

IMPACT OF ECONOMIC ACTIVITY ON NATURAL ENVIRONMENT

(Use tourism, OR:)

For a named area you have studied, describe the impacts of manufacturing industry on the natural environment. Named area

Content guide

- Atmospheric pollution
- Water pollution
- Destruction of vegetation/ Loss of habitat
- Destruction of food chains/ ecosystems
- Impacts on climate/ Global warming
- Acid rain
- Soil erosion
- Noise scares wildlife

Pearl River Delta

Economic activity: Manufacturing Industry

Introduction

- Pearl River Delta is the low-lying area surrounding the Pearl River Estuary: where the Pearl river flows into the South China Sea.
- The area accounts for 8.7% of the GDP 36% of total trade in 2001 in China.
- It is a major manufacturing base of electronic products (watches, phones), toys, textiles & plastic products

Atmospheric pollution/ climate change

- Much of the energy needed to perform the manufacturing industrial activities is produced from the burning of fossil fuels.
- This, as well as emission from industries has led to higher quantities of fine particulate matter, oxides of nitrogen, greenhouse gases and sulphur dioxide: These cause smog, respiratory diseases & infant mortality.
- China now has the largest CO₂ emissions in the world; this is an increasing cause of climate change & global warming.

Acid rain

- 2/3rds of the province's cities were affected by acid rain in 2007.
- 8 out of 10 rainfalls in Guangzhou in 2007 were acid rain.

Water pollution/ disruption to food chains

- Half of the wastewater in urban areas of Guangdong is not treated before being dumped into the rivers
- 39% of rivers in the PRD is considered *unfit for touch*.
- Fish species like tilapia from rivers in the PRD have been found to contain PCBs and other halogenated compounds, which disrupts food chains of several aquatic species.

Destruction of vegetation/ soil erosion

- Many industrial zones have overexploited and destroyed surrounding vegetation, to clear land.
- Mangrove forest wetlands were once very common in Guangdong, but are now under severe threat.
- As a result of this deforestation, many upland areas easily erode under rainfall.

IMPACTS OF GLOBAL WARMING ON NATURAL ENVIRONMENT

Describe the impacts of global warming on the natural environment. You should refer to named areas affected.

Content guide

- **Changing rainfall patterns/drought/desertification**
- Difficulty producing food
- **Lack of water supplies**
- **Melting of ice caps/glaciers**
- **Flooding of coastal lowlands**
- **Spread of tropical diseases to other areas**
- **Impacts on species/biodiversity/food chains**
- **Loss of habitat**
- **Heat stroke**
- Carbon dioxide/oxygen balance

Changing Rainfall Patterns

- Climate change alters air and ocean currents.
- Precipitation is expected to increase in higher latitudes and decrease closer to the equator: Pennsylvania has seen 5% increase, while Hawaii has experienced a decline in annual precipitation.

Drought/desertification // Lack of water supplies

- Rising global temperatures increase evaporation, causing droughts and desertification.
- Jordan faces its worst drought in 900 years: its water reserves can support 2 million, but its population is currently approaching 10 million.

Melting of ice caps/glaciers // Flooding of coastal lowlands

- Polar ice caps are now melting 6 times faster than in the 1990s.
- Melting of Greenland ice sheet contributes to 20% of sea level rise.
- Rising sea levels could expose 400 million people to flooding by the century's end: 70% of the earth's population lives within 100 miles of a coast.

Impacts on species/biodiversity/food chains // loss of habitat

- Increased CO₂ concentration makes oceans more acidic.
- Rapid decline of corals due to mass bleaching and acidification.
- Arctic Ocean ice melt and acidification reduces krill populations, threatening whales, penguins, and seals.

Heat stroke

- More frequent heat waves in regions like Qatar, Belgium, and the UK.
- From 2000 to 2016, number of people exposed to heat waves increased by 125mil.
- In 2010, 56,000 deaths during a 44-day heatwave in Russia.

Spread of Diseases

- Warmer temperatures increase transmission rates of vector-borne diseases.
- Mosquitoes are likely to expand their habitats & spread diseases like malaria, dengue fever, and chikungunya; malaria most likely to spread at 25 degrees Celsius.

AIR POLLUTION

For a named area you have studied, describe the causes and impacts of air pollution. Name of area

Content guide

- Industry
- Energy generation

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| <ul style="list-style-type: none">- Transport- Health issues- Impact on flora and fauna- Visual/aesthetic impacts- Impacts on transport/communications |
| <p>Place specific reference is likely to consist of: Locational details, Specific details of places within the area chosen, Specific details of polluters, statistics</p> |

Describe the effects of desertification on people and the natural environment. You should refer to places where desertification is occurring.

- Slightly less than half of Earth's ice-free land surface is drylands
- The United Nations Environment Programme (UNEP) notes that desertification has affected 36 million square km of land.
- The lives of 250 million people are affected by desertification, and 135 million people may be displaced by desertification by 2045.

Africa

- Africa is the continent most affected by desertification.
- The countries that lie on the edge of the Sahara desert are among the poorest in the world, and they are subject to periodic droughts.
- African drylands (which include the Sahara, the Kalahari, and the grasslands of East Africa) span 20 million square km (about 7.7 million square miles), some 65 percent of the continent. One-third of Africa's drylands are largely uninhabited arid deserts, while the remaining two-thirds support two-thirds of the continent's burgeoning human population. As Africa's population increases, the productivity of the land supporting this population declines. Some one-fifth of the irrigated cropland, three-fifths of the rain-fed cropland, and three-fourths of the rangeland have been at least moderately harmed by desertification.