

The Environment

GLOSSARY

the environment = the air, water, and land around us

harmful/ dangerous/ damaging effects of human activity

pollution = dirty air, land and water

some activities are destroying the environment = damaging it so badly that soon parts will not exist

the ozone layer = a layer of gases which stop harmful radiation from the sun reaching the earth; recent research shows that there is now a hole in parts of the ozone layer

global warming = an increase in world temperature caused by an increase in carbon dioxide

acid rain = rain that contains dangerous chemicals; this is caused by smoke from factories

conservation = the protection of natural things, e.g. plants and animals

the “greens” = groups of people whose aim is conservation (e.g. Greenpeace and Friends of the Earth)

common causes of damage = smoke from factories, car exhaust fumes, dumping (throwing away) industrial waste (unwanted material) in seas and rivers, aerosol cans (sprays), cutting down tropical rainforests (e.g. The Amazon), which increases carbon dioxide in the atmosphere

help = bottle banks, newspaper bank s (don't throw away bottles, newspapers, etc. – take them to a bottle bank, a newspaper bank)

to recycle = use again

to waste = use badly – the opposite = **to save**

natural resources = water or gold (a resource is a valuable possession)

Exercises

1 Read the text and do the exercise:

Water pollution results from harmful industrial processes and households, from pesticides and other chemicals (e.g. fertilizers) used in agriculture, from waste disposal sites, substandard sewage treatment plants and from ships. Concentrations of heavy metals, such as mercury, cadmium, lead, or copper are increasing. Nitrate can pollute inland waters by leaching from farmland. Much of this comes from organic nitrogen in the soil but some also from organic and inorganic fertilizer use.

If we want to have cleaner waterways, some measures must be taken. First, discharges to water from industrial processes should be controlled and the number of sewage treatment plants should be increased. We should also find technologies for saving water and reduce the amount of chemicals. New technologies should develop environmentally friendly pesticides. Pollution occurring from waste silage effluent or slurry leaking and entering watercourses should be minimized or stopped. To prevent nitrate leaching into water, farmers can change their farming practices, for example by growing “green cover” crops in the autumn to take up residual nitrogen. International agreements control oil discharges and dumping of land-generated wastes. Oil and chemical spills from ships at sea are dealt with by chemical dispersants spread onto it from specially equipped aircraft.

What causes water pollution and how can it be reduced?

cause	suitable measures
1 industrial processes and households -	
2 chemicals from agriculture (fertilizers) -	
3 nitrate leaching from farmland -	
4 waste disposal sites -	
5 oil and chemical spills from ships -	

2 Read the text and do the exercise:

Soil can become contaminated as a result of industrial waste and other causes. Much domestic rubbish is disposed of in **landfills**. Waste disposal should be controlled and maintained properly. How do we reduce the waste which seems to grow more and more?

Before waste is landfilled, it can be treated in other ways to reduce the volume of landfill it takes up – e.g. it can be shredded or compressed into bales.

But in many cases landfill can be avoided by **re-using, recycling** or **energy recovery** from the waste material. A great deal of industrial waste has traditionally been reclaimed. Not only bottle bins or containers, but also can containers, plastic containers and paper containers should be installed where the public can deposit used glass containers, cans, plastic and waste paper for recycling. Domestic rubbish should be sorted out too. Kitchen rubbish and garden

waste of organic origin can be composted and turned into fertilizer. Organic waste in landfills can be re-used in the form of biogas which comes from natural decays.

How can soil become contaminated? How can we avoid landfills?

- 1 in order to reduce the volume of landfill, we can
- 2 by reclaiming which means
- 3 people can deposit used glass containers, cans, plastic, waste paper in
- 4 kitchen garbage and garden waste can be and turned into
- 5 organic waste in landfills can be in the form of

3 What can you personally do to protect the environment? Write a short paragraph.

save water (have a shower rather than a bath)

save energy (switch off the light when leaving)

sort out waste and put in into containers if they are provided, compost kitchen garbage

use deodorant sprays without CFC gases

put litter only into litter bins, not in the street

not be noisy in the woods, not pick flowers and branches

not use many fertilizers in the garden

use public transport or unleaded petrol

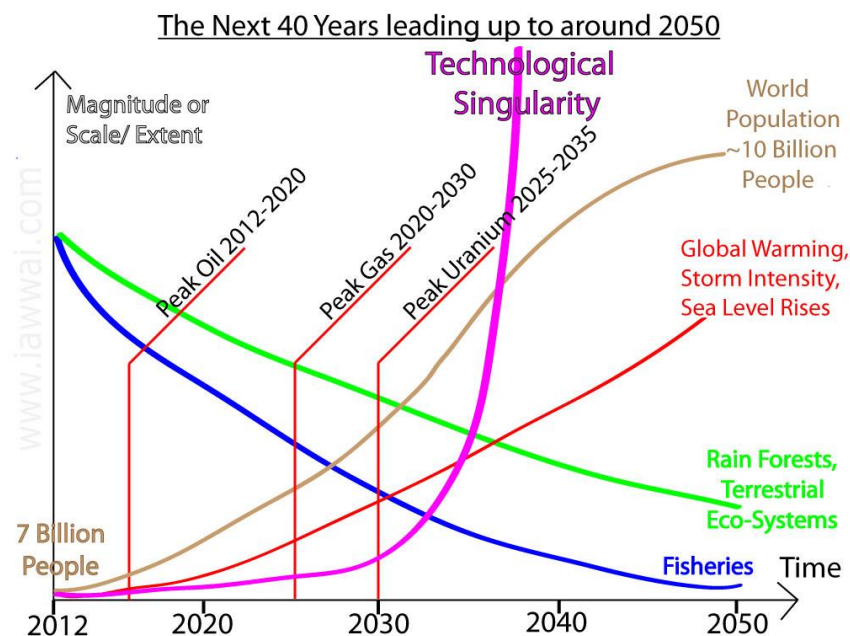
4 Read the article and answer the questions:

Environment

Environmental issues are a concern for everyone. Global warming is becoming a huge problem, and those in the developed nations are contributing to, and will be affected by, climate change. Cutting down trees, too many cars on the roads, companies that pollute the air and water with chemicals, a consumer society that produces too much waste, and the destruction of the ozone layer – all of this is concern for people, animals and plants – and could soon affect the way we live. The destruction of many forests, especially in South and Central American countries like Brazil and Costa Rica, means many animals and insects are becoming extinct. Pollution is a major difficulty in many large countries around the world, such as Los Angeles, Mexico City, Beijing and New Delhi. The Ivory Coast is currently figuring out how to clean up toxic waste that was illegally dumped near its capital city. The United Nations say that 2006 was the sixth warmest year on record and weather changes can create devastating natural disasters like tornados, hurricanes and floods.

- 1 Why will global warming soon affect the way we live?
- 2 What causes global warming?
- 3 Explain why cutting down trees South and Central American countries will affect climate change?
- 4 Which devastating natural disasters can be created by weather changes?

9 Look at the chart and describe what we can expect in the next 40 years.



10 Read the article and prepare questions.

The Environmental and Ecological problems of the times. A Planet in Peril

It is generally acknowledged that in the World today there are potentially calamitous problems relating to environmental destruction, resource depletion, global warming and over population. The natural resources of this planet, its forests, fisheries and crop lands are already being used at such a rate that is unsustainable. We are already using the planets renewable resources faster than what the planet can replenish. This trend is related to the ongoing and accelerating process of species extinction and the destruction of natural habitats such as the tropical rainforests, whole ocean ecosystems, rivers and coastal wetlands. This gradual destruction of the earth's biosphere, its animal and plant species together with their

complex webs of self sustenance, is certainly set to continue as human population growth and increased economic activity imposes more pressures on the planetary ecosystem. The world's population at an estimated 7 billion people today is projected to grow to over 10 billion people as early as 2050. This is coupled with massive growth in economic activity lead by the surging economies of China and India and further boosted by economic growth in the rest of the World as well. If the Planet is already struggling to cope with the demands placed upon it by the human race currently, when we also factor in these other considerations, then certainly we are heading for some interesting times. The United Nations Environment Programme and the World Wildlife Fund for Nature issued a joint report in 2000 that said, 'The World's seas, fresh waters, forests and croplands are being exploited at such a rate that nothing will be left by 2075'. Also food shortages and food price hikes that were experienced by the World in 2008 may be the shape of things to come.

7 Read the article and retell the contents.

Global Warming

Another major problem that looms on the horizon and one that probably is already upon us and exerting its effects is the phenomenon of Global Warming. It can be argued endlessly whether Global Warming is man-made or whether it's a naturally occurring phenomenon, however the empirical evidence certainly shows that Global Warming is indeed occurring. This is made manifest in the melting glaciers and polar ice caps, the increase in hurricane activity (with category 4 and 5 hurricanes, the most intense, doubling in frequency over the past 50 years), changing rainfall patterns and of course the actual increases in measured surface temperatures.

The majority verdict of the scientific community points towards the notion that Global Warming is at least partly man made and brought about through the emissions of so called green house gases such as methane and carbon dioxide, which causes the earth's atmosphere to retain more heat. Also based on computer climate models, it is projected that Global Warming will continue with potentially dire consequences for vast numbers of people living on this planet. These predictions vary with some scenarios describing temperature rises of 1 or 2 degrees centigrade coupled with sea level rises of 80cm or so. Other models predict temperature rises of 3 to 5 degrees centigrade coupled with sea level rises of 7m! At the extreme end we find truly doomsday scenarios where the earth's atmosphere is changed to such an extent that it becomes similar to that of the planet Venus, with surface temperatures way above the boiling point of water that is 250 degrees Celsius together with sulphuric acid rain. Though seemingly far-fetched, the world renowned scientist Stephen Hawking cited this scenario as a distinct future possibility.

Even without considering these future predictions we are already being affected by climate change in a way that is detrimental to human life and well-being. It is estimated that over 27,000 died as a direct result of the 2003 freak heat wave that was experienced over Western Europe. Those that died were many the very old and the very young. The deaths that have resulted from crop failures in The Third World, brought about as an indirect consequence of climate change, may number into the millions. Hurricane Katrina which a few years ago hit the Southern coastal city of New Orleans in the USA is estimated to have killed over 1000 people.

8 Read the article and put down its main ideas.

Water Scarcity

A problem that is related to Global Warming concerns the availability of water resources to the world's people. It has been estimated by the United Nations that due to population growth, pollution and global warming the average person's water supply will be cut by a third over the next 20 years. This would be a major inconvenience in the developed and industrialized countries but in the Third World where 90% of the water supply is used for agriculture, the consequences will be disastrous. Even in Australia which at the time of writing this, is in a drought that has lasted 6 years, is facing the ruin of large swathes of its agricultural industry. It has been said by strategists that in the future wars will be fought over water, this most essential of requirements for sustaining life. For instance, King Abdullah of Jordan has said 'future potential conflict in our area is not over land, it is over water.' It is a certainty that the problems deriving from water scarcity will increase sharply over the years to come.

11 Read the article and put down its main ideas.

Peak Oil, Peak Gas and Peak Uranium

A serious problem looming over the horizon is that of fuel shortages due to the peaking in production and subsequent decline in output of three of the World's most important energy sources that is Oil, Gas and Uranium Ore. The World's output of all these commodities is described by what's known as the Hubbert Curve, which describes how the output of each of these energy resources will peak at a certain point in time but thereafter production of the commodity goes into terminal decline. At the same time the World demand for the same commodity will either grow or remain constant thereby producing a supply shortfall, pushing up prices and producing a state of scarcity for that resource. This can lead to Political instability, Economic problems and even War when countries use force of arms to try to secure their energy supplies. The dates for these eventualities are around 2010 for Peak Oil, though some commentators think we have already got there. The estimates for the time of Peak Gas range from around 2020 to 2030 and that for Peak Uranium at around 2025 to 2035.

Text resource: <http://www.iawwai.com/ProblemsOfThisWorld.htm>