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Nepal in crisis: Tragedy tinged with hope

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Abstract--The emission of greenhouse gas blankets the earth trapping the sun's heat waves. This leads to a rise in temperature with scientists and ecologists term it as climate change. The world is now warming faster than at any point in recorded history. This affects the agriculture, forestry, human health biodiversity, and the snow-covered mountains. Changes in climatic factors such as rise in temperature, uneven precipitation patterns, solar radiations have a great influence on crops which on the other hand affect the lifestyle of humans and in particularly women. This study examines Nepal under immediate climate crisis. Nepal is prone to a variety of recurring natural disasters such as floods. Water is one of the most important lives' driving factor. Nepal experiences both extremities. Too much water and too little water. Flood happens due to extreme weather conditions damaging the lifestyle and drought happens when there is no proper management during the floods. Both affect the people on the mountain terrains. This paper examines how nature repays us for our deeds in different forms. Women are mainly affected by climate crisis. The hardships faced by the women and it also examines their strong will power in overcoming it. Many native descendants are even unaware of what is happening around them. The crisis the world is facing now is not just climate change. Its everything's change. The world is in an important mission to save the planet and to transmit it to the next generation.

Keywords--climate change, agriculture, climate crisis, women issues, temperature rise, gender inequalities climate.

According to the recent study conducted by the Department of Water Supply and Sewerage in Nepal. Calculated that nearly $\frac{3}{4}$ of Nepal's population who have access to drinking water is not safe.

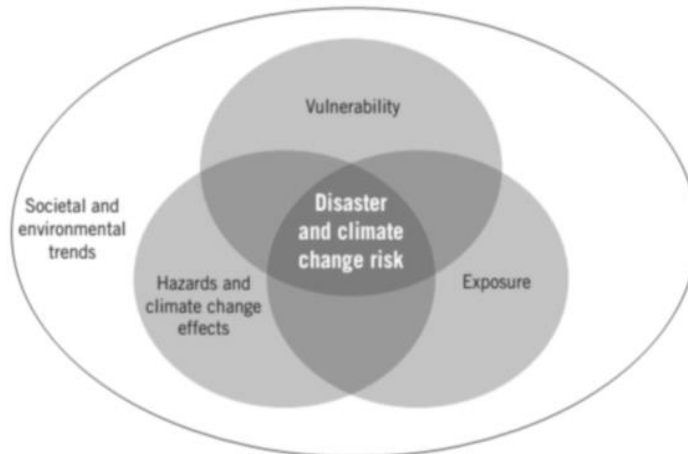


Figure 1.2 (Poudel,2018)

Over the last decade global warming in the Himalayan regions have been recorded intensively high to an average of 0.75 C. The climate change happening in the Himalayas raises concern about its role as a major supplier of water to most of the Asian regions. Himalayan glaciers and rivers are the main water economy to many of Asia's mainstreams and waters conservations. The amount of water distributed in these regions have a great effect on the health of many industries in Asia. It also includes the agricultural production, food security and the livelihood. The dependence on the mountain water is very complex because the average rainfall in the mountain areas vary from time and id mostly unequal. It varies from extremely low rainfall in China to high average of annual rainfall in Cherapunjee, India. For instance, the rivers in Nepal contribute to about half of the annual water. As they have a high flow, they are the significant source of water in the dry season and they have a huge impact on the environment, biodiversity and livestock.

For instance, in China, the Yangtze River is the major supplier of water to industries, agriculture and nearly half of the populations consumption. In the recent years the flow experienced it's never experienced situation as it reached its low level. The expansion of the dryland, melting of glaciers, aggravated deposits of silts affect the downstream flood discharge capacity. Due to this, it is now affecting the world's largest hydroelectric installation, the dams and the enormous population living under the dependence of this mainstream.

The impact of climate change in the Himalayan region will lead to large number of natural disasters that can never be predicted. Climate change results in increased occurrences of natural disasters and mainly the Himalayas are affected by water related disasters, mostly flood and drought. The intensity if these disasters are mostly unpredictable ad they vary depending on many factors, like the existing environment issues. They lead to change in eco system, decrease in production

due to less irrigation in agricultural land that leads to less supply of livelihood. Due to food shortage and other severe consequences the living population gets affected. For instance, due to floods happening in the Himalayas, around 5,000 people loose lives every year and the death rate depends in the severity of the disaster. These floods also lead to destruction of the agricultural land that results in shortage of food supply. Bridges, dams, roads and buildings are also affected in a large scale. Mudslides and grounds that are unstable are a very serious threat to the settlement areas. Due to heavy population people again begin to live in the flood prone areas as they have nowhere to go.

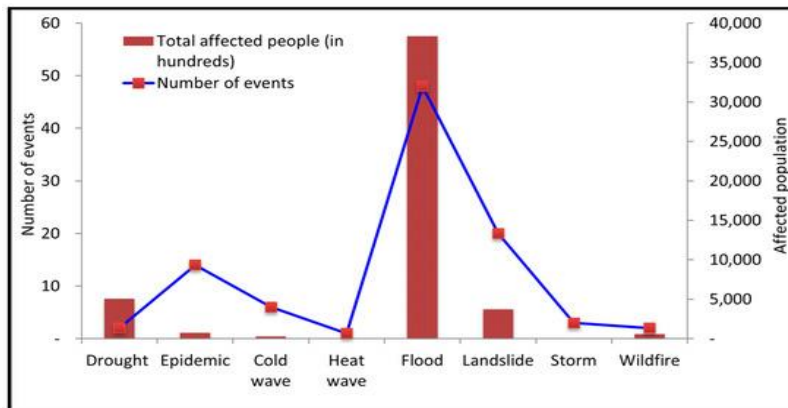


Figure 1.3 (Sustainability, 2017)

In India flood has affected about many lakhs of people annually and has caused damage estimated to be very high. 35 million hectares of land are at risk all years and thousands of people are killed by floods annually in India. Not only floods but climate change brings about drought in Nepal. Two extremities are faced by Nepal every year. The reduction in water both from the springs and from the Mountains affect the agriculture and the water reserves. The United Nations Development Program has warned that the increase in temperature and water scarcity may lead to decrease in crop yield in the Asian continent in the upcoming years.

Impact of climate change on agriculture

The main occupation of Nepal is agriculture. Rice is the most cultivated crop in Nepal, and about half of the country's production comes from these mountains. Change in climatic conditions has increased concern on the nation's food production and the population dependent on the production. Less production leads to depletion of the food resources and the country will be unable to meet the needs of the community. Considering all the negative impacts the native farmers have started to adapt new measures to meet production. Like they have changed the patters in cultivating their crops to increase the yield. They have also thought about alternate measures for irrigation.



Figure 1.4 (Climate change and agricultural production, 2015)

Many studies have found out that change in climate has a large-scale impact on cultivation in developing countries like India than developed countries. The impact will depend upon the effects if climate change. Increase in temperature will obviously affect the crops. Seasonal crops will not give proper yield when there is a slight change in temperature and obviously the production decreases. Not only change in temperature but also increased water flow will affect the production.

Problems such as seasonal increase in air temperature and seasonal precipitation is the main accelerating cause in warming in many parts of South Asia and that will become the greatest climate change in the upcoming years. The global warming is high in the Himalayan regions. There has also been a change in frequency of rainfall in many parts of South Asia. These change in rainfall patterns have resulted in unusual floods, landslides and mud floods. The frequency of floods has comparatively increased in unusual seasons thus resulting in disasters for which people are not ready for.

Scientists have cautioned that the melt in Himalayan glaciers are a threat to the indigenous people living in the springs. These melting of glaciers will also affect the water resources in the upcoming years. This also results in gradual decrease of water level in the rivers as the glaciers start to recede. Recent study has shown that there is an increase in temperature in each phase the rice grows. Study confirms that increase in temperature is one big environmental factor that affect the growth and the final production of rice. For instance, rise in temperature during the initial phase can lead to sterility. On the other hand, high temperature can alter the quality of the crop in the final stage.

Most of the agricultural land depends on the seasonal rain for their growth. At a point of time the monsoon originating from the Bay of Bengal would support the crops. As the climatic patterns change, they arouse a confusion. Human exploitation of the resources has resulted in degradation of the environment. This leads to an unbalanced eco system. Other than increase in population the increase in warming has also become a threat to farming in Nepal. Frequent

droughts, prolonged rains and surprise floods are main threat to agriculture. In a study conducted by the Nepal Agricultural Research Council showed that the change in temperature is a boom to crops such as rice and wheat, as it helps in increasing the yield and on the other hand it also negatives impact on maize. The extremely worse climatic conditions increase soil erosion, floods give birth to landslides, the destruction of the flora and fauna all these lead to poor production. Many studies have come to a conclusion that what the world is experiencing today is what humans have initiated for them tomorrow. Increase in greenhouse emissions have increased warming and rise in global warming has brought in change in the rainfall patterns. Climate change cannot be brought to an end all of a sudden. To save the future and the agricultural practices from being extinct recovery measures must be undertaken. For agricultural adaptations Nepal should act on proper resource management such as land use planning, water management and to study on introducing crops according to the climate or that one which suits to the changing temperature.

Impact of climate change on women

“Women will be directly and adversely affected by climate change” (Atwood). Women are more vulnerable to climate change than men. They constitute half of the world’s economically poor population, do all the house hold work, take care of their family, fight against poverty and also help in increasing production. In recent studies conducted it is evident that women do half of the agricultural work than men.

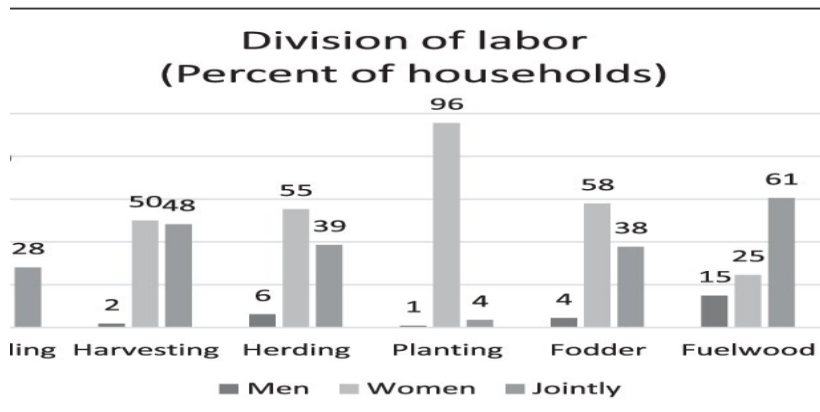


Figure 1.5 (Holmelin, 2019)

In Nepal it is even more. Nearly 3/4 of the work is carried out by women. This reflects much of women’s work go unrecognised, unpaid, not counted and unrecorded. For instance, taking agriculture, women start by preparing the land, they make the manure, purchase the seeds according to the temperature, they sow the seeds, after the seeds are sowed, they regularly monitor and thus when they are ready to harvest, they collect the yield, protect them, store them and a lot more is carried out. Whereas men on the other hand just plough the field and take the production to the market place. That too in the mountain regions, women have to clime slopes carrying heavy weight on their backs.



Figure 1.6 (“Women and girls carrying water in Ghandruk, Nepal Stock Photo”)

In times of drought women carry loads of containers on their backs and walk down for hours to the nearest spring to fill water for their family. In order to save time and do other house hold work they tend to carry heavy amount of load at a single time on their back. This results in many health-related problems. Women are unable to give birth. Due to poor supply of water and in drought seasons they are prone urinary problems due to poor sanitation. Due to carrying of heavy loads women get spine problems and also problems in getting conceived.

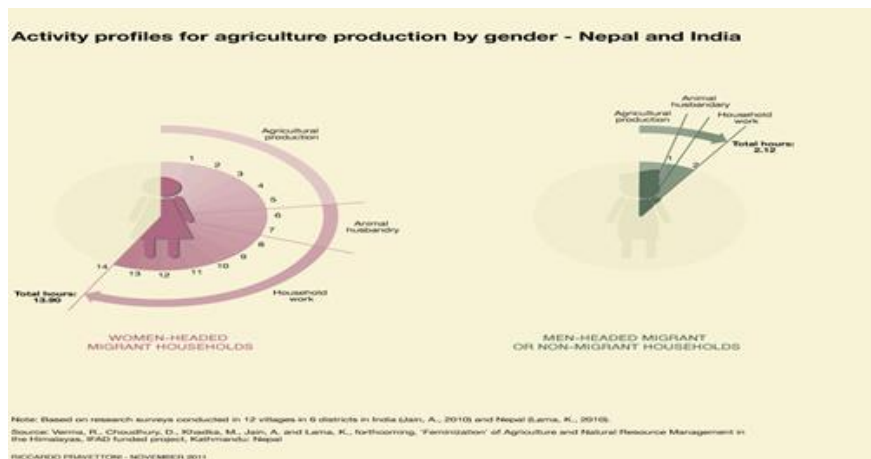


Figure 1.7 (“Gender division of labour in agriculture and household activities - Nepal and India”)

As there are no proper hospitals in the mountain areas many babies die newborn. Only 1/4 of the birth were attended by skilled people. Women are also subjected to gender-based violence, harassment, and psychological violence within the household. Water shortage create health issues and labour burdens because they travel a lot to carry water. Women spend more time in other tasks

apart from their family work. So as a result, this decrease the time that could be spent on earning money for the family, other livelihood activities. This increase in workload for women tend to take their children from school in order to help them cope up with their household work. There is a great difference in how men and women look at climate change. When there are water shortage men look at it as irrigation problem. Bur for women, water shortage creates health problem, sanitation problem, labour problems as they tend to carry burdens on their back and travel through arduous mountain pathways. During the time of flood men get tensed about generating the income whereas women think about family, how to sustain all the forthcoming devastations and how to live among all the chaos. When men migrate, women's work load increases and their decision-making power remains the same.

Margaret Atwood in one of her speeches stated that women's lives, particularly in developing countries, are likely to be more affected by climate change than those of men, because they are so reliant on agriculture, and bear the burden of work such as fetching scarce water and firewood, and have lesser options than men. Women are affected by indoor air pollution by smoky cooking fires. She also believes that women will struggle to survive in the future due to climate change. "More extreme weather events such as drought and floods, rising sea levels that will destroy arable land, and disruption of marine life will all result in less food," Atwood says. "Less food will mean they women and children get less, as remaining food supplies will be unevenly distributed, even more than they are."

Conclusion

"The one thing we need more than hope is action. Once we start to act, hope is everywhere"

-Greta Thunberg

Sad part of Nepal is that many don't know what is happening and why they are suffering. Climate justice is a very key component in the fight against climate change. This is very relevant for a country like Nepal, basically because this is an issue that has emerged from the bad development that the western worked did for which the natives are facing the consequences. When the UN policy convention was negotiated the focus was on reducing greenhouse gas emissions. Twenty years later if one sees the present context the whole climate impacts dimension will have changed. There has been a higher realization that just reducing greenhouse gas emission is not going to solve the problem. Even if the emissions get stopped right away, it's of no use, because the impacts are happening. The other way to reduce climate risk other than greenhouse reduction is to adapt to the changes and to build resilience of people and the society. Climate war cannot be stopped, we people have to learn to accept to live with it.

Climate change only intensifies impacts in coming years. The developed countries must help the developing countries by providing the climate finance and helping them to move towards the climate resilient development parallelly cutting down the emissions and developing nations should prioritise sustainable development and put nature in the heart of its development. When it comes to flood the only thing the irrigation department think of is just building embankments. That

doesn't solve the problem. When dams are built on both sides it jackets the river, so instead of allowing the river to flood and deposit its silt all over you jacket the river and the entire silt gets deposited within the narrow thing, the river bed keeps raising until the embankment can't hold. Then the water breaches the embankment and causes massive flooding. With every year that passes, hundreds of people lose lives to changing climate. Natural catastrophes like these are becoming more frequent and dangerous as the monsoon season is impacted by climate change. More than 6 lakh women in Nepal suffer from uterine prolapse. Although medical treatment is improving, climate change is threatening the development of female healthcare and equality. The planet is not just for us but also to thousands of our descendants. If we are suffering today, one can imagine the struggle that shall be against nature faced by our offspring.

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