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Impact of Climate Change on the Indigenous People of Rajasthan

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ABSTRACT

Rajasthan, the largest state in India, is also one of the driest regions in India and its climate is characterized by dry and hot winds. A large fraction of it is covered by the Thar Desert which is the world's most densely populated desert ecosystem. Due to its geographical position, Rajasthan suffers from water scarcity and has the maximum probability of occurrence of draught in India. The present paradigm is related to the impact of development induced climate change on the indigenous populace of Rajasthan. It looks at the vulnerability of the state to climate change and reiterates the plight of its primitive, shy and socially & economically backward indigenous people. Very low earnings and lack of access to fundamental necessities of life make them extremely susceptible to the climate change shocks. According to Rajasthan's State Action Plan on Climate Change (RSAPCC), major climate change threat in the state include decrease in mean annual rainfall and increase in annual mean surface temperature which would have serious consequences on indigenous population, livestock and crops as almost 94% of total tribal population of Rajasthan resides in rural areas with minimum technologies and adaptation measures. However, the RSAPCC's key activities and strategies themselves lack emphasis on the varied adaptation needs and characteristics of the indigenous population. This paper highlights the need of understanding the heterogeneity within public during policy making.

Key Words: I*ndigenous People of Rajasthan, Impact of climate change, Rajasthan State Action Plan on Climate Change, Climate Change in Thar Desert*

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1. Intoduction

Located in northwest, Rajasthan is one of the driest regions in India and experiences dangerously high temperatures for several months of the year. It is geographically the largest state in India and the climate is characterized by dry and hot winds. The state has even experienced temperature as high as 49°C during summers. A large fraction of the state is covered by the Thar desert also known as the Great Indian Desert which includes the districts of Jaisalmer, Barmer, Bikaner and Jodhpur. Due to its geographical position, Rajasthan suffers from water scarcity and has the maximum probability of occurrence of draught in India. The present paradigm is related to impact of development induced climate change on the indigenous populace of Rajasthan. It looks at the vulnerability of the state to climate change and reiterates the plight of its primitive, shy and socially & economically backward indigenous people.

According to the Population Census (2011), almost 94% of the total tribal population of Rajasthan lives in rural areas and is dependent on agriculture and allied sectors for livelihood. Low earnings and lack of access to fundamental necessities of life make them exceedingly vulnerable to the climate change shocks. Breakdown of the principal monsoon during critical seasons and unexpected extreme rainfall events result in crop failure and shortage of drinking water causing much destitution to the people in the affected areas. One normative reason to be concerned with the impact of climate change is that it exacerbates the existing problems as there is already a heavy resource stress in the arid and semi-arid

regions of Rajasthan. In addition, Thar is the world's most densely populated desert ecosystem (Soltoff, 2013) and a combination of overpopulation and climate change has made it both socially and environmentally difficult habitat which has been further elaborated by the author later.

According to Rajasthan's State Action Plan on Climate Change (RSAPCC), major climate change threat in the state include slight decrease in mean annual rainfall combined with increase in annual mean surface temperature of 2 to 4 degree Celsius (2011, pp 97-101). This indicates that there will eventually be intense depletion of the water in lakes and in other sources of water like underground water with minimum chances of getting recharged. The lakes are the major source of drinking water for the people of Rajasthan especially the tribal communities. In these communities responsibility of collecting and storing water for the family for drinking and cleaning purpose lies majorly on the shoulders of women. They walk miles for getting water. Sometimes they have to walk even twice or three times in a day to get water. Hence, further decrease in underground water level and drying of lakes & ponds would lead to aggravation of the amount of labour the indigenous groups have to carry out for getting as simple necessities of life as water. Toiling for the whole day for basic requirements leaves no time for education or recreation. Hence, there is no scope left for their development in socio-economic terms.

2. Development Menace

The state of Rajasthan is developing fast and in the last five years (FY09 to FY13) it has grown at a robust 8.5% rate (CARE Ratings, 2013). The state is richly endowed with a great range of metallic and non- metallic minerals and mining activities are important contributors to its Gross State Domestic Product (GSDP). However, due to the erratic nature of its operation, mining is destroying the nature, landscape and environment of the area along with threatening the life and culture of indigenous population in Rajasthan. Recurring draughts and failure of agriculture compel tribal population to look for alternatives which mainly consist of migration or labor in mines to survive (Bose, n. d.). Nevertheless, due to unregulated mining the mine workers are bound to live a life that can be best described as dejected. The pressure exerted by mining activities on the landscape of Rajasthan can be best observed in Udaipur, Rajsamand, Ajmer and Jodhpur where the hills of Aravali have been destroyed to a large extent. Udaipur, the city of lakes has started losing both the quantity and quality of water in its lakes due to uncertainties in rainfall along with the air and noise pollution caused by the mining activities in that area which would have grave consequences on the health of the people in the near future.

Overzealous attempts towards development have given impetus to the process of deterioration of the environment. For example, Delhi Mumbai Industrial Corridor (DMIC) that promises a bright future for Rajasthan, employment opportunities for its residents and an array of infrastructural facilities for industrial development, sure will act as a catalyst to climate change in the state as it will cost a lot in terms of environment and natural resources of the state if proper balance is not observed. The activities related to industrial development must go through climate proofing (a tool developed by GIZ) and Environmental Impact Assessment (EIA) because vulnerability to climate change will be increased by the pollution caused by industries, natural resource scarcities and other unsustainable practices which will impose significant additional stress on the ecology and on the adaptation & mitigation strategies adopted by the tribal people of Rajasthan.

3. Impact on Indigenous Livelihood and Mitigation

For a large proportion of the indigenous population of Rajasthan that majorly reside in the desert area, livestock rearing is a major component of livelihood and migration during the time of scarcity of fodder, food and water has been used as a mitigation strategy against drought. Living a nomadic life, these people have gained knowledge about the traditional phenomenon that helps them in climate screening and building livelihood resilience. However, due to unexpected changes in the climatic conditions and a large number of mouths to feed, the pastoral tribes like Rebari, Ghosi, Ahir etc are forced to take up sedentary way of life and the non- pastoral nomads such as artisans, acrobats, jugglers, snake charmers etc and tribes like Nats, Kalbeliyas are forced to put their skills on hold and migrate in search of work.

The people of nomadic communities have very few resources to adapt to hardships and even the most elementary needs are directly or indirectly dependent on environment. In this context, it is important to realize that enhancement in their capabilities to deal with climate change comprise of poverty alleviation, education, health improvement and risk management. Well being is a desirable state of life that needs to be harmonized by justifiable understanding of the role and significance of environment in the process of development for which it is important that the

policies and plans for climate change mitigation are made keeping in mind the people who are most affected by it. These must be in line with addressing the key environmental stresses and stress bearers of Rajasthan.

4. Conclusion and Recommendations

So far, the priorities identified under the RSAPCC, Government of Rajasthan (2011), are in coherence with the overall development of the state. It states its vision as *to achieve sustainable development by reducing vulnerability to climate change impacts and enhancing resilience of ecological, economic and social systems in Rajasthan.* However, it has mainly talked about people of Rajasthan in broad-spectrum because of which perhaps the issues of marginalized indigenous people seem to be lost. The key strategies and actions of RSAPCC fall short of focusing on the heterogeneity among the citizens of Rajasthan and their varied needs and characteristics. Therefore, there's still a long way to go before achieving inclusion of the marginalized indigenous groups in the process of development along with stronger mitigation policies. There should be climate proofing of government programmes and schemes to make them more responsive to climate change by incorporating adaptation measures into their objectives and methodology (CCARAI, n.d.), along with strong presence of civil society and non-governmental organizations for sustained efforts towards holistic development.

Media also play an important role in exploring the mitigation and adaptation strategies in response to climate change. Community level activities such as street plays, folk dance etc can be organized and can be used as disaster mitigation and preparedness tools. The panchyats and other local bodies must organize healthcare campaigns and training in basic lifesaving skills which will help the local people at the time of disaster. The central and state governments should provide appropriate compensation to those affected adversely due to climate change and whose livelihoods are severely jeopardised.

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