TITLE: POLLUTION-AIR, WATER-CONSEQUENCE AND REMEDIAL MEASURES

Kavana. K
Student X Standard
Vikasa High School, Alkola,
Shimoga - 577204
INTRODUCTION

• Nature is our mother. She offers us all facilities to lead a comfortable and peaceful life. She brings us rain. She feeds the human beings who are her children. The plants, trees, bushes and the grains we grow all belong to nature. Yet man is not grateful to nature. He pollutes the surroundings and brings destruction on himself. Man’s ability to manipulate the environment has today resulted in Several Serious problems. The most Serious of these problems, is the environmental pollution
Environmental pollution can be defined as an undesirable change in the physical, chemical and biological characteristics of the environment such changes are caused by substances that are introduced into the environment, by human activities.
TYPES OF POLLUTION

Pollution is normally classified on an environmental basis, into the following 3 types.

• Air pollution.
• Water pollution.
• Soil pollution.

Apart from these, we can recognize other forms of pollution such as noise pollution, thermal pollution, radio-active pollution and so on.
AIR POLLUTION

• According to W.H.O, an increase in any of the constituents of the atmosphere which is harmful to the living beings and their environment, is known as air pollution.

The view from the space
Causes of Air Pollution

• Photo Chemical Smog

[Image of a person wearing a mask and riding a bicycle on a hazy day, accompanied by a diagram illustrating the formation of photochemical smog.]
Smog
Soil

"Acid" rain
Fertilizers
Soil use

Plants

Man

Diet/Bad habits
Absorption disorder
Diseases
Medicines
Mg deficiency

Animals

Spring tetany in animals at pasture
Burning of Fire Wood

Chimneys
Effects of Air Pollution

1. Effect on human health
2. Effects on vegetation.
3. Effects on building and monuments.

St. Paul Cathedral  Liberty Statue
Be Aware

• The ozone layer is becoming thin due to the gases called CFCS. The use of these gases started in 1930s in refrigerators, air conditioners, and for cleaning of computers. These gases do not burn and are not poisonous. However, CFCS are known to spoil the ozone layer of the atmosphere in a systematic way. Modern research shows that one molecule of CFCs can destroy one lakh molecules of ozone.
4. Effects on Climate

Since 1979, more than 20% of the Polar Ice Cap has melted away.
Control of Air Pollution.

Air pollution can be controlled by a thorough understanding of its causes.

• Establishment of industries away from the towns and cities.
• Increasing the length of the chyeysmn in industries.
• Growing more plants and trees.
• Use of efficient engines in automobiles.
• Use of smokeless choola.
• Use of petrol without lead (Unleaded petrol)
Vanamohotsava should be organized in the right spirit

The UNO must stop nuclear tests
WATER POLLUTION

• Effluent from various industries, Sewage containing domestic waster and pesticides from agricultural lands are finding their way into water bodies leading to water pollution.

• **Causes of Water Pollution:** Water pollution is mainly due to the following causes.
• Industrial wastes
• Sewage water
• Agricultural wastes
• Release of Superheated water
• Addition of waste and oil from refineries
Water Pollution
Effects of Water Pollution

- Industrial pollutants like mercury, chromium, cadmium and lead are poisonous. They are also capable of entering the food chains and cause diseases in man. Mercury is known to cause a disease called Minimata.
- Organochlorine pesticides like D.D.T. in the agricultural wastes are non-degradable and move along the food chains. It may lead to biomagnification.
- Some industrial effluents can cause changes in colour, odour and taste of water in the natural water bodies. Contamination of water also leads to spread of water borne diseases such as cholera, amoebiasis and other diseases.
Control of Water Pollution

Sewage Treatment

Sewage

Screening

Sedimentation

Sludge (insoluble)

Anaerobic digestion

Digested sludge: drying: incineration

Soluble liquid

Oxidation

Disinfection

Treated effluent to stream

Activated sludge

Trickling filter

Biological processes

Nonbiological processes
WASTE WATER TREATMENT PROCESS

SLUDGE BUILDING
Sludge produced from the treatment process is hauled off site to incineration.

1. SEPTAGE BUILDING
2. SETTLEMENT TANKS
3. PRIMARY TREATMENT PRESSURE FILTERS
4. SECONDARY TANKS
5. SLUDGE TANKS
6. SAND FILTERS
7. GLASS TANKS
8. SLUDGE TANK

THE PURPOSE OF THIS PROCESS IS TO
RECYCLE WATER AND WASTE INTO
DRINKABLE WATER AND COMPOST!

TERMS:
ANAEROBIC: contains NO AIR - smells bad
AEROBIC: contains AIR - smells sweaty!

KEY:
Underground pipe from one area to the next, carrying material to be processed!
SOIL POLLUTION

Cause of Soil Pollution

• Residences from the factories.
• Indiscriminate use of pesticides.
• Addition of non degradable domestic waste like plastic
Control of Soil Pollution

• Minimising the usage of pesticides.
• Periodic change of crops to increase the soil fertility.
• Disposal of unwanted garbage created by clinics and hospitals properly either by burning or by burying into the soil.
• Following the rules and regulations laid down by pollution control board.
• Minimising the usage of plastics.
NOISE POLLUTION

Effects of Noise Pollution

- It affects human nervous system leading to deafness, headache, blood pressure, brain disorders etc.
- Harsh noise leads to uneasy feelings, short temper, heart disease and other related problems
Measure to Check the Noise Pollution

- Replacing very old machines by new ones.
- Providing labourers in industries with ear plugs and improved sound proof instruments

Earplugs
• Regulation of loud speakers used in functions.
• Growing broad-leafed plants which can absorb sound.
• The sound volume beyond certain limit is prohibited by law
ENVIRONMENTAL EDUCATION IS THE NEED OF THE HOUS.

- Students must spread awareness among the people on “environmental issues such as over use of petrol vehicles, over use of coal, oil and ground water. Besides, people must be taught not to pollute water bodies too. If we do not protect our environment, it will stop supporting organisms. That would be the end of human life”