data from the same tree they had observed during the Spring Campaign. They successfully completed this Campaign and received a certificate.

European Spring Phenology Campaign 2023: Took place in Europe between February and June. Students from **10 schools** (3 of which 3 were new to the campaign) observe their tree growing from buds to leaves after its winter sleep and upload their measurements into the GLOBE database.

Urban Heat Island Effect Campaign: The campaign which runs in October, December, and March, is focused on looking at the impact urbanisation has on the Earth's surface temperature and how the surface temperature changes the dynamics of the Earth's atmosphere. The students' observations of surface temperature and atmospheric parameters contributed to a vast dataset accessible to scientists worldwide, facilitating the study of the urban heat island effect. **Twelve schools** from Gozo and Malta collected surface temperature readings using an Infrared Thermometer.

Volunteer Weather Observer Programme: Dr Charles Galdies from the Institute of Earth Systems, University of Malta, is the mentor and coordinator of this pilot project. A total of **ten educators** from primary and secondary State, Independent and Church schools have been selected and are recording and monitoring rainfall data.

Collaboration projects:

- **with Europe Direct Gozo:** Eleven schools participated in a year-long **campaign focused on improving air quality.** Schools were provided with the necessary equipment and guidance to carry out nitrogen dioxide measurements.
- **with Xrobb I-Għaġin ESD Programme and Ambjent Malta: The project, I Start as a Seed,** involved webinars about soil and the relation between soil, animals, plants and trees. Students carried out simple soil experiments and seed-sowing. A total of 864 students and 75 educators from 18 primary schools participated in outdoor learning sessions about the benefit of trees, the human impact on trees; and how to use the GLOBE Observer App to observe and report what's on land and in the sky.

- **with [GLOBE Ireland](#) and [GLOBE Israel](#)**: students took 5 **surface temperatures** of 3-4 different surfaces (concrete, bare soil, natural grass and artificial turf) together with **cloud observations** over 4 weeks in March 2023.

GLOBE Cooling Down Students' Investigation: Following the success of the first edition of the GLOBE Cooling Down Students Investigation by GLOBE Malta and the Xrobb I-Għagin Outdoor ESD Program, the second edition **provided a communication channel between schools and local councils**. Students shared their research from the GLOBE Student Investigation and projects related to tree inventories with two mayors. They also explored justice issues related to the built environment and proposed related actions to bring about change within the schools and the local community. The students together with the mayors **explored the issue of urban heating and how local communities can be more sustainable**.

GLOBE International Virtual Science Symposium 2023: This year GLOBE Malta had **7 research reports submitted** for the IVSS, two of which involved national and international collaboration. (i) *Clean Air Matters: A Study on the State of our Atmosphere*; (ii) *The State of Our Sea: A Comprehensive Study of Marine Parameters*; (iii) *Can a tiny island in the Middle of the Mediterranean have Air Pollution?*; (iv) *How can we improve air quality at our school and its surroundings?*; (v) *The Impact of Surface Material on Temperature Variations*; (vi) *Comparing pH levels and surface sea water temperatures at two sites in Sliema*; and (vii) *Air Detectives: Exploring Air Quality at St Francis School, Victoria*.

GLOBE Water Bodies Challenge by Europe and Eurasia Implementation Office: Eleven schools participated in the 4th edition of the GLOBE Water Bodies Challenge. The students had fieldtrips to different water bodies in the Maltese Islands and shared their findings with GLOBE Europe and Eurasia community on the Water Bodies Challenge Padlet. All schools were awarded a certificate and a virtual badge.

3. Community

GLOBE student Gabriel Grech from Sacred Heart Minor Seminary, Victoria, Gozo was selected as one of the **new vloggers** for 2023-2024. Benjamin Copperstone from St Michael School was selected as one of the **GLOBE Student Vlogger Alumni Mentors** for 2023-2024.

The Deputy CC was nominated and elected member of **GLOBE Europe and Eurasia Regional Board**.

The Deputy CC served as a **judge for IVSS 2023**.

The Deputy CC was awarded the US Embassy award in recognition of her contribution to enhancing the relations between the US and Malta through The GLOBE Program.

4. Technology

The Deputy CC GLOBE Malta provides personalized support for teachers during their e-Training, while adding sites, inputting and visualizing data on GLOBE website.

5. Communications

Communication with GLOBE schools and teachers was maintained through **e-mail and one-to-one school-based meetings** by the Deputy CC.

Showcasing and promoting the work of the participating schools through regular updates of the **GLOBE Malta Facebook page** (with 1.2K followers to date) and the Malta Page on the GLOBE website.

The GLOBE Program and the students' investigations were disseminated through **newspaper articles and features on popular TV & Radio programmes on the national channel**.

Managing the GLOBE Malta stand at Foundation for Environmental Education (FEE) fest 2023 during which visitors were introduced to the GLOBE program.

Celebrating GLOBE's 28th birthday and Earth Day: The U.S. Embassy Valletta, Malta, GLOBE students from five GLOBE schools and representatives from the Green Diplomacy Network came together to show their support for environmental protection and joined in a community clean-up event in Sliema. Former NASA Chief Scientist Dr Jim Green and Sliema Mayor Mr John Pillow, joined in singing Happy Birthday GLOBE!

Participating in the **GLOBE Science Fair at Villa Rundle Gardens, Victoria** during which students presented their research in the Europe Direct Gozo – GLOBE Malta Air Quality Campaign. Students participated in a panel discussion where they exchanged ideas and opinions on how to tackle air pollution. The event also included a GLOBE birthday celebration.

The Deputy CC was one of the panelists during the Eastern Regional Council Annual General Meeting about 'Creating Liveable Cities!' on 3rd June 2023. She shared how students are engaged in data collection to better understand city dynamics, urban temperature, and air quality and how this empowers them to act in promoting sustainable cities and communities.

Plans and Ideas for Next Year:

- Continue engaging in discussions with the Ministry of Education to elevate the current position of the Deputy Country Coordinator (Deputy CC) to a full-time role.
- Continue actively exploring opportunities for further collaborative investigations, involving schools from other GLOBE countries.