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Environmental Pollution

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Outline

- Definition of Environmental Pollution
- Causes of Environmental Pollution
- 8 Kinds of Environmental pollution
- Conclusion and Recommendations

What is environmental pollution?

- "The contamination of the physical and biological components of the earth/atmosphere system to such an extent that normal environmental processes are adversely affected."
- "Pollution is the introduction of contaminants into the environment that cause harm or discomfort to humans or other living organisms, or damage the environment."

Source: http://www.tropical-rainforest-animals.com/Environmental-Pollution.html

What causes environmental pollution?

- "Pollutants can be naturally occurring substances or energies, but are considered contaminants when in excess of natural levels."
- "Any use of natural resources at a rate higher than nature's capacity to restore itself can result in pollution of air, water, and land."

Source: http://www.tropical-rainforest-animals.com/Environmental-Pollution.html

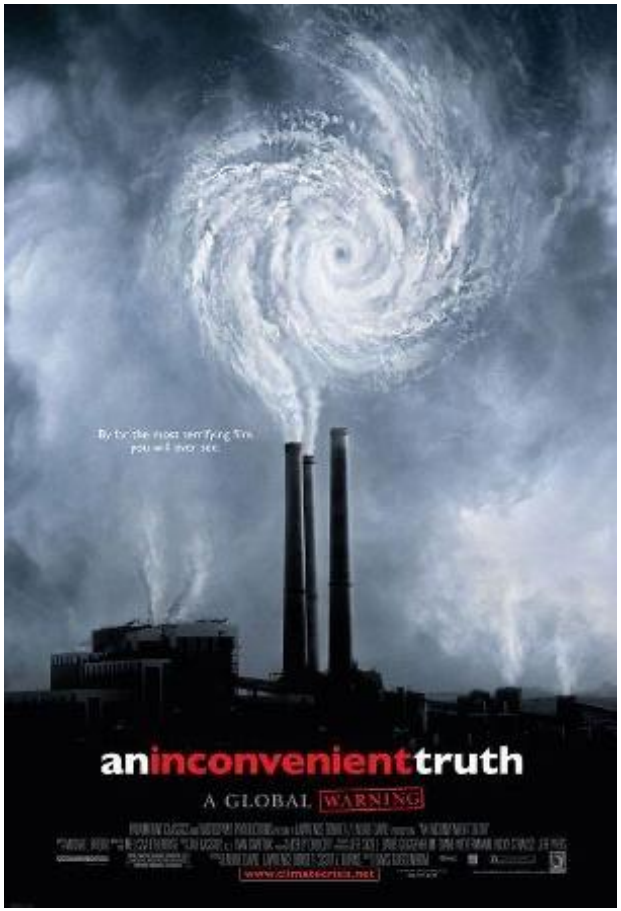
How many kinds of environmental pollution?

- There are actually 8 different kinds of environmental pollution.

① Air Pollution	⑤ Thermal Pollution
② Land Pollution	⑥ Light Pollution
③ Soil Pollution	⑦ Visual Pollution
④ Water Pollution	⑧ Noise Pollution

Source:
http://www.sustainablebabysteps.com/kinds-of-environmental-pollution.html
http://www.tropical-rainforest-animals.com/Environmental-Pollution.html

Environmental Pollution: Air Pollution



- Air pollution is the contamination of air by smoke and harmful gases, e.g. CO_2, SO_2, NO_x
- Air pollution includes:
  - Manmade greenhouse gases from vehicles' exhaust and burning of fossil fuels
  - CFC and other harmful off-gassing from things such as paint, plastic production, and so on
  - Radiation spills or nuclear accidents
- Air pollution can cause negative impacts on environment and affect human health (e.g. respiratory diseases, allergies)

Environmental Pollution: Land Pollution

- Land pollution is the degradation of the Earth's surface caused by a misuse of resources and improper disposal of waste.

- Land pollution includes:
  - Litter found on the side of the road
  - Illegal dumping in natural habitats
  - Oil spills that happen inland
  - The use of pesticides and other farming chemicals
  - Damage and debris caused from unsustainable mining and logging practices
  - Radiation spills or nuclear accidents
- Land pollution is responsible for damage done to natural habitat of animals, deforestation and damage done to natural resources, and ugly communities.

Source: http://www.tropical-rainforest-animals.com/Environmental-Pollution.html

Environmental Pollution: Soil Pollution

- Soil pollution is also known as soil contamination which is either solid or liquid hazardous substances mixed with the naturally occurring soil.
- Main causes of soil pollution are:
  - Industrial activities: waste which are not disposed off in a manner that can be considered safe
  - Agricultural activities: chemical utilization
  - Ineffective and inefficient waste disposal
  - Accidental oil spills
  - Acid rain
  - Radiation spills or nuclear accidents
- Soil pollution can cause effects on human health, plants growth, and ecological equilibrium.

Source: http://www.epa.gov/superfund/students/wastsite/soilspil.htm

Environmental Pollution: Water Pollution

- Water pollution is the contamination of any body of water (e.g. lakes, groundwater, oceans, etc.).
- Followings are significant causes of water pollution:
  - Waste/garbage disposal in the river
  - Sewage running/urban and agricultural runoff into lake or streams
  - Industrial waste spills contaminating groundwater
  - Excessive nutrients resulting in algae booming and water pollution
  - Biological contamination, such as bacteria growth
  - Radiation spills or nuclear accidents
  - Illegal dumping of substances or items within bodies of water

- These kinds of environmental pollution are linked to health issues in humans, animals and plant species..

Source: http://www.tropical-rainforest-animals.com/Environmental-Pollution.html

Environmental Pollution: Thermal Pollution

- Thermal pollution is the increase of temperature caused by human activity.
- Followings are example of thermal pollution:
  - Warmer lake water from nearby manufacturing (e.g. using cool water to cool the plant and then pump it back into the lake)
  - Thermal pollution should also be the increase in the temperatures in areas with lots of concrete or vehicles, generally in cities
- Thermal pollution can cause aquatic life to suffer or die due to the increased temperature.
- Thermal pollution can also cause discomfort to communities dealing with higher temperatures and will affect plant and animal species around the area.

Source: http://www.tropical-rainforest-animals.com/Environmental-Pollution.html

Environmental Pollution: Light Pollution

- Light pollution is the brightening of the night sky inhibiting the visibility of stars and planets by the use of improper lighting of communities.

- Light pollution includes:
  - Street lamps that shine light in all directions
  - Extra, unnecessary lights around the home
  - Cities that run lights all night long
- Light pollution using more energy may affect human health and our sleep cycles, and most importantly, corrupts our kids telescopes and their curiosity.

Source: http://www.tropical-rainforest-animals.com/Environmental-Pollution.html

Environmental Pollution: Visual Pollution

- Visual pollution is anything unattractive or visualizing damaging to the nearby landscape.
- Followings are examples of visual pollution:
  - Skyscrapers that blocks a natural view
  - Graffiti or carving on trees, rocks, or other natural landscapes
  - Billboards, litter, abandoned homes, and junkyards
- Visual kinds of environmental pollution are annoying and ugly. It is also depressing.
- Visual environmental pollution can cause negative affects on landscape.

Source: http://www.tropical-rainforest-animals.com/Environmental-Pollution.html

Environmental Pollution: Noise Pollution

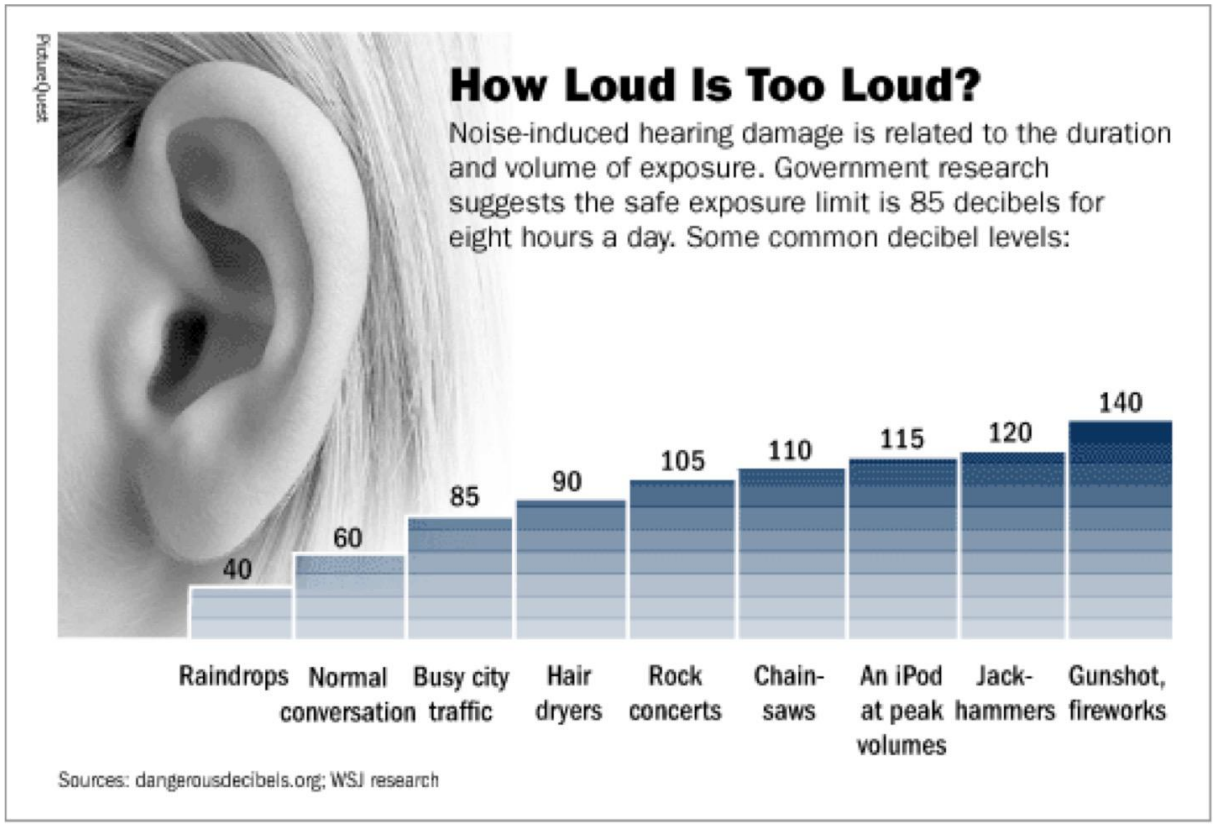
- Noise pollution is any loud sounds that are either harmful or annoying to humans and animals.
- Noise pollution includes:
  - Airplanes, helicopters, and motor vehicles
  - Construction or demolition noise
  - Human activities such as sporting events or concerts

- Noise pollution can be disruptive to humans' stress levels and may be harmful to unborn babies.
- Drive animals away might decrease their ability to hear prey or predators

Source: http://www.tropical-rainforest-animals.com/Environmental-Pollution.html

Sound Levels (Loudness of Noise) [decibel-dB]

Sound sources (noise) Examples with distance	Sound pressure Level L_p dB SPL
Jet aircraft, 50 m away	140
Threshold of pain	130
Threshold of discomfort	120
Chainsaw, 1 m distance	110
Disco, 1 m from speaker	100
Diesel truck, 10 m away	90
Kerbside of busy road, 5 m	80
Vacuum cleaner, distance 1 m	70
Conversational speech, 1 m	60
Average home	50
Quiet library	40
Quiet bedroom at night	30
Background in TV studio	20
Rustling leaves in the distance	10
Hearing threshold	0



Source: http://www.sengpielaudio.com/TableOfSoundPressureLevels.htm

Conclusion

- Pollution is the introduction of contaminants into the environment that cause harm or discomfort to humans or other living organisms, or damage the environment.
- There are actually 8 different kinds of environmental pollution:

1. Air Pollution
2. Land Pollution
3. Soil Pollution
4. Water Pollution
5. Thermal Pollution
6. Light Pollution
7. Visual Pollution
8. Noise Pollution

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Recommendations

- Promote green production activities and the use of alternative energy
- Stop overexploitation of natural resources for our better environment and better life!

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Thank You for Your Attention!