

Impact Of Climate Change On Ecosystem: An Analysis In The Light Of Islamic Teachings

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Abstract

The weather is changing very fast. Climate change is the reason for an imbalance between natural resources and human resources and sometimes misuse of these resources. Climate change is resulting from people's activities, particularly by way of growing air pollutants. Climate change is taken into consideration to be a major threat to the environment. Due to High temperatures, glaciers melt, lakes and sea level rises, hurricanes and rainstorms come, wildfires, droughts, and floods are disastrous because of climate change. This study divides the topic into three parts which discuss all three sufferers i.e. plants, animals, and humans who are directly or indirectly affected by this issue. This research follows the correlational research design which highlights all aspects of the causes and effects of climate change and suggests some steps for prevention. Climate change impacts vegetation and animals and affects species' survival. For human beings, climate change has many bad impacts on health, vegetation, agriculture, and livestock. It also becomes the reason for water scarcity which impacts the whole life circle of humans and destroys the natural habitat. Using renewable energy resources, recycling waste and protecting the ozone layer are precautionary measures for the sake of the development and well-being of all the creatures of the planet earth is the main focus of this research.

Key Words: Climate change, resources, impact, ecosystem, temperature, global warming

Introduction

First, the weather from the ancient Greek "Klima" which means the trend is defined as moderate weather for a long time. The main focus of the research is to determine the global impacts of climate change on living and non-living organism's in-short as we can say the eco-system.

Climate change has been taking place on this planet but its fast rate and the apparent magnitude of what is occurring now are fantastic subjects. Variation in climate is the outcome of an inequality between the rays of the surroundings. International heating associated with climate

change isn't the same as preceding global warming by way of its scale. Global temperatures are expected to upward push to 5. 4° C by 2100. It is proof that people have added to climate change over the last 100 years and that the adjustments taking place inside the sun and within the volcano have played a small role. It's related to changes in the climate and temperature on the planet Earth. (Smith, 2013)

Change in weather is taken into consideration to be a main risk to the surroundings and ecosystems. Its areas are associated with adjustments in the physical surroundings of planet Earth and affect lifestyles on an

international level. Consequently, clear know-how is required of this issue that will communicate to people approximately weather exchange and global warming is regularly used but has different connotations and refers to different conditions. Climate change refers to warming and the outcomes of global warming, for instance, heavy rainfall and growing wind speeds at the same time as international warming, which means that no longer it is addressed. So, weather change is observed within the states, and immediate effects on the globe and long-term bad impacts of climate change on the ecosystem are seen.

Statement of the Problem

This research is about the effect of climate change on the ecosystem. It gives complete details about the impact of climate change on humans, plants and animals. This research highlights the problems created by climate change which directly or indirectly impacts humans, plant life, animals and the whole planet earth's environment and helps us to recognize the environmental crises of the atmosphere.

Research Objectives

1. The top research's objective is to recognize the effects of climate change on the ecosystem.
2. To ascertain the different situations of weather change around the globe.
3. To examine the cause-and-effect relationship of climate change with special reference to the ecosystem.

Research Questions

1. What are the reasons for climate change?
2. How does changing climate impact humans, plants and animals?
3. How does the whole world deal with this issue and what is the way forward to overcome the crises of climate change?

Research Methodology

This research examines the effects of climate change on the ecosystem, therefore, research is conducted by qualitative research approach while opting correlational research method which examines the cause-and-effect relationship between humans, plants, animals and climate change. Qualitative work could be related to the interpretation of climate change and its impact on the ecosystem. The reason for engaging in research is explanatory research that is undertaken with the motive to explain the relationship between climate change and the ecosystem.

Methods and Material

This research is done by using the qualitative research design. Qualitative material is gathered through the internet, books, journals and articles and many other sources of newspaper and web-based information. Secondary information offers a theoretical body of the subject which apprehend the primary understanding of the effects of weather change on the ecosystem wherein humans, animals and plants also the physical planet earth's environment is affected.

Literature Review

Global warming is a long-term international issue of the pre-business era (between 1850 and 1900) because of human activities, especially the burning of fossil fuels, which increase the levels of warmth within the earth's atmosphere.

Global warming, gradual international warming, oceans, and air pollution are caused by human activities, mainly the combustion of carbon dioxide (CO₂), methane, and different greenhouse gases. In any case, international warming has a global impact. (Afroz, R, 2017)

In this paper, a strong correlation between global warming and worldwide carbon dioxide emissions (CO₂) is made and analyzed with the aid of quantitative and spectral analysis in time

and space scope, respectively. The ancient records of worldwide CO₂ emission and worldwide warming instability over 129 years from 1860-1988 had been used. The causal courting among the two situations has first assessed the use of a Sim and Granger popularity state of affairs in a time zone after a series of data is taken care of with the aid of ARIMA models. Granger's causal relationships have been assessed and demonstrated through spectral and multichannel spectral evaluation in the domain frequency. Proof found in each analysis proves that there is a causal change between all indicators. Time zone analysis indicates that Granger causality exists between international warming and global CO₂ emission. Further, CO₂ emission causes a high temperature. The results are similarly shown by way of the evaluation of the frequency range, which suggests that the increase in CO₂ emission reasons the warming of the climate due to the fact there is a high correlation between these modifications. In addition, it is verified that climate change takes place after an average change in CO₂ emission, which ensures that growth in CO₂ emission causes international warming. (Ahmed, 2018)

However, throughout history, lots of studies on international warming and its outcomes causes environmental problems. There may be a little bit gap so the reason is to research the impacts of weather changes on the environment. In this study, the consequences are discussed of the bitter impacts of weather change on the eco-system and discuss the demanding situations in the upcoming time. (Fadlallah, 2001)

Main Body of the Research

Reasons for Climate Change

The basic reasons for climate change around the globe are:

1. Greenhouse gases
2. Solar activity
3. Deforestation

4. Agriculture
5. Human activity
6. Livestock

Weather change is the reason for an imbalance between the incoming and outgoing rays of the sun. The increase in greenhouse gases (e.g. carbon dioxide, methane, and nitrous oxide) in the environment increases the earth's temperature because when the temperature rises, more water evaporates from the oceans and different resources of water dry and this becomes the reason for water scarcity. Atmospheric carbon dioxide comes from two major resources, natural and anthropogenic (man-made). Natural resources of carbon dioxide consist of many plants that emit carbon dioxide as a waste product. The human sources of carbon dioxide are largely contributed through human activities, smoke from factories and vehicles, commercial revolution mainly oil burning (e.g., burning coal, oil, and herbal gasoline), however also from agricultural extraction and deforestation. The summit of five countries liable for carbon emissions China, the USA, (United States of America), India, Russia and Japan. In 2017, the United States launched about 5.1 billion electricity-related chemicals to emit approximately 32.5 billion tons worldwide. The deforestation of the Amazon rainforest in Brazil (the loss of nearly a million wooded areas and fields each year), in particular for agricultural functions, has a profound effect on weather changes. (Khan et al., 2022)

Effects of Climate change

Climate change causes an explosion of bad effects on the visible surroundings of planet Earth and life on earth. All of the adjustments seen on the planet Earth affect the fitness of flowers, animals, and humans. Coral reefs, forests, and coastline groups are mainly vulnerable to climate change. Some of the results of weather change are feasible by improving the tendency to chemical pollutants even as among the effects of weather

change may be critical, some health issues could cause a problem for other regions. For instance, a heat wave can reduce the number of normal activities related to heat and death (Shidore, 2020).

Earth's Atmosphere

Due to a stunning increase, the planet Earth became hot and near about 45.4 billion years ago approximately 3rd of the world by gathering gases inside the sun. Planet Earth has experienced climate change for the duration of its long records. Moreover, climate change has many terrible impacts on international groups. Increases in heat and temperature also become the reason for disasters on earth.(Howard-Grenville et al., 2014)

Temperature

Excessive temperature records from new thermometers had been being most effective because the beginning of the 18th century by using these parameters (chemical signatures and formulations), scientists can transmit through temperatures. At the beginning of the universe, the surroundings 10-35 years ago were around 1 octillion ° C. In less than a few minutes, the temperature of the earth dropped to about 1 billion ° C as a minimum of a few million years ago. Plant earth changed in the Centre of the ice age, its miles cold (glacial) and heat (interglacial), with cycles of one hundred thousand years.(Kiran & Qurat-UI-Ain, 2021.) Nowadays weather change is associated with growing worldwide warming. The earth's land is warmer than the oceans. The hotter weather can entice greater water vapour, which has brought about an increase in everyday climate. Over the past 70 years, the Earth's temperature has risen using approximately 0.7 ° C. Because of 1976, international warming has been exceptional for the past thousand years. At any given time, there is hot weather. The earth's present-day temperature is about 1.16 ° C. presently; the earth's temperature is rising with an increase of

approximately 0.08 ° C over a decade. Consistent with the Intergovernmental Panel on climate change (IPCC) and based on the diverse conditions of worldwide warming, worldwide warming will increase. (Kahn et al., 2013)

Growing international temperatures are not the same everywhere. There's an indigenous version of global warming. Some areas will not heat up and might cool down for some time. Warmth is the maximum said at excessive altitudes. The North Pole and the Northern Hemisphere warm up a lot quicker than the South Pole and the Southern Hemisphere. Predicted temperatures are anticipated in winter in comparison to summer and nighttime as compared to daytime. Fountains work in advance and winters are prepared for these circumstances.

Mountains, Glaciers and Lakes

Climate change is inflicting icebergs inside the mountains to melt and accelerating the price of glaciers in Greenland and Antarctica. A few glaciers are websites with dominant consecrated and symbolic meanings of trendy groups. Lakes around the arena are very cold and narrow. In a few decades, hundreds of lakes might also lose their iciness snow. (Frey, 2022)

Sea Level Rise

Climate change is causing rising sea levels. Sea levels upward push following a roar inside the quantity of water already in the ocean because the water warms and expands or the ocean amount rises specifically because of ice melting. Growing sea levels will lead to the disappearance of a few islands and floods through flooding of cities, resulting in homelessness and displacement. Salty seawater will charge local flowers and animals to imitate changing conditions. (Lawrence & Lorsch, 1967)In people, it creates

salt in freshwater and loss its productive agricultural land. Low earnings especially in developing states are maximum affected at the international level and cause unemployment.

Hurricanes and Rainstorms

Weather change is triggering greater extreme storms and heavy rainstorms due to the warming of the climate and cost ocean waters. The number of storming segments four and 5 has grown at a charge of 25-30% at 1.0 ° C every of the earth's temperatures. Typhoon Katrina segment five become one of the deadliest hurricanes in current US records. The death toll without delay or not directly after storm Katrina turned to 1,833 (reports from national and neighbourhood states in 5 provinces). (Bouzehaia, 2008)

Wildfires

Climate change causes the most not unusual wildfires. The parched, warm weather has multiplied the intensity and destruction of wooded area fires in several international locations e.g. Brazil, America, and Australia. The purpose of wildfires is deforestation, to harm the belongings, extend advertising to polluted air and toxic fitness results consisting of respiration sicknesses and death. The Amazon (Brazil) has emerged as pretty hot and liable to wildfires for the duration of the current drought. California (America) has been hit by using a series of wildfires in current years which have killed at least 100 humans because of the devastating and lethal wildfires of 2017 and 2018. (Ewald et al., 2020)

Droughts

Drought is a complex and multifaceted situation; it is driven by way of diverse physiological and biological methods. Drought is one of the major problems in many parts of the world and it has become a natural failure. (Hassan Al-Taai, 2021)Climate change causes the maximum

common and severe droughts, specifically in hotter climates that face desertification. This can cause misery, famine, starvation, and human migration.

Ocean Acidity

The oceans provide plenty of water to a whole arena's existence which is maintaining the balance between supply and demand. The quantity of carbon dioxide inside the atmosphere makes the surface water extra acidic as a few carbon dioxides dissolve in seawater forming carbonic acid. (Mumtaz.T, 2020)Sea acidification can modify the marine surroundings damaging coral reefs, fish, and different aquatic species.

2. Plants

Climate change contributes to the extinction of plant species. Diverse elements of weather change are discussed, increment of the level of carbon dioxide, temperature, sea, rain, weeds and bugs or germs is the main reason for the destruction of plant life and the heavy price is paid in the loss of vegetation and plants. (Edward et al., 2019)

1. Survival

Crop survival is affected by climate change. Increased international temperatures and bloodless winters have resulted in the proliferation of viruses, for example, allowing pine beetles to continue to exist; overrunning farmland fields with salt water, wildfires, and droughts disrupt vegetation and result in deforestation and damage to agriculture. (Jones & Sullivan, 2020)

2. Blooming, Pollination, and Fructification

Crop increase, flowering and pollen are affected by weather changes. With the emergence of short winters and warm springs, the plants bloom upfront and die younger. Iciness and cooling Ares are crucial for numerous fruit-bearing timber. Inadequate cooling because of weather changes affects the production of fruit. Moreover, a few terminations, small results, and modifications in shade, texture, and flavour of the fruit. About 75% of the manufacturing of seeds and culmination for human intake depends on pollinators. (Edward & Abed, 2017) Volunteers, specific bees, are facing extraordinary challenges to continue to exist. With a loss of synchronization between plant life and pollen due to seasonal adjustments and declining pollen ranges, fruit manufacturing is declining while expenses are growing high.

3. Animals

Climate change produces a diffusion of animals, influencing metabolic and endocrine functions, and capabilities resulting in species survival. With the weather change, many species grow to be extinct every 12 months. Species with low stamina with increasing temperatures are vulnerable to survival. Endangered species consisting of polar bears, koalas, elephants, sea turtles, cheetahs, panda bears, and penguins (endless listing) are also rare and they are facing survival threats as humans and plants face due to climate change. (Adejumoke et al., 2018)

Species tormented by weather change will need to relocate to greater appropriate places (e.g., better altitudes and places) or adapt to modifications in

their modern-day habitats (e.g. habitat, feeding and breeding strategies).

3. Habitat

Weather change can lead to ecological deprivation or loss of numerous species (e.g., polar bears, koalas and birds). The polar bears lean in opposition to the sea ice. Rising temperatures cause the Arctic sea ice to melt, and deleterious habitats cause the decrease of natural habitat. Koalas rely upon eucalyptus trees. Increasing temperatures and drought are inflicting wildfires; diminishing the koala's habitat. Lake Uremia (Iran) is an artificial sanctuary and has regularly been a popular vacationer vacation spot. The lake will dry up specifically because of climate change. (Shore, 2020)

4. Nutrition

The existence of species can be affected by the availability of water, meals, and satisfaction in extra of those illiberal species. Uncertainty of water and food, and lack of confidence as a result of Climate change can lead to an extensive spread of apathy and hibernation in small mammals and hypo-metabolism in big mammals. (Saha,2019) Arctic bears may worry about searching for food as sea ice shrinks and melts in advance. With limited food availability, polar bears are dependent on their stored food. They must plunge lengthy distances in the water and plenty of young lambs die from no longer being capable of surviving.

The major food source for Koalas is eucalyptus leaves. Each koala eats about 1 kg of eucalyptus leaves step by step within a day. Climate change reduces the amount of water inside the eucalyptus tree. Increased carbon dioxide levels

cause a decrease in the protein inside the tree which impacts the life of the plant's weight loss. A lot of these changes lead to water shortages, malnutrition, and hunger. The koalas risked their lives by descending from their bushes on the lookout for water and food. This places them liable to predators and vehicle crashes. The population of Koalas has dropped using greater than 30% over the last 3 generations. Elephants need one hundred fifty-three litres of water an afternoon to drink more than the quantity required for bathing and play. Drought could cause population decline. (Al-Saati, 1988)

5. Migration, Breeding, and Gender Fortification

Heat waves have caused a high range of migration and a decline in breeding since latest many years. Rising sea levels threaten the turtle's eggs as many tortoises lay their eggs on seashores. Weather changes may furthermore affect the sexual morality of several animals. The gender of sea turtles is accompanied using the hotness of the nest. Cool temperatures produce many male turtles even as hotter temperatures produce more female turtles. (Kiran & Qurat-Ul-Ain, 2006.) Climate change is converting the populace of sea turtles. A few regions may end up generating the most effective female tortoises, wherein the possible extinction of local species may not have mating companions of female tortoises.

4. Humans

Climate change is a major threat to human survival. It has many unfavourable health effects that cause an increase in ailment and demise.

Temperature

Someone's temperature is between 37.0 ° C and is exactly managed within 33.2 ° C and 38.2°C to make certain best characteristics. The most vital deviations from preferred critical temperatures, i.e., reduce beneath 27.0°C (hypothermia) or a raise above 42.0°C (hyperthermia) can be critical. Weather change is causing more dangerous to excessive temperatures in many parts of the world. (Jones & Sullivan, 2020) With growing temperatures, there is an allergic reaction in other organs and exposes humans to an increase in disorder and demise (e.g. poor performance, behavioural vicissitudes, heat stroke, fever, respiration failure, stroke, and loss of life). Decreased exertion productiveness (up to 10% in some tropical areas) has full-size financial results not composed with change, the economic sufferers are of cheap productiveness could be greater than 20% of overall home manufacturing throughout the year 2100. Kids, the old, the poor, operating outdoor employees in need of defensive clothing and or defensive gadget, and matters with persistent health situations are at greater hazard whilst uncovered to heat stress, in the US, approximately 1,500 annual warmth-related deaths occurred. The European heat wave in the summer of 2003 claimed the loss of lives of some 70,000 people. (Mall et al., 2006)

Similarly, temperatures have risen to allow a cold winter to lessen the occurrence and demise of cold weather-related activities together with myocardial infarction and stroke. Additionally, warm and dry situations can reduce the prevalence of infectious sicknesses (e.g., malaria).

Nutrition

Climate change is scaring water and shortages of water have a first-hand impact on sanitation, crop production and food security in several countries. In the absence of proper extraction of water and consuming water tormented by rising salts following sea level rise with high salt quantity

consuming water, meals, and bathing can cause numerous health problems (e.g. excessive blood pressure and pores and skin diseases). (Fadlallah, 2001) In many areas, meals manufacturing programs have a bad impact due to climate change. Malnutrition also causes diseases and sudden cardiac attacks which become the reason for early deaths in children and adults. (Afroz et al., 2017)

Infection

Climate change with varying degrees of temperature, rain/humidity, wind and solar radiation contributes to the spread of certain infectious diseases as these variations can affect the survival, reproduction, and distribution of pathogens and vectors or host and their transmission space. There are several infectious diseases including malaria, dengue, and Lyme disease due to climate change. Ultraviolet rays cause skin cancer as well. (Lin et al., 2022)

Migration

Climate change by causing unfavourable living settings (e.g. increasing deserts, rising sea levels, declining access to fresh water, food shortages, health problems) will transport more people (forced migration, planned migration, migration). Deprived communities are severely affected by human migration. It is assessed that by the year 2050, several hundred million people will be displaced. The human movement will cause countries too many challenges e.g., societal, physical conditions, and monetary costs and aggressive conflict which is ultimately unfavourable for the development of mankind. (Frey, 2022)

Susceptible Populations

Overall, children, the elderly, ethnic groups, the poor, foreign workers, remote people, and

deprived subjects are affected by climate change directly. Low-income and physically susceptible countries are most affected by the health effects of climate change at least in the previous phase. However, in high-income countries (e.g., the USA), there is also a significant risk to other racial and economic groups as evidenced by the 1995 Chicago wave and New Orleans Hurricane Katrina of 2005. (Pearson & Clair, 1998)

Solutions:

The world is using more clean and sustainable energy solutions; there may be millions of new jobs created and billions of dollars in economic benefits. Below are some practical ways to combat climate change:

Buy a Renewable Energy license for your home power requirements

Make your home energy efficient

Buy carbon offsets

Adopt a plant-based diet

Reduce food waste

Recycle of resources

Stop using fossil fuels

Stop deforestation

Walk, bike and take public transportation

Challenges:

1. Climate adaptation: Humans, plants and animals are also on earth and face many challenges of climate change
2. Climate change and the health of children: Man-made climate change has already seriously damaged the health and well-being of children and has put present and future children on a challenging path to growing sick health and an unstable future.

3. Children are particularly vulnerable to climate change and the burning of fossil fuels.
4. Temperatures increase.
5. Drought and wildfires are beginning to occur more frequently.
6. Rain patterns change.
7. Glaciers and ice melt.
8. Global sea levels are rising.
9. These worldwide threats include water, food and energy security, population expansion, contagious viruses, and global security. Though, climate change is frequently viewed as one of the world's deepest issues.

Recommendations/ Suggestions

1. Every State should follow the strict policies for implementation and start to work on it and especially design an organization or institution also collaborate with NGOs and different social welfare trusts etc. which is suitable for work. Also, the government should take sessions or meetings on green peace development in a legislature to overcome the condition of climate change.
2. From UN-sustain to sustainable development projects.
3. The green revolution, greenery campaigns, and awareness should be augmented in front of the masses
4. Eco-system-friendly products such as solar panels and wind turbines should be launched
5. WTO, World Bank or TNC's project launched "Green" activities.
6. Carbon Disclosure Project CDP should be introduced (McManus et al., 2008)
7. No need to destroy the natural ecosystem with man-made harmful activities.

An Analysis

It is a bitter reality that the climate is changing rapidly. Climate change impacts all components

of life. This is called a major security threat to the environment, biodiversity and fitness.

Adapting to the health effects of climate change and the severe circumstances of climate change are major threatening situations for society. The health field ought to assist research, schooling (medical examiners), and information (public and policymakers) on climate change and its implications.

Various meetings for taking many steps for the preservation of climate at distinctive levels are required. Policymakers want to use techniques and opt for strategies for a better solution to this issue which is climate change. It is the need of the hour to adopt the policies which are introduced by the policymakers for the preservation of rights in particular for inclined people.

The results of climate change can be mitigated with the aid of decreasing emissions of greenhouse gases and by using increasing the earth's ability to captivate greenhouse gases into the ecosystem. Long-time period savings in renewable power and energy effectiveness is urgently required.

Islam teaches its followers to take care of the earth. Muslims believe that humans should act as guardians, or khalifah, of the planet, and that they will be held accountable by God for their actions. This concept of stewardship is a powerful one, and was used in the Islamic Declaration on Climate Change to propel change in environmental policy in Muslim countries.

In fact, Muslims need to look no further than the Quran for guidance, where there are approximately 200 verses concerning the environment. Muslims are taught that "greater indeed than the creation of man is the creation of the heavens and the earth". The reality is that nothing could be more Islamic than protecting God's most precious creation: the earth.

It is this approach that can reach the hearts and minds of the 1.8 billion Muslims around the world, and it must be integrated with, rather than neglected by, the climate movement.

The Prophet Muhammad (pbuh) also demonstrated kindness, care and general good principles for the treatment of animals, which form a benchmark for Muslims. He outlawed killing animals for sport, told people not to overload their camels and donkeys, commanded that slaughtering an animal for food be done with kindness and consideration for the animal's feelings and respect for Allah who gave it life, he even allowed his camel to choose the place where he built his first mosque in the city of Medina.

One day The Prophet (SAW) passed by Sa'd ibn Abi Waqas (RA) while he was performing wudu'. The Prophet (SAW) asked Sa'd: "What is this wastage?" Sa'd replied: "Is there wastage in wudu also?"

The Prophet (SAW) said: "Yes, even if you are at a flowing river." (Ibn Majah)

This hadith exemplifies the importance of not wasting vital resources, **even** when there is no supposed scarcity.

There is not an animal that lives on the earth, nor a being that flies on its wings, but they form communities like you. Nothing have we omitted from the Book, and they all shall be gathered to their Lord in the end. (Qur'an 6:38)

This verse of the Qur'an demonstrates the rights of animals.

It acknowledges the importance of their place on earth. It also sends a stark reminder that just as humans have networks, communities and roots on earth; so too do animals.

Animals also have their own form of worship towards Allah (SWT). They will also speak of their treatment by humans here on earth as testimony to Allah (SWT).

It's therefore vitally important that we, as Muslims, remember this and be mindful of our behaviour towards other creatures.

Prophet Muhammad (SAW) said: "I am in this world like a rider who halts in the shade of a tree for a short time, and after taking some rest, resumes his journey leaving the tree behind." (Ahmad, Tirmidhi)

This hadith has a very meaningful message for those who delve a little deeper.

Firstly, we pick up the importance and significance of a tree for the shade it provides in this dunya (mortal world).

However, the greater message is the understanding that although we are on the earth, this is temporary. It teaches us that **as** humans we are merely travellers on the earth.

After death, we move on to the afterlife, where we will be judged for our actions towards ourselves, each other and the planet.

The earth, and with it, the mercy of a **tree** should not be exploited by humans but rather nurtured and left for others to also enjoy.

Conclusion

Consequently, a continuous climate change, people and ecosystems will either have to adapt to a world that is significantly warmer than it is now or significant steps will have to be made to minimize warming within the next few decades. Both of these scenarios heavily involve ecosystems. The effects of climate change can be lessened by large, interconnected ecosystems, a variety of species, inherited diversity, trophic intactness, and habitat variation. Ecosystem management and restoration can be crucial for societal adaptation to climate change and its mitigation, but they will only be effective if used in parallel with a decline in fossil fuel emanations. Worldwide atmospheric greenhouse gas emissions are probably going to alleviate, and international temperatures will be high, at some time this century when human civilization deals

with the decarbonization challenge. Reasonable preservation and restoration of Global temperatures will peak, and atmospheric greenhouse gas concentrations will probably stabilize. Ecosystems' careful preservation and restoration could have contributed significantly to such stabilization and could still do so in the ensuing cool-down. Ecosystem deterioration and biodiversity loss will have unavoidably been brought on by the climate change that will already have taken place. Ecosystems that are undamaged, large, and associated, however, have a much better chance of acclimating and flourishing in this novel climate regime, and as a result of contributing to a vivacious and irrepressible biosphere that is required for its own sake as well as for providing the framework within which human societies survive and flourish. The global harm caused by human activity is at a critical point. According to Islamic law, containing the harm is a priority. Caring for the environment and action to limit and even reverse climate change must be at a level of obligation (fard) for Muslim people, organisations and governments. Caring for the environment can be considered as fard al-'ayn and fard al-kifaya at the same time.

From the perspective of activism, the possibility of environmental protection can also be covered by the Islamic concept of jihad, especially for individual Muslims and Muslim organisations. Reversing the impact of climate change requires all people to make sacrifices. They need to consume less and produce less waste. Through its theology of the environment and the power of its ethical stance, Islam, along with other world religions, can facilitate this critical outcome.

Reference

- Adejumoke, I., Babatunde A, A. O., Tabitha, A., Adewumi, D., & Toyin, O. (2018). Water Pollution: Effects. Intech Open.
- Afroz, R., Rahman, A., & Rahman, A. (2017). Health Impact of River Water Pollution in Malaysia. *Int. J. Adv*, 4(5), 78–85. <https://doi.org/10.21833/ijaas.2017.05.014>
- Al-Saati, A. (1988). Water Pollution. *Journal of Science and Technology*, 4, 13–14.
- Bouzeghaia, B. (2008). Environmental pollution and the development in the city of Biskra. Ministry of Higher Education and Scientific Research Matnouri Kastania University Faculty of Humanities and Social Sciences).
- Ewaid, S. H., & Abed, S. A. (2017). Water quality index for Al-Gharraf river, southern Iraq. *Egypt. J. Aquatic Res*, 43(2), 117–122.
- Ewaldaid, S. H., Abed, S. A., & Al-Ansari, N. (2019). Crop Water Requirements and Irrigation Schedules for Some Major Crops in Southern Iraq. *Water*, 11, 75Ewaldaid, S. H., Abed, S. A., & Al-Ansari, N. (2020). Assessment of Main Cereal Crop Trade Impacts on Water and Land Security in Iraq. *Agronomy*, 10, 98.
- Fadlallah, S. (2001). Environmental pollution and its impact on agricultural economic development. *Assiut Journal of Environmental Studies*. 20 PP. 82-84. Badran A, 1988.
- Frey, B. B. (2022). Structural Holes: The Social Structure of Competition. In *The SAGE Encyclopedia of Research Design*. Harvard University Press. <https://doi.org/10.4135/9781071812082.n611>
- Gulbenkian Think Tank on Water and the Future of Humanity Water and the Future of Humanity Revisiting Water Security. (n.d.).
- Hassan Al-Taai, S. H. (2021). Water pollution Its causes and effects. *IOP Conference Series: Earth and Environmental Science*, 790(1).

- <https://doi.org/10.1088/1755-1315/790/1/012026>
- Howard-Grenville, J., Buckle, S. J., Hoskins, B. J., & George, G. (2014). Climate change and management. *Academy of Management Journal*, 57(3), 615–623. <https://doi.org/10.5465/amj.2014.4003>
- IMPACT OF CLIMATE CHANGE ON WATER SHORTAGE IN PAKITAN: AN ANALYSIS. (n.d.).
- Jones, N., & Sullivan, J. P. (2020). Climate Change and Global Security. *Journal of Strategic Security*, 13(4), i–iv. <https://doi.org/10.5038/1944-0472.13.4.1899>
- Kahn, W. A., Barton, M. A., & Fellows, S. (2013). Organizational crises and the disturbance of relational systems. *Academy of Management Review*, 38(3), 377–396. <https://doi.org/10.5465/amr.2011.0363>
- Khan, R., Muzaffar, M., & Ghulam Mustafa. (2022). Pakistan-India Water Conflict: A Causal Analysis. *ANNALS OF SOCIAL SCIENCES AND PERSPECTIVE*, 3(1), 43–51. <https://doi.org/10.52700/assap.v3i1.141>
- Kiran, A., & Qurat-Ul-Ain, &. (n.d.). CLIMATE CHANGE: IMPLICATIONS FOR PAKISTAN AND WAY FORWARD.
- Lawrence, P. R., & Lorsch, J. W. (1967). Differentiation and Integration in Complex Organizations. *Administrative Science Quarterly*, 12(1), 1. <https://doi.org/10.2307/2391211>
- Lin, L., Yang, H., & Xu, X. (2022). Effects of Water Pollution on Human Health and Disease Heterogeneity: A Review. In *Frontiers in Environmental Science* (Vol. 10). Frontiers Media S.A. <https://doi.org/10.3389/fenvs.2022.880246>
- Mall, R. K., Gupta, A., Singh, R., Singh, R. S., & Rathore, L. S. (2006). Water resources and climate change: An Indian perspective. In *REVIEW ARTICLES CURRENT SCIENCE* (Vol. 90, Issue 12).
- McManus, S., Seville, E., Vargo, J., & Brunson, D. (2008). Facilitated Process for Improving Organizational Resilience. *Natural Hazards Review*, 9(2), 81–90. [https://doi.org/10.1061/\(ASCE\)1527-6988\(2008\)9:2\(81\)](https://doi.org/10.1061/(ASCE)1527-6988(2008)9:2(81))
- Pearson, C. M., & Clair, J. A. (1998). Reframing crisis management. *Academy of Management Review*, 23(1), 59–76. <https://doi.org/10.5465/AMR.1998.192960>
- Saha, A. (n.d.). Zaman, S and Mitra A 2017 Assessment of Coastal Water Quality using Aquatic Health Index (AHI), *Parana Journal of Science and Education (PJSE)*. Vol., 3(6), 35–37.
- Shore, S. (n.d.). Climate Change and the India-Pakistan Rivalry. <https://www.researchgate.net/publication/339292424>
- Smith, K. (2013). Environmental hazards: Assessing risk and reducing disaster. In *Environmental Hazards: Assessing Risk and Reducing Disaster*. Routledge. <https://doi.org/10.4324/9780203805305>