

Environmental Care and Management

Presentation by the National
Environment and Planning
Agency, NEPA.



What is the Environment?



WHAT IS THE ENVIRONMENT?

- **The environment is composed of everything around us.**
- **It is comprised of both a natural aspect and a built aspect**



Natural Aspect of the Environment

- ✦ **Animals, plants, fungi, bacteria and genetic resources make up the Biological Segment of the Natural Environment.**
- **Air, land, water, soil, minerals, oceans and seas make up the Physical Segment of the Natural Environment.**



The Natural Environment

- ◆ The Natural Environment existed before the arrival of man on earth.
- ◆ It has the capacity to exist independent of human impacts or influences.

The Natural Environment

- Examples include:

- The Great Barrier Reef-*Australia*
 - Cockpit Country-*Jamaica*
 - Kingston Harbour-*Jamaica*
- The Amazon-*nine countries*
 - Hellshire Hills-*Jamaica*
 - Caribbean Sea
- Dunn's River Falls-*Jamaica*



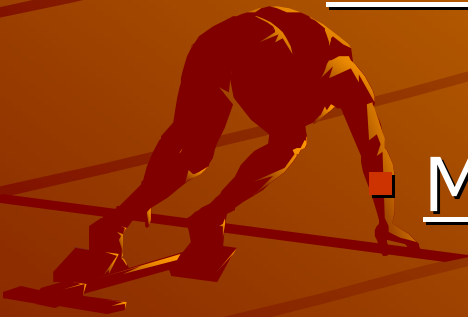
The Built/Social Aspect of the Environment

- ✦ The Built Environments originates in or out of the actions of human beings.
- ✦ Unlike the Natural Environment, the sustained functioning of the Built Environment depends on human influence.

The Built/Social Environment

- Examples include:

- Urban Settlements- *Portmore, New Kingston*
- Cities-*Kingston, New York, London*
- Roadways and Railways
- Markets-*Coronation, Linstead*
- Hospitals- *KPH, CRH*
- Universities and Colleges- *UTech, UWI, NCU*





How do we destroy the Environment?



Negative Effects of Human Action on the Environment.

✦ *We Have Enormous Waste Problems.*

✦ *Biological Species Are Becoming Extinct.*

✦ *Population Growth Is a Driving Force.*

✦ *We Are Producing Global Change*



What is happening to the Environment?

- ◆ In the last few decades, humans have caused changes in the atmosphere, oceans and land surfaces.



What is happening to the Environment?

- ✦ Human activity is measurably changing the composition of the atmosphere, adding gases.
- ✦ They have caused serious degradation of some of the largest sources of fresh water.



What is happening to the Environment?

- ✦ **Population Growth**- The human population is more than 5 billion. It's projected to reach 8.5 billion by 2025.



What is happening to the Environment?

- ✦ Population growth has been accompanied by a more rapid increase in the use of natural resources and the production of environmental pollutants.



POLLUTION

✦ Contamination or undesirable changes in the physical, chemical or biological characteristics of air, water or land that can negatively affect living things.

✦ Pollution causes degradation in the natural quality of the environment and can offend the senses of sight, taste or smell and can cause a health hazard

Soil Pollution

- ◆ *The build-up in soils of persistent toxic compounds, chemicals, salts, radioactive materials or disease causing agents which have adverse effects on plant growth and animal health*

Soil Pollution

- ✦ After World War Two many countries suffered from food shortage and this facilitated the introduction of fertilizers and other agricultural chemicals.



Soil Pollution

✦ Pesticides such as DDT, a colourless chemical pesticide, which is a potent nerve poison in insects was first widely used to combat diseases such as yellow fever and malaria.

✦ DDT prevents the shelling of bird eggs and causes health problems for humans.

Soil Pollution

- ◆ Pollution of land by heavy metals is a result of the mining of ore to extract metals such as tin, silver, nickel, lead, iron, chromium and copper.



Is man the greatest threat to the environment?



Air Quality-Smog

- ◆ Smog is produced by a set of complex photochemical reactions involving volatile organic compounds, nitrogen oxides and sunlight which form ground-level ozone.

Smog comes from:

- ✦ Automobile exhaust, power plants, factories, paint, hairspray, charcoal, starter fluid, chemical solvents, plastic packaging.

- ✦ In typical urban areas at least half of the smog produced comes from cars, buses, trucks, and boats.

Air Quality-Smog

- ◆ Major smog occurrences are linked to heavy motor vehicle traffic, high temperatures, sunshine and calm winds.
- ◆ Weather and geography affect the location and severity of smog.



Air Quality-Smog

- ◆ Smog can occur more quickly and be more severe on a hot, sunny day.



Air Quality-Smog

- ◆ Smog may remain trapped over a city for days.
- ◆ Ironically, smog is often more severe farther away from the sources of pollution.

Water Pollution



Water Pollution

- ◆ Comprising over 70% of the Earth's surface, water is undoubtedly the most precious natural resource that exists on our planet.

Water Pollution

- ◆ Water pollution occurs when a body of water is adversely affected due to the addition of large amounts of materials to the water.



Water Pollution

- ◆ Two types of water pollutants exist; Point Source and Nonpoint Source.



Water Pollution

- ✦ Point sources of pollution occur when harmful substances are emitted directly into a body of water.
- ✦ Example oil spill, sewage spill/let off



Water Pollution

- ✦ A nonpoint source delivers pollutants indirectly through environmental changes
- ✦ Example: fertilizer from a field is carried into a stream by rain in the form of run off and then affects marine life.

Jamaica's Pollution Problems

- ✦ Major environmental problems involve water quality and waste disposal.
- ✦ 77% of Jamaica's renewable water resources are used for agriculture while 7% is used for industrial purposes.

Jamaica's Pollution Problems

- ✦ Coastal waters have been polluted by sewage, oil spills, and industrial wastes.
- ✦ Another major source of water pollution has been the mining of bauxite, which has contaminated the ground water with red-mud waste.

Jamaica's Pollution Problems

- ✦ Another environmental problem for Jamaica is land erosion and deforestation.
- ✦ In 2001, four of Jamaica's mammal species were endangered, as were seven bird species and eight reptile species. About 680 plant species are also threatened.

We treat the Environment like
garbage.

