Climate Change Adaptation Strategies for Vulnerable communities

Outline

I. Introduction

II. Understanding climate change and its impacts on vulnerable communities

III. Adaptation strategies to mitigate affects of climate change on vulnerable communities.

1. Sustainable urban planning in metropolitan cities will reduce human losses during heatwaves.
2. Advanced water conservation strategies can mitigate impacts of draughts on agricultural crops.
3. Ban on encroachments on river beds can allow natural water flow, reducing chances of urban flooding.
4. Increase awareness in vulnerable communities by local authorities can reduce human and livestock losses.
5. Advanced safety measures in building infrastructure in risky areas can aid in survival during emergency.
6. Cultivation of climate resilient agriculture helps in adequate productivity in vulnerable areas.
7. Active early warning systems can reduce huge losses in risky communities.

8. Early preparedness and proactive approach should be adopted rather reactive response.
9. Strict measures against large scale deforestation can restore natural environment and reduce impacts of climate change.
10. Shifting to renewable energy resources can decrease global emissions, reduling climate change.
11. Swift response of disaster management authorities is imperative for vulnerable areas.
12. Integrated rescue and relief operations are important in emergency situations in risky areas.
13.

IV. Conclusion

The Essay

Properly follow the structure of introduction
your introduction must contain summary of outline and thesis statement

Frequent heatwaves, prolonged droughts, torrential rains, urban flooding and cloudbursts; these incidents prove that climate change is a reality in today's world. In eighteenth and ninteenth centuries, industrial revolution started with the invention of steam engine, railways, machines and telegram. The industrialization had initiated in European Countries gradually spreaded in whole world. Due to large-scale burning of fossil fuels for energy purposes, the global emission of harmful gases like carbon monoxide (CO), carbondioxide (CO_2),

nitrous oxide (N_2O) and sulphurdioxide (SO_2) etc have increased. These Greenhouse Gases (GHGs) disrupt the natural environment and result in climate change. There are various negative consequences of climate change, such as extreme ~~heat~~ environmental temperatures, frequent disasters, flooding, landslides, glacier melting and unusual weather events like cloudburst. To face these challenges, vulnerable communities should take adaptation measures to reduce overall humanitarian and economic losses.

First of all, climate change is deviation of the climate from its natural condition which was present before industrial revolution. ~~It~~ climate change includes is due to increasing concentration of greenhouse gases in the air, which trap heat in the environment, a phenomenon called Global Warming (GW). Additionally, these harmful gases disrupt the ozone layer which expose the Earth to harmful ultraviolet radiations from Sun. Other factors responsible for climate change are deforestation, increased human activities, population explosion, rapid urbanization, and large-scale use of fertilizers and pesticides in crops. The impacts of climate change include human losses, economic, social, and health crisis. Likewise, disasters result in lower crop production, education

produces agricultural losses, lower yields and disruptions, and displacement of millions of people. To mitigate these impacts of disasters due to climate, some adaptation strategies are discussed in the following paragraphs.

In the metropolitan cities, effective urban planning can help adapt human being against in heatwaves. For instance, workers should remain indoor during peak hours of sun. Cooling areas constructed in certain parts of cities aid human beings to survive in intense heat. Additionally, water reservoirs constructed in different parts of cities produces urban heat island effect, reducing intense temperature. Sustainable urban development also includes parks, green rooftops, and planting trees along aveneus to reduce harmful gases as plants are natural sinks against air pollution. These measures reduce the impact of extreme temperature on human beings and aid in survival. Hence, avoiding sun during peak time, constructing cooling areas in cities, and increasing greenery across cities are some adaptation strategies for vulnerable communities during heatwaves.

Likewise, climate change has resulted in prolonged draughts, which require water conservation strategies to continue sustainable crop production. The communities living in arid conditions should adapt certain measures to store water. For example, they should construct sub-surface water storage facilities to use that water during draughts. Flood water harvesting is also an effective technique for arid areas. In addition to this, water recycling and filtration help in utilization of used water for agriculture. An example in this regard is Israel that recycles 95% of water or filters through desalination technique to use for its agriculture. Similarly, shifting from flood irrigation to sprinkler and drip irrigation technique conserves large amount of water for draughts. Therefore, storage of water and its filtration using technology are sustainable adaptation measures for vulnerable communities.

Another impact of climate change is urban flooding which seeks restrictions on encroachment on riverbeds. Due to poor governance and accountability, people construct housing societies, buildings, restaurants, hotels, and tourist spots on natural river beds.

People reside in these vulnerable areas which were pathways of river flow in past. Whenever, level of water rises in river, it requires some pathway to flow. Hence, flood water enters these urban centers, causing urban flooding. Certain developed countries take adaptation measures to utilize these areas. Permanent settlements on river beds should be avoided. The government should involve local authorities to utilize these vulnerable areas for temporary use, such as picnic spots, jogging, games etc. However, during moonsoon or climate emergency, these areas should be evacuated.

Additionally, the higher authorities should monitor all natural water ways and provide warnings to vulnerable populations regarding risks and consequences. In this way, vulnerable community will remain vigilant and they will take measures accordingly during dangerous intervals.

Additionally, local authorities should increase awareness in vulnerable communities to reduce huge losses during disasters. People residing in risky areas can be easily approached during daily communitarian interactions, such as mosques, funerals, wedding or any other event. Local government

should involve informed citizens of these communities to raise coscience about seriousness of the issue. ~~Elders of families sho~~ The environmental authories should involve elders of families to inform them about safer areas to use during emergency. many advanced countries like china, Britian, Japan allocate safer areas to each family in case of disaster in vulnerable areas. For such purposes, government can utilize schools, colleges and university buildings to protect human lives. These adaptation measures decrease human losses and simultanously prove economical for poor vulnerable countries like Pakistan.

Moving towards another adaptation strategy for vulnerable areas that is to take advance safety measures when building houses or infrastructure. Due to climate change, there is risk of cloudburst or frequent flooding. To survive during emergency situation, houses should be two to three story and they must have shock-resistant boards atleast at ground floors. Additionally, kitchen, washrooms and other essentials must be present at upper floors, so that people can easily survive in emergency conditions of cloudburst. ~~Commities~~ Communities

should take other safety measures, such as keeping boats or safety kits, communication techniques to move out of disastrous areas. These adaptation strategies are necessary for all vulnerable communities to ensure their survival during disaster.

Overall your points are okay
But substantiate your arguments with strong evidences
Avoid grammatical errors