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A DEGRADED ENVIRONMENT MAY ALSO HEIGHTEN THE RISK OF INFECTIONS, LANDSLIDES, FLOODING, AND OTHER DISASTERS: A SUSTAINABLE LIVELIHOODS APPROACH

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Abstract: In recent years, the most prevalent problems are rising global temperatures, glacier melting, degraded environment, landslides, and flooding, responsible for health risks and infections. A great deal of attention, research, and discussion are required in the Asian Indian continent. We have grossly observed this according to our recent data. There is still much to learn about the intricate connections between ecological activities, natural calamities and their consequences. Although, at one end of the world, climate change is a major causal factor in the traditional range. According to the viability of the land-based lifestyle of pastoralists in Asia Indian countries are now disrupted. It is misleading to widespread poverty and migration for the common public. At the other end of the world, the habitats of the Himalayan regions and different mountain regions in the Asian Indian continent are facing livelihood insecurity due to the unwanted tragedies brought on by climate change. The human-animal conflict, and ecological shifting, deforestation is now creating the rapid ecological destruction of the forests. It has been accelerated the critical climatic variability and causing another factor for ecological meltdown and making the local habitats (Flora and Fauna). The most vulnerable communities are observed in, 70 to 80% of households of the herder communities and for the common people it is approximately 80-95% from the hilly and tranches areas are living below the sustainable livelihood index and they are own related health risk of infections. This article focuses on the complex interrelationship between climate change, the destruction of the environment, and ecological misbalance. It is accelerating poverty among most of the vulnerable communities and traditional people on the earth. This study adds to the knowledge base method by concentrating on a particular region and offering localized perspectives on how landslides affect livelihood security. It helps Government Policymakers and local communities in decision-making. It can be useful for the common public as a basis for intervening in how to improve degraded livelihood security and save the sustainability, and protection from the earthquake in the near future.

Keywords: risk of infections, landslides, flooding, disasters, sustainable livelihoods

1. Introduction:

The 21st century has affected us without any doubt climate change and its impact to the livelihood in our society [1]. It is affecting all facets of human quality of life, destruction of nature and sustainable degradation. The geographically, environmentally, and economically difficult regions are living in the planet's most severe victim areas [1-2]. India is regarded as the most landslide-prone nation in Asia because of its diverse and delicate topography [2]. Climatic changes and natural calamities are also responsible for

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active tectonic zones, and unplanned settlements in the mid-hills areas [3]. This study combined quantitative and qualitative methods to learn more about the actual experiences of landslide victims in Asia and India [3]. The most landslide-prone areas of the country are Kerla, Sikkim, Uttarakhand, Jammu, Karnataka and other places [4]. Not only did landslides result in fatalities and injuries, but they also created livelihood instability in places that were vulnerable to them it helped to develop critical illnesses for the common public and it also promoted uncertain natural calamities [5]. The study findings indicated that livelihood indices such as food, shelter, and education are most deficient. In addition, employer are also suffered, their health issues significantly [4-5]. Nonetheless, data shed light on the health issues, psychological suffering, and displacement experienced by victim areas [6]. Getting worse climate change makes social problems worse and their sustainable livelihoods get critical, mostly in places where there have been violent disputes in the past and uncertain natural calamities [7]. This research study delineates the connections between extreme weather events and their consequences for the security and livelihoods of the Asian Indian continent, as well as for the preservation of their environment [6-7].

A comprehensive study of the ways in which climate and security risks affect sustainable livelihoods and vulnerabilities, as well as how weather extremes and conflicts intensify common public concerns, is brought to the forefront [7]. The most important scientific data on these connections is how lengthy droughts and strong rains are related to one another [6-7]. It is inaccurate to say that floods and violent conflict have an impact on Asian Indian people's means of subsistence [8]. In order to solve the present and foreseeable problems related to these methods, local governments and citizens must take the lead in resolving these particular concerns through various livelihood adaptation measures [9]. Sustainable livelihoods, additional downward spirals, poverty traps, exacerbated inequality, and health concerns can all be threatened by climate fragilities [10]. Researchers reported that being a crucial component of the global power system, hydropower also helps to slow down climate change and promote economic growth [11]. Reducing greenhouse gas emissions from linked occurrences like floods and hydropower is one of the biggest problems facing humanity today. Hydropower has several drawbacks in addition to its benefits, most of which are associated with its effects on the environment and sustainable livelihoods [12].

It is also necessary to categorize the direct and indirect socio-environmental effects of hydropower construction and operation in Asia and India and to suggest mitigating measures for the general public [13]. Changes in water quality and population displacement are two of the key negative consequences of a persistent energy shortage. Our country's key concerns include the structure of land and aquatic communities, loss of agricultural productivity, landslides and slope destabilization, and climate change [14]. Aside from the pertinent element, hydroelectric dam design and construction are necessary to create new opportunities for low-flow reaches downstream of the reservoir. Therefore, in order to reduce the livelihood of

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hydrological drought and ecological harm, the river and its resources are stretched out with a minimum water flow [15].

2. Material and Methods:

Study design: A cohort Population study:

Data Collection: We collected the data available from 2021 to 2024 prospectively.

Selection Criteria:

Inclusion Criteria: We have selected the original contributions of the authors included in the study.

Exclusion Criteria: Those articles are irrelevant and hypothesis based included with case reports excluded in this study.

Materials and Methods: We selectively use the word "A degraded environment may also heighten the risk of infections, landslides, flooding, and other disasters" from the database of Pub Med/Pub Med Central, web of Sciences, SCI citation index, and Scopus databases.

Statistical Analysis: We have used simple statistics and taken percentages, mean, and median according to recent advanced versions of SPSS.

3. Results:

The Hindu Kush Himalaya (HKH) in the Asian Indian continent is a vast mountain range that spreads over eight countries. It contains a ten-river system that originates from the highest peak of the earth. The major source of livelihood for around 250 million people in the world. The HKH region is one of the hotspots for change of climate and people residing in this area are vulnerable to the different impacts caused by climate change and associated with their critical conditions. The HKH region is warming faster than the global average areas due to the increase in temperature unlike glacial lakes that are melting and deforestation in the environment. According to climate change, tropical diseases are being expanded in the highlands along with the increase in the incidence of water and food-borne diseases and food insecurity are also developed. However, affecting people's health, well-being, and livelihoods encompasses the scenario for climate change in HKH, as well as impacts on growth and development. Numerous injuries and mental health issues are linked to the spread of various vector-borne, water-borne, and food-borne illnesses as well as their effects on non-communicable diseases. Climate change's effects on people's livelihoods and gender roles change the equity and socio-economic status of the common public.

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Table No 1: *A degraded environment may also heighten the risk of infections, landslides, flooding, and other disasters.*

SL No	Degraded Environment	Risk of Infections	Landslides and Flooding	Remarks
1	Kerla	*70- 85%*	Severe	socio-economic disruptions, food insecurity
2	Sikkim	*65-75%*	Mild	Impact on Livelihood
3	Uttarakhand	*75-90%*	Severe	socio-economic disruptions, food insecurity
4	Jammu	*70-85%*	Severe	socio-economic disruptions, food insecurity
5	Karnataka	60-75%	Mild	Impact on Livelihood

It is still necessary to chronicle the local efforts in the HKH region to adapt to and mitigate the effects of climate change. The Government of India should take care of these findings for implementation as this research study report examines the crucial relationship between human rights, environmental preservation, and women's leadership. Given the many issues confronting our planet, this study sheds light on the little-known but crucial aspect of gender equality in conservation initiatives and their required embellishments. The research report might be useful in identifying the contributions made by women to environmental stewardship and analysing the obstacles, as per the use of a human rights framework in the available literature. This result emphasizes how crucial it is to incorporate a gender viewpoint into environmental regulations and therapeutic procedures. It draws attention to the ways that widespread public participation in environmental advocacy increases gender equality, human rights, sustainable development, and all essential conditions and unavoidable natural disasters.

4. Discussion:

Climate change and natural disasters have necessitated the development of system resilience at the city, state, and national levels by governments around the globe [13]. Although the current global temperature increases, shifting rainfall patterns developed, increasing instances of extreme weather induced by climate change, the deforestation of the environment, and the cutting of trees in the forests will have a direct impact on water supply and sanitation services [14]. It is affecting all elements of service delivery and impeding the accomplishment of the Sustainable Development Goals. Floods pose a significant threat to water and sanitary systems due to environmental misbalance [15]. Flooding can be degraded by the quality of both surface and groundwater resources. It disrupts supply services owing to damaged infrastructures, water supply with sanitation [16]. It is seen as a critical component of environmental sustainability,

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and the risk to human health, social services, and resilience is quite important information for the government and NGOs [17]. To serve the situation there is an urgent need to understand and increase resilience, particularly in rural and small towns in low- and middle-income nations [18]. Those are already struggling to offer equitable access to clean and potable water and face increasing flood threats and natural calamities. The Government should plan to institute results of worldwide flood-resilient water supply and sanitation system research and their applications for the necessary action for the benefit of the common public on a priority basis [19]. It emphasizes the need for comprehensive, long-term, and adaptable thinking in the development of system resilience by highlighting correlations between political, social, and cultural institutions and constructed system resilience is highly needful in the Government decision and necessary action [20]. Climate change effects on water and sanitation systems have not received attention to date. Moreover, the value of a simple framework for assessing resilience as a beneficial addition to tools is undermined according to our report, it adds some important information [21]. The major indicators for water and sanitation resilience are more crucial for the government's understanding and adaptation to climate change is now a question mark [22].

There is a clear correlation between a nation's environmental issues and its level of economic development and growth. When economic growth is conducted without taking the environment into account, it can also result in major environmental hazards that lower the quality of life [23]. Now specific action will be required to mitigate the problems in the present and future generations for their sustainable livelihood [24. In the current economic development setting, local administrations have either disregarded or paid less attention to environmental issues. The rapid deterioration of the environment is caused by several causes, including poverty, industrialization, urbanization, rapid population expansion, and the lifestyle of the populace, in addition to the availability of natural resources [25].

Focusing on sustainable development and livelihoods to meet the needs of the current generation without sacrificing those of future generations is now imperative. Three key components must be integrated into sustainable development: economic efficiency, environmental preservation, and equity [21]. The preservation of many species depends on environmental protection measures, habitat development, restoration, afforestation, and forestation [20-21]. They are taking advantage of the sustainable management of plant and animal populations. The long-term process of meeting humanity's basic requirements involves not only the prudent management of human, environmental, and financial resources [22]. It also protects our nature, nurturing food habitats and protecting us from earthquakes.

One of the most climatically sensitive regions, Asia-India, is home to 25% of the world's population. The Policymakers do not fully acknowledge how climate change affects migration and displacement (at National and International levels). An essential component of national and international policies must acknowledge the interdependence of the effects of climate change on environmental degradation, extreme weather events, human migration, and

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adaptation [23]. It highlights the serious concerns that the number of people displaced by war and conflict is nearly the same worldwide and that climate change is increasingly playing a role in displacement. There will be more migration in the Asian Indian region as a result of climate change, nevertheless. The migratory nations of Asia are facing poverty and relocation [24].

The research study claims that either people are directly displaced by climate change or that distress migration in Asian nations is a result of heightened distress. National, regional, and global policy measures are desperately needed, as are efforts to mitigate and adapt to climate change. We must guarantee displaced people's rights to social protection, humanitarian aid, and the statistical magnitude of climate migrants. To alleviate the suffering and provide their basic requirements, the current crises require the cooperation of all parties involved, including the directly impacted people and officials who are willing to confront the issues and act quickly. Under the direction of a rights-based framework, this study seeks to pinpoint important patterns, obstacles, and exciting prospects that can further our understanding and spark inquiries for further study. It is extremely responsible for all sectors to work together, including academic institutions, civic society, and governmental and private organizations. Our goal is to discuss the complex ways that migration, climate change, and health effects interact in the Asian Indian region. This comprehensive strategy puts the basic needs of the most vulnerable—including migrants—first, creating a recently created framework for adaptation and mitigation that guarantees fair results.

Nature itself save the natural hazards besides this Natural Hazards (NH) are also characterized as clusters of events. That characterized a negative impact on the environment and ecosystems. There are The four primary categories of natural disasters that occur in our resource-related experiences are hydrological, geophysical, biological, and meteorological dangers. Geological processes that can result in geophysical hazards and associated mechanisms include landslides, earthquakes, volcanic eruptions, avalanches, coastal erosion, and lahars. Meteorological elements that also contribute to sustainable development and livelihood include storms, cyclones, blizzards, hurricanes, forest fires, drought, ice storms, heat waves, hail, and geomagnetic storms. More research work needs to be done on these grey areas.

Floods are a common hydrological hazard influences to create critical diseases, in the endemic and pandemic. We should make up our minds for the bulk of biological threats. Thus, it is essential to continuously assess the situation and develop practical scientific solutions to lower the hazards to the general public's health. Accurate forecasts of natural hazardous events and their surroundings can help develop preventative measures more effectively. Environmental pollution is mostly caused by climate change, problems with sustainable resource management, contamination of water reservoirs from natural disasters, disaster risk reduction programs, and forest fire suppression.

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The environmental disasters especially floods and landslides, on local development in different parts of Asian India, are examined in this study. Floods are a serious hazard to both present and future generations because they are caused by acid rain, global warming, and biodiversity loss. This research used a direct methods approach to evaluate the factors that led to the landslides in India. The results show a strong relationship between the increased risk of flooding in the area and environmental vulnerabilities such as the breakdown of water management systems, heavy rainfall, and deforestation. This research study provides practical insights and advances knowledge of the interrelated problems caused by floods and landslides can be used as practical advice to policymakers and stakeholders to enhance resilience and advance environmental sustainability and Sustainable livelihood.

5. Future Prospective:

In many nations, artificial intelligence (AI) has caused a paradigm change, and its environmental applications are transforming attempts to reduce the risk of disasters. Environmental advances powered by AI, with a particular emphasis on catastrophe risk reduction and its significant effects on rural inhabitants' quality of life. Natural calamities such as droughts and floods pose serious risks to livelihoods and food security. A strong toolkit for reducing these dangers is provided by AI for everyone. Additionally, sophisticated machine learning algorithms are used to forecast modelling and analyse past data, weather trends, and soil properties to generate early warnings and guide flexible new tactics. Through the optimization of numerous operations like planting, irrigation, pest management, and forestation, AI-powered precision environmental solutions are increasing sustainability and production. AI demonstrates how AI can be used to provide sustainable livelihoods, reduce disruptions caused by disasters, create resilient, prosperous farming communities, and reduce health hazards for the general population.

Limitations: Today, developing countries and developed countries are all suffering from environmental problems. Therefore, environmental problems have been the main object of discussion throughout the world. This research covers a specific portion of the globe.

6. Conclusion:

We concluded that the landslides' effects on the security of livelihoods and their protection are needed for the hour. It helps to Government, Policymakers and local communities in decision-making. It can be more useful and appropriate for the common public as a starting point for taking action to enhance diminished livelihood security and save the sustainability, and protection from the earthquake shortly. The study explores the aftermath and continuing difficulties that people impacted by landslides confront, concentrating on the landslides that were caused by excessive rainfall in Kerala, India's Wayanad district. Several landslides along the Badrinath

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National Highway in Uttarakhand were also brought on by the intense rains in Sikkim. Bhata Dhurian village has been affected due to the landslide of Jammu, and Ankola (Karnataka) landslides. In addition to causing immediate physical damage, landslides also cause socioeconomic disruptions and food shortages in the near future. These landslide-prone places have a variety of effects on livelihood possibilities, settlement patterns, and socioeconomic situations. This paper helps with the policy decision-making for common public and sustainable livelihood.

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