

Learning Unit 1: Geography in the Anthropocene

GGH2604



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Sources to consult

- **Atlas:** The location of Indonesia; Malaysia; the Pacific Ocean; Pripyat, Ukraine; and Lake Chad in West Africa.
- **Prescribed book:** Chapter 1, "Introduction: Geography in the Anthropocene", on pages 1–14 in Whitehead (2014)
- **Case Studies:** 1.1 and 1.2 in the study guide
- **Additional Resources on myUnisa:** YouTube videos and Podcast 1.4

Learning Outcomes

- Explain the concept of the Anthropocene
- Identify and explain the basic linkages between human activities and environmental degradation
- Discuss how human activities on a local scale can have regional and global consequences

Meme or geological Epoch: Introducing the Anthropocene

- **Watch** the YouTube video titled “Welcome to the Anthropocene” from the link: <https://www.youtube.com/watch?v=fvgG-pxlobk>
- The term “Anthropocene” is made up from the prefix “anthropo” (humankind) and the suffix “cene” (a geological epoch) and can also be referred to as “the age of humans”.
- The Anthropocene is marked by:
 - Greenhouse gases reaching their highest levels for 400,000 years
 - The ability of humans to regulate and control the flow of water through dam-building and sluice constructions
 - Industrial emissions of sulphur dioxide reaching 160 million tons per year
 - Increased exploitation of fisheries in the ocean
 - Increased levels of fertilizers in soils; and
 - High extraction rates of minerals through mining.

Meme or geological Epoch: Introducing the Anthropocene

- Ecocentrists see the Anthropocene as basis for reducing the demands we place on the planet, to challenge the value of economic growth and to re-localize our economies. Technocentrists feel that the idea of humans as intelligent agents of geological power should be an incentive to deeper interventions on the planet.
- Two large trash vortexes were formed by ocean currents in the North Pacific Ocean. The floating mass of micro-plastics, cigarette lighters and syringes causes the death of approximately 1 million seabirds every year and 100,000 marine mammals.

Meme or geological Epoch: Introducing the Anthropocene

- **Read** Case Study 1.1: Plastic pollution in the oceans
- A recent study on bioaccumulation found high levels of persistent organic pollutants (POPs) in amphipods (crustaceans such as sand fleas) in two of the deepest parts of the oceans. Both of these trenches are more than 10,000 meters deep and are considered as some of the most inaccessible and remote parts of the Earth.
- Plastics are already present in sufficient numbers to be considered as one of the most important types of ‘technofossil’ that will form a permanent record of human presence on Earth.
- **Vote** in Poll 1.3 on myUnisa. The poll question is:
 - In your opinion, can plastic pollution be used as an indicator for the Anthropocene Epoch?

The rough geographies of the Anthropocene

- The origin of the Anthropocene has been linked to the human domestication of animals, the start of agriculture as well as the rise of nuclear technology and the radioactive traces it left in the geological record.
- **Watch** the YouTube video titled “Chernobyl: The disaster that shook the world” from the link:
<https://www.youtube.com/watch?v=hZqA2hZW53o>
- **Read** Case Study 1.2: Pripyat, Ukraine.
- **Vote** in Poll 1.4 on myUnisa. The poll question is:
 - Do you think the Chernobyl accident is an example of the dangers of an extreme technocentric approach to the environment?

The rough geographies of the Anthropocene

- We often think about environmental issues in terms of interconnected global systems, yet we cannot only consider environmental problems on a global scale alone. There is an unevenness of our environmental fates and one example of this is climate change. The areas that are most likely to suffer the worst impacts of climate change are Africa and South Asia. Ironically, these areas are some of the places that are the least responsible for the creation of the climate change problem and are least able to protect themselves from its impacts.
- **Listen** to Podcast 1.4 titled “The role of geography in environmental issues” on myUnisa.
- **Participate** in the Discussion Forum Topic 1 on myUnisa:
 - Which worldview do you support the most: The human mastery of nature (technocentrism) or the deep green environmental care (ecocentrism) worldview?

Thank you

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