



CERD Green Chronicles

EFFECT OF CLIMATE CHANGE ON WOMEN – A CASE STUDY OF MUSSOORIE, UTTARAKHAND

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Over Earth's history, the climate has changed considerably due to natural processes, but in the last 50-100 years these changes have been much bigger and happened much faster than any such changes the planet has seen in the recorded history of humans. The IPCC finds that it is "extremely likely" that human activity has been the dominant cause of the rapid warming seen during this time and that climate change poses significant challenges for our way of life on Earth. Climate change is thus one of the major problems faced by everyone in the present times. Flora, Fauna and even the human beings are getting adversely affected by the changing patterns of climate. The negative impacts of climate change are becoming increasingly evident today, including long term changes in average temperature and rainfall; changes in the intensity, timing, and geographic distribution of rainfall; an increase in the frequency of extreme events such as drought and flood; and sea level rise (IPCC 2007; Verner 2011). Human beings being the dominant species on earth are much adversely affected and these effects are seen prominently on most of the individuals in one way or the other. To study the stated impacts of the climate change, we conducted a study in the Dehradun district of Darjeeling for a period of 7 days in four different areas of Mussoorie i.e. Kempty Falls; George Everest Peak; Surkanda Devi Temple and Brasskanda village.

The studies reflected different ways in which climate change had a major impact on the people of these areas. Concluding the survey following statements can be presented. Climate change has increasingly affected the livelihoods of people, since people lack capacity to prepare for and cope with the effects of a changing climate. Among humans, women and men may experience these impacts differently due to their different roles and responsibilities in the society. Inequality between sexes is determined by differences in consumption patterns, lifestyle, access to and control of resources and power and vulnerability to climate change. Women play important socio-economic roles in farming and natural resource management. They have great potential and estimated that roughly quarter of women are economically active. A huge portion of women population are indulged in activities like agriculture and reduced crop yields because of climate change will have devastating effect on livelihood of millions of them. Due to existing gender inequalities and development gaps, climate change put greater burden on women. Gendered vulnerability to disasters is very evident, more women die than men. Men are often exposed to new places for work, they explore different environment and develop new skills. But women face more restrictions due to traditional cultural norms which affect their ability to adapt climate change. Since they always remain in the same environment, they are less adaptive and exposed to various situations, which can put them in greater risks when exposed to such situations.

Women's lives are closely tied up with natural resources including fetching water and wood for family. Women also have advanced expertise in indigenous knowledge related to medicinal and aromatic plants. They voluntarily dedicate their time for households, sacrificing their personal well being for the whole community. They take care of the most vulnerable part of society i.e. children and persons with disabilities. They are most reliant on natural resources for their livelihood and have least capacity to respond to natural hazards, such as droughts, landslides, floods, and hurricanes. Women face higher risks and burdens from the impacts of climate change in situations of poverty, and the majority of the world's poor are women. Women face social, economic and political barriers that limit their coping capacity. It is thus important to identify gender sensitive strategies to respond to crises caused by climate change. Women are responsible for major food production in developing countries. Climate change led to scarcity of traditional food sources, which led to increase in cost of food production. The increased food price make food more inaccessible to poor people, in particular to women and girls whose health has been found to decline more than male health in times of food shortages. In rural areas, women are highly dependent on biomass, such as wood, agricultural crops waste and forest resources for their energy and livelihoods. Due to climate change these natural resources are reduced. Climate change led to search of resources from greater distances which make women and girls more vulnerable to injuries from carrying heavy loads long distances and also face increased risk of sexual harassment and assault. Climate change also affects the availability of natural resource like freshwater for domestic and productive tasks. Women face huge burden of fetching water for their families from distant resources. The water is not enough for daily routines and often sacrifices women's sanitation. Women are often exposed to increased flood levels resulting in health problems include: lesions, swollen limbs, dark spots on hands and feet. The risk of contracting serious illness is high due to climate change. Climate may impact women's health through water scarcity and water contamination. Infectious diseases such as cholera, malaria and dengue fever increase due to extension of risk seasons and wider distribution of disease vectors. Greater number of people is being displaced due to severe coastal weather events, the erosion of shorelines, coastal flooding, droughts and agricultural disruptions. The high migratory rates result in higher death rates for women in least developed countries. Often the men of the house migrate to other cities in search of work and all the responsibilities come on women. This creates mental pressure on women.

Therefore it is necessary to ensure that we have gender sensitive climate policies that are informed by women and address the realities of women's needs. Women's life is closely tied up with natural resources but they are excluded from decision making process and thus barred from contributing their unique expertise and knowledge to the struggle to adapt to climate change. There is a need for gendered approach toward adaptation; otherwise these differences between men and women may be overlooked, leading to gender inequality and women's vulnerability to climate change relative to men. There is no assured water supply in the study areas by the authorized government authority which leads them to rely on nearby wells and other natural resources like seasonal streams and runoff water which were located at considerably far distances from the settlement. The task of loading of water on a daily basis is found to be done primarily by the women of the household as per the observations of the field. In winters and rainy season the moisture from rain and snow causes slippery tracks traversing on which, the women transport the loaded water usually by walking which sometimes leads to minor injuries by slipping and even a greater risk to life. Also in the study area livestock was not commonly reared by the people therefore biogas was not seen as a reliable source of energy (because livestock dung is used to produce biogas). LPG is the fuel source used in scattered fashion among population particularly famous among the comparatively privileged market area that were financially sound and could bear the price of transport of LPG from far off areas. On the other hand, the economically weaker sections forming the majority of the population could not afford to bear the transport expenses of LPG and therefore LPG was seen to be used among very restricted and clustered population leaving no choice. The economically weaker population has to survive on fuel wood extracted from nearby forest areas. As per the observations made in the field by the group, the fuel wood collection is done primarily by the women of the household. The trends observed by them in the past few years is that over the period of time since the density of the forest has decreased it has led to increase in the time taken to collect fuel wood. This also prevents them to utilize the time and energy into some other productive tasks. Uneven and fluctuating patterns of rainfall have a direct impact on the agriculture. Most of the females are indulged in agriculture which creates a lot of physical and mental pressure on them. As per the observations made in the field, the males were more reluctant and irresponsible & in drunken state leaving them in no condition to look after their professions as well as families whereas in many families the male members have migrated to the urban and semi urban areas which further increased the pressure on women. Also due to climate change, harvest of the staple vegetation was affected and women were forced to change the crops because the earlier ones were not reaping the desired benefits or profits to sustain their families. -Since a significant population uses fuel wood as a primary source of energy, as discussed above, the burning of fuel wood not only adds to a loss of carbon sink and increase of carbon dioxide (GHG) emission but also causes hazardous ill effects on the health of not only the female who is burning the fuel wood and is in direct contact with the smoke, but also the entire household which is exposed to such harmful emissions. This leads to health risks like respiratory track disease and infections (Asthma, Bronchitis etc.). The drudgery caused by the collection of fuel wood and the collection of water leads to sore joints and prolonged joint pain issues (e.g., arthritis) in the women folk. Also as seen in the agricultural areas the loading and unloading of the vegetable, to and fro from the farmlands to the transporting vehicle caused cases of abortions and miscarriages including the above mentioned reasons as well. The repetitive abortions also caused social exclusion and harassment by the family members. The nearest hospital was located at Mussoorie with limited medical facilities due to which the people were further recommended to go to hospital in Dehradun with better facilities as compared to the one in the Mussoorie. Pertaining to this, the women rarely went to the hospitals to address their medical issues and even if they went to hospitals in Mussoorie and were not cured their properly, they dropped the idea of visiting the hospital in Dehradun in majority of times. They were also not having any significant knowledge in ethno-botany and traditional medicinal knowledge to cure them with home remedies used by their ancestors. Therefore, we conclude that despite having vast health issues caused by an exhaustive and demanding lifestyle catering to both domestic and professional duties, the women were not addressed for the same neither in allopathy nor in traditional medicine. This leads them to face the health issues, social issues, family issues and financial issues all alone in majority of the cases in the study area. Thus, the article rightly reflects the major ways in which women are affected because of change in climate particularly in these four areas of Mussoorie, Dehradun.