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CLEARING THE AIR: ADDRESSING THE MENTAL
HEALTH IMPACTS OF POLLUTION
(KUSUM JASWAL)



About E-magazine

“Earth Root” is an open access e-magazine in the discipline of Environmental sciences published by Earth Root Foundation. The aim of the e-magazine is to provide information and upgradation of knowledge about environmental issues on wider scale and to share ideas and resources to the readers. Using essential knowledge people can lead a healthy life, which is more sustainable and can connect with ongoing efforts for stopping catastrophically the climate change. E-magazine caters to all related environmental aspects ranging from big issues like climate change, renewable energy and pollutants in the atmosphere to the health of human and living beings on Earth. We also take topics of water resources and efforts and measurement to provide optimum use of it; including large scale atmospheric circulation linked with oceans and ecology.

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TABLE OF CONTENTS

LOW EMISSION MOBILITY: THE FUTURE OF TRANSPORTATION (Vibha Sharaswat)	4
CLEARING THE AIR: ADDRESSING THE MENTAL HEALTH IMPACTS OF POLLUTION (Kusum Jaswal)	7
EFFECTS OF WAR ON CLIMATE (Hemant kumar)	9
RAPIDLY CHANGING LIFESTYLE AND ITS ADVERSE EFFECTS ON CLIMATE (Monika Agarwal)	12
Global Warming A threat to the world's coasts (Harsh khandelwal)	14
MOVIE RECOMMENDATION: GEOSTORM (2017)	16
POEM(SAVE CORAL REEFS)	17
CROSSWORD	18

LOW EMISSION MOBILITY: THE FUTURE OF TRANSPORTATION

Vibha Saraswat

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Transportation is a major contributor to air pollution and greenhouse gas emissions, both of which have negative effects on the environment and human health. As a result, there is an increasing demand for low-emission mobility options to reduce the environmental impact of transportation. In this article, we will look at the concept of low-emission mobility and its potential as the future of transportation. As climate change and air pollution remain major concerns for our planet, low-emission mobility is more important than ever. Low-emission mobility is a critical solution for reducing the environmental impact of transportation and ensuring our planet's long-term viability.

What exactly is Low Emission Mobility?

Low emission mobility refers to modes of transportation that emit fewer pollutants and greenhouse gases than traditional fossil-fuel-powered vehicles. Electric vehicles (EVs), hybrid vehicles, hydrogen fuel cell vehicles, and biofuel vehicles are among the options. Active transportation options for low-emission mobility include walking, cycling, and public transportation.

What Is the Importance of Low-Emission Mobility?

Low-emission mobility is critical for a variety of reasons. For starters, it aids in the reduction of air pollution and greenhouse gas emissions, both of which are harmful to the environment and human health. Second, it contributes to lessening our reliance on fossil fuels, which are a finite resource that contribute to climate change.

Finally, low-emission mobility can help to make cities more livable by reducing traffic congestion, noise pollution, and parking requirements.

Electric vehicles are a critical component of low-emission mobility. They use battery power to power an electric motor, resulting in zero tailpipe emissions. Electric vehicles are becoming more affordable and widely available, and many countries are providing incentives to encourage their use. However, the production of batteries for electric vehicles has its own environmental consequences, and the infrastructure for charging electric vehicles needs to be expanded.

Hybrid vehicles use an internal combustion engine in conjunction with an electric motor and battery, resulting in lower emissions than traditional gasoline-powered vehicles. Hybrid vehicles are becoming more popular and come in a wide range of models and sizes. They may be more expensive than standard vehicles, but their fuel efficiency can result in lower operating costs over time.

Hydrogen fuel cell vehicles generate electricity using hydrogen as the fuel, emitting only water vapour as emissions. While hydrogen fuel has the potential to be a zero-emission option, the infrastructure for producing and distributing it is currently limited.

Biofuels, which can be used to power vehicles, are derived from renewable sources such as plant materials. They emit fewer pollutants than traditional gasoline and diesel fuels and can be produced in the United States. Concerns have been raised about the sustainability of some biofuels, as well as their impact on food prices and land use.

1. The National Electric Mobility Mission Plan (NEMMP) was launched in 2013 to encourage the use of electric vehicles in India. The plan is to sell 10-11 million hybrid and electric vehicles by 2025.

2. Public Transportation: To reduce reliance on private vehicles, several Indian cities are investing in public transportation options such as metro systems, buses, and cycle sharing schemes.

3. Emission Norms for Bharat Stage VI Vehicles: India has implemented Bharat Stage VI emission norms for vehicles, which are equivalent to Euro VI norms. These standards require strict limits on pollutant emissions such as carbon monoxide, nitrogen oxides, and particulate matter.

4. Infrastructure: The Indian government is also investing in electric vehicle charging infrastructure, with plans to build charging stations across the country. Incentives are also being offered for the development of battery manufacturing plants in India.

5. GST Reduction: The Goods and Services Tax (GST) for electric vehicles was reduced from 12% to 5% in 2019 to make them more affordable for buyers.

Low-emission mobility is an important component of the transportation future. It can help to mitigate the effects of transportation on the environment and human health by reducing emissions and our reliance on fossil fuels. While there are obstacles to overcome, such as expanding electric vehicle charging infrastructure and developing sustainable biofuels, the benefits of low-emission mobility make it a worthwhile investment for the future.

FACTS

Delivery by drone is one of the immediate next advances, intended to reduce delivery van congestion and pollution while allowing us to keep the convenience of home delivery.

Mobility's net-zero transition: A look at opportunities and risks

April 25, 2022 | Article

By [Eric Hannon](#), [Mekala Krishnan](#), [Jwalit Patel](#), and [Shivika Sahde](#)

A transition to net-zero emissions would entail much greater demand for electric vehicles. McKinsey analysis shows how the shift could create opportunities and risks for automakers around the world.

Mobility industries are the engines of the global economy, enabling trillions of dollars of trade every year. Transportation is also among the most significant sources of greenhouse-gas (GHG) emissions, accounting for 19 percent of them. The good news is that with climate technologies such as batteries, fuel cells, and biofuels, vehicles could emit little or no GHGs. That would help businesses and governments alike to meet their net-zero targets.

[McKinsey's research on the economic implications of a net-zero transition](#) suggests that decarbonizing mobility would involve major changes, including a shift in the mix of vehicles being manufactured and an increase in upfront capital costs for consumers and organizations as they switch to electric vehicles (EVs) and other low-emission transport alternatives. Because of these changes, companies throughout the mobility system—including OEMs and their suppliers, plus manufacturers and operators of infrastructure—will have opportunities to tap the growing demand for vehicles that produce minimal or no GHGs. They will also want to manage their legacy businesses carefully. By assessing these dynamics and adjusting strategies appropriately, mobility companies can transform themselves to thrive as the net-zero transition progresses.

A net-zero outlook for mobility

Across the mobility system, by far the biggest GHG producer is road transportation. Tailpipe emissions from cars, trucks, and other vehicles make up 75 percent of all emissions from transportation

CLEARING THE AIR: ADDRESSING THE MENTAL HEALTH IMPACTS OF POLLUTION

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“Pollutants not only corrupt the environment but also the mind”

- Anon

The impact of pollution on mental health is a field that is yet to be fully studied but is gaining traction in the scientific community as new research suggests that environmental pollutants not only damage our physical bodies but our minds as well.

In this article, we further explore the effects of pollution on our mental health.

Air pollution also known as the emissions of harmful gases, fine particles, or aerosol above a specific threshold level that is harmful to the environment, economy, and human health is one of the major issues that the entire world faces today. The toxic components of air pollution include heavy metals, volatile organic compounds (VOCs), black coal, environmental tobacco smoke, carbon monoxide (CO), ozone, nitrogen dioxide and sulfur dioxide, particulate matter (PM), and larger particles.

Air pollution is known for its adverse effects on cardiovascular and respiratory health as well as increased risk of early death. However, its impact on the central nervous system has been less understood. New findings state that air pollution is also responsible for an increased risk of cognitive decline and depression.

One research states that air pollution can reach the brain through the nasal nervous system causing systemic inflammation or the toxins can also enter through the vascular system passing the semi-permeable blood-brain barrier that controls the nutrient flow. The balance of the cerebral mechanism faces heavy distortion due to the harmful effects of air pollution.

These effects are observed in the neurons which are a main component of our nervous system. Neurons receive and relay signals to and from different parts of the body and Neurons achieve this with the help of various neurotransmitter molecules that also contribute in the maintenance of our mental health. So, because of the disturbance and imbalance, mental health issues are observed.

Studies have found that air pollution damages the cognitive abilities of children and in adults increases the risk of cognitive decline and depression. Air pollution has also been linked to neurological disorders such as Alzheimer's and Parkinson's disease.

Even though there is no conclusive and sure explanation for these associations, many biological, psychological, and social implications have been proposed and supported to different degrees that state that a small increase in pollution levels has significant physical and functional changes within the regions of the brain that regulate emotions.

Following are some findings from various studies-

1. It has been discovered that human neuro-developmental processes and the Central Nervous System can be significantly impacted by air pollution, which is based on chemical emissions primarily derived from various urban and industrial activities. (CNS).
2. Studies also indicate that PM levels are linked to mental health decline, and prolonged exposure to PM 2.5 can raise the chance of depression and Autism Spectrum Disorder. Additionally,

there have been more instances of depression and anxiety than normal due to the elevated levels of NO₂ in the summer and PM 10 in the winter. Self-harm risk has been shown to rise with short-term increased exposure to NO₂, PM₁₀, and PM₃.

3. During fetal life, exposure to air pollutants may be a significant risk factor for neurodevelopmental disorders such as autism and major psychoses like schizophrenia.

4. It has also been reported that air pollutants, PM particularly, encourage oxidative stress and children who are exposed to emissions face redox pathways related gene mutations.

5. One study found that in India, children living in urban areas had substantially higher rates of attention-deficit/hyperactivity disorder (ADHD) than children of the same age and gender living in non-urbanized areas.

6. Carbon monoxide (CO) from vehicles, gas stoves, or tobacco smoke which can cause changes in neurodevelopment if exposed during perinatal period can pass through the placenta and get to the growing brain.

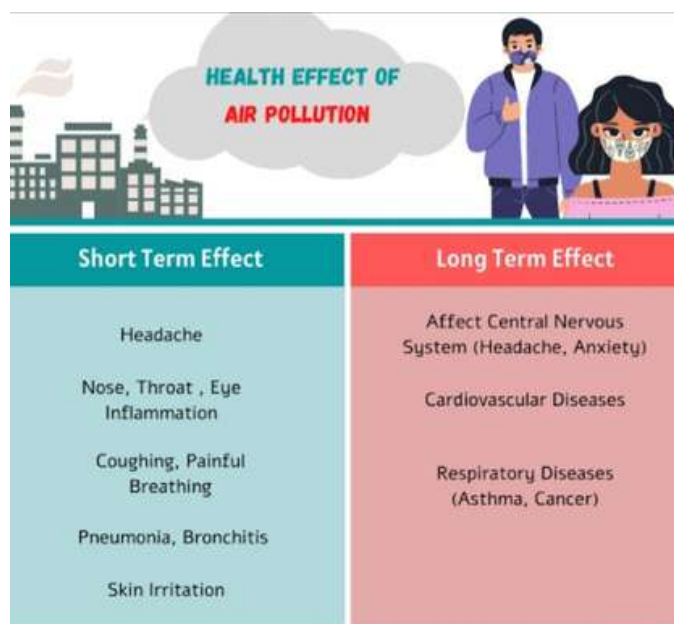
7. Increased NO₂ and SO₂ exposure is favorably correlated with poor mental health, anti-anxiety medication prescription, and increased suicidal ideation.

8. Living in heavily polluted regions can cause stress and worry about getting sick, which has a negative impact on mental health. The final theory explains how air pollution indirectly affects mental health by affecting people's physical health and how people who get sick frequently may also experience bad mental health.

Additionally, a person's mental health may be impacted by water pollution. Pathogens, pesticides, fertilizers, heavy metals like arsenic, mercury, and lead, and radioactive minerals like uranium have been found to be present in many water systems and may have acute or chronic effects on our bodies. However, their effects on cognition have not been looked at, with the exception of lead, which has shown that children exposed to lead are more likely to develop psychiatric disorders like depression and schizophrenia as adults.

Another most common source of stress is noise, which can be brought on by the workplace setting, home appliances, airplanes, and city traffic. Noise pollution could be categorized as an indirect pollutant because, despite the possibility of some direct biological processes involving CNS tissues, its effects on mental health are primarily mediated by stress generation. Noise pollution can contribute to mood swings, sleep issues, and depression. Children who live in noisy places have reported difficulties with problem-solving, hearing loss, reading difficulties, and frustration. It has also been reported that excess noise reduces dendritic count, alters the levels of neurotransmitters in various regions of the brain, inhibits cognition and memory, and also raises corticosteroid levels in the blood.

In conclusion, a big step towards lowering some environmental triggers of mental health symptoms is breathing cleaner air and consuming safe water. A better environment can be advantageous for better cognitive performance and greater longevity. As there is no singular treatment strategy for all mental health symptoms, we must be mindful of what we consume and also take appropriate measures to provide a wholesome, healthy life for our current and future generations.





EFFECTS OF WAR ON CLIMATE

Hemant Kumar

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While most of us are aware that armed conflict is bad for humans, we frequently overlook the extremely negative and long-lasting effects it has on the environment. The "natural environment" is made up of the land, the water, the plants, the animals, and every other living thing. Due to its interaction with nature, a geographic environment is also referred to as a natural environment. The natural environment includes things like the surface of the world, rivers, mountains, deserts, land, water, oceans, volcanoes, etc. Natural resources are found in the environment and are used as raw materials in the production of goods. Food, fuel, and raw materials for the manufacture of commodities are all made with the help of natural resources. Natural resources include things like stone, sand, metals, oil, coal, and natural gas. Other natural resources are air, sunlight, soil, water, animals, birds, fish and plants.

Some of the natural resources on the world are included in this graph along with their final uses. The chart lists a few of the natural resources that each nation has to offer. These natural resources indicate the nation's wealth, which is also based on how those resources are used.

ENVIRONMENTAL & ECO-TERRORISM

The term "environmental terrorism" refers to the intentional destruction of natural resources. Targeting the built environment, such as roads, buildings, and trucks, is referred to as "eco-terrorism." Many wars have been documented throughout history. The devastating impact of destruction has resulted in the degradation and decline of the planet and its natural environment.

Natural Resource	Products/Services Examples
Air	Wind power, oxygen, CO2
Animals	Food and clothing
Coal	Energy, electricity, heat
Minerals	Steel, aluminum, wire, power, batteries
Natural gas	Energy, electricity, heat
Oil	Energy, electricity, heat, plastics, fuel
Plants	Paper, wood, clothing, food, medicines
Sunlight	Solar power, heat, photosynthesis
Water	Hydropower, cleaning, drinking

Not only can war be harmful to the social environment, but it also emits large amounts of greenhouse gases, causing pollution that contributes to anthropogenic climate change and resource depletion, among other negative effects on the overall environment.

War results in pollution incidents that are industrial in scope. Oil or energy facilities are targeted on purpose. Scorched earth techniques include the destruction of agricultural infrastructure such as canals, wells, and pumps, resulting in cross-border contamination of rivers, aquifers, and the sea. Time and history show that winning wars has resulted in devastation and crippling damage by destroying and depleting countries' natural resources. Let's take a look at some specific conflicts and evaluate their impact on the environment.



World conflicts and their environmental damage

World War I: Due to the changes in the landscape brought on by trench fighting, World War I had the greatest negative effects on the ecosystem. Trench digging resulted in soil churning, crushing of plants and animals, and trampling of grassland. Logging in the forest to create more trenches caused erosion.

World War II: The environmental consequences of World War II were severe, allowing them to be observed during the Cold War period and up to the present day. Conflict, chemical contamination, and aerial warfare all contribute to a reduction in global flora and fauna populations, as well as a reduction in species diversity.

Vietnam War: New technologies were developed during the Vietnam War, some of which helped Vietnam's environment transition from a once-pristine habitat to an almost apocalyptic state after the conflict. These technologies included methods for chemical deforestation.

The current war in Ukraine: The current invasion of Ukraine by Russia impacted its natural environment in many ways. Wars are by nature violent and destructive.

Sometimes the destruction of resources can cause more severe damage than bombs and bullets. The destruction of farms, livestock, gardens, land, and other civilian infrastructure is resulting in a lack of food, a severe disruption of economic activity, a threat to survival, an issue to the lives of people and all wild species, and it is also causing displacement, starvation, and death due to threatened food security and other factors.

Can Warfare Protect Nature?

It may seem counterintuitive, but some argue that military conflicts often result in the preservation of the natural environment. "It's one of the findings that is completely contrary to expectations," says Jurgen Brauer, Ph.D., an economics professor at Augusta State University in Augusta, Georgia. "The demilitarised zone is the most preserved area in all of Korea because human activity is prohibited," he says. Other researchers have observed that, despite massive herbicide use during the Vietnam War, more forests have been lost in that country since the war's end than during it, owing to peacetime commerce and Vietnam's quest for prosperity.

. The coal-black skies caused by the Kuwaiti oil fires in 1991 provided striking visual evidence of the environmental damage caused by war. However, these oil fires consumed roughly the same amount of oil as the United States in a single day in one month.

"Peace can also be harmful," says Dabelko. "You've got some ironic twists."

Experts, however, are quick to point out that this is not an argument in favour of armed conflict. "War is bad for the environment," says Brauer, author of "War and Nature: The Environmental Consequences of War in a Globalized World."

And, as Bruch points out, warfare only postpones the environmental damage caused by peaceful human activity and commerce. "It may provide a temporary reprieve, but the long-term effects of war aren't all that different from what happens in commercial development," he says.

Environmental opportunities

While military operations and armed conflicts can contribute to or facilitate a variety of environmental harms, they can also offer chances for establishing and maintaining peace as well as for assisting in the transformation of society through sustainable recovery.

Common environmental hazards that transcend national boundaries and human borders, as well as shared natural resources, can serve as the starting point for communication between parties engaged in conflict.

Conflicts can drive a switch to solar energy due to unpredictable energy supply, and the destruction they wreak can be an opportunity to rebuild greener or to establish new domestic legislative frameworks for resource management in a sustainable way.

These opportunities, however, are dependent on greater attention being paid to the environment prior to, during, and after conflicts. If we do not demand greater protection before and during conflicts, damage will be accepted. And ignoring the environment after a conflict not only misses out on opportunities to encourage long-term recovery, but it may also set states up for future resource conflicts. Several studies have found a strong positive correlation between military spending and increased greenhouse gas emissions, with the impact of military spending on carbon emissions being more pronounced for countries of the Global North (i.e.: OECD developed countries).





RAPIDLY CHANGING LIFESTYLE AND ITS ADVERSE EFFECTS ON CLIMATE

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Climate change is a global crisis that is largely driven by human activities, including our rapidly changing lifestyle. Over the past few decades, there has been a significant shift in how people live and consume, which has had adverse effects on the environment and contributed to the current climate crisis. In this article, we will explore how our changing lifestyle is affecting the climate and its consequences in detail.

One of the primary drivers of climate change is the increased consumption of fossil fuels, such as coal, oil, and natural gas, to power our modern lifestyle. The burning of fossil fuels releases large amounts of greenhouse gases, including carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), into the atmosphere. These gases trap heat in the Earth's atmosphere, leading to the greenhouse effect and resulting in global warming.

The modern lifestyle is characterized by high energy consumption patterns, such as increased use of electricity for lighting, heating, cooling, and powering electronic devices. The growing demand for energy has led to the construction of more power plants and increased burning of fossil fuels, which has significantly contributed to the emission of greenhouse gases into the atmosphere.

Another aspect of our changing lifestyle is the increase in transportation emissions. The use of private vehicles has surged in recent years, leading to higher carbon emissions from burning gasoline and diesel. Additionally, the globalized economy has led to increased transportation of goods across the world, resulting in emissions from shipping and air travel.

Furthermore, the rapid urbanization and industrialization have led to deforestation and land degradation. Forests act as carbon sinks, absorbing and storing large amounts of carbon dioxide. However, deforestation, particularly in tropical rainforests, has resulted in the release of vast amounts of carbon dioxide into the atmosphere. Deforestation also disrupts natural ecosystems, displaces wildlife, and contributes to the loss of biodiversity, further exacerbating the adverse effects of climate change.

The changing lifestyle has also led to a shift in food consumption patterns. There has been an increased demand for resource-intensive animal-based products, such as meat and dairy, resulting in higher emissions of methane, a potent greenhouse gas, from livestock production. Additionally, the globalized food system has led to increased transportation of food across the world, resulting in food miles and associated emissions.

The adverse effects of climate change are far-reaching and include rising temperatures, extreme weather events, such as hurricanes, droughts, floods, and wildfires, melting glaciers and ice caps, rising sea levels, and loss of biodiversity.

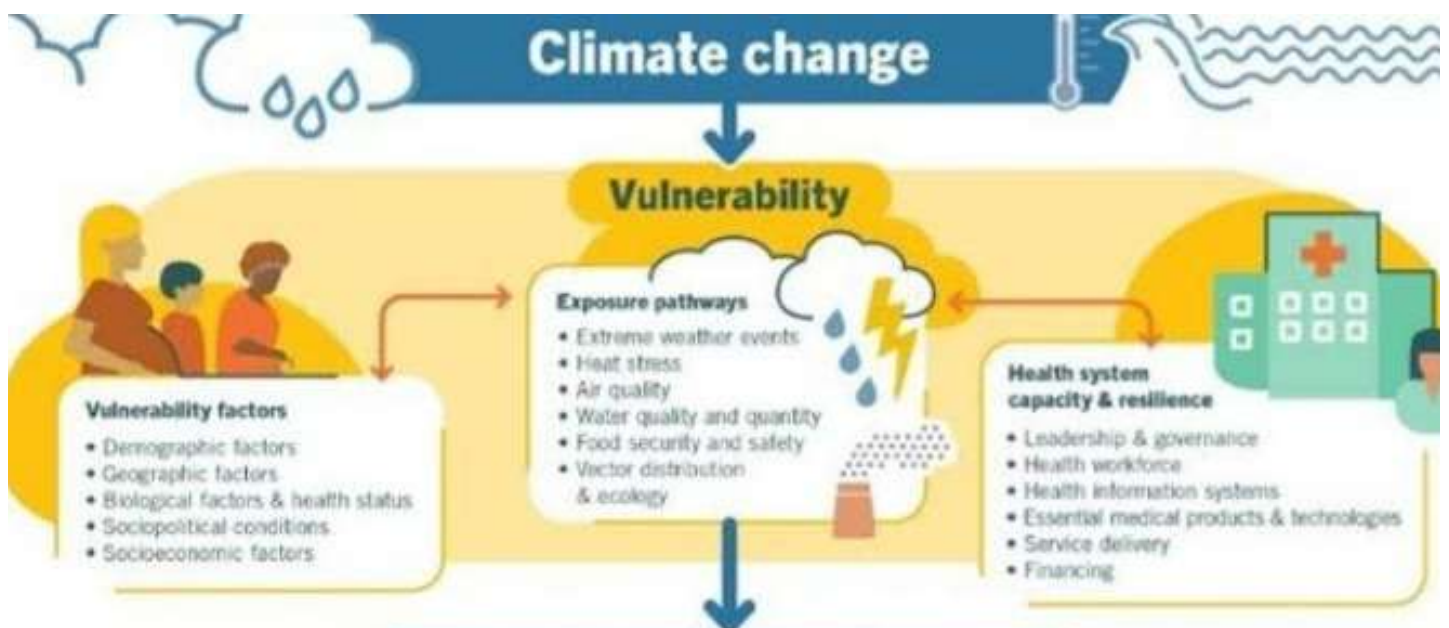
These impacts have severe consequences on human health, agriculture, water resources, food security, and economies, particularly in vulnerable communities that are least responsible for the emissions but most affected by the consequences.

To mitigate the adverse effects of our rapidly changing lifestyle on the climate, it is essential to adopt sustainable practices and lifestyles. This includes transitioning to renewable energy sources, such as solar and wind power, improving energy efficiency, promoting public transportation and reducing the use of private vehicles, conserving forests and restoring degraded lands, adopting sustainable agricultural practices, and reducing food waste. Additionally, raising awareness about the need to reduce greenhouse gas emissions, advocating for policies to mitigate climate change, and promoting individual and collective actions to reduce our carbon footprint are crucial steps towards addressing the climate crisis.

In conclusion, our rapidly changing lifestyle, characterized by high energy consumption, increased transportation emissions, deforestation, and changing food consumption patterns, is contributing to climate change and its adverse effects on the planet. It is imperative to recognize the connection between our lifestyle choices and their impacts on the climate and take urgent and collective actions to mitigate these effects. Transitioning towards sustainable practices and lifestyles is crucial to safeguard the planet for current

Climate change is our planet's greatest existential threat. If we don't limit greenhouse gas emissions from the burning of fossil fuels, the consequences of rising global temperatures include massive crop and fishery collapse, the disappearance of hundreds of thousands of species, and entire communities becoming uninhabitable. While these outcomes may still be avoidable, climate change is already causing suffering and death. From raging wildfires and supercharged storms, its compounding effects can be felt today, outside our own windows.

Understanding these impacts can help us prepare for what's here, what's avoidable, and what's yet to come, and to better prepare and protect all communities. Even though everyone is or will be affected by climate change, those living in the world's poorest countries—which have contributed least to the problem—are the most climate-vulnerable. They have the fewest financial resources to respond to crises or adapt, and they're closely dependent on a healthy, thriving natural world for food and income. Similarly, in the United States, it is most often low-income communities and communities of color that are on the frontlines of climate impacts. And because climate change and rising inequality are interconnected crises, decision makers must take action to combat both—and all of us must fight for climate justice.





GLOBAL WARMING A THREAT TO THE WORLD'S COASTS

Harsh khandelwal

New Delhi institute of management

Yes, global warming is a threat to the world's coasts in several ways.

Firstly, as global temperatures rise, so do sea levels. This increase in sea levels can lead to coastal erosion, flooding, and loss of habitat for plants and animals. In some cases, entire coastal communities may need to be relocated due to the encroaching sea.

Secondly, global warming is also linked to the intensification of natural disasters such as hurricanes, cyclones, and typhoons. These extreme weather events can cause significant damage to coastal areas, including destruction of infrastructure and loss of life.

Thirdly, the warming of ocean waters can also lead to the bleaching and death of coral reefs, which are important habitats for many marine species. This can have a cascading effect on the entire marine ecosystem, leading to the loss of biodiversity and reduced fish populations.

Overall, global warming poses a significant threat to the world's coasts, and urgent action is needed to reduce greenhouse gas emissions and mitigate the impacts of climate change.

As global temperatures continue to rise due to the accumulation of greenhouse gases in the atmosphere, sea levels are also rising. This is primarily caused by the thermal expansion of ocean water and the melting of glaciers and ice caps. As a result, coastal regions around the world are facing a range of impacts, including:

Increased coastal flooding: As sea levels rise, flooding from storm surges, heavy rainfall, and tidal events is becoming more frequent and severe. This can lead to property damage, erosion, and loss of life.

Coastal erosion: Higher sea levels and stronger waves can cause more erosion along coastlines.

This can lead to loss of beaches, cliffs, and other coastal features, as well as damage to infrastructure such as roads, bridges, and buildings.

Saltwater intrusion: Rising sea levels can also cause saltwater to infiltrate coastal aquifers and estuaries. This can lead to contamination of freshwater resources, affecting both human populations and ecosystems.

Impacts on coastal ecosystems: As sea levels raise, coastal ecosystems such as wetlands, marshes, and mangroves are at risk of being inundated with saltwater, which can affect their ability to support plant and animal species. This, in turn, can impact human activities such as fishing and tourism.

Overall, global warming is a significant threat to the world's coasts, and urgent action is needed to mitigate its effects. This includes reducing greenhouse gas emissions, implementing coastal protection measures, and promoting sustainable development practices.

Global warming, also known as climate change, is a global phenomenon that is caused by the increase of greenhouse gases, mainly carbon dioxide, in the Earth's atmosphere. The rise in global temperatures is having a significant impact on the world's coastlines, which are increasingly vulnerable to the effects of sea-level rise, coastal flooding, and erosion.

Sea-level rise is caused by the thermal expansion of ocean water and the melting of glaciers and ice caps. As a result, sea levels have risen by about 8 inches (20 cm) since 1880, and they are expected to continue to rise by an additional 1-4 feet (0.3-1.2 m) by the end of this century, according to the Intergovernmental Panel on Climate Change (IPCC).

Coastal regions around the world are facing a range of impacts as a result of sea-level rise and other effects of global warming. One of the most significant impacts is increased coastal flooding. As sea levels rise, flooding from storm surges, heavy rainfall, and tidal events is becoming more frequent and severe. This can lead to property damage, erosion, and loss of life.

Coastal erosion is another significant impact of global warming on the world's coasts. Higher sea levels and stronger waves can cause more erosion along coastlines. This can lead to loss of beaches, cliffs, and other coastal features, as well as damage to infrastructure such as roads, bridges, and buildings.

In addition to coastal flooding and erosion, rising sea levels can also cause saltwater to infiltrate coastal aquifers and estuaries. This can lead to contamination of freshwater resources, affecting both human populations and ecosystems. Coastal ecosystems such as wetlands, marshes, and mangroves are also at risk of being inundated with saltwater as sea levels rise. This can affect their ability to support plant and animal species, which in turn can impact human activities such as fishing and tourism.

To address these challenges, urgent action is needed to mitigate the effects of global warming on the world's coasts. This includes reducing greenhouse gas emissions, implementing coastal protection measures, and promoting sustainable development practices. Coastal communities must also take steps to adapt to the impacts of climate change and build resilience to future challenges.

Global warming is one of the most significant threats facing the world's coasts. The effects of global warming on the world's oceans are already evident in rising sea levels, increased coastal flooding, and more frequent and severe weather events. As temperatures continue to rise, these impacts are likely to become even more severe.

One of the primary impacts of global warming on the world's coasts is increased coastal flooding. As sea levels rise, coastal areas are becoming more vulnerable to storm surges, tidal events, and heavy rainfall. This can lead to damage to infrastructure and property, erosion of beaches and cliffs, and loss of life.

Another significant impact of global warming on coastal areas is erosion.

Higher sea levels and stronger waves can cause more erosion along coastlines, leading to the loss of beaches, cliffs, and other coastal features. This, in turn, can lead to damage to infrastructure, such as roads, bridges, and buildings.

Rising sea levels also pose a significant risk of saltwater intrusion. This occurs when saltwater infiltrates coastal aquifers and estuaries, leading to contamination of freshwater resources. This can impact both human populations and ecosystems, affecting activities such as farming, fishing, and tourism.

Coastal ecosystems such as wetlands, marshes, and mangroves are also at risk due to global warming. As sea levels rise, these ecosystems may become inundated with saltwater, affecting their ability to support plant and animal species. This can have a significant impact on human activities, such as fishing and tourism.

Overall, global warming is a significant threat to the world's coasts, and urgent action is needed to mitigate its effects.

This includes reducing greenhouse gas emissions, implementing coastal protection measures, and promoting sustainable development practices. Only through a concerted effort can we hope to protect our coasts and the many communities and ecosystems that depend on them.

MOVIE RECOMMENDATION: GEOSTORM (2017)

Synopsis

What if, in the wake of more than a decade of devastating weather events, we finally found a way to control Mother Nature and the destruction her tirades entail? When catastrophic climate change endangers Earth's very survival, world governments unite and create Project Dutch Boy: a global net of satellites surrounding the planet that are armed with geo-engineering technologies designed to stave off the natural disasters. After successfully protecting the planet for two years, something is starting to go wrong. Two estranged brothers (Gerard Butler, Jim Sturgess) are tasked with solving the program's malfunction before a worldwide geostorm can engulf the planet.

Geostorm is a 2017 American science fiction disaster film directed, co-written, and co-produced by Dean Devlin (in his feature directorial debut). The film stars Gerard Butler, Jim Sturgess, Abbie Cornish, Ed Harris, and Andy García. It follows a satellite designer who tries to save the world from a storm of epic proportions caused by malfunctioning climate-controlling satellites.

Principal photography began on October 20, 2014, in New Orleans, Louisiana. After poor test screenings, re-shoots took place in December 2016 under executive producer Jerry Bruckheimer, writer Laeta Kalogridis and new director Danny Cannon. To date, the film is the only co-production between Skydance Media and Warner Bros.

source:- IMDB

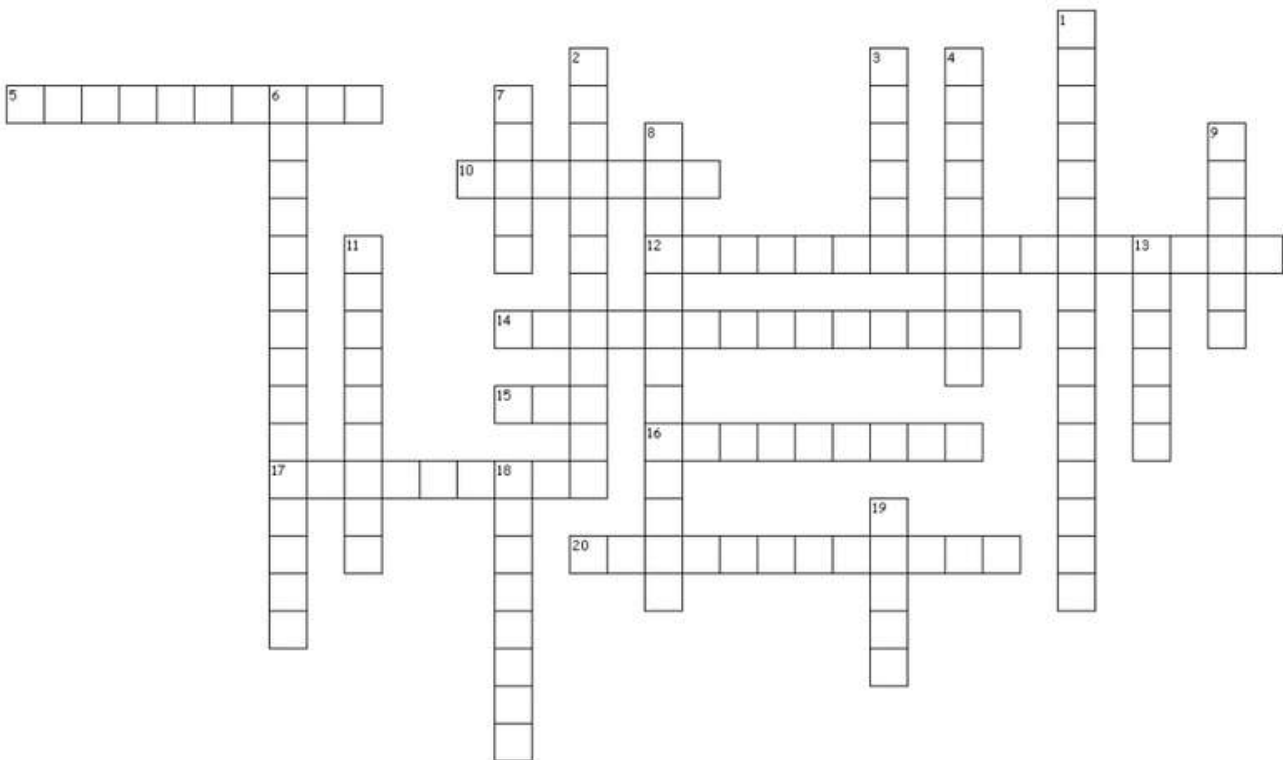


In an attempt to save the planet from the devastating effects of extreme climate change, an eminent team of scientists led by Jake Lawson manages to build a powerful and elaborate network of satellites known as the "Dutch Boy", to practically control the weather. However, when unexplained accidents and catastrophic weather malfunctions start to occur, it's evident that what was invented to protect the Earth has now become its nemesis, wreaking havoc with random attacks. Can Jake and his estranged brother Max stop the string of dysfunctions before a Geostorm--an annihilating worldwide meteorological phenomenon--obliterates mankind?

SAVE CORAL REEFS

Beneath the ocean's glistening sheen,
Lies a world of beauty yet unseen,
A coral reef, a treasure trove,
A myriad of life, woven in a cove.
A symphony of colors and forms,
A delicate balance that life adorns,
But these marvels of the sea,
Are facing threats that cannot flee.
Rising temperatures, ocean acidification,
Affecting corals' growth and calcification,
Pollution and overfishing taking their toll,
Depleting these ecosystems, inch by inch, whole.
We've taken them for granted for far too long,
Our actions, a chorus of a tragic song,
But it's not too late to make a change,
To save these corals, from an irreversible range.
Let's join hands to preserve this wonder,
To protect the reefs, we need not plunder,
Reduce our carbon footprint, and pollution too,
For these corals to thrive and renew.
For every reef, that we can save,
Is a triumph, that we can rave,
Let's spread the word, far and wide,
For these corals, our future to abide.
Beneath the ocean's glistening sheen,
Lies a world of beauty, yet unseen,
A coral reef, a treasure trove,
Let's do our part, to let them rove

Jagriti Hinduja



Across

- 5. Book by Janine Benyus about learning from nature.
- 10. The world's first offshore landfill.
- 12. Al Gore's first book about environmental issues and climate change.
- 14. The book that advocates for designing out waste and where products become biological or technical nutrients after end-of-life.
- 15. The international organization that has pioneered sustainability reporting since 1997.
- 16. The global movement that started in 2007 by encouraging people to switch off their lights to call attention to climate change.
- 17. This animal is critically endangered, especially due to deforestation and habitat loss to make way for palm oil plantations.
- 20. She catalyzed the global environmental movement with her 1962 book *Silent Spring*.

Down

- 1. The international treaty designed to protect the ozone layer.
- 2. The process of removing salt from seawater.
- 3. The world's first and only carbon negative country which absorbs more carbon emissions than it produces.
- 4. The United Nations Conference on the Human Environment was held in this city in 1972.
- 6. The opposite of a linear economy.
- 7. The girl who started the climate change school strike.
- 8. The author of the Gaia hypothesis which postulates that the Earth functions as a self-regulating system.
- 9. This treaty was adopted at the Earth Summit in 1992.
- 11. The company that began its journey up Mount Sustainability in 1997.
- 13. The largest rainforest in the world.
- 18. This person chaired the Third UN Conference on the Law of the Sea in 1981 and 1982, and the Main Committee of the Earth Summit in 1992.
- 19. The president who wanted to withdraw from the Paris Agreement.



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