The environment

Environmental issues

The 1970s saw the **emergence** of heated debates around two major environmental problems. The first major concern was the **depletion** of the **ozone layer** as a result of chemical **emissions** and **acid rain**. The other discussion was about **climate change** and the **greenhouse effect**. Lots of corporations suddenly found themselves in the centre of attention. Politicians, consumers and activists began asking about the environmental **policies** of companies and how they planned on **addressing** the issues at hand. There was a general fear that these problems could be long-lasting and perhaps even **irreversible**.

The depletion of the ozone layer

Ozone works like a filter which **shields** the earth's surface from most of the sun's ultraviolet **rays**, hence protecting humans from the dangerous effects of **solar radiation**. In the 1980s holes in the ozone layer over the North and South Pole were discovered for the first time. Experts immediately issued warnings, pointing out the serious consequences on people's health. The risk of skin cancer, damage to the **immune system** and the possibility of **eye cataracts** were mentioned in studies by **renowned** scientists.
The main reason for the depletion of the ozone layer was the usage of **CFCs**. CFCs were mostly used in **propellants** in **aerosols** and for the production of plastic **foams**.

Keywords

emergence	*- Auftauchen*
depletion	*- hier: Zerstörung / Abbau*
ozone layer	*- Ozonschicht*
emissions	*- Abgase*
acid rain	*- saurer Regen*
climate change	*- Klimawandel*
greenhouse effect	*- Treibhauseffekt*
policy	*- hier: Strategien*
to address	*- etwas ansprechen*
irreversible	*- nicht rückgängig zu machen*
to shield	*- schützen / bewahren*
rays	- Strahlen
solar radiation	*- UV-Strahlung*
immune system	*- Immunsystem*
eye cataracts	*- grauer Star*
renowned	*- berühmt*
CFCs	*- FCKW (Fluorchlorkohlenwasserstoff)*
propellants	*- Treibgas*
aerosol	*- Spraydose*
foams	*- Schaum*

Climate change and the greenhouse effect

There is no doubt that we are currently experiencing a significant change in our climate. All the scientists **agree on** this matter. However, there is a division when it comes to the interpretation of this phenomenon. On the one hand, there is the **consensus** in some scientific communities that climate change is **human-induced** and that it is high time to focus on finding solutions to save the planet. On the other hand, there are also **skeptics** who believe that the **retrieved** data is unreliable and has been **misinterpreted**. In their opinion, changes in temperature like the ones we are currently experiencing have always occurred on planet earth even before humans even existed.

The scientists who believe that climate change is the result of human actions link it to the problems surrounding the greenhouse effect. Greenhouse gases pass through the earth's atmosphere and keep most of the outgoing infrared radiation from escaping into **outer space**. This is a natural process which is vital because it keeps the earth's **average surface temperature** at approximately 15°C. The problem however is the fact that human activities severely intensify the natural greenhouse effect through an **overload** of emissions, which will ultimately increase the average surface temperature, hence leading to global warming. The **excessive** emission of **methane** and **carbon dioxide** may have devastating consequences that threaten our survival. **The polar ice caps** may **melt** and as a result the **sea levels** will rise causing the **flooding** of **coastal areas**. **Heatwaves** and **droughts** will lead to the creation of new deserts. Thus, **natural habitats** of animals will be destroyed and some species will come close to **extinction**.

Keywords

to agree on	*- sich einigen*
consensus	*- Einigkeit*
human-induced	*- von Menschen verursacht*
skeptics	*- Skeptiker*
retrieved	*- hier: gesammelt*
to misinterpret	*- falsch interpretieren*
outer space	*- Weltraum*
average	*- Durschnitts...*
surface temperature	- Oberflächentemperatur
overload	*- hier: Unmenge*
excessive	*- überhöht*
methane	*- Methangas*
carbon dioxide	*- Kohlendioxid*
polar ice caps	*- Eisschichten am Nord/Südpol*
to melt	*- schmelzen*
sea levels	*- Meeresspiegel*
flooding	- Überflutung
coastal area	*- Küstengebiet*
heatwave	*- Hitzewelle*
natural habitats	*- natürlicher Lebensraum*
extinction	*- Ausrottung*

Pollution

Water and air **pollution** are some of the most threatening environmental problems we have to cope with today. We poison our **streams** and rivers with chemical substances such as **pesticides**, and **fertilizers**. **Industrial waste contaminates** our **groundwater** with toxic substances. Our oceans are polluted by plastic **debris** and **oil spills**, which have a **devastating** effect on wildlife.

Air pollution has reached alarming levels in big cities. **Exhaust fumes** from cars and the burning of fossil fuels in factories have led to cases of acid rain, smog and **respiratory disorders** among the population. Most of these **contribute** to the greenhouse effect.

Intensive farming

The aim of modern farming methods is maximum production. So as to increase **crop yields** the usage of synthetic fertilizers and pesticides has become common practice. These substances contaminate the **soil** and may lead to irreversible soil **degradation**. Organic farming is an alternative which is a lot more **sustainable**.

Deforestation

More than 50% of the earth's tropical forests have been destroyed in the past two centuries. Clearance for agriculture and housing as well as commercial **logging** are just some reasons for this phenomenon. As a result natural habitats of many species are lost. Conservation organizations like WWF are alarmed by the rate of extinction of species and they see the biodiversity of our planet seriously **threatened**.

Keywords

pollution	- *Verschmutzung*
stream	- *Bach*
pesticides	- *Schädlignsbekämpfungsmittel*
fertilizer	- *Düngemittel*
industrial waste	- *Industrieabfall*
to contaminate	- verunreinigen
groundwater	- Grundwasser
debris	- *hier: Überbleibsel*
oil spills	- *Ölpest*
devastating	- verheerend
exhaust fumes	- *Abgase*
respiratory disorders	- *Atemkrankheiten*
to contribute	- *zu etwas beitragen*
crop yields	- *Ernteertrag*
soil	- *Boden*
degradation	- Verschlechterung
sustainable	- *nachhaltig*
logging	- *Abholzung*
to threaten	- *bedrohen*

What can be done about climate change?

First of all, the protection of our environment starts at home. Good habits and small practical steps can already bring about major change if each individual **takes his responsibility**. For example, people should recycle waste, **cut back on** their electricity consumption and use **public transport**. We need to reduce our **carbon footprint** to protect future generations. We should try to save water and stop wasting so much food.

Moreover, world leaders and big industry also need to come to an agreement to boost energy efficient production methods and to put an end to polluting the environment. **Renewable energies** are available and could prove to be a **viable** alternative to the burning of **fossil fuels**.

A pessimist would point out that humanity is heading towards a brick wall. The earth's resources are **finite** and given the current trend of **overpopulation** the future looks **bleak**.

An optimist would draw attention to the potential of technology and its ability to come up with sustainable solutions for all our problems.

Keywords

to take responsibility	- *Verantwortung übernehmen*
to cut back on	- etwas einschränken
public transport	- *öffentliche Verkehrsmittel*
carbon footprint	- persönliche CO2 Bilanz
renewable energies	- *erneuerbare Energien*
viable	- *durchführbar*
fossil fuels	- *fossile Brennstoffe*
finite	- *begrenzt*
overpopulation	- *Überbevölkerung*
bleak	- düster

CHECKPOINT

Can you answer these questions with adequate vocabulary?

1. Make a list of the top 5 threats our environment faces today and explain these phenomena?
2. Explain why experts are divided on the issue of climate change?
3. What can you do about climate change?
4. How should politics address the problems at hand?
5. How should corporations tackle the current problems?
6. Which organisations are trying to find solutions to the environmental problems?
7. Are you optimistic or pessimistic about the future? Why? Why not?