

# SNAP SHOTS OF THE E-LEARNING MODULE



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## **Welcome!**

Licensing Information

1) Describe green space in urban setting

2) Problems & trends in urban areas

3) Benefits of urban green spaces

4) Urban green planning terms

5) Urban management considerations

6) Measuring urban green space benefits for management support

7) Evaluate impact of urban change scenarios

To conclude

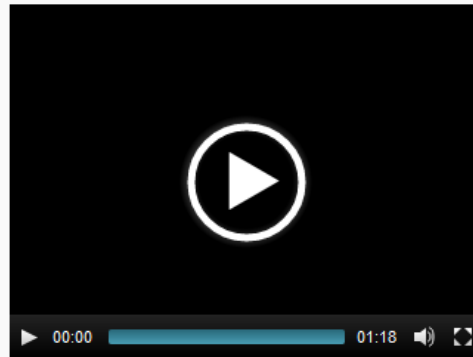
Consulted Literature

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## Welcome!

### Welcome to the e-module on **Urban Green Spaces!**

We invite you to get started by watching this introduction **video**.



#### **About the e-module**

The module will address seven topics. Each topic starts with a 10-minute micro-lecture video which introduces the topic, highlights the most important aspects, and guides the reading and exercise. After this video, you will read material and test your gained knowledge with a quiz. The reading materials provided are short and are meant to show the key concepts and elements. Each reading part can have one to three recommended in-depth reading suggestions (adding 5h of reading time per learning outcome). All suggested reading material is open access and made available. For some topics, you are asked to do an exercise and you can self-assess your results through guided model answers. Each topic follows the same structure of teaching format, so you quickly get used to the learning environment. In the [Index](#) of this course you find an overview of all topics and concepts that will be addressed.



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**Core Reading**

In-depth Reading

Exercise: UGS and ES

Quiz

4) Urban green planning terms

5) Urban management considerations

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7) Evaluate impact of urban change scenarios

## Core Reading

People depend on nature. Nature, including that in urban green spaces, sustains our lives. Nature provides the food we eat and coffee we drink, nature regulates important processes like the climate and water cycle, and nature provides us with areas we enjoy going to. But those benefits are often not clear or recognized in decision-making processes. How can we systematically describe the benefits we derive from nature, so we can better manage and protect these areas?

To systematically describe the benefits that people derive from nature the concept of "*Ecosystem services*" is used. This concept describes our living environment from a human well-being perspective. The ecosystem services concept is an anthropogenic way of systematically describing nature.

We can categorize the benefits from nature in three ways:

1. **Provisioning services:** the goods we obtain from nature, for example food, timber and medicinal plants.
2. **Regulating services:** the natural processes that regulate our surroundings: vegetation that cools our city, regulates water flows after rains, or protects our coastal cities against storms,
3. **Cultural services:** the way nature contributes to our wellbeing as it provides opportunities to experience things we like, such as recreation, enjoyment and cultural heritage.

This general categorization in these three groups one of the most used. In section 2.4 of the reading material, different classifications of benefits from nature are presented to you. However in the remainder of this course we will refer to these categories.





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## Quiz

**Time to check what you have learned! Answer the following questions.**

### ? Question 1

The authors provide two possible interpretations of what they call a "greenspace" for a more functional understanding. Mark the two that are correct.

- A. Urban green infrastructure
- B. Green space seen as nature
- C. Nature-based solutions
- D. Vegetated open space in cities

Show Feedback

### ? Question 2

How should researchers describe urban green space according to Taylor and Hochuli (2017)?

- A. They should describe the urban green space(s) qualitatively



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Core Reading

In-depth Reading

**Exercise: Estimate ecosystem services**

Case Study Greater Paramaribo Area

## Exercise: Estimate ecosystem services

### Estimating ecosystem services

In this exercise, you will use a model from the modelling suite Urban InVEST to quantify the ecosystem service local climate regulation. Paramaribo, the capital of Suriname, will be the case study. You will compute the "heat mitigation index" which considers evapotranspiration, shade and albedo per pixel plus the cooling effect of large green spaces (> 2ha) since these can also cool their surroundings. You will run this analysis for the month January 2020.

#### Software

You will need three software tools:

1. The latest version of the InVEST (Integrated Valuation of Ecosystem Services and Tradeoffs) tool. You can download that from [here](#).
2. A Geographical Information System (GIS). A free and open source option is QGIS and can be downloaded [here](#).
3. A basic tool to open and edit csv tables, such as Open Office, R, Excel.

#### Data

The data you will need for this exercise are provided in this [zip-archive](#). To access the data, unzip the folder on your local disk where you have full read and write access.



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## To conclude

Congratulations! You have come to the end on this e-module on **Urban Green Spaces!**

During this module you learned to:

- 1) Describe green spaces in urban setting
- 2) Explore problems & trends in urban areas
- 3) Understand benefits of green space in urban setting
- 4) Explain urban green planning terms
- 5) Understand urban management considerations
- 6) Select options of measurement of urban green space benefits for management support, and
- 7) Evaluate impact of urban change scenarios.

The videos, articles and exercises in this e-module introduced you to these concepts and practices, and provided some hand-on experience on answering questions that might arise with the planning, management or understanding of urban green spaces.

