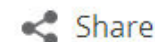




# Introduction to Biosphere

## Вступ до Біосфери е-тренінг



### Protocol eTraining

[Atmosphere](#)

[Biosphere](#)

[Hydrosphere](#)

[Pedosphere  
\(Soil\)](#)

[eTraining  
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## Protocol eTraining

To enter GLOBE data on this website or through the GLOBE data entry app, GLOBE users must complete the necessary training either by attending a [GLOBE workshop](#) or by completing the required online eTraining modules and assessment tests in this section. Please review the [eTraining Requirements](#) to learn which modules are required to become a trained GLOBE teacher or GLOBE Observer. Once your training is complete, you will be ready to start entering your measurements and will be joining a community of thousands teachers around the world!

Existing GLOBE teachers can continue to expand their GLOBE protocol knowledge by completing additional modules and assessment tests. Click on the [Trained GLOBE Users](#) link below to learn which tests are required to become certified in a particular GLOBE protocol.

The GLOBE community looks forward to welcoming you. Please [contact us](#) if you have any questions. Your question may also be answered in one of our [Discussion Forums](#), so check there as well.

A [summary document](#) about GLOBE eTraining is available for download.



## Protocol eTraining

[Atmosphere](#)

[Biosphere](#)

[Hydrosphere](#)

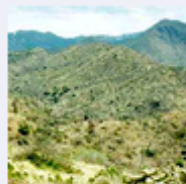
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## Biosphere



### INTRODUCTION TO BIOSPHERE

This module provides an introduction to the Biosphere investigation. You will learn how to conduct GLOBE's biosphere protocols so that the data you collect is of appropriate precision and accuracy. You will learn about the MUC classification system used to classify land cover at our study site, and get an overview of the biometry and phenology field procedures. You will also review the steps you will take to upload your observations to the GLOBE database and visualize data using the GLOBE Visualization system.

[Download Module](#)

[Assessment Test](#)

**Test not  
completed**





# THE GLOBE PROGRAM

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# Ukraine



## THE GLOBE PROGRAM

## Protocol eTraining Assessment Test

Introd

odule

Click the

uck!



Would you like to resume where you left off?

Yes

No

Start Quiz



# THE GLOBE PROGRAM

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## THE GLOBE PROGRAM

### Protocol eTraining Assessment Test

## Introduction to Biosphere Module

Click the "Start Quiz" button to begin. Good luck!

[Start Quiz](#)



The Biosphere is: Біосфера це:

- Part of the Earth system Частина системи Землі
- The zone of life Зона життя
- One of the GLOBE protocol areas Один із напрямів дослідження GLOBE
- All of the above Все зазначене вище
- a and b only



What is the most important use of GLOBE data collected by students?

Яке найбільш важливе використання зібраних студентами даних?

It can be used by scientists to improve the interpretation of satellite data.

Вони можуть використовуватись вченими для покращення інтерпретації супутникових даних

Students can use GLOBE data to conduct their own original investigations.

Студенти можуть використовувати GLOBE дані для проведення власних досліджень

Both are important outcomes of the GLOBE program.

Все зазначене вище



### What is true about GLOBE protocols?

Яке судження є правдиве щодо GLOBE протоколів?

- It is recommended to always use them when collecting data, unless the teacher wants to use a more scientific procedure they learned in college.
- They ensure that the data collected by GLOBE schools around the world can be compared because the data collection procedures are the same.
- GLOBE protocols to report the data **Стверджують, що дані зібрані GLOBE школярами з усього світу можна порівнювати між собою тому, що процедура збору уніфікована.**
- All of the above
- A and B only



How big is a land cover sampling site?

- 15 x 15 km
- 90 x 90 m
- 30 x 30 m
- 3 x 3 m

Який розмір має ділянка для дослідження наземного покриву?



What do we use to classify a GLOBE Land Cover Study Site?

Що ми використовуємо для класифікації GLOBE ділянки при вивченні наземного покриву?

- The MUC Guide Модифікована класифікація ЮНЕСКО
- A land cover classification system that can be applied in all parts of the world. Класифікація наземного покриву, яка може використовуватись у будь-якій частині світу
- The Modified UNESCO Classification Guide Модифікована класифікація ЮНЕСКО
- All of the above Все зазначене вище



What is biometry? Що таке біометрія?

- The measurement of living things. Вимірювання всього живого
- The study of the response of living organisms to seasonal and climate changes in the environment.
- The study of life on Earth and the Earth system.



What characteristic is important when selecting a sampling site?

Які характеристики важливі при виборі ділянки для спостережень?

- All the plants need to be of the same species.
- The sampling site can have many different species, but the density and composition of species should be similar over the sampling area.
- The site Ділянка для спостережень може мати багато різних видів, але густина та структура видів повинні бути однорідними на
- The site всій ділянці



What is the goal of phenology?

Яка мета фенологічних досліджень?

- To observe an organism's growth and behavior to study changes in seasons and climate. **Спостерігати за ростом і поведінкою організмів з метою встановлення сезонних та кліматичних змін**
- To measure the different growth parameters of plants and describe the land cover, so it can be identified in Landsat images.
- To determine how fast Arctic terns fly.
- a and b
- All of the above



Which of the following is a GLOBE phenology protocol?

- Fire Fuel
- Land Cover
- Canopy Cover and Ground Cover
- Arctic Bird Migration

Що з переліченого є Фенологічним протоколом GLOBE?

Міграція арктичних птахів



### How often are Green-Up measurements made?

Як часто робляться вимірювання бруньки і листка?

Once for each new site.

Once a month for four months in a row during low tides.

Twice a week beginning two weeks prior to the anticipated start of budburst. Двічі на тиждень, починаючи за два тижні до очікуваного початку розпукування бруньок

Daily beginning in Spring, until the end of the blooming season.



What is the reason GLOBE land cover sites are defined as at least 90 x 90 m?

- You are able to measure the size of the site. Чому GLOBE ділянка для дослідження наземного покриття повинна становити не менше як 90x90 м?
- The size corresponds to a 3 x 3 pixel array in a Landsat image. Цей розмір відповідає матриці 3x3 пікселя у зображенні Землі
- It is the average size of a GLOBE site.



What is the reason GLOBE land cover sites are defined as at least 90 x 90 m?

- You are a
- The size of
- It is the average size of most vegetation patches on Earth.

? Are you sure you want to submit all answers and finish the quiz?

Yes

No

Submit All



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## THE GLOBE PROGRAM

## Protocol eTraining Assessment Test



Congratulations! You successfully completed the Introduction to Biosphere module. Click 'Finish' to record your results.

### Quiz Result

Your Score: **100%**

Passing Score: **80%**

Review Quiz

Finish



## Biosphere



INTRODUCTION TO BIOSPHERE

### Protocol eTraining

Atmosphere

Biosphere

Hydrosphere

Pedosphere (Soil)

eTraining Requirements

eTraining Community Feedback

Discussion Forums

### eTraining Information

Recently completed module: **INTRODUCTION TO BIOSPHERE**

**Modules required to become a GLOBE Trained user:**

- Introduction to GLOBE
- Introduction to a Sphere (Atmosphere, Biosphere, Hydrosphere or Pedosphere)
- 1 Protocol Module (from the same sphere as the introduction module)
- The Land Cover Sample Site Description module is

Learn how to document a Land Cover Study Site so that you can take biometry measurements using the GLOBE Biosphere Protocols. This module reviews the selection of a GLOBE biometry site, reviews the procedure for locating your site using a GPS receiver, and provides a step-by-step introduction of the protocol method. After completing this



e Biosphere  
 GLOBE's biosphere  
 appropriate precision  
 classification system  
 , and get an overview  
 tures. You will also  
 r observations to the  
 e GLOBE Visualization

**Test not completed**

te Description



## Protocol eTraining

[Atmosphere](#)

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[Assessment Test](#)

**Test completed  
03/14/2018**

 [LAND COVER CLASSIFICATION - Land Cover Sample Site Description](#)

Learn how to document a Land Cover Study Site so that you can take