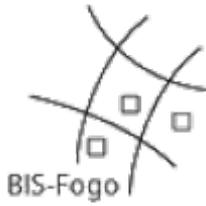


Activity 10: Biological invasion

Dysfunctions in the process of the forest ecosystem



Objective: Analyzing and assessing food webs and chains as well as the materials cycle. Hereby, learners explore the effects of adding single species to an ecosystem and in what way man is responsible for animals and plants.

Learning outcomes: Learners are able to reproduce the mutual dependence of producers, consumers and destruenters, describe dysfunctions in an ecosystem, name differences in the dysfunction between adding or removing species from the ecosystem and come up with measures to prevent dysfunctions.

Previous knowledge: relations in an ecosystem, living beings and habitats

Duration: 60 min

Materials / Conditions: Text-Introduction, Internet access

Methods / Techniques: Individual work, creative thinking, learning through models

Learning subject: Biodiversity / Module I: Introduction to biodiversity / Level: expert learning

Introduction:

The forest ecosystem is a unit of biotope and biocenosis. Each living being is in a constant process of adaption to find its perfect living conditions. Each species lives in a habitat that meets its biotic and abiotic needs. These abiotic and biotic factors influence the survival of species. If two species share the same biotic and abiotic factors, they are in competition for nutrition. Now, what happens if species are added to an ecosystem? What dangers are there?

(Translated from: <http://www.wald.de/was-ist-ein-oekosystem/>)

Instruction:

- 1) Research the terms producers, consumers and destruenters on the internet.
- 2) Create an overview about food webs and materials cycles.
- 3) With the help of your sketch, explain the effects of adding species to an ecosystem. How can this disturb an ecosystem?
- 4) Develop solutions for environmental organizations in terms of how to protect ecosystems, especially from human influence.

Resources:

/

Possible results / Results:

1. cf. wikipedia
2. siehe http://www.uic.edu/classes/bios/bios101/x311_files/images/image30.png
3. siehe https://en.wikipedia.org/wiki/Invasive_species (point 3: effects)
4. siehe <http://www.areasprotegidas.gov.cv/index.php/en/>

Related activities:

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