

TOPIC:

THE ENVIRONMENT HAS GONE BEYOND THE TIPPING POINT NOW.

OUTLINE:

1. Introduction:
 - Thesis statement.
2. Crunch paragraph.
3. Numerous reasons which have led our environment beyond the tipping point.
 - a. Hazardous role nuclear reactors in the environment.
 - b. Expansion of urbanization --- a threat to the environment.
 - c. Flaming of plastics and brick kiln factories (Bhatta).
 - d. Material used in solar panels --- a threat to land pollution.
 - e. Rapid production of semi-conductors --- an alarming situation for the environment.
 - f. Recurrence of wildfire around the globe.
 - g. Excessive use of radiation (UV, X-rays, Microwaves, etc.) is killing the ecosystem.
 - h. Accumulation of Chloro-Flouro-Carbon (CFCs) --- causing air pollution.
4. Outcomes of the factors threatening the environment.
 - a. Disruption in marine ecosystem.
 - b. Deforestation leading towards drought conditions.
 - c. Expanding air pollution causes eye and skin diseases.
 - d. Greenhouse effect leading the environment to global boiling.
 - e. Origin of DNA abnormalities due to radiation.
5. Way forward to drag down the environment from the tipping point.
 - a. Ceasing deforestation and promoting plantation.
 - b. Constructions of new plants for treatment of polluted water.
 - c. Encouraging public and environmental friendly transport.
 - d. Establishment of recycling plants for plastics and other wastes.
6. Conclusion.

“I always get involved with the environment because once you go past the tipping point with the environment, you don't get it back. “This is all wrong. I should not be up here. I should be back in school on the other side of the ocean. Yet you all come to us young people for hope. How dare you! You have stolen my dreams and my childhood with your empty words. And yet I am one of the lucky ones. People are suffering. People are dying. Entire ecosystems are collapsing. We are in the beginning of a mass extinction, and all you can talk about is money, and fairy tales of eternal economic growth. How dare you! Continue to look away, and come here saying that you are doing enough when the politics and solutions needed are still nowhere in-sight. The popular idea of cutting our emissions has failed to restrict our environment crossing the tipping point. How dare you pretend that this can be solved with just “business as usual” and some technical solutions? You are failing us. The eyes of all future generations are upon you. And if you choose to fail us, I say: we will never forgive you. Right here, right now is where we draw the line. The world is waking up. And change is coming, whether you like it or not.” The astonishing speech was given by Greta Thunberg at Climate Action Summit 2019 held in New York. This is how our globe is facing consequences. Threatening role of nuclear plants and expansion of urbanization leaving the world unrest. Air pollution along with land pollution causes severe impact on the environment. Chloro-Fluoro-Carbons (CFCs) also play a key role in this scenario. Additionally, wildfires occurring again and again also make the environment even worst. Deforestation is promoting excessive pollution and severe flood conditions. DNA abnormalities are increasing due to numerous radiations. However, this situation can be curbed through ceasing deforestation, constructing treatment plants for water and recycling purposes. The recent situation of our globe expresses the fact that our environment has gone beyond the tipping point. Various factors are responsible for this disastrous situation.

The place where we live, work, and do other activities — is our environment. Unfortunately, our environment has been disturbed due to several irresponsible and the non-serious behavior of international politicians and influencers, leading the environment across the tipping point. July has been the hottest month after centuries, breaking a 137 year old record. (UN Report, August 2023).

Prominent hazardous roles are being played by nuclear reactors to our environment. Many radioactive elements are used in these reactors, causing even death of the employees working in the plant. Nuclear energy produces radioactive waste like uranium, which can remain dangerous to human health for thousands of years. Recently, Japan began releasing waste water from its nuclear reactor (Fukushima) into the Pacific ocean on August 24, 2023, which is a threat — for both Marine and Terrestrial life. Hence, nuclear reactors and its radiation are effecting the environment.

Along with nuclear reactor's effects, extension of urbanization — a threat to the environment. Every other day, the inauguration of new factories becomes a challenge to the environment. Rapid expansion of industrialization is engulfing rural areas — causing an imbalance in the ecosystem. For example, “the proportion of the global population living in urban areas has risen to 55% and is predicted to reach 70% by 2050.” (UN-Habitat Executive Director, John Clos, 2019). This is how urbanization is damaging the balanced ecosystem of the globe.

Rapid urbanization is adding flaming of plastic and smoke produced by brick kiln factories in open environment --- polluting the air continuously --- their smoke contain several poisonous hydrocarbons and other compounds. Due to these chemicals, natural habitat, and ecosystem is reducing to adopt climate change. According to Business Recorder report on December 7th,

2022, “schools in Lahore remain closed for 3 days a week due to smog.” That's why, burning of plastic and production of red bricks making the environment uncomfortable.

Not only plastics but materials such as silver, lead, and cadmium, which are basic elements for solar panels, are hazardous. These elements can originate land pollution, which results in several diseases. Element like lead can cause high blood pressure and different kidney problems. For instance, “Solar PV generation increased by record up to 26% in 2022.” (IEA report December 2022). This is how, production and manufacturing of solar panels is threatening the society.

In addition to above elements, rapid production of semiconductors --- an alarming situation for the environment. Race to become self-sufficient in the production of semiconductors, become a challenge for mankind. Chemicals like phosphine and arsine --- the building blocks of semiconductors --- are serious hazardous to human health. Use of these chemicals can exaggerate the chances of cancer, leukemia, and birth defects. For example, “American chipmakers had a toxic problem. Then they outsourced it.” (Cam Simpson, Business week, 2018). In this way, rapid and excessive production of semiconductors is warning human health.

Manufacturing of semi-conductors – anti-environmental human activity is followed by recurrence of wildfire around the globe with no time, challenging the human activities. Wildfire is not only devastating animal's habitat but also effecting men's environment too. Millions of species got extinct around the planet which create an empty space within ecosystem. “Almost 450 causalities along with millions of animals' death have been recorded. Additionally, wildfire smoke caused drought and rise in temperature within the state of Australia.” (wikipedia.org, 2022). Hence, wildfire is destroying natural habitat and making it unlivable.

Beside the wildfire, excessive use of radiation (UV, X-rays, and microwave) is killing the ecosystem. Radiations like X-ray --- key tool to diagnose medical problems --- being used without precautions. Similarly, microwave (speedy heating appliances) is also deteriorating human environment gradually. "Microwaves are responsible for some 7.7 million tons of carbon monoxide emissions each year." (The Atlanta journal, Jason Lemon, 2018). Hence, these radiations can collapse the human environment.

Apart from radiations in the environment, accumulation of Chloro-Fluoro-Carbon (CFCs) --- causing air pollution. Fast emission of CFCs from air conditioners and refrigerators result in its accumulation in stratosphere (layer of atmosphere). Immoderate growth of CFCs in the atmosphere leads toward the formation of blanket like structure, which resists infrared rays to escape from earth's atmosphere. According to research, "CFCs, for a given amount of mass, trap substantially more heat than CO₂, result in increasing global warming." (EPA, April 2023). In this way, the aggregation of CFCs in the atmosphere creates toxic environment.

Not only our globe is facing so many hurdles to maintain a healthy environment, but also it is confronting numerous troubles.

Disruption in marine ecosystem is also a severe consequence to environment. Anthropogenic chemicals can disrupt endocrine system of marine animals. Reproductive hormone system appear to be especially vulnerable. "Reproductive failure in riverine fish, abnormalities in the reproductive organ of alligators, and other symptoms have been observed in marine animals." (Marine pollution Bulletin, 2022). This is how, marine ecosystem is vulnerable since too long.

Along with disruption in marine ecosystem, deforestation leading towards drought condition in several terrestrial areas of the world. Cutting massive numbers of trees disrupt whole water cycle, causing less rainfall and drying of underground water. The amount of groundwater reduces, resulting in water shortage and droughts, "The Amazon fire of 2020 had consumed approximately 7600 square kilometer, which led to severe drought in Amazon forest." (Earthremind.com, March 2022). Hence, deforestation is leading reason for drought conditions.

Deforestation results in expanding air pollution causes eye and skin diseases. Air pollution is inevitably the result of human civilization, industrialization, and globalization. It is composed of nitrogen oxide (NO), and carbon dioxide (CO₂), which are leading cause of several eye and skin diseases. For example, "exposure to air pollution is proven to be harmful to human eyes. Diseases like - -- conjunctivitis, glaucoma, cataracts, and other dermatological diseases --- cause severe impacts on mankind." PubMed Central, by Paul B., January 2022). Hence, air pollution and toxic particles are the origin of different diseases.

Air pollution causes greenhouse effect leading the environment to global boiling. Escaping of reflected rays --- UV rays, infrared rays --- has been restricted due to thick blanket formed by poisonous gases. These gases cause greenhouse effect, which increase the global temperature. "2023 is currently the third warmest air to date at 0.43 degree Celsius above the recent average, with the average global temperature in July at 1.5 degree Celsius above preindustrial level." (Climate change service, August 2023). In this way, greenhouse effect is destroying global temperature and its climate.

Greenhouse gases blocks the radiation in the atmosphere and result in the origin of DNA abnormalities which is one of the leading cause of abnormal birth rate. Radiations in the environment

induced DNA injury and damage detection is forcing diseases --- like breast cancer. Breast cancer is the leading cause of cancer morbidity and death in women in developed countries. "A global increase has been estimated to around 16,500 yearly new cases of this neoplasia in 2024." (National Library of medicine report, 2020). Hence, uncontrolled emission of radiations create abnormalities in DNA resulting in abnormal childbirth.

Beside several challenges and side effects of polluted environment, some preventive measures can reduce the risk for future generation.

Ceasing deforestation and promoting plantation is the foremost step to preserve environment. Cutting of trees insanely should be banned. Initiation of planting trees should be made top priority. According to Ministry of climate change of Pakistan, "430 million trees planted. However a total one billion plantation target is set for 30th June, 2021." In this way, plantation drive can help in maintaining balance in ecosystem.

Along with the ban on cutting trees, construction of new plants for the treatment of polluted water is another utmost priority of each government. Establishing new sewage treatment plants can reduce its harmful effects on marine life. Aquatic ecosystem could be balanced by establishing proper treatment plants --- which remove solid waste --- decompose bacteria --- and do extra filtration. "A water treatment plant works beside the river Wye, UK, is going to upgrade, at a cost of 3.6 million pounds. (BBC News Agency, March 2023). Hence, building such infrastructure would help to counter environmental change in marine life.

Furthermore, with the preservation of marine ecosystem, encouraging public and environmental friendly transport is another need of the society. Promoting public transport over private, would help to curb air pollution. Electric vehicles should be subsidize over

non-electric vehicles to grab air pollution. “A new funding scheme is being launched in Jersey to encourage islanders to make more use of low-carbon transport.” (BBC News Agency, August 2023). In this way, active promotion of electric vehicles could result in less air pollution.

Besides promoting the environmental friendly transport, it is also necessary to establish recycling plants for plastic and other wastes. Recycling plants aid to control land pollution --- lowering the cost of new items. Phenomenon of recycling encourages society to make its clean and healthy. “The Scottish Government announces extra funding for community projects which reuse and recycle.” (BBC News Agency, June 2018). Hence, construction of recycling plants help us to control air and land pollution.

In a nutshell, our planet’s environment has gone beyond the tipping point in outcomes of several anti-environmental activities. However, still various way forward could be followed to lesser it’s effects. Governments of many countries are taking keen interest to preserve Earth’s environment. These steps must be followed by each individual, so we can rebuilt our environment and make it livable for human and other living organism. “The earth does not belong to us; we belong to the earth.” (Chief Seattle).