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THREATS OF CLIMATE CHANGES TO THE PEOPLE HAILING FROM THE HILLY BELT OF DISTRICT REASI

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***Abstract*— In contemporary times,the climatic change is seen as the real threat to the human existence that largely affects water resources, agriculture, coastal region, fresh water habitats, vegetation, forests, snow cover and melting and geological process such as landslide, deforestation and floods. It has been a challenging issue faced by all the countries across the globe and India is no exception to this. The paper brings into limelight the impact of Climatic Change in India. Besides, the major effects of climatic change broadly in the state of Jammu and Kashmirand particularly in the district of Reasi have been undertaken in the paper.**

I INTRODUCTION

Now-a-days, the climate change is a major burning issue of the earth planet. No country or person is unaffected by this global phenomenon. This is an all-encompassing threat that will pose significant environmental, economic, social and political challenges for years and decades to come. Scientifically it is least predictable and its impacts are likely to affect adversely the vulnerable and poor people mostly, who have contributed least to the major causes of climate change.

The Governmental, non-Governmental organizations, Environmentalists, Conservationists and Donors around the world are focusing on this issue. Climate change in the world can be caused by various activities. But with the industrial revolution, the mean surface temperature of the earth has increased and temperature are likely to rise more, many different changes occurs on earth with serious impacts on biodiversity composition, Tourism, Agriculture, Horticulture, Water Regime and Food Security (J & K ENVIS Centre2015).

Global warming refers to the recent and ongoing rise in global average temperature near earth surface, due to the green house gases released as people burn fossil fuels, lead to CO_2emissions, and increasing Green hour gases in the atmosphere. Global contribution of CO_2 has increased by 31% since 1950. The departure has also been leading to more CO_2. The scientists have also predicted while studying various climatic models that average global temperatures will increase from 1.4 to 5.8 degrees and the sea level will rise between 0.09 and 0.88m at the end of this century (atkiss, Downing, Handley and Butterfield 2005).

Global warming caused by the climatic change has been described as one of the most serious environmental problems to confront humanity as this problem is inextricably linked to the process of development and economic growth itself. Climate change is an unusually difficult issue for the inhabitants of the globe, but the need of the hour is to make firm decision at domestic as well as global level.

II MAJOR EFFECTS OF THE CLIMATE CHANGE

The future effects of global climate change include more increase in temperature, intense rainfall, floods, wild fires, longer periods of floods droughts, windstorms, snowstorms, hail storms, landslides, disease etc. Due to Global Climate change it has been observed that Glaciers have shrunk, ice on rivers and lakes is breaking up earlier. The plant and animals ranges have shifted and trees are flowering sooner. Changes in behavior of migratory birds have been observed.

If we talk in the context of J&K State, there are alarming fluctuations both the natural as well as human induced. The state of J&K forms a part the Himalayan mountain system and is situated in the Northern part of the Indian Sub-continent and is sharing its border with Pakistan, China and Tibet strategically it is one of the most important among the Indian states. The mountains of J&K have a big rate on assisting Economy, which mostly depend on the water for hydropower, water supply, agriculture, Horticulture and tourism. The State has also significant importance in term of biodiversity, Biological richness social-cultural diversity and Ecological-wealth. Climate Change poses serious threat to the agriculture. Livelihood, Horticulture, water, tourism, species diversity, forest, wildlife floods-droughts landslides, human health and food security are the great concerns in the state due climate change (Kumar and Chopra 2009).

As per UNEP report, some parts of the state are moderate to highly vulnerable. As per INCCA assessment the number of rain days in the Himalayan region in 2030's may increase by 5-10 days on an average with an increase by more than 15 days in the eastern part of state. The intensity of rain fall is likely to increase by 1-2 mm/day. This is likely to impact some of the Horticulture crops. The recession rate of glaciers is reportedly varying which is being attributed to winter precipitation, climate warming and anthropogenic elements, cold wave, precipitation and temperature are most likely to significantly impact the agriculture sector. The shortage of food production is growing in J&K with the reduction of rainfall, the rainfall agriculture is worst sufferer. About 34% to 39% of the forested grides are likely to undergo shifts in vegetation type with a trend towards increased occurrence of the weather forests types (Singh 2014).

The climate change has also impact on human health. It is projected that spread of malaria, tuck-bone disease etc. will all be to enhanced. The annual temperature is projected to increase from 0.9(+,-) 0.6 degree Centigrade to 2.6(+,-) 0.7degree

centigrade by 2030.The net increase of temperature ranges from 1.7degree centigrade to 2.2 degree centigrade. With respect to the 1970s,the annual rainfall in the Himalayan region is likely to very L/W 1268(+,) 225.2 and 1604(+,-) 175.2mm in 2030s. The precipitation is likely to increase by 5% to 13% in 2030, with respect to 1970s. The water yield in the Himalayan Region mainly covered by the river Indus, is likely to increase by 5%-20% in the most region areas, with some areas of J&K showing an increase of up to 50% with respect to 1970s(J & K ENVIS Centre 2015).

III CLIMATE CHANGE AND THE DISTRICT REASI

District Reasi has unique geographical areas. The District is mostly Hilly with deep Georges and ravine and the most important physiographic features of the district are forests. It lies 330 05" N latitude and 740 50" ELongitudes. It forms a part of complex Pirpanjal Range, Muninal, Lapri Hill, Trikuta Hill Range Bhanag area and some Non accessible reaches. The district shares its boundaries with Udhampur districts in south, Ramban in the East, Shopian of Kashmir in North and Rajouri in West (Government of Jammu & Kashmir 2017-18).

Total Area	151701 Hectares
Population	247697
Total area under cultivation	38783 Hectares
Forest Land	67498 Hectares
Block	04
No. of Municipality	02
Villages	259
Assembly `	03
MP's	01

The Reasi and Rajouri Tehsils formed a joint district prior to the state's accession to India in 1947. As part of the reorganization, the two Tehsils were separated and Reasi was merged with the Udhampur District.Reasi is one amongst the eight newly created district in the state. It is predominantly a Hill district, which enjoys variable climatic conditions, ranging from sub-tropical to the semi-temperature population 20% ST, 10% SC. Reasi has many historical places having culture and religious significance like theShri Mata Vaishno Devi Shrine, Shiv Khori, Bana Aghar JittoJi, Shri Dansar Baba Ji, Baba Bhander Badhour and Zirat Baji Ismail Near Bharata.

It was in 2006 again become a separate district among the 8 new created. The district is water shape of the River Chenab and itsTributries (Ans, Plassu, Banganga, Pai, Anji). It is predominantly a hill district, which enjoys variable climatic conditions, ranging from sub-tropical to semi-temperature. Some of the areas of this district remain snow clad for certain period of time in a year. But these snow clad area has also been greatly affected by the climate change. The snow on these hills is melting at very fast rate due to global warming and it is also been observed that unusual snow fall especially recurs snow fall in the mid of March 2017 on all these mountains after 1987. One can easily witness some tribes that include Gujjars, Bakarwals, Gaddis who move to colder places like Lapri, Monimal, Sanasar, Serkanta etc for their survival. The mountains in District Reasi play a key role in supporting the economy of these people directly and indirectly. Any change in climate will reduce access to drinking water, affects the health of the poor, will also pose a serious threat to food security in this belt. Moreover, agriculture in district especially in the hilly belt is mainly rainfall and confined to terraces confined out of hills slopes.

The climate change has reduced availability of water for irrigation, loss of soil, Moisture, degraded soil fertility, extreme draught events and shifts in the rainfall regime resulting into failure of crops germination (in whole district). The climate change has also gently affected water reserves in the district mountain springs have been reported to decline the water yield or have gone dry mainly due to the ergative rainfall and many ground water resources are lowering. The climate change has not only affected water resumes and agriculture but it has also affected the forest and health and tourisms in this district mainly the upper reaches because of increase of temperature, change in vegetation, rapid deforestation and scarcity of drinking water lead to great threat to extinction of wild flora and fauna.

The human health has also multi-faceted affected involving increased incidence of vector, water and food born diseases. It is projected that the spread by Malaria, tick-born disease will be enhanced. The people of this belt are more vulnerable due to limited opportunities and choices, small land holdings and lack of access to market within state district and states. The marginalized groups have limited reasons and capacity to adopt and are the most easily affected. Hence, the climate change polices are crucial for enhancing adoptive capacity of the community and capacity to adopt and are the most easily affected change polices are crucial for extracting adoptive capacity of the community. Some of the important adoptive measures area as under:-

a) Improvement in Agriculture weather forecasting and awareness among farmers.
b) Adoption of organic farming and reintroduction of non-polluting traditional methods.
c) Canal irrigations (Kahlorgul)
d) Pond irrigation
e) Access to early warming equipment (e.g. radio)
f) Weather forecasting and early warning systems.
g) Rain water collection and water recycling systems.

IV CLIMATIC CHANGE AND ITS IMPACT IN INDIA

Climate change will make monsoons unpredictable. As a result, rain-fed wheat cultivation in South Asia as well as in India will suffer in a big way. Total cereal production will go down. The crop yield per hectare will be hit badly, causing food insecurity and loss of livelihood. On the other hand, the Industrial development is important for economic growth, employment generation and improvement in the quality of life. However, industrial activities without proper precautionary measures for environment protection cause pollution and related problems.

Now there is a global consensus about the threat posed by the climate change .The difference is only on how to go about altering human activities that unleash greenhouse gases fuelling global warming. The greenhouses gases act like blanket around the earth trapping too much the heat that would otherwise have scoped into space. A report of IPCC of 2500 scientists pointed out that the increased global air and ocean temperature will spread melting of snowed ice and rising sea level. If the introduction of these green house gases continued to solar global temperature could rise up by 2.40 into 6.40 by the end of the century. The summit meeting of the group of eight industrialized countries (G8) to be held in Germany (2007) is expected to launches new initiatives for collective action by both the rich and fast developing countries to tackle the issue of climatic change.

India has been arguing at all climate summits/negotiations that though it is among the top 10 emitters of carbon dioxide, the per capita emission is still one-sixth of the global average. Further, it has managed an 8% growth with only a 3.7% growth in energy consumption. India may oppose any move to seek its commitment to reduce greenhouse gas emissions and will ask the developed world to transfer Intellectual Property Rights with the clean technologies.

India needs to chart out a roadmap for itself in the light of the report on climate change. The Constitution of India on a sensitive provision in Article 48-A states, "The State shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country". Article 51A (g) creates a fundamental duty on every individual to obey the mandate of environment and ecology (Thomas 2007).

Therefore, the climate change can be mitigated in many ways, such as improving the efficiency of energy-intensive devices, vehicles and buildings, all of which involve direct and indirect gas emissions. Developing countries like India must adopt new energy and efficient technologies.

V CONCLUSION

The climate change has impacted the economies from forestry, agriculture, livestock, husbandry and medicinal plants based livelihood. The rural poor people living in the far flung areas are among the most affected by the climate change. So prompt and strong actions are clearly warranted involving both the government as well as local community.

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