
Global Environmental Crisis: A Tragedy of the Commons

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Abstract: *When an individual or some individuals uncompromisingly exploit common/shared resources for their personal use at the cost of the rest of the population that causes the tragedy of a commons and then results in the depletion of the resource. When we talk about the global crisis, Tragedy of the commons is one of the first concerns as our planet is suffering from all the damages that have been done throughout the years. From exploiting shared resources to performing poor legal actions, it is no surprise that the world's population is facing a global crisis because it harms not only the people but the environment as well. Even though there are renewable resources like solar energy, wind energy, hydropower from flowing water, etc., there are also non-renewable resources like coal, oil, groundwater, natural gas, etc. that need to be saved and used only when needed so that these resources can last for longer. This article is a qualitative document analysis and research based piece of writing that mainly comprised of first and second hand research sources.*

1. Introduction:

Initially introduced in the world of economics, a Tragedy of the Commons occurs when an individual or individuals uncompromisingly exploit common/shared resources for their personal use at the cost of the rest of the population, resulting in the depletion of the resources. Although the term was first introduced in the year 1833 by a British writer, William Forster Lloyd, the first time it was ever actually used was in 1968 by Garret Hardin in Science Magazine. The concept was based on the idea of overpopulation and how its causes overconsumption, underinvestment, and depletion of resources which ultimately results in poverty, affecting the economy. (Michael B., Timothy L., 2022)

Non-renewable resources are not replenished, compared to the speed at its consumed which is a problem that can result in major issues like future generations not having access to and benefiting from these useful resources. As a part of society, we should not neglect other people's needs by using all the resources for our best interests and instead keep a close eye on how much we are consuming. (Imani W., 2020)

Following are some of the major examples.

1.1 Animal Extinction:

Warned of the situation as "catastrophic", a study showed that overfishing will cause the oceans to be virtually emptied by the end of 2048 and that the human population will run out of seafood. With a 94% decline in mega fish that weigh over 30 kg, overfishing is a major issue that has caused animal extinction. For years, it was believed by the fisherfolk that their sea grounds will be supported with an abundance of codfish for a huge chunk of time to come. This belief, however, did not last for long as the technology started to advance and different types of machinery were invented to catch massive amounts of codfish. (Alexandra S., 2019) These technological advancements caused the natural spawning cycle of codfish, which was not an issue before the invention. Each year, fewer codfish are left in the sea and all the ones that are left are usually caught the next season. This caused the industry to collapse because there were no proper actions taken to overcome the hurdle that caused animal extinction. (Paul B., 2022).

1.2 Traffic Congestion:

With vast and growing technological inventions, transportation has become easy access to many and is, unfortunately, a part of daily life. This has caused cities all over the world to be congested with traffic and especially over the last decade, India, the Philippines, Turkey, and Russia have been among the most congested traffic areas. This is one of the problems that is causing the planet Earth to be exposed to harmful fumes that circulate in the surroundings, damaging our environment. Not only this but pathways have also been created because of traffic congestion to allow more people to pass through a space. This so-called solution is formed purely for the self-interest of the individuals who do not care about our environment and the damage they are causing to it, becoming one of the many examples of Tragedy of the Commons. (Matto M., 2019)

The solution is there, however, people neglect to use it. In many rural areas, the population uses public transportation which is one of the easiest solutions to overcome this particular hurdle that causes several problems. This way, we can buy fewer cars, causing less damage to the environment and ultimately, saving long hours of getting stuck in traffic congestions. (Lisa M., 2019)

1.3 Littering:

There is no surprise that no matter where, littering is not only revolting, but also toxic to our environment, causing land, air, and water pollution. It is one of the major reasons why sea animals are washed lifeless on the shores because the garbage that gets thrown into the ocean still exists on our planet and harms the animals, even when the general population thinks of it as a solution to be away from disgusting chemicals. (Bretton K., 2021)

Parks, streets, schools, malls, almost every place is full of useless waste and can easily enter the food chains to only irreversible cause diseases as well as life-taking. This significant problem is causing the soil and water to become toxic, hence resulting in poor productivity. It is a fact that roads and other dirty places become a breeding ground for insects, which in today's world, can be frequently witnessed. (Macro A., Skaidra S., Rimjhim A., Michael L., 2019)

Plastic waste is the most common kind of littering because many industries use it for its inexpensive cost. Not only this, but it also does not decay, which means that it eventually ends up in the ocean. For example; when fast fashion brands use plastic for their clothing and merchandise items, they are causing one of the leading problems because the material does not decay or rot once thrown away. It travels down the streams and finally into the ocean, hurting marine life. (Daniel K., 2017)

A very simple yet effective solution to prevent this problem is to form strict laws and regulations against those who choose not to care about the environment and cause damage to their fellow beings by playing their parts poorly and throwing garbage everywhere. Bins should be installed every few meters for the general population, as well as special recycle bins so that the material can be used over and over again. Recycling bags are also a great option as opposed to loose papers. Finally, educating people, especially the younger generation, is very important if we want to save our planet. (Memory N., 2018)

1.4 Different kinds of Contaminations

Researchers have been working on the health effects of air pollution and the exposure to pollutants such as airborne, which was a factor, and then ozone depletion was associated with an increase in deaths and hospitalizations for respiratory and cardiovascular diseases. These results were obtained from a short-term study, related to different variations in air pollution and health, this is taken as a long-term study in which a group of students has been working overtime. Although the effects that have been noticed are very low levels of exposure and mostly, they are unnoticeable that's they have been neglected in the health effects. (Bascom, 1996)

Air pollution can cause many diseases and have a long-lasting effect on our lives and health. The organs that it affects mainly are the respiratory system, heart disease, lung cancer, respiratory infections in children and chronic bronchitis in adults, and asthma attacks. Moreover, all the short-term and long-term effects are also linked to premature deaths and reduce the life of a normal human being. (Brunekreef, 2002)

Mining, agriculture, and deforestation are the main aspect of our economy and have a major effect on our lives as it gives us food and employment, but it has direct as well as indirect effect on land pollution as well as air pollution. In the whole process, there are a lot of waste materials and sterile that are produced are a major source of creating toxic metals. Most of the load on the mines and tails is usually stored near the excavation of large open pits. (Owa, 2013)

In the modern era, agriculture production requires the use of pesticides, and it produces animal waste, which is the main reason for the pollution of soil, air, and water. Also, the side effect is that it affects the quality of soil which leads to soil erosion and then it results in creating a loss of nutrient-rich soil. By creating soil erosion, the soil and the area become toxic to the other plants and the crops around that area. These substances can also be extracted from air or water sources.

Pollution is a worldwide problem having a large impact on every activity of a human being and hence affect the way of living. Pollution is not just a problem for Human beings but all living things around the world and it indirectly affects our day-to-day lives and the natural processes of this planet earth. (Stauffer, 1998)

Pollution is a worldwide issue creating human health issues around the world, this paper provides a clear view that the impacts of environmental pollution in the light of air, water, and land pollution on living things. Researcher says that we still have time to control the environmental effects on the earth as the environment is still controllable and be catered with some rules, laws, and precautions taken against it. (Khan, 2011)

Then we have water pollution which creates a big impact on marine life directly and then human lives indirectly as being the source of food for them. Modern society also tends to view water as an end and the effects that its effects become increasingly evident. Analysis of clean water often seems difficult by seeing the level of pollution underneath the land i.e water including the waste of humans, heavy metals, and synthetic chemicals, which harm our health and the health of all ecosystems. The water crisis is a big issue in Urban life as it has a large

impact because of industrial and agricultural activities. But it can be taken care of by assessing the impact of high pollution and discussing prevention strategies.

Human activities, including industrial development and agricultural processes, have made a significant contribution to the degradation and pollution that has a devastating effect on water (rivers and seas) that are essential to life. The researcher attempts to address water pollution and addresses the source, impact management, and overall water pollution control. Solving the problem of water pollution through toxic metals caused by human technology activities create a problem. To start with the solutions to pollution Biosorption can be a part of it. Other types of Bio sorbents like mold, yeast and other types of bacteria are an example of biomass with a very immense results. All the metals combined can weigh more than 50%.

1.5 Deforestation

The research number of trees in the forest is decreasing because of deforestation, cutting down trees is the main reason which is now a tragedy of common. It is a global issue for the people of the universe. Trees consume carbon dioxide which helps in the making of food through the process, but reducing trees affects the climatic change which is facing the globe. (Houghton, 2012) The temperature of the earth is increasing by 1 to 2% because of global warming. The use of greenhouse gases can also cause global warming. Deforestation can cause by wood logging, forest fire, and urbanization which are the main reasons. In the world, the forest plays a vital role to control and saving the environment, if trees are not present in the forest the life of animals are also affected by deforestation, which destroys their natural habitat. Most of the animals that live in the forest depend on the trees for food and shelter. (Robalino, 2010)

Forest gives wood that uses in the fuel, to reduce the use of the wood then use alternative energy sources to stop the effect of deforestation. a Tragedy of the Commons occurs when an individual or individuals uncompromisingly exploit common/shared resources for their personal use at the cost of the rest of the population, resulting in the depletion of the resources. (Allen, 1985) Although the term was first introduced in the year 1833 by a British writer, William Forster Lloyd, the first time it was ever actually used was in 1968 by Garret Hardin in Science Magazine. The concept was based on the idea of overpopulation and how its causes overconsumption, underinvestment, and depletion of resources which ultimately results in poverty, affecting the economy. (Alexandra S., 2019)

Warned of the situation as “catastrophic”, a study showed that overfishing will cause the oceans to be virtually emptied by the end of 2048 and that the human population will run out of seafood. With a 94% decline in mega fish that weigh over 30 kg, overfishing is a major issue that has caused animal extinction. For years, it was believed by the fisherfolk that their sea grounds will be supported with an abundance of codfish for a huge chunk of time to come. (Villoria, 2014) This belief, however, did not last for long as the technology started to advance and different types of machinery were invented to catch massive amounts of codfish. These technological advancements caused the natural spawning cycle of codfish, which was not an issue before the invention. Each year, fewer codfish are left in the sea and all the ones that are left are usually

caught the next season. This caused the industry to collapse because there were no proper actions taken to overcome the hurdle that caused animal extinction. (Imani W., 2020)

Deforestation and its detrimental effects, including biodiversity loss and climate change which are causes of soil degradation, and floods, prompt economies to increase their tries to sample however forest is converting to other lands usage, this is a main cause of deforestation, as per some article planet earth is losing 80,000 acres land of forest every day, the research is reasonable because of the creation of deforestation models, but some corporate companies are still causing a heavy effect on the earth by making the forest a raw material for them and using wood for paper, medicines, etc. but all these human activities are criminal as it cause the tragedy of a common. (Hay, 2006) However, we have lost so many animal species and still losing them because of deforestation there are only 10,000 whites Loins left now and white Ryno have recently extinct animals there are thousands of animals died cause of deforestation caused by some criminals who ruins our environment of the sake of their benefits, this problem can be fixed if every country makes a team against these criminals and made some strict laws against them and make sure that nobody will do these criminal activities again, these are the only solution to save our environment from the tragedy of a common. (Kaimowitz, 1998)

Forest gives wood that uses in the fuel, to reduce the use of the wood then use alternative energy sources to stop the effect of deforestation. A Tragedy of the Commons occurs when an individual or individuals uncompromisingly exploit common/shared resources for their personal use at the cost of the rest of the population, resulting in the depletion of the resources. A very simple yet effective solution to prevent this problem is to form strict laws and regulations against those who choose not to care about the environment and cause damage to their fellow beings by playing their parts poorly and throwing garbage everywhere. (Fairhead, 2003) Bins shoulder be installed every few meters for the general population, as well as special recycle bins so that the material can be used over and over again. Recycling bags are also a great option as opposed to losing papers. Finally, educating people, especially the younger generation, is very important if we want to save our planet (Daniel K., 2017)

Non-renewable resources are not replenished, compared to the speed at its consumed which is a problem that can result in major issues like future generations not having access to and benefiting from these useful resources. As a part of society, we should not neglect other people's needs by using all the resources for our best interests and instead keep a close eye on how much we are consuming. (Murray, B. C. 2008)

We should control cutting trees from the forest, and use alternative fuel energy to save the environmental effect, it will also help to reduce greenhouse gases. The environment should be clean for all living organisms that live on Earth and are dependent on natural habitats for suppose animals that eat plants will not be extinct and live their life in a normal way, if we don't control deforestation it will harm our environment and disturb the life cycle of all living things. Climatic conditions will also improve and global warming can be controlled because of the execution of deforestation. (Chies, 2020)

1.6 Water Crisis:

70% of our earth is covered with water. So many of us have a misconception about it that, this is enough for our use. But the majority don't know the reality. 97% of water is not drinkable only the remaining 3% is fresh. That 97% is in the form of frozen water like glaciers. Agriculture takes most of the water to produce crops. And it is very upsetting that people use it with carelessness and if the situation remains constant, we may face worst conditions in the future. Water is necessary for not only human beings but for nature and another living thing that lives on this planet. (Jury, 2007) Every continent is damaged by water scarcity which is very harmful. Every single person and country faces the issue of water shortage. Management should provide a framework to the government for integrating water resources according to several users of it including nature.

“Water scarcity has caused life-threatening problems for tens of thousands of people living in the deserts and most recently cholistan Pakistan has faced a serious threat to cattle and wildlife species, with death rate increasing every day.”

The drought could be overcome in cholistan if the authorities concerned took steps to release water into the canals to relieve the locals. Water scarcity occurs due to the imbalance between the demand and supply of water. The scarcity of water supply is one of the very serious environmental issues being faced by the world. This undoubtedly is a major health threat and challenge for the generations to come. (Hussain, 2014)

Water shortage is directly connected with human rights. For the sake of the global environment, we prioritize fresh drinkable, and purified water. Unfortunately, the challenge of water pollution stops us to get pure water even in developing countries or poor ones who might face the poverty of water through the changes come due to global warming and weather patterns. Undersupply of water is defined in two ways. Physical and economical. (Sivakumar, 2011)

We elaborate on the shortage of water as where the water demand is higher than its supply. It impacts not only a single living place, or a specific area but also affects a whole environment and its surroundings.

1.7 Water shortage or water scarcity:

It is the term that is used to describe the situation when people demand more water because the water provided is not just enough for the people to use. Water shortage is one of the problems that is faced not just by certain people of a specific society but it is the problem for everyone, in every country. Moreover, this issue can occur anytime and it could last for days, months, or years in an area. Meanwhile, where people are facing the consequences of water shortage there's also another major concern about clean water drinking. According to recent research, approximately 1.2 billion people are not having clean water to drink which can cause a variety of illnesses and diseases like food poisoning and cholera, etc. There are two different types of water scarcity, one is physical and the other is economical scarcity. Physical therapy water scarcity is caused when enough water is not supplied to a specific region according to their demands. Whereas, economic water scarcity occurs when water is sufficiently available but there is mismanagement in the supply of available water resources. (Green, 2015)

1.8 The major cause of water scarcity:

These are some of the major causes responsible for the issue of water shortage:

- Waste of water and overuse of water
- Globally increased demand for freshwater
- Climate change
- Human consumption increased
- Natural disasters such as floods and droughts
- Overuse of aquifers

These may affect the overall water quality and causes a shortage of water anywhere in the world.

1.9 The water crisis in Pakistan:

Government Pakistan ordered national and international Pakistanis to contribute funds to make two dams. The focus of this dam is to save water and provide electricity to the country, some famous personalities also participate in funds for dams. Unfortunately, this project needs more time and money to complete.

Our government should take some serious action to slow down the crisis of water in Pakistan.

“Pakistan Academy of Science” advises refining the work rate and giving a proper storyboard, it will be helpful to manage the upper surface and groundwater. It may be a good and secure step to protect from further damage.

1.10 Specific countries facing more water shortage problems:

If we talk about some of the countries that are facing water scarcity at its peak then it would be three of them, the number is North Africa, the Middle East, and Pakistan. These counties are known as the most densely populated regions in the world. Pakistan and North Africa also face less rainfall and their population is growing faster than anything else. While the wealthier countries still have the opportunity and privilege to get as much water as they can.

How can we stop water scarcity?

Recycle water:

Water recycling could be very helpful and consuming rainwater from the surface to the ground will also be a major profit to prevent water scarcity. To educate people and to aware them of the usage of water and how they can save water from waste. The infrastructure of the management of water supplies could be improved so that every county, every region, and every village will be able to use water according to their need and demand.

The security of water is directly connected with humans. For sustainable development, it's a critical discussion to increase water security. The majority of rural and urban areas get water supply from the ground through tube well and hand pumps. Industries use water for cooling and in the manufacturing procedure. We can make a feasible water security plan to save it for the future and the next generation. If every single person plays an honest part in the preservation of this plan surely we will never face any difficulty.

2. Findings and Conclusion

The tragedy of the commons is one of the first concerns as our planet is suffering from all the damages that have been done throughout the years. From exploiting shared resources to performing poor legal actions, it is no surprise that the world's population is facing a global crisis because it hurts not only the people but the environment as well. Even though there are

renewable resources, each year, fewer codfish is left in the sea and all the ones that are left are usually caught the next season. This caused the industry to collapse because there were no proper actions taken to overcome the hurdle that caused animal extinction, just because of illegal and overfishing as we all know some people do these criminal activities for profit and ruin the environment on a bigger level as they are a reason of animal extinction.

Traffic and urbanization are one of the problems that are causing the planet Earth to be exposed to harmful fumes that circulate the surroundings, damaging our environment. Not only this but pathways have also been created because of traffic congestion to allow more people to pass through a space, littering is a significant problem that is causing the soil and water to become toxic, hence resulting in poor productivity. It is a fact that roads and other dirty places become breeding grounds for insects, which in today's world, can be frequently witnessed, plastic waste is the most common kind of littering because many industries use it for its inexpensive cost. Not only this, but it also does not decay, which means that it eventually ends up in the ocean. A very simple yet effective solution to prevent this problem is to form strict laws and regulations against those who choose not to care about the environment and cause damage to their fellow beings by playing their parts poorly and throwing garbage everywhere which is ruining our environment.

Ozone depletion was associated with an increase in deaths and hospitalizations for respiratory and cardiovascular diseases, Although the effects that have been noticed are very low levels of exposure and mostly, they are unnoticed. Pesticides produces animal waste, which is the main reason of the pollution of soil, air, and water able that's they have been neglected in the health effects, Air pollution cause many diseases as well and have a long-lasting effect on our lives and health, that it effects mainly are the respiratory system, lung cancer, asthma attacks and different kind of infections in children are some diseases cause from air pollution, Mining, agriculture, and deforestation are the main aspect of our economy and have a major effect on our lives as it gives us food and employment, but it has a direct as well as indirect effect on land pollution as well as air pollution. Then we have water pollution which creates a big impact on the marine life directly and then the human lives indirectly as being the source of food for them, Human activities, including industrial development and agricultural processes, have made a significant contribution to the degradation and pollution that has a devastating effect on water (rivers and seas) that are essential to life, Then comes the sound pollution, breakdown in human activities as well as some psychological effects are cause by it.

Deforestation and its detrimental effects, including biodiversity loss and climate change which are causes of soil degradation, and floods, which prompt economics to increase their tries to sample however forest is converting to other lands usage, this is a main cause of deforestation, as per some article planet earth is losing 80,000 acres land of forest every day, the research is reasonable because of the creation of deforestation models, but some corporate companies are still causing a heavy effect on the earth by making the forest a raw material for them and using wood for paper, medicines, etc. but all these human activities are criminal activities as it cause the tragedy of a common, however, we have lost so many animal species and still losing it because of deforestation there are only 10,000 whites Loins left now and white Ryno have

recently extinct animals there are thousands of animals died cause of deforestation caused by some criminals who ruins our environment for the sake of their benefits, this problem can be fixed if every country make a team against these criminals and made some strict laws against them and make sure that nobody will do these criminal activities again, these are the only solution to save our environment from tragedy of a common.

Water crises have now become a major issue or we can say a global issue as there is now only 3% of drinking water remaining on planet earth of which 2% is icebergs, and the remaining 97% is totally salty and non-drinkable this is also caused by the tragedy of a common, as some companies start selling water, some companies start using drinking water as raw material, for example, making of 1 jeans waste 1000 gallons tons of water which makes it non-environment friendly that's why it is considered in a tragedy of a common wastage of water and improper use of drinking water, etc., which are the cause of it as it's a global issue and probably every country is fighting from this problem because every country know that if this problem would not be solved there will be a scarcity of water faced by planet earth, however, these many countries are trying to find the solution of it and some countries have made laws and policies against it as they are even against non-environmental friendly exports this problem would be solved soon if every country start saving drinking water are try to find solution together, water wastage should be policy concerned by every country.

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