# **ANNUAL REPORT**

GLOBE - SRI LANKA

2024-2025













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#### INTRODUCTION

#### **Global Learning and Observations to Benefit the Environment (GLOBE)**

The GLOBE program is an international science and education initiative that engages students and the public in environmental data collection and scientific inquiry. In Sri Lanka, the program aims to promote environmental awareness and understanding through hands-on learning experiences.

#### GLOBE in Sri Lanka

The GLOBE program in Sri Lanka is implemented through collaboration between the Ministry of Education, Government Universities, and the Central Environmental Authority. It provides a unique platform for students and teachers to engage in scientific research while contributing to global environmental studies.

#### **Primary Objectives of the GLOBE Program**

1. Environmental Observation

GLOBE encourages participants to collect data on various environmental parameters such as:

- Atmosphere and weather
- Water quality
- Soil
- Land cover

Using standardized protocols, this data is contributed to a global database, helping advance worldwide environmental research.

2. Science Education

The program emphasizes authentic scientific inquiry by involving students in fieldwork and data collection activities. These hands-on experiences help students.









- 3. Learn about environmental science concepts
- 4. Develop research and data analysis skills
- Gain a deeper understanding of environmental challenges
   This approach fosters environmental stewardship among young learners.
- 6. Collaboration and Networking GLOBE provides opportunities for collaboration and knowledge sharing at local, national, and international levels. Through workshops, conferences, and online forums, participants can share best practices, exchange research findings and build networks with other environmental enthusiasts and professionals.

#### Impact of GLOBE Programme in Sri Lanka

By participating in the GLOBE program, students, teachers, and the wider community in Sri Lanka contribute to meaningful environmental research while enhancing their scientific knowledge and skills. The program not only fosters environmental responsibility but also strengthens scientific inquiry and collaboration among participants.

Global Learning and Observation to Benefit the Environment (GLOBE) is an international science and education program that provides students and the public with the opportunity to participate in data collection and the scientific process. GLOBE Sri Lanka aims to promote environmental awareness and understanding through hands-on learning experiences. In Sri Lanka, the GLOBE program offers a unique platform for students and teachers to engage in scientific inquiry while contributing to global environmental research.

The GLOBE program in Sri Lanka operates through collaboration between Ministry of Education, Government universities and Central environmental Authority. Its primary objectives include,

#### • Environmental Monitoring

GLOBE encourages students to collect environmental data on parameters such as atmosphere and water quality, soil moisture and land cover. By gathering this data using standardized protocols, students and teachers contribute to a global database.











Supported by:

#### **Science Education**

GLOBE provides students with opportunities to engage in authentic scientific inquiry. Through fieldwork and data collection activities, students learn about environmental science concepts, research methods, and data analysis techniques. This hands-on approach helps foster a deeper understanding of environmental issues and encourages students to become stewards of the environment.

#### Collaboration and Networking

GLOBE facilitates collaboration and networking among participants at local, national, and international levels. Through workshops, conferences, and online forums, participants can share experiences, best practices, and research findings.

In Sri Lanka, GLOBE activities are implemented in 126 schools. 166 teachers are actively engaged in GLOBE program. Local coordinators help and facilitate training, provide support, and coordinate data collection efforts. By participating in the GLOBE program, individuals in Sri Lanka can make meaningful contributions to environmental research while gaining valuable scientific skills and knowledge.









Implemented by:

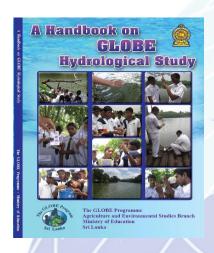
#### **EDUCATION**

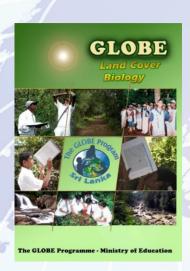
The relationship between education and the GLOBE program in Sri Lanka is symbiotic, as the program enriches education through hands-on learning experiences, scientific inquiry, and environmental awareness initiatives.

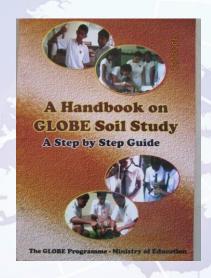
The relationship between education and the GLOBE program in Sri Lanka is mutually beneficial, as the program enriches education through experiential learning, interdisciplinary approaches, environmental awareness initiatives, inquiry-based learning, and community engagement opportunities. By integrating GLOBE activities into the curriculum and supporting educators and students, the program contributes to enhancing education outcomes and preparing students to address environmental challenges and contribute to sustainable development in Sri Lanka and beyond.

#### **GLOBE Protocols Conducted in Sri Lanka**

- Atmosphere
- Hydrosphere
- Pedosphere
- Biosphere







GLOBE

Atmosphere investigation















#### **SCIENCE**

The link between science education and the GLOBE program in Sri Lanka is profound, as the program serves as a valuable tool for enhancing science education at all levels. Here are several ways in which science education and the GLOBE program are interconnected in Sri Lanka.

#### • Experiential Learning

The GLOBE program emphasizes hands-on, experiential learning, providing students with opportunities to actively engage in scientific inquiry and data collection. By participating in GLOBE activities, students gain practical experience in conducting scientific experiments, making observations, and analyzing data, which complements and reinforces classroom learning.

#### • Curriculum Integration

Some of the GLOBE activities have already been integrated into existing science, Agriculture and Biosystems Technology curricula. Teachers can incorporate GLOBE protocols and fieldwork opportunities into lesson plans, allowing students to apply theoretical concepts learned in the classroom to real-world environmental issues.

#### • Interdisciplinary Approach

The GLOBE program encourages an interdisciplinary approach to science education, integrating concepts from various scientific disciplines, including earth science, agriculture, biology, and geography. Through GLOBE activities, students develop a holistic understanding of environmental systems and the complex interactions between the atmosphere, hydrosphere, biosphere, and pedosphere.

#### • Inquiry-Based Learning

GLOBE promotes inquiry-based learning, where students formulate questions, design experiments, and investigate environmental phenomena independently or in small groups. This approach fosters critical thinking, problem-solving skills, and scientific literacy among students, empowering them to become active participants in the scientific process.

#### Environmental Awareness

By engaging in GLOBE activities, students develop a deeper appreciation for the environment and a sense of stewardship for the Earth's natural resources. They learn









about environmental issues such as climate change, air and water pollution, deforestation and explore ways to address these challenges through sustainable practices and community action.

Overall, the link between science education and the GLOBE program in Sri Lanka is symbiotic, with the program serving as a catalyst for enhancing science education outcomes and fostering environmental literacy among students. Through experiential learning, curriculum integration, interdisciplinary approach, inquiry-based learning and environmental awareness the GLOBE program enriches science education and empowers students to become informed, engaged, and responsible global citizens.



#### **COMMUNITY**

#### Students of 126 schools and 166 teachers

Province	No. of Schools
Western	45
Central	13
Southern	16
Northern	4
Eastern	3
North Western	14
Uva	5
Sabaragamuwa	15
North Central	11
Total	126









#### **TECHNOLOGY**

The GLOBE program in Sri Lanka utilizes various technologies to facilitate data collection, analysis, and collaboration among participants. Some of the key technologies used in the GLOBE program include,

#### • Mobile Apps

GLOBE provides mobile applications that enable participants to collect and submit environmental data using smartphones.

#### • Online Data Entry

Participants can also submit data collected through traditional methods using online data entry forms. These forms are accessible through the GLOBE website and allow participants to enter data manually, including measurements of air and water quality, soil characteristics, and other environmental parameters.

#### • Online Collaboration Platforms

GLOBE provides online collaboration platforms, such as forums and social media groups, where participants can share ideas, collaborate on projects, and communicate with peers and experts. These platforms facilitate networking and knowledge exchange among participants at local, national, and international levels.

#### • Data Visualization Tools

GLOBE offers data visualization tools that enable participants to explore and analyze environmental data in interactive ways. These tools may include graphs, charts, and dashboards that help users identify trends, patterns, and relationships within the data.

Overall, the GLOBE program in Sri Lanka harnesses technology to empower students and teachers to collect, analyze, and share environmental data effectively. By leveraging mobile apps, online platforms, and data visualization tools, the GLOBE program enables participants to make meaningful contributions to environmental research and education.









#### Communication

Communication plays a vital role in the success and effectiveness of the GLOBE program in Sri Lanka. Here are several aspects of communication within the program.

#### • Coordination and Collaboration

Effective communication is essential for coordinating and collaborating with various stakeholders involved in the GLOBE program in Sri Lanka. This includes teachers, students, government agencies, non-profit organizations, and community members. Clear communication channels ensure that all stakeholders are informed about program activities, objectives, and opportunities for involvement.

#### Training and Capacity Building

Communication facilitates the training and capacity building of teachers and students participating in the GLOBE program. Training workshops, webinars, and resources are used to provide participants with the necessary knowledge and skills to conduct environmental data collection and research activities. Clear and concise communication during training sessions ensures that participants understand the protocols and procedures for data collection and submission.

#### Data Sharing and Reporting

Communication facilitates the sharing of environmental data collected through the GLOBE program in Sri Lanka. Students submit their observations to the GLOBE database, where the data can be accessed and analyzed by scientists, researchers, and policymakers. Clear communication channels ensure that data is accurately recorded, submitted, and reported in a timely manner.

#### Networking and Partnerships

Communication facilitates networking and partnerships with other organizations and institutions involved in environmental research and education in Sri Lanka such as government universities and Central Environmental authority. Collaborative efforts help to leverage resources, expertise, and support for the GLOBE program, enhancing its









impact and sustainability. Clear communication channels ensure that partners are aligned with program goals and objectives.

#### Feedback and Evaluation

Communication enables feedback and evaluation of the GLOBE program in Sri Lanka. Regular communication with participants, stakeholders, and partners allows for ongoing assessment of program activities, outcomes, and effectiveness. Feedback mechanisms help to identify strengths, weaknesses, and areas for improvement, ensuring that the program remains responsive to the needs of its stakeholders.

Overall, effective communication is essential for the successful implementation and impact of the GLOBE program in Sri Lanka. By facilitating coordination, training, data sharing, community engagement, networking, and feedback, communication helps to ensure that the program achieves its objectives of promoting environmental awareness, scientific inquiry, and citizen participation in environmental research and education.

#### **Atmosphere**







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### Hydrosphere

























#### Pedosphere





#### Biosphere





















#### **STAFF**

Name	Designation	Institute
1. Mrs. Dilrukshika Hettiarachchi	Country coordinator/Trainer	Ministry of Education
2. Miss. Damayanthi Balasuiriya	Former country co coordinator/Trainer	
3. Mr. Tuder Senarathne	Former country co coordinator/Trainer	
4. Mrs. Shanthi Siriwardana	Trainer	
5. Mrs. Chethika Ambalangoda	Trainer	Central Environmental Authority
6. Mrs. Vinodya Wijesuriya	Assistant Trainer	Western Provincial Department of Education
7. Mrs. Asha De Silva	Assistant Trainer	Ministry of Education
8. Mrs. Thilini Wickremasinghe	Assistant Trainer	Ministry of Education





