

The Overview Of Water Pollution In The World

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Abstract: Water is a precious resource, but not everyone is aware of it. More than 1 billion people are missing about 20 to 50 liters of clean water each day to cater for basic needs such as eating and bathing. The phenomenon of oil exploration, ocean shipping and petroleum-contaminated wastes is one of the causes of water pollution. It is estimated that about 1 billion tons of oil are transported by sea each year. Part of this volume, about 0.1 to 0.3%, is thrown into the sea in a relatively legal way: the washing of oil tankers with seawater. The shipwreck is relatively regular, disposal of lubricant, or accidental dropping gasoline. The permeation rate of petroleum is seven times that of water, which will cause the groundwater to become contaminated. About 1.6 million tons of hydrocarbons are discharged by rivers of industrialized nations. From the above causes we see that human consciousness is the main cause of pollution of water environment. Resources are not endless, with the exploitation of an indiscriminate way, rampant, run for market economy benefits without the appropriate treatment, the water pollution is a certain matter. The importance is inevitable if people are unaware of the importance of water for life, in the near future the resources will be exhausted.

Keywords: water pollution, water source, environment pollution

1 INTRODUCTION

The environment has been a concern to many countries as well as most people living on our planet. However, the environmental pollution is still raging all over the green planet. After the industrial revolution of the world economy as meat was changed with the economic growth miracle of many countries but every problem always has the opposite side. Humans have broken the balance of the earth. What causes the ecological environment to be polluted and destroyed? The situation of this problem and some explanations under the eyes of philosophy for this really hot issue are. On our Green Planet, it is easy to see signs of environmental pollution: from climate changes that make the weather unusually harsh, acid rain destroys public buildings. Value for money, ecosystem damage, to ozone depletion, which enhances ultraviolet radiation ... We are facing three common problems: warming of the Earth, pollution of the sea and ocean and desertification. The average temperature of the Earth is now nearly 40 degrees Celsius hotter than the temperature in the last ice age, about 13,000 years ago. However, over the past 100 years, the average surface temperature of the Earth's surface has increased by about 0, 6 to 0, 7 degrees Celsius and is expected to rise by 1.4 to 5.4 degrees Celsius over the next 100 years. Global warming has a profound impact on the environment and society. One of the inevitable consequence of the rising temperature of the earth is the increase in sea level, increased intensity of storms and extreme weather events, declining populations, changes in the agricultural sector. , And reduce the oxygen in the ocean. Global warming rates in the 21st century are faster than the adaptation of species, so some species are extinct. The sea and the ocean are crying for help because of severe pollution.

Every year, about 50 million tons of solid waste discharged into the sea include land, sand, garbage, construction waste, radioactive material ... In addition, oil leaks, 50% of marine oil pollution. Through the following numbers, one can see in part the consequences of the infection:

- 1,000,000 seabirds, 100,000 sea and marine mammals died due to being caught or choked by plastics.
- 30-50% of the CO₂ emitted by fossil fuel combustion is absorbed by the oceans, the change in temperature will affect the CO₂ absorption capacity of the phytoplankton and then the photo. Affects the ecosystem.
- 60% of reefs are threatened by pollution.
- 60% of the Pacific coast and 35% of the Atlantic coast are eroded at 1m / year

If people see the sea as a giant scum that can contain all sorts of waste, the ocean environment will be more severely damaged than it is now. Each year, the Sahara is moving southward at a rate of 45 km per year. Madagascar Plateau, which is considered a treasure of biodiversity, now accounts for 7% of the land is barren hills. In Kazakhstan, since 1980, 50% of arable land has been abandoned due to overcrowded desert. Biodiversity is degraded, land becomes uncultivated, the two major influences of desertification. This situation is threatening the lives of nearly 1 billion people on Earth. Africa could only raise 25% of its population by 2025 if desertification continues in the dark continent. Warning signs of global environmental pollution appear more and more everywhere in the world. We all understand that, once environmental pollution occurs, it is we humans and other innocent creatures on Earth that will be the first to be affected - the negative effects on life. Today and tomorrow. The promotion of industrialization and agricultural cultivation has brought the economy to a sustainable development, but the problem of polluting the environment is also an urgent issue that needs attention. Waste from factories and factories that pollute the environment is largely accumulated in rivers and lakes and eventually accumulates at the bottom of the ocean. In the United States (1950) more than 200 square kilometers of water (equivalent to a quarter of the regular US flow) ran through nuclear power plants and raised temperatures by 10 to 120 ° C, severely disrupting hydrological systems. . Anwar and CS (1999) studied the quality of drinking water in Punjab, showing that 95.83% of wells and 91.3% of water tanks were contaminated. UNEP warns that more than 300 million people in the three continents are at risk for cholera and typhus due to water pollution. Water resources for daily life and agricultural

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production are declining due to unprocessed industrial waste discharged into rivers and lakes. Speaking on the issue, UNEP Science Program Chair Jacqueline McGlade said that the amount of untreated water discharged into rivers and lakes has become increasingly a concern today, Population growth and rapid economic growth in Asia, Africa, and Latin America. Jaqueline McGlade said that restoring seriously polluted rivers and stopping the polluted rivers would be successful if countries around the world worked together to protect water. The UNEP report showed that between 1990 and 2010, the water environment of more than 50% of the rivers on three continents was contaminated with microorganisms and organic pollutants. Increased by nearly 1/3. About a quarter of Latin America's rivers, 10-25% of Africa's rivers and 50% of Asian rivers are affected by microbial contamination, largely due to the discharge of waste water, waste, and waste. Disposal of unprocessed wastewater into the river. In particular, in many countries, 90% of people use contaminated surface water to serve their living needs or for the purpose of irrigation and swimming, posing a major threat to health. According to the UNEP Report, an average of 3.4 million people die on 3 continents each year due to diseases of the pathogenic microorganisms present in the surface water such as cholera, typhoid, polio, And an estimated 25 million people in Latin America, 164 million in Africa, 134 million people in Asia are at risk of contracting the disease. In addition, surface water in three continents is seriously polluted by sewage, industrial waste, industrial and industrial waste, and so on. Mechanical complex, toxic, affecting aquatic species. In addition, wastewater from mining operations, irrigation systems and salinity intrusion also increases salinity in river water. Between 1990 and 2010, one third of the rivers in three continents experienced saltwater intrusion. In particular, in ponds, lakes, rivers and canals, the problem of nutrient pollution is causing the quality of water to change in a negative direction, affecting the ecosystem. One of the main consequences of this problem is that eutrophication, which occurs when excess nutrients in the water environment, is typically nitrogen (N) greater than 500µg/l and large phosphorus (P) More than 20µg/l, excess of nutrients will promote the growth of algae, seaweed, moss, phytoplankton in water, resulting in lack of oxygen, dissolved oxygen, reduced numbers of fish and trouters. Other animals. According to the UNEP Report, 23/25 large lakes of the world have large levels of phosphorus, mainly from sources such as fertilizers, animal waste, and household waste. Most large lakes in Latin America and Africa have higher levels of phosphorus than in 1990.

2 THE CATASTROPHIC DISCHARGES ABOUT WATER POLLUTION IN THE WORLD

In 1932-1968, a tainted sea catastrophe occurred in Japan by the Chisso chemical plant discharging effluent directly containing untreated mercury to Minamata Bay and Shiranui Sea. According to Med.org.jp, wastes have accumulated bio-in seafood in the sea, causing people and animals to ingest mercury poisoning. The disease caused by mercury poisoning here is called Minamata disease. The first poisoning was discovered in 1956 but it was not until 1968 that the authorities officially came to the conclusion that the cause of Minamata was caused by the Chisso plant. Its consequences lasted 36 years. Tainted people have convulsions, limp limbs, speechless. Fetal birth defects. Nearly 2,000 people died,

10,000 were affected. The infected dogs and cats also go crazy and die. Dead sea fish is full of water, covering the surface of the sea.



Figure 1. The position of mercury pollution in Japan, 1932

By 2004, Chisso had paid \$ 86 million in compensation to victims and was required to clean contaminated marine areas. Minamata disease remains one of the four most serious diseases caused by environmental pollution in Japan. Its consequences continue to this day, when the victims are over 40-50 years old, can only stay indoors, isolated from the community and care for the family. Chisso lawsuits and regional authorities are continuing. Its consequences continue to this day, when the victims are over 40-50 years old, can only stay indoors, isolated from the community and care for the family. Chisso lawsuits and regional authorities are continuing. A similar Japanese mercury contamination is also occurring in China. According to a 2010 study by the Environmental Institute, Tongji University in Shanghai, the Jilin Catlam Chemical Industry Company, now known as Jilin Petroleum, discharged 114 tons of mercury and 5.4 tons of methylmercury into the Songhua River from 1958 to 1982. The first cases of mercury poisoning emerged in 1965. In 1973, the amount of mercury measured in the hair of fishermen upstream of Jilin City was 52.5 mg/kg. In July 1973, the Jilin government launched a Songhua River pollution investigation. The maximum level of mercury in human hair is 1.8 mg/kg, according to the World Health Organization (WHO) By 1976, the Chinese authorities admitted to being infected with Minamata. After the event, the plant reduced the amount of mercury discharge, not stopping completely. At this time, the factory started to process water. 100 km downstream of the river flows through the city of Jilin no fish and shrimp. In 1978, the government asked the Jilin chemical plant to clean up pollution for three years. River cleaning started in March 1979 and completed in the late 1980s, totaling 192,000 tons of water. In 1979-1981, the government compensated fishermen for nearly 4 million yuan (about \$ 2.56 million at 1979 exchange rates). However, China has yet to publish specific data on the number of people infected with Minamata in the Songhua River area. According to a study of the Medical Library of America (PMC) in September 2010, although the concentration of mercury in river water has decreased, it may

take several decades or 100 years for mercury levels in river waters to become About the original. Mercury concentrations in fish have declined by more than 90% compared to 1975, but are still 2-7 times higher than normal and are expected to regain normal levels for at least another 10 years. In 2010, the BP oil rig exploded, off the coast of Louisiana, USA, causing the Deepwater Horizon oil spill, according to the New York Times. The disaster occurred when the Horizon Deepwater Drilling Rig Drilling rig drilled at a depth of 1,500 m at the Macondo Prospect oilfield. Exhausted gas from a very high pressure well exploded, killing 11 and injuring 17 others. The rig is on fire and sinks into the ocean, nearly 5 million barrels of oil spilled into the vast Gulf of Mexico, destroying ecosystems, affecting the fisheries and tourism of the region. This is the largest environmental breakdown in American history. The oil spill affected more than 400 species of marine species. Five years after the catastrophe, according to the US Department of Meteorology and Hydrology (NOAA), crude oil concentrations measured in fish in the Gulf remain higher than normal, causing congenital heart defects in fish, causing them to die prematurely. According to NOAA, the long-term impact of the oil spill on the environment "is more than we think." "Of the 32 dolphins observed, many are lighter, have anemia, have lung disease and liver disease, and hormone levels reduce stress and metabolism by half."



Figure 2. An oil spill of 2010, USA

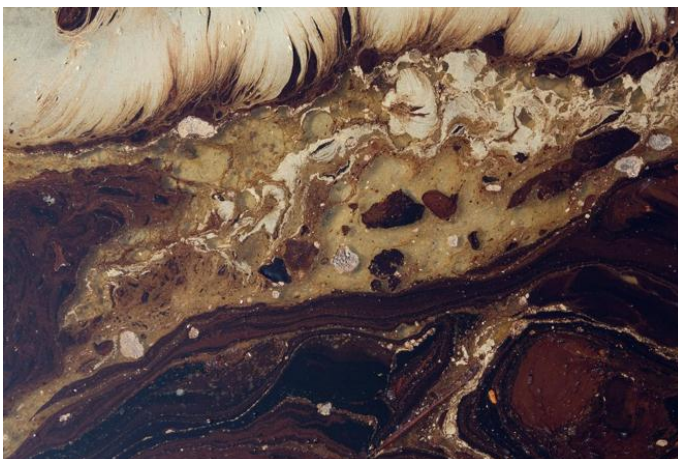


Figure 3. Water surface after oil spill of 2010, USA

3 CAUSES OF WATER POLLUTION

Most countries in the world use surface water, in the United Kingdom is 2/3, the United States is half, Japan has 90% of the total, in other countries such as the Federal Republic of Germany and the Netherlands. Again use groundwater (because surface water has been contaminated). Water from ponds, lakes, rivers and streams (surface water) is an important source of fresh water, but humans have polluted the waste water, which directly affects human life and health. Causes of surface water pollution:

+ Due to industrial waste:

According to calculations by some experts, 1 m³ of contaminated water will make 50-60 m³ of fresh water unusable. In the world, up to 500 km³ of polluted water is mixed with natural water in the world every year, leaving about 2 billion people in poor hygienic water. Although countries have paid due attention to water resources: In 1950 the United States established a Water Resources Advisory Committee. In 1956, the International Commission on Water Inspectors was established. However, industrialization is taking place at a rapid pace, and environmental protection measures are not strong enough, so the situation of water pollution is getting worse.

+ Due to agricultural development:

The achievements of global science and technology not only promote the continuous development of industrialization, but the intensification of agricultural productivity has always been improved. Annual agricultural output has been raised on the basis of seed quality and the use of pesticides. But it has also had devastating consequences for the environment and for humans, especially for insecticides. Through research, we have found that the amount of pesticides, herbicides in water in some countries such as France reached 1.6-6.4 mg/l, the US, some rivers pesticide content, kill High grass: DDT 11.3 mg / l, Aldrin 5 mg/l. The Detroit River contains up to 20 million tons of mixed waste each day, including pesticides, herbicides, kerosene and radioactive materials.

+ Due to domestic waste:

Humans also emit significant amounts of waste into the environment during the course of their daily activities, which is also one of the risk factors for surface water pollution. By analyzing water samples at 20 sites of 18 rivers in Kanagawa, Japan from 1987 to 1995, 64.7% of samples were infected with *V. cholerae*, in Russia, 98% of the Cama River water samples had an *E.coli* index of 102. -104/100ml water.

+ Due to medical waste:

Parallel to the improvement of the quality of medical examination and treatment, hospital waste management in a number of hospitals in developed countries has been implemented in all health facilities. In Vietnam, although the State and Ministry of Health have issued a series of laws and regulations such as the Law on the Protection of People's Health, the Law on Environmental Protection, the Regulation on Hospital Infection, Medical waste But the management and treatment of hospital waste still exist. As many as 47% of hospitals do not have liquid waste treatment tanks, 15% of hospitals have liquid waste treatment systems but they are not functioning due to failure due to lack of maintenance funds. Thus, hospitals do not have waste treatment systems,

wastewater discharged into the public sewer system. This will greatly contribute to microbial contamination from the hospital to the community where the hospital effluent flows through garbage that is not classified, but disposed of with domestic waste or buried at the hospital is also a factor causing environmental pollution.

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4 CONCLUSIONS

In order to address the problem of water pollution, countries should focus on implementing the following solutions: - Strengthening water environment monitoring, especially in developing countries, with a view to accurately assessing water quality. The state of the water environment at the same time, extending the scope of water environment monitoring (inter-regional, inter-state) will evaluate water quality at a national and international level to identify contaminated sites. Thereby it will be addressing priority actions addressing global water pollution to research the selection of new management and technical solutions (including the use of traditional wastewater treatment methods, the application of management and technical solutions to water quality management) to set up legal framework, institutional regulations on water environmental protection, contributing to promote the management and control of water pollution. Waste water treatment standards are allowed before discharge to rivers and lakes; Recycling of wastewater for irrigation and protection of ecosystems ... Resolving global challenges related to water quality should be closely linked to many other priorities of social life. The UNEP report shows that the challenge of protecting water quality is intertwined with many other social objectives such as food supply, economic development and safe sanitation.

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