Campus Group T
Bachelor of Engineering Technology
Engineering and Sustainability: Philosophy and Global Challenges

Global Challenges for a Sustainable Society

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Summary

This is a summary of the MOOC Global Challenges for a Sustainable Society, based on the provided study guides.

Contents

1 Climate **2**

2 Biodiversity **3**

3 Demography **4**

4 Energy **5**

5 Raw materials and circular economy **6**

6 Food security **7**

7 Not part of course **8**

8 Buildings **9**

9 Mobility **10**

10 Economics for sustainability **11**

11 Social and economic inequality **12**

12 Human behaviour **13**

13 Global governance **14**

1 Climate

2 Biodiversity

2.1 Study guide

Module 2 (Biodiversity) sketches basic insights biodiversity, different types of diversity, in an historical perspective and with options for the future. Make sure to understand:

- The different types of diversity
- Historical evolution of biodiversity
- The importance of biodiversity
- How can biodiversity be measured and challenges in this?
- The important treats for biodiversity
- Different options to restore biodiversity
- Being able to interpret data with regard to biodiversity

Don't learn the specific examples by heart, do not learn specific vocabulary by heart (such as Cambrian or Cretaceous).

2.2 Types of diversity

The variability among living organisms from all sources, including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are parts. This includes the diversity within species, between species and of ecosystems

The first type of biodiversity is genetic diversity or diversity between species. It is the amount of naturally occurring genetic variation among individuals of the same species.
Another type of diversity is species diversity. This type is often defined as the number of species at a certain location. Figure 1 gives an indication of this diversity.

Figure 1: Diversity in species

Thirdly, there also is diversity in ecosystems. There are a lot of different ecosystems around the globe: from the boreal forest at high latitudes to tropical forests around the equator, but also aquatic ecosystems like lake systems, coral reefs and mangroves count towards ecosystem diversity.

2.3 Historical evolution of biodiversity

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3 Demography

4 Energy

5 Raw materials and circular economy

6 Food security

7 Not part of course

Module 7 is unavailable in the MOOC and does not belong to the course content.

8 Buildings

9 Mobility

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