

Impact of Pollution|sample answer

Q: ‘Pollution does not recognise boundaries and therefore can impact on the environment locally, nationally or internationally’ (2011 Q8 C.)

Pollution is the word is used to describe the waste produced by humans. This waste is a harmful addition to the environment, it can be chemical gases or solid plastics and can affect water or air or land in different ways.

The burning of fossil fuels causes pollution. Burning fossil fuels and deforestation have released huge amounts of carbon dioxide and methane into the atmosphere. This has caused more heat to be trapped in the atmosphere and as a result global warming has become a pressing problem.

With the excess carbon dioxide and other chemicals in the air the moisture in the atmosphere absorbs them and as a result clouds become acidic. When rain falls from these clouds it can cause acid rain and this can harmful impacts on the earth below.

The polluted clouds are carried by the wind and air currents. this can cause conflict because one country can be affected by another's pollution.

Pollution therefore has no boundaries in the area it effects; it can be at a local, national or international level.

LOCAL:

The burning of fossil fuels in homes and industry, combined with traffic emissions, causes smog and other air pollution in urban areas causes a yellowish-brown haze called smog.

Sunlight causes air pollutants to chemically react. The reaction of sunlight with these air pollutants forms a gas called ozone. The main pollutants that react together are nitrogen oxides and sulfur dioxides.

Ozone causes lung problems and reduces plant growth at ground level. The small particles in the air, when inhaled, can cause problems such as asthma. Cities in sunny regions such as los angeles and athens experience this kind of smog.

In ireland and other countries where it is less sunny, smog is caused by fog mixing with smoke particles from car fumes and household fires. Smog occurs more often here in winter.

INTERNATIONAL/NATIONAL:

Acid rain is a popular term used to describe acid precipitation. The major cause of acid rain are sulphur dioxide and nitrogen oxide produced when fossil fuels such as oil, coal and gas are burned.

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Sulphur dioxide and nitrogen oxides are released into the atmosphere where they can be absorbed by the moisture and become weak sulphuric acids, sometimes with a pH of around 3.

When the moisture in clouds becomes saturated it falls as acid rain.

Acid rain can cause problems nationally but sometimes air pollution can be dispersed by the wind causing environmental problems far from the source of the pollution, making it an international problem.

Acid rain corrodes metal and stone work making the maintenance of buildings more costly. As land becomes more acidic, it is less suitable for growing crops and yields. Crops such as maize are unable to germinate if acid rain falls on them.

Sulphur dioxide in acid rain interferes with the process of photosynthesis especially in coniferous trees because they do not shed their leaves. Acid rain causes these trees to shed their pines and as a result kills them.

Watercourses and lakes become more acidic, this is due to the acid rain falling directly into them and also the runoff water that comes off land. Fish populations decline and then consequently, so do bird populations.

The only satisfactory way to prevent damage to the environment from acid rain is to reduce the amount of pollution from burning fossil fuels. However, this will take a long time and international agreements, immediate measures are needed to safeguard the environment.