



Green-Down - Tree and Shrub

Пожовтіння і опадання листя – Дерева та кущі е-тренінг



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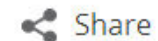
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Protocol
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Get Trained

GLOBE offers trainings around the world. In order to provide high-quality data to the scientific community, teachers are trained in GLOBE data-collection procedures. GLOBE protocols are written and reviewed by scientists.



Protocol eTraining

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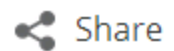
Protocol eTraining

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
- Pedosphere (Soil)
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Biosphere



INTRODUCTION TO BIOSPHERE

This module provides an introduction to the Biosphere



GREEN UP-GREEN DOWN - Tree and Shrub Green-Down

Learn how to select and define a Tree and Shrub Green-Down protocol study site and get a step by step introduction of the protocol. After completing this module, you'll know how to explain what phenology is to your students and why monitoring green-down is scientifically important to our understanding of the changing Earth system. You will know how to collect data in the field, upload data to the GLOBE database, and visualize data using GLOBE's Visualization Site.

Download Module

Assessment Test

Test not completed



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Protocol eTraining Assessment Test

Tree and Shrub Green-Down Module

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

[Start Quiz](#)



To determine if the plant is too close to a building, stand at the plant and sight the top of the building through your clinometer. What should the angle be on the clinometer?

- 90°
- $\leq 45^\circ$
- $\geq 60^\circ$
- 120°

Щоб визначити чи знаходиться рослина надто близько до будівлі, стань біля рослини і поглянь на вершину будівлі через клінометр. Який кут повинен показувати клінометр?

Submit All

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Next



When observing tree and shrub green down, where should the leaves be located?

При спостереженні за пожовтінням листя на деревах та кущах, де листки повинні розміщуватись?

- Near where the branch is attached to the tree/shrub trunk
- Midway along the branch, out of the shade of upper leaves
- At the end of the branch
- It doesn't matter where the leaves are located

Submit All

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When observing tree and shrub green down, how many other leaves should be observed besides the terminal leaf?

При спостереженні за пожовтінням листя на деревах та кущах, скільки ще листків треба відібрати для спостереження від крайнього листка?

- 5
- 3
- 4
- 2

Submit All

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Plant green down is also known as?

Пожовтіння листя також називається...?

- Abscission
- Deciduous
- Phenology
- Senescence

Старіння

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When selecting the site for green down, which factor will NOT negatively affect your data?

- Close to a structure
- Exotic or introduced, non-native vegetation
- Native species
- Plants that are watered or fertilized

При виборі ділянки для спостережень за пожовтінням листя, котрі із перелічених факторів не мають негативного впливу на дані?

Природні види

Submit All

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Which term best defines the study of organisms' response to seasonal and climatic changes in the environment?

- Phenology
- Biometry
- Senescence
- Photosynthesis

Який термін найкраще описує вчення про залежність організмів від сезонних та кліматичних змін навколишнього середовища?

Фенологія

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The change in the length of growing season can be an indicator of which of the following?

- Sea level rise
- Ozone depletion
- Increased storm events
- Climate change

Зміни довжини вегетаційного сезону можуть бути індикатором...

Змін клімату

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When should the observation of anticipated green-down begin?

Коли потрібно починати спостереження очікуваного пожовтіння листя?

- Two weeks prior
- One week prior
- Two weeks after
- When there is a change in color documenting the beginning of green-down

За два тижні

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What precedes green-down in temperate regions?

- fewer hours of sunlight
- lower temperatures
- drier and warmer temperatures
- A and B
- A and C
- all of the above

Що передує пожовтінню листя в помірних регіонах?

A. Зменшення надходження світла
B. Зниження температури

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What if evergreen needle-leaved trees are the dominant vegetation?

Якщо хвойні дерева є доміантною рослинністю у досліджуваному регіоні?

- look for subtle changes in the needles as they brown more slowly and use the GLOBE color chart to describe the slow changes.
- select understory deciduous shrubs to monitor green-down in that sample area
Виділити для спостереження листяні кущі нижчого ярусу
- look for the detachment of pine cones
- A and C
- all of the above

Submit All

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What if evergreen needle-leaved trees are the dominant vegetation?

- look for su... slowly and use
the GLOBE
- select und... in that sample
area
- look for the detachment of pine cones
- A and C
- all of the above



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

Yes

No

Submit All



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Protocol eTraining Assessment Test



Congratulations! You successfully completed the Tree and Shrub Green-Down module. Click 'Finish' to record your results.

Quiz Result

Your Score: **90%**

Passing Score: **80%**

Review Quiz

Finish



GREEN UP-GREEN DOWN - Tree and Shrub Green-Up

Learn how to select and define a Tree and Shrub Green-Up protocol study site and get a step by step introduction of the protocol. After completing

eTraining Information

Recently completed module: **GREEN UP-GREEN DOWN - Tree and Shrub Green-Up**

To be considered trained in an protocol, you must complete the assessment tests for an Introduction to a Sphere module (Atmosphere, Biosphere, Hydrosphere or Pedosphere) and the protocol you wish to be trained in. You only need to pass an introduction module once.

[View your training records](#)

Download Module

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