Forum:	Environment Commission
Issue:	Measures to restore environments damaged by man-made disasters in the Caribbean
Student Officer:	Leighton DuYang
Position:	Chair of the Environment Commission

Introduction

The increase in water pollution is a rising concern among many nations and has been the root of several environmental issues that exist in our world today, including the increase of plastic and toxins in water bodies, the thinning of marine biodiversity, a decrease in the amount of safe drinking water, and an increase in cases of waterborne diseases. Throughout the history of mankind, water pollution has not been as rampant as it is today. Water pollution is an issue older than most realize, dating back to forty thousand years ago, but the types of materials that were disposed of were different. Materials that were deposited in the ocean used to be biodegradable, but now, the synthetic materials that are being dumped into the ocean are non-biodegradable, continuing to pile waste upon the ever-increasing polluted water bodies on Earth.

Definition of Key Terms

Caribbean

The Caribbean is a region in North America and Central America containing 13 sovereign states and 17 dependent territories. The majority of the Caribbean region is water, specifically the Gulf of Mexico, where the states derive part of their livelihood and economy from.

Man-made Disasters

Man-made disasters are ones that are caused by man's faults. These include global warming, water pollution, war, and etc. Any problems that were artificially caused, or made significantly worse by man, is a man-made disaster.

Pollution

Pollution is the introduction of contaminants into natural environments that can cause adverse changes. There are many different types of pollution, including light pollution, water pollution, air pollution, and etc. Light pollution is when bright lights, especially at night, cover

up the natural lighting of the moons and the stars, changing our view of the environment. Water pollution is when waste is left or thrown into water bodies in order to dispose of them, and this could lead to the death of wildlife, and the death of humans. Air pollution is when particles scatter over an area and cause smog. This smog is harmful to humans' lungs and other sensitive parts of the body such as the eyes. Each type of pollution is harmful to the natural environment.

Marine Biodiversity

Marine biodiversity is two words, marine and biodiversity. Marine refers to anything that is of, found in, or produced by the sea. Marine wildlife means wildlife in the sea, and marine biology is studying the life of creatures under the sea. Biodiversity refers to the variety of life in one ecosystem or in a particular habitat. The jungle contains a large amount of biodiversity; there are many different species of each type of animal in the jungle. Hence, marine biodiversity refers to the biodiversity of plants and animals under the sea.

Waterborne Diseases

Waterborne diseases are diseases that are specifically transported through contaminated water. These diseases are typically very contagious and diseases such as cholera, typhoid, and giardia cause severe stomach irritation and diarrhea. This makes these diseases even more of a problem since as it deprives a human of their fluids, it creates an environment for others to become infected with the disease thus spreading the disease until everyone is infected.

World Health Organization (WHO)

The World Health Organization, otherwise known as the WHO, is a UN specialized agency that is concerned with international public health, and its parent organization is the United Nations Economic and Social Council, ECOSOC. It was established on April 7, 1948 after World War II, and it absorbed all previous health organizations established by the League of Nations, in particular, The Health Organization. Its headquarters are located in Geneva, Switzerland.

Its current priorities include communicable diseases such as HIV/AIDS, Ebola, malaria, and tuberculosis. However, communicable diseases also include waterborne diseases such as cholera, typhoid, and giardia.

General Overview

Although humans have been polluting the waters for centuries, there has not been much of an impact on water pollution until the past century. After World War II, the pollution evolved from simply waste material to synthetic waste material, non-biodegradable material. Despite efforts to control water pollution, the pollution level has gradually worsened due to the fact that the waste material cannot decompose and as such will be left in the ocean for countless generations.

Pollution to the oceans and seas have escalated significantly since the last century, and with it have brought many issues to be solved. Recently, the synthetic waste material that has been deposited into our world's water bodies have released toxins into the water and ecosystem around it. In addition, this causes a sharp decrease in marine biodiversity, depending on the severity of the pollution. Humans are not exempt from this issue either, as polluted water carries diseases that are uncommon in an area such as cholera, typhoid, and giardia.

Loss of marine biodiversity

Consumption of waste material by marine life

Waste is continuously being dumped into the ocean, often times oil and plastic materials that nations do not, or cannot, recycle. Plastic materials could include six-pack rings, plastic straws, plastic bags, etc, and oil spills are a constant issue that nations face when transporting oil across water bodies. These waste materials end up accosting the marine wildlife and endanger their lives and their fate, ultimately affecting the entire ecosystem.

Plastic materials are dangerous to the local wildlife and have severe effects on their health. Six-pack rings could suffocate any animals who attempt to consume them. Plastic straws could very well end up in any tract in an animal's body, be it the naval cavity or the esophagus, and that could cause an infection, if not outright kill them. Other plastic materials such as plastic bags could also, if consumed, fill up the stomach and end up starving an animal to death, as plastic took up space in an animal's stomach but was indigestible. The amount of plastic waste floating in the ocean should be controlled and monitored to prevent the loss of marine biodiversity.

Caption 1: Turtle restricted by six-pack plastic formation

Release of toxins into water bodies

Although plastic is believed to be impossible to decompose, plastics exposed to the sun, rain, and other environmental conditions have been found to decompose faster than thought possible. Due to this phenomenon, in many areas where plastic has been polluting nearby water bodies for a few years may begin to decompose. As the plastic decomposes, it releases deadly toxins into the water. While plastic cannot decompose whilst inside of an animal's digestive system, when decomposing plastic is consumed, so are the toxins. These toxins have been found to have adverse effects on animals after consumption, which could lead to death.

Waterborne diseases

Contaminated water

According to WHO, 2 million deaths occur each year due to waterborne diarrheal diseases such as cholera, typhoid, and giardia. These diseases were all caused by a case of contaminated water. Either the water was consumed due to a lack of other water sources, or the water had come in contact with a vulnerable part of the human body, in order for the disease to have spread.

Contaminated water however, does not just refer to sewage water that has risen from the pipes, but also water that has had toxins released into it that can cause other types of illnesses and harm. Instead of causing diarrheal diseases to spread, the consumption of toxic water could lead to increased rates of cancer, physical birth defects, and mental retardation. Each of these symptoms should be avoided and the prevention of such illnesses is the best way to cure people.

UN Involvement, Relevant Resolutions, Treaties and Events

UN resolution

On December 22, 1989, the UN passed a resolution, "A/RES/44/228", at the 85th plenary meeting in the "United Nations Conference on Environment and Development" on the protection of the environment by controlling waste emitted and protecting important environmental sites. The resolution made clear that large companies should reduce their waste and control the dumping of the waste, and that measures be taken to confine the environmental issue with water pollution. The resolution was put into effect with the intent to help minimize the amount of waste that would be dumped and maximize the amount of waste that would be recycled.

Treaties

London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter

The "London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter" of 1972, otherwise known as the "London Convention", or "LC '72", is an agreement to control the pollution of the sea by dumping (waste). There are 89 contracting parties as of 2016, many of which are part of the Caribbean, and each is required to follow a "black list/grey list". Items on the black list can only be disposed into the ocean if they are in trace amounts or can be rapidly rendered harmless. Items on the grey list must be handled with care.

On December 29, 1972, the "London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter" was opened for signature, and once 15 nations ratified, it came into effect on August 30, 1975. On November 17, 1996 a special meeting of the Contracting Parties adopted the "1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972" which was to replace the 1972 Convention. This was in order to reflect the "global trend

of precaution and prevention". It was agreed upon that instead of controlling the waste dumped, nations would find land-based solutions for most waste materials and would only be controlling the dumping of select few waste materials into the sea.

Timeline of Events

Date	Description of event
December 19th, 1972	"London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter" is opened for signature
August 30th, 1975	"London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter" is entered into force
December 22nd, 1989	UN passed resolution, "A/RES/44/228"
November 17th, 1996	"1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972" is adopted and replaces the previous treaty

Possible Solutions

One possible solution to this problem is to rally the people of each island in the Caribbean in order to set up crews to clean up the trash that floats around though the gulf. In order to call more attention to this problem, public announcements could be made, and educators could encourage students to go and assist the community by picking up trash and throwing it away.

Another solution would be to enforce stricter laws on the disposal of waste upon the people in order to minimize the source of the problem. Just as how spitting on the ground is punishable by public spanking in Singapore, littering could also be made punishable by fines or corporal punishments, as respective governments see fit. This would incentivize the citizens of any country to think twice before littering

In addition, recycling stations could be constructed around major cities. These machines would take in different forms of recyclable garbage and compensate the citizens accordingly. This way not only will citizens stop littering, but they will instead bring them to the aforementioned recycling machines, and they will also collect the litter that covers the ground.

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